

Project Manual

# Hilliard Elementary School Parent Pick-Up Lane Extension

Nassau County School Board

Nassau County, Florida

Project Number 0506-09-1

May 2020



BID SET

Prepared by:



**MITTAUER**  
**& ASSOCIATES, INC.**  
CONSULTING ENGINEERS &  
PROJECT FUNDING SPECIALISTS  
CERTIFICATE OF AUTHORIZATION NO. 6569

PROJECT MANUAL

FOR

HILLIARD ELEMENTARY SCHOOL  
PARENT PICK-UP LANE EXTENSION

NASSAU COUNTY SCHOOL BOARD

NASSAU COUNTY, FLORIDA

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Orange Park, Florida  
Project No. 0506-09-1  
May 2020

HILLIARD ELEMENTARY SCHOOL  
PARENT PICK-UP LANE EXTENSION  
NASSAU COUNTY SCHOOL BOARD  
NASSAU COUNTY, FLORIDA

**TABLE OF CONTENTS**

---

**DIVISION 0 - BIDDING AND CONTRACT REQUIREMENTS**

00111	Advertisement for Bids
00200	Instructions to Bidders
00410	Bid Form
00420	Trench Excavation Safety Certification
00421	Proposed Subcontractors Form
00430	Bid Bond
00510	Notice of Award
00520	Standard Form of Agreement
00610	Performance Bond
00615	Payment Bond
00620	Contractor's Application for Payment
00641	Final Waiver and Release of Lien
00650	Consent of Surety Company to Final Payment
00700	General Conditions
00800	Supplementary Conditions
00814	Sworn Statement Under Section 287.133(3)(a), Florida Statutes, on Public Entity Crimes
00900	Addenda and Modifications

## **DIVISION 1 - GENERAL REQUIREMENTS**

01000	Abbreviations
01020	Direct Purchase Procedures
01060	Regulatory Requirements
01300	Submittals
01301	Administrative Requirements
01370	Schedule of Values
01391	Visual Documentation
01400	Quality Control
01500	Construction Facilities
01570	Temporary Traffic Control
01700	Project Closeout

## **DIVISION 2 - SITE WORK**

02115	Landscape and Tree Protection
02210	Soil Borings
02220	Demolition
02230	Site Clearing, Stripping and Grubbing
02240	Dewatering
02300	Earthwork
02370	Erosion and Sedimentation Control
02590	Underground Facilities
02630	Storm Sewer Collection System
02740	Asphaltic Concrete Paving

02750 Concrete Paving, Sidewalk and Curb

02820 Chain Link Fencing

02921 Grassing, Seeding and Sodding

**DIVISION 3 - CONCRETE**

Not Applicable

**DIVISION 4 - MASONRY**

Not Applicable

**DIVISION 5 - METALS**

Not Applicable

**DIVISION 6 - WOOD AND PLASTICS**

Not Applicable

**DIVISION 7 - THERMAL AND MOISTURE PROTECTION**

Not Applicable

**DIVISION 8 - DOORS AND WINDOWS**

Not Applicable

**DIVISION 9 - FINISHES**

Not Applicable

**DIVISION 10 - SPECIALTIES**

Not Applicable

**DIVISION 11 - EQUIPMENT**

Not Applicable

**DIVISION 12 - FURNISHINGS**

Not Applicable

**DIVISION 13 - SPECIAL CONSTRUCTION**

Not Applicable

**DIVISION 14 - CONVEYING SYSTEMS**

Not Applicable

**DIVISION 15 - MECHANICAL**

Not Applicable

**DIVISION 16 - ELECTRICAL**

16050	General Electrical Requirements
16123	Wire and Cable
16131	Conduit
16520	Exterior Luminaries

**SECTION 00111**  
**ADVERTISEMENT FOR BIDS**  
**HILLIARD ELEMENTARY SCHOOL PARENT PICK-UP LANE EXTENSION**  
**NASSAU COUNTY SCHOOL BOARD**  
**NASSAU COUNTY, FLORIDA**

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Sealed Bids for the construction of the Hilliard Elementary School Parent Pick-Up Lane Extension project will be received by the Nassau County School Board at the office of the Director of Facilities, Nassau County School Board, 86334 Goodbread Road, Room 01-12, Yulee, Florida 32097, until 14:00 local time on May 27, 2020, at which time the Bids received will be publicly opened and read aloud.

The Project consists of constructing approximately 950 LF of 24' wide asphalt pavement with associated signage, striping, milled asphalt parking, wet detention pond, drainage conveyance system, exterior lighting and all necessary restoration.

Bids will be received for a single prime Contract. Bids shall be on a, unit price basis, as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is: Mittauer & Associates, Inc., 580-1 Wells Road, Orange Park, Florida 32073, (904) 278-0030. Prospective Bidders may examine the Bidding Documents at the Issuing Office, Monday through Friday (excluding Holidays), and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Bidding Documents also may be examined at the office of the Director of Facilities, Nassau County School Board, 86334 Goodbread Road, Room 01-12, Yulee, Florida 32097, (904) 225-0573, Ext. 8107, Monday through Friday (excluding Holidays).

Bidding Documents will be provided on compact disc as portable document format (PDF) files and as printed Bidding Documents (one of each), for a non-refundable charge of \$120 per set, payable to "Mittauer & Associates, Inc." Upon Issuing Office's receipt of payment, the digital and printed Bidding Documents will be sent via UPS Ground. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda, if any, obtained from sources other than the Issuing Office.

Bid security shall be furnished in accordance with the Instructions to Bidders.

To be considered qualified, Bidder shall be licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board and pre-approved by the Nassau County School Board.

The Nassau County School Board is an Equal Opportunity Employer.

**END OF SECTION**

**SECTION 00200**

**INSTRUCTIONS TO BIDDERS**

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**TABLE OF CONTENTS**

	<b>Page</b>
Article 1 – Defined Terms.....	2
Article 2 – Copies of Bidding Documents.....	2
Article 3 – Qualifications of Bidders.....	2
Article 4 – Site and Other Areas; Existing Site Conditions; Examination of Site; Owner’s Safety Program; Other Work at the Site.....	2
Article 5 – Bidder’s Representations.....	4
Article 6 – Pre-Bid Conference.....	5
Article 7 – Interpretations and Addenda .....	5
Article 8 – Bid Security .....	5
Article 9 – Contract Times.....	6
Article 10 – Liquidated Damages .....	6
Article 11 – Substitute and “Or-Equal” Items .....	6
Article 12 – Subcontractors, Suppliers, and Others.....	6
Article 13 – Preparation of Bid.....	7
Article 14 – Basis of Bid.....	8
Article 15 – Submittal of Bid .....	8
Article 16 – Modification and Withdrawal of Bid .....	8
Article 17 – Opening of Bids.....	9
Article 18 – Bids to Remain Subject to Acceptance .....	9
Article 19 – Evaluation of Bids and Award of Contract.....	9
Article 20 – Bonds and Insurance .....	10
Article 21 – Signing of Agreement .....	10
Article 22 – Sales and Use Taxes.....	10
Article 23 – Contracts to be Assigned .....	10
Article 24 – Wage Rates .....	10



## **ARTICLE 1 - DEFINED TERMS**

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued.

## **ARTICLE 2 – COPIES OF BIDDING DOCUMENTS**

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office as stated in the advertisement for bids.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Engineer, in making copies of Bidding Documents available on the above terms, does so only for the purpose of obtaining Bids for the Work and does not authorize or confer a license for any other use.

## **ARTICLE 3 – QUALIFICATIONS OF BIDDERS**

3.01 To be considered qualified, bidder shall be licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board. Additionally, a qualified bidder shall be pre-approved by the Nassau County School Board.

3.02 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.03 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

## **ARTICLE 4 – SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE**

4.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 *Existing Site Conditions*

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:

a. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.

- b. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
  - c. reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
  - d. Technical Data contained in such reports and drawings.
2. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
- B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.
  - C. Adequacy of Data: Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.03 *Site Visit and Testing by Bidders*

- A. Bidder shall conduct the required Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.
- B. Site visits are to be conducted by appointment only. Contact Jeffrey L. Bunch, Director of Facilities, at (904) 225-0573, Ext. 8107 to schedule an appointment time.
- C. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- D. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.
- E. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- F. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

#### 4.04 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. As the General Conditions indicate, if an Owner safety program exists, it will be noted in the Supplementary Conditions.

#### 4.05 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

### **ARTICLE 5 – BIDDER'S REPRESENTATIONS**

#### 5.01 It is the responsibility of each Bidder before submitting a Bid to:

- A. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;
- B. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;
- C. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- D. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- E. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;
- F. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and

- G. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### **ARTICLE 6 – PRE-BID CONFERENCE – NOT APPLICABLE**

#### **ARTICLE 7 – INTERPRETATIONS AND ADDENDA**

- 7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than 5 business days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

#### **ARTICLE 8 – BID SECURITY**

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of [5%] of Bidder's maximum Bid price (determined by adding the base bid and all additive alternates) and in the form of a certified check, bank money order, or a Bid bond (on the form included in the Bidding Documents) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 business days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- 8.03 The Bid security of the apparent successful bidder and that of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Contract or 91 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.
- 8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

#### **ARTICLE 9 – CONTRACT TIMES**

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

## **ARTICLE 10 – LIQUIDATED DAMAGES**

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

## **ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS**

- 11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or “or-equal” items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or “or-equal” item of material or equipment, application for such acceptance may not be made to, and will not be considered by, Engineer until after the Effective Date of the Contract.
- 11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

## **ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

- 12.01 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.
- 12.02 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers proposed for the Work. If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.
- 12.03 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions shall not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner subject to subsequent revocation of such acceptance as provided in Paragraph 7.06 of the General Conditions.

## **ARTICLE 13 – PREPARATION OF BID**

- 13.01 The Bid Form is included with the Bidding Documents.

- A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein. Blanks left incomplete on the Bid Form may be considered non-responsive under Article 19 of this Section and cause for rejection.
  - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words "No Bid" or "Not Applicable."
- 13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown. The corporate seal shall be affixed and attested by the corporate secretary or an assistant corporate secretary, as appropriate.
- 13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.
- 13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.05 A Bid by an individual shall show the Bidder's name and official address.
- 13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.07 All names shall be printed in ink below the signatures.
- 13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.09 Postal and e-mail addresses and telephone and fax numbers for communications regarding the Bid shall be shown.
- 13.10 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

#### **ARTICLE 14 – BASIS OF BID**

14.01 *Lump Sum*

- A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

14.02 *Unit Price – Not Applicable*

14.03 *Allowances – Not Applicable*

## **ARTICLE 15 – SUBMITTAL OF BID**

- 15.01 A Bid shall be received no later than the date and time prescribed and at the place indicated in the advertisement for bids and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation “**BID ENCLOSED.**” A mailed Bid shall be addressed to **Jeffrey L. Bunch, Director of Facilities, Nassau County School Board, 86334 Goodbread Road, Room 01-12, Yulee, Florida, 32097.**
- 15.02 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

## **ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID**

- 16.01 A Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

## **ARTICLE 17 – OPENING OF BIDS**

- 17.01 Bids will be opened at the time and place indicated in the advertisement for bids and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

## **ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

- 18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

## **ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports

to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

- 19.02 If Owner awards the contract for the Work, such award shall be to the responsible Bidder submitting the lowest responsive Bid.
- 19.03 Evaluation of Bids
- A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
  - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. For comparison purposes, alternates will be accepted following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its Base Bid and any combination of its additive or deductive alternate Bids for which Owner determines funds will be available at the time of award.
- 19.04 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

## **ARTICLE 20 – BONDS AND INSURANCE**

- 20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

## **ARTICLE 21 – SIGNING OF AGREEMENT**

- 21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 business days thereafter, Successful Bidder shall execute and deliver the required number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.



**ARTICLE 22 – SALES AND USE TAXES – NOT APPLICABLE**

**ARTICLE 23 – CONTRACTS TO BE ASSIGNED – NOT APPLICABLE**

**ARTICLE 24 – WAGE RATES – NOT APPLICABLE**

**END OF SECTION**

**SECTION 00410**  
**BID FORM**  
**HILLIARD ELEMENTARY SCHOOL PARENT PICK-UP LANE EXTENSION**  
**NASSAU COUNTY SCHOOL BOARD**  
**NASSAU COUNTY, FLORIDA**

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**SUBMITTED BY:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
\_\_\_\_\_ **TELE:** \_\_\_\_\_  
\_\_\_\_\_ **FAX:** \_\_\_\_\_  
**EMAIL ADDRESS:** \_\_\_\_\_  
**CONTRACTOR'S FLORIDA LICENSE NO.:** \_\_\_\_\_

**TABLE OF CONTENTS**

	<b>Page</b>
Article 1 – Bid Recipient .....	2
Article 2 – Bidder’s Acknowledgements .....	2
Article 3 – Bidder’s Representations.....	2
Article 4 – Bidder’s Certification .....	3
Article 5 – Basis of Bid.....	4
Article 6 – Time of Completion .....	4
Article 7 – Attachments to this Bid .....	4
Article 8 – Defined Terms.....	4
Article 9 – Bid Submittal.....	5

**ARTICLE 1 - BID RECIPIENT**

1.01 This Bid is submitted to:

Nassau County School Board  
1201 Atlantic Avenue  
Fernandina Beach, Florida 32034

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS**

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
- K. Bidder is licensed to engage in the business of contracting in the State of Florida by the Construction Industry Licensing Board.

#### **ARTICLE 4 – BIDDER'S CERTIFICATION**

##### **4.01 Bidder certifies that:**

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at

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artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### **ARTICLE 5 – BASIS OF BID**

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**Total Lump Sum Bid = Total Bid Price** \$ \_\_\_\_\_

#### **ARTICLE 6 – TIME OF COMPLETION**

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

#### **ARTICLE 7 – ATTACHMENTS TO THIS BID**

- 7.01 The following document is submitted with and made a condition of this Bid:
  - A. Required Bid security.
  - B. Trench Excavation Safety Certification (Section 00420)
  - C. Proposed Subcontractors Form (Section 00421)

#### **ARTICLE 8 – DEFINED TERMS**

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

**ARTICLE 9 - BID SUBMITTAL**

BIDDER: *[Indicate correct name of bidding entity]*

---

By:

*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_

*(Title)* \_\_\_\_\_

*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_

*[Title]* \_\_\_\_\_

Bidder's Business License No.: \_\_\_\_\_

***Affix corporate seal, if applicable.***

**END OF SECTION**

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## SECTION 00420

### TRENCH EXCAVATION SAFETY CERTIFICATION

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Pursuant to Florida Statutes 553.63, the Contractor or Subcontractor, when performing trench excavation in excess of five feet (5'), will comply with the following requirements:

1. The Contract bid submitted by the contractor who will perform such excavation shall include:
  - a. A reference to the trench safety standards that will be in effect during the period of construction of the project.
  - b. Written assurance by the contractor performing the trench excavation that such contractor will comply with the applicable trench safety standards.
2. A contractor performing trench excavation shall:
  - a. As a minimum, comply with the excavation safety standards which are applicable to a project.
  - b. Adhere to any special shoring requirements, if any, of the state or other political subdivisions which may be applicable to such a project.
  - c. If any geotechnical information is available from the owner, the contractor, or otherwise, the contractor performing trench excavation shall consider this information in the contractor's design of the project. This paragraph shall not require the owner to obtain geotechnical information.
3. The separate item identifying the cost of compliance with trench safety standards shall be based on the linear feet of trench to be excavated. The separate item for special shoring requirements, if any, shall be based on the square feet of shoring used. Every separate item shall indicate the specific method of compliance as well as the cost of that method.

The contractor shall complete this form and submit it to the owner as a part of the bidding proposal package.

The undersigned, herein called "Bidder", has determined to his own complete satisfaction that all portions of the Florida Trench Safety Act (90-96, Laws of Florida) as the OSHA Excavation Safety Standards 29, CFR Part 1926.650 Subpart P, will be fully complied with and executed properly on this project.

Bidder acknowledges that included in the various items of the proposal and in the Total Bid Price are costs for complying with the Florida Trench Safety Act (90-96, Laws of Florida) effective October 1, 1990. The bidder further identifies the costs to be summarized below:

	Trench Safety Measure (Description)	Qty	Units (LF,SY,Etc.)	Unit Cost	Extended
A.	_____	_____	_____	\$_____	\$_____
B.	_____	_____	_____	\$_____	\$_____
C.	_____	_____	_____	\$_____	\$_____
D.	_____	_____	_____	\$_____	\$_____
				TOTAL \$	_____

In witness whereof, the Bidder has hereunto set his signature and affixed his seal this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

Firm: \_\_\_\_\_

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

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

(SEAL)

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

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



**SECTION 00421**

**PROPOSED SUBCONTRACTORS FORM**

---

**PARTICULARS:**

- 1.01 Herewith is the list of Subcontractors referenced in the bid submitted by:
- 1.02 (Bidder): \_\_\_\_\_
- 1.03 To (Owner): Nassau County School Board
- 1.04 Dated \_\_\_\_\_ and which is an integral part of the Bid Form.
- 1.05 The following work will be performed (or provided) by Subcontractors and coordinated by us:

**LIST OF SUBCONTRACTORS:**

2.01	WORK SUBJECT	SUBCONTRACTOR NAME
2.02	Paving	_____
2.03	Earthwork	_____
2.04	Striping	_____
2.05	Grassing	_____
2.06	Fencing	_____
2.07	Storm Pipe	_____
2.08	Concrete	_____
2.09	_____	_____

**END OF SECTION**

**SECTION 00430**

**BID BOND (PENAL SUM FORM)**

Any singular reference to bidder, surety, owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SURETY (*Name, and Address of Principal Place of Business*):

\_\_\_\_\_  
\_\_\_\_\_

OWNER (*Name and Address*):

Nassau County School Board  
1201 Atlantic Avenue  
Fernandina Beach, Florida 32034

BID

Bid Due Date: \_\_\_\_\_

Description (*Project Name— Include Location*): Hilliard Elementary School Parent Pick-Up Lane Extension  
Hilliard, Florida

BOND: 5% of Maximum Bid (Base Bid plus Alternates)

Bond Number: \_\_\_\_\_

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

Penal sum \_\_\_\_\_ \$ \_\_\_\_\_  
(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

**BIDDER**

**SURETY**

\_\_\_\_\_  
Bidder's Name and Corporate Seal (Seal)

\_\_\_\_\_  
Surety's Name and Corporate Seal (Seal)

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

By: \_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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

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

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

*Note: Addresses are to be used for giving any required notice.  
Provide execution by any additional parties, such as joint venturers, if necessary.*

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
  - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2 All Bids are rejected by Owner, or
  - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**SECTION 00510**  
**NOTICE OF AWARD**

---

Date of Issuance: \_\_\_\_\_

Owner: Nassau County School Board Owner's Contract No.: \_\_\_\_\_

Engineer: Mittauer & Associates, Inc. Engineer's Project No.: 0506-09-1

Project: Hilliard Elementary School Parent Pick- Up Lane Extension Contract Name: \_\_\_\_\_

Bidder: \_\_\_\_\_

Bidder's Address: \_\_\_\_\_

**TO BIDDER:**

You are notified that Owner has accepted your Bid dated [\_\_\_\_\_] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

---

*[describe Work, alternates, or sections of Work awarded]*

The Contract Price of the awarded Contract is: \$\_\_\_\_\_ *[note if subject to unit prices, or cost-plus]*

[ ] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically. *[revise if multiple copies accompany the Notice of Award]*

a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner [\_\_\_\_] counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security *[e.g., performance and payment bonds]* and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

---

Owner: Nassau County School Board, Nassau County, Florida

\_\_\_\_\_  
Authorized Signature

By: Jeffrey L. Bunch

Title: Director of Facilities

Copy: Mittauer & Associates, Inc.

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EJCDC® C-510, Notice of Award.

Prepared and published 2013 by the Engineers Joint Contract Documents Committee.



#### 4.03 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
1. Substantial Completion: Contractor shall pay Owner \$500 for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
  2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$300 for each day that expires after such time until the Work is completed and ready for final payment.
  3. Liquidated damages for failing to timely attain Substantial Completion and Final Completion are additive and will be imposed concurrently.

#### **ARTICLE 5 – CONTRACT PRICE**

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:
- A. For all Work, at the prices stated in Contractor's Bid. See Contractor's Bid (Section 00410).

#### **ARTICLE 6 – PAYMENT PROCEDURES**

##### 6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

##### 6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment in accordance with Paragraph 15.01 of the General Conditions during performance of the Work as provided in Paragraph 6.02.A.1. below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract:

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- a. 90 percent of Work completed (with the balance being retainage); and
  - b. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 90 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

**ARTICLE 7 – INTEREST**

- 7.01 All amounts not paid when due shall bear interest in accordance with the Local Government Prompt Payment Act, Florida Statute 218, Part VII.

**ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS**

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
  - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
  - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
  - E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings if any identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor’s safety precautions and programs.
  - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies,

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or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

## **ARTICLE 9 – CONTRACT DOCUMENTS**

### **9.01 Contents**

- A. The Contract Documents consist of the following:
  - 1. This Agreement (Section 00520).
  - 2. Performance bond (Section 00610).
  - 3. Payment bond (Section 00615).
  - 4. Other bonds (if any).
  - 5. General Conditions (Section 00700).
  - 6. Supplementary Conditions (Section 00800).
  - 7. Specifications as listed in the table of contents of the Project Manual.
  - 8. Drawings (not attached but incorporated by reference) consisting of 10 sheets with each sheet bearing the following general title: Hilliard Elementary School Parent Pick-Up Lane Extension.
  - 9. Addenda (numbers \_\_\_ to \_\_\_, inclusive).
  - 10. Exhibits to this Agreement:
    - a. Contractor's Bid (Section 00410).
  - 11. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
    - a. Notice to Proceed.
    - b. Work Change Directives.
    - c. Change Orders.
    - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

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- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

## **ARTICLE 10 – MISCELLANEOUS**

### **10.01 Terms**

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

### **10.02 Assignment of Contract**

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

### **10.03 Successors and Assigns**

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

### **10.04 Severability**

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

### **10.05 Contractor's Certifications**

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
  1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
  2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

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4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions:* Not applicable

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Contract).

OWNER: Nassau County School Board

CONTRACTOR:

By: Dr. Kathy K. Burns

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

Title: Superintendent

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

*(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

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

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

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

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

Address for giving notices:

Address for giving notices:

Nassau County School Board

1201 Atlantic Avenue

Fernandina Beach, Florida 32034

Contractor

License No.: \_\_\_\_\_

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Designated Representative:

Name: Jeffrey L. Bunch

Title: Director of Facilities

Address: Nassau County School Board

86334 Goodbread Road, Room 01-12

Yulee, Florida 32097

Phone: (904) 225-0573, Ext. 8107

Facsimile: (904) 225-0094

Email: jeffrey.bunch@nassau.k12.fl.us

Designated Representative:

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

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

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: \_\_\_\_\_

Facsimile: \_\_\_\_\_

Email: \_\_\_\_\_

**END OF SECTION**

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**SECTION 00610**

**PERFORMANCE BOND**

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

Nassau County School Board  
1201 Atlantic Avenue  
Fernandina Beach, Florida 32034

**CONSTRUCTION CONTRACT**

Effective Date of the Agreement:

Amount:

Description *(name and location):* Hilliard Elementary School Parent Pick-Up Lan Extension  
Nassau County, Florida

**BOND**

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form:  None  See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

**CONTRACTOR AS PRINCIPAL**

**SURETY**

\_\_\_\_\_  
Contractor's Name and Corporate Seal *(seal)*

\_\_\_\_\_  
Surety's Name and Corporate Seal *(seal)*

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

By: \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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

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

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.**

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
  - 3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
  - 3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
  - 3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
  - 5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
  - 5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
- 5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
  - 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
  - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
  - 7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - 7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
  - 7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

#### 14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including

allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

Bond shall be recorded in the County in which work is performed in accordance with Florida Statutes Section 255.05.

**SECTION 00615**

**PAYMENT BOND**

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

Nassau County School Board  
1201 Atlantic Avenue  
Fernandina Beach, Florida 32034

**CONSTRUCTION CONTRACT**

Effective Date of the Agreement:

Amount:

Description *(name and location):* Hilliard Elementary School Parent Pick-Up Lane Extension  
Nassau County, Florida

**BOND**

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form:  None  See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

**CONTRACTOR AS PRINCIPAL**

**SURETY**

\_\_\_\_\_  
Contractor's Name and Corporate Seal *(seal)*

\_\_\_\_\_  
Surety's Name and Corporate Seal *(seal)*

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

By: \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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

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

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.**

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
  - 5.1 Claimants who do not have a direct contract with the Contractor,
    - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2 Pay or arrange for payment of any undisputed amounts.
  - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.



11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
  12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
  13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
  14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
  15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
- 16. Definitions**
- 16.1 **Claim:** A written statement by the Claimant including at a minimum:
    1. The name of the Claimant;
    2. The name of the person for whom the labor was done, or materials or equipment furnished;
    3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
    4. A brief description of the labor, materials, or equipment furnished;
    5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
  - 16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
  - 16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
  - 16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
  18. Modifications to this Bond are as follows:
 

Bond shall be recorded in the County in which work is performed in accordance with Florida Statutes Section 255.05.
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
  7. The total amount of previous payments received by the Claimant; and
  8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

Application Period: From (Contractor): Contract: Contractor's Project No.:	Application Date: Via (Engineer): Engineer's Project No.: 0506-09-1
To (Owner): Nassau County School Board	Mittauer & Associates, Inc.
Project: Hilliard Elementary School Parent Pick-Up Lane Extension	
Owner's Contract No.:	

**Application For Payment  
Change Order Summary**

Approved Change Orders	Additions	Deductions	
<b>TOTALS</b>			
<b>NET CHANGE BY</b>			
<b>CHANGE ORDERS</b>			

1. ORIGINAL CONTRACT PRICE.....	\$ _____
2. Net change by Change Orders.....	\$ _____
3. Current Contract Price (Line 1 + 2).....	\$ _____
4. TOTAL COMPLETED AND STORED TO DATE	
(Column F total on Progress Estimates).....	\$ _____
5. RETAINAGE:	
a. <input checked="" type="checkbox"/> Work Completed.....	\$ _____
b. <input checked="" type="checkbox"/> Stored Material.....	\$ _____
c. Total Retainage (Line 5.a + Line 5.b).....	\$ _____
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5.c).....	\$ _____
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$ _____
8. AMOUNT DUE THIS APPLICATION.....	\$ _____
9. BALANCE TO FINISH, PLUS RETAINAGE	
(Column G total on Progress Estimates + Line 5.c above).....	\$ _____

**Contractor's Certification**

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment.

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all Liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such Liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

Payment of:	\$ _____
is recommended by:	(Line 8 or other - attach explanation of the other amount)  Michael P. Tibble, P.E. _____ Date Mittauer & Associates, Inc. _____
Payment of:	\$ _____
is approved by:	(Line 8 or other - attach explanation of the other amount)  Nassau County School Board _____ (Date)
Approved by:	Funding or Financing Entity (if applicable) _____ (Date)

**Contractor Signature**

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

Progress Estimate - Lump Sum Work

Contractor's Application

For (Contract): Hilliard Elementary School Parent Pick-Up Lane Extension		Application Number: Application Date:					
Application Period:		Application Date:					
Specification Section No.	A Description	B Scheduled Value (\$)	Work Completed		E Materials Presently Stored (not in C or D)	F Total Completed and Stored to Date (C + D + E)	G Balance to Finish (B - F)
			C From Previous Application (C+D)	D This Period			
<b>Totals</b>							

Modified per Mitbauer Associates, Inc.  
 EJCDC® C-620 Contractor's Application for Payment  
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 00620-2

**Stored Material Summary**

**Contractor's Application**

For (Contract):	Hilliard Elementary School Parent Pick-Up Lane Extension												
Application Number:													
Application Period:													
A		B		C		D		E		F		G	
Bid Item No.	Supplier Invoice No.	Submittal No. (with Specification Section No.)	Storage Location	Description of Materials or Equipment Stored		Stored Previously		Amount Stored this Month (\$)		Subtotal Amount Completed and Stored to Date (D + E)	Incorporated in Work		Materials Remaining in Storage (\$) (D + E - F)
						Date Placed into Storage (Month/Year)	Amount (\$)	Amount (\$)	Date (Month/Year)		Amount (\$)		
<b>Totals</b>													

**SECTION 00641**

**WAIVER AND RELEASE OF LIEN UPON FINAL PAYMENT**

The undersigned lienor, in consideration of the final payment in the amount of \$ \_\_\_\_\_, hereby waives and releases its lien and right to claim a lien for labor, services, or materials furnished to Nassau County School Board on the job of Hilliard Elementary School Parent Pick-Up Lane Extension to the following described property:

**HILLIARD ELEMENTARY SCHOOL  
PARENT PICK-UP LANE EXTENSION  
NASSAU COUNTY SCHOOL BOARD  
NASSAU COUNTY, FLORIDA**

DATED on (month and day), (year)

By:

(Name)  
(Title)  
(Name of Business)

Sworn to and subscribed before me this day of \_\_\_\_\_ (date) by \_\_\_\_\_ (name),  
Who is personally known to me or produced \_\_\_\_\_ (form of I.D.), as identification, and  
did take an oath.

\_\_\_\_\_  
Name of Notary Public

My Commission Expires: \_\_\_\_\_ (date)

SECTION 00650

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

Project Name: Hilliard Elementary School Parent Pick-Up Lane Extension

Location: Nassau County, Florida

A/E#: 0506-09-1

TO (Owner): Nassau County School Board

Address: 1201 Atlantic Avenue

City/ State/ Zip: Fernandina Beach, Florida, 32034

Contractor: Contract Date:

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the (here insert name and address of Surety Company)

, Surety Company,

on bond of (here insert name and address of Contractor)

, Contractor,

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the Surety Company of any of its obligations to the Nassau County School Board, Owner, as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF, the Surety Company has hereunto set its hand this \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_

Surety Company

Signature of Authorized Representative

Title

Attest: (Seal)

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 Laws and Regulations.

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## TABLE OF CONTENTS

	<b>Page</b>
Article 1 – Definitions and Terminology .....	1
1.01 Defined Terms.....	1
1.02 Terminology .....	5
Article 2 – Preliminary Matters.....	6
2.01 Delivery of Bonds and Evidence of Insurance.....	6
2.02 Copies of Documents .....	6
2.03 Before Starting Construction .....	6
2.04 Preconstruction Conference; Designation of Authorized Representatives .....	7
2.05 Initial Acceptance of Schedules .....	7
2.06 Electronic Transmittals.....	7
Article 3 – Documents: Intent, Requirements, Reuse .....	8
3.01 Intent.....	8
3.02 Reference Standards.....	8
3.03 Reporting and Resolving Discrepancies .....	8
3.04 Requirements of the Contract Documents .....	9
3.05 Reuse of Documents .....	10
Article 4 – Commencement and Progress of the Work.....	10
4.01 Commencement of Contract Times; Notice to Proceed .....	10
4.02 Starting the Work.....	10
4.03 Reference Points .....	10
4.04 Progress Schedule .....	10
4.05 Delays in Contractor’s Progress .....	11
Article 5 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions.....	12
5.01 Availability of Lands .....	12
5.02 Use of Site and Other Areas.....	12
5.03 Subsurface and Physical Conditions.....	13
5.04 Differing Subsurface or Physical Conditions .....	14
5.05 Underground Facilities .....	15
5.06 Hazardous Environmental Conditions at Site .....	17

Article 6 – Bonds and Insurance .....	19
6.01 Performance, Payment, and Other Bonds .....	19
6.02 Insurance—General Provisions .....	19
6.03 Contractor’s Insurance .....	20
6.04 Owner’s Liability Insurance .....	23
6.05 Property Insurance .....	23
6.06 Waiver of Rights .....	25
6.07 Receipt and Application of Property Insurance Proceeds .....	25
Article 7 – Contractor’s Responsibilities .....	26
7.01 Supervision and Superintendence .....	26
7.02 Labor; Working Hours .....	26
7.03 Services, Materials, and Equipment.....	26
7.04 “Or Equals” .....	27
7.05 Substitutes .....	28
7.06 Concerning Subcontractors, Suppliers, and Others .....	29
7.07 Patent Fees and Royalties .....	31
7.08 Permits .....	31
7.09 Taxes .....	32
7.10 Laws and Regulations.....	32
7.11 Record Documents.....	32
7.12 Safety and Protection.....	32
7.13 Safety Representative .....	33
7.14 Hazard Communication Programs .....	33
7.15 Emergencies .....	34
7.16 Shop Drawings, Samples, and Other Submittals.....	34
7.17 Contractor’s General Warranty and Guarantee.....	36
7.18 Indemnification .....	37
7.19 Delegation of Professional Design Services .....	37
Article 8 – Other Work at the Site .....	38
8.01 Other Work .....	38
8.02 Coordination .....	39
8.03 Legal Relationships.....	39

Article 9 – Owner’s Responsibilities.....	40
9.01 Communications to Contractor.....	40
9.02 Replacement of Engineer .....	40
9.03 Furnish Data .....	40
9.04 Pay When Due.....	40
9.05 Lands and Easements; Reports, Tests, and Drawings .....	40
9.06 Insurance .....	40
9.07 Change Orders.....	40
9.08 Inspections, Tests, and Approvals.....	41
9.09 Limitations on Owner’s Responsibilities .....	41
9.10 Undisclosed Hazardous Environmental Condition.....	41
9.11 Evidence of Financial Arrangements.....	41
9.12 Safety Programs .....	41
Article 10 – Engineer’s Status During Construction.....	41
10.01 Owner’s Representative.....	41
10.02 Visits to Site.....	41
10.03 Project Representative.....	42
10.04 Rejecting Defective Work.....	42
10.05 Shop Drawings, Change Orders and Payments.....	42
10.06 Determinations for Unit Price Work .....	42
10.07 Decisions on Requirements of Contract Documents and Acceptability of Work .....	42
10.08 Limitations on Engineer’s Authority and Responsibilities.....	42
10.09 Compliance with Safety Program.....	43
Article 11 – Amending the Contract Documents; Changes in the Work .....	43
11.01 Amending and Supplementing Contract Documents .....	43
11.02 Owner-Authorized Changes in the Work .....	44
11.03 Unauthorized Changes in the Work .....	44
11.04 Change of Contract Price .....	44
11.05 Change of Contract Times .....	45
11.06 Change Proposals .....	45
11.07 Execution of Change Orders.....	46
11.08 Notification to Surety.....	47

Article 12 – Claims.....	47
12.01 Claims .....	47
Article 13 – Cost of the Work; Allowances; Unit Price Work.....	48
13.01 Cost of the Work .....	48
13.02 Allowances .....	50
13.03 Unit Price Work .....	51
Article 14 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work.....	52
14.01 Access to Work.....	52
14.02 Tests, Inspections, and Approvals.....	52
14.03 Defective Work.....	53
14.04 Acceptance of Defective Work.....	53
14.05 Uncovering Work .....	53
14.06 Owner May Stop the Work .....	54
14.07 Owner May Correct Defective Work.....	54
Article 15 – Payments to Contractor; Set-Offs; Completion; Correction Period .....	55
15.01 Progress Payments.....	55
15.02 Contractor’s Warranty of Title .....	58
15.03 Substantial Completion.....	58
15.04 Partial Use or Occupancy .....	59
15.05 Final Inspection .....	59
15.06 Final Payment.....	59
15.07 Waiver of Claims .....	61
15.08 Correction Period .....	61
Article 16 – Suspension of Work and Termination .....	62
16.01 Owner May Suspend Work .....	62
16.02 Owner May Terminate for Cause.....	62
16.03 Owner May Terminate For Convenience .....	63
16.04 Contractor May Stop Work or Terminate .....	63
Article 17 – Final Resolution of Disputes .....	64
17.01 Methods and Procedures.....	64
Article 18 – Miscellaneous .....	64
18.01 Giving Notice .....	64
18.02 Computation of Times.....	64
18.03 Cumulative Remedies .....	64

18.04	Limitation of Damages .....	65
18.05	No Waiver .....	65
18.06	Survival of Obligations .....	65
18.07	Controlling Law .....	65
18.08	Headings.....	65

## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. 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, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
  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. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  5. *Bidder*—An individual or entity that submits a Bid to Owner.
  6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
  7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
  8. *Change Order*—A document 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, or other revision to the Contract, issued on or after the Effective Date of the Contract.
  9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
  10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *Notice to Proceed*—A written notice 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.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *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.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *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.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.



37. *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, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *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.
40. *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.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *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 a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *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 but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *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; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 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 15.03 or 15.04).
- 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. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 – PRELIMINARY MATTERS**

### **2.01 *Delivery of Bonds and Evidence of Insurance***

- A. *Bonds*: 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 Contractor’s Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

### **2.02 *Copies of Documents***

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

### **2.03 *Before Starting Construction***

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), 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;
  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.

#### 2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

#### 2.05 *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 2.03.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 the component parts of the Work.

#### 2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

### **ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, 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.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

#### **3.02 *Reference Standards***

- A. Standards Specifications, Codes, Laws and Regulations
  - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, 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, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract 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, reference standard, 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 part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

#### **3.03 *Reporting and Resolving Discrepancies***

- A. *Reporting Discrepancies:*
  - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
  - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); 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 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

### 3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

## **ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK**

### 4.01 *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 Contract 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 Contract. 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 Contract, whichever date is earlier.

### 4.02 *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 such date.

### 4.03 *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.

### 4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 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 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. 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, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

#### 4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, 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 Times and Contract Price. 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.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. 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. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  2. abnormal weather conditions;
  3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
  4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.



- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

**ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

5.01 *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.
- 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 permanent improvements are to be made 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.

5.02 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all 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 directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent 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 and adjacent areas 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 of 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 structures or land to stresses or pressures that will endanger them.

### 5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
  - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
  - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
  - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
  - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
  - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  - 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

#### 5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site 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 5.03 is materially inaccurate; or
  2. is of such a nature as to require a change in the Drawings or Specifications; 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 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, 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 fall within any one or more of the categories described in Paragraph 5.04.A;
    - 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 Paragraph 13.03; and,

- c. 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.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
  - a. Contractor knew of the existence of such condition at the time Contractor made a 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 otherwise; or
  - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent 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 do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
    - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
    - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
    - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then 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 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
  - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
    - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
    - 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 Paragraph 13.03;
    - c. 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; and
    - d. Contractor gave the notice required in Paragraph 5.05.B.
  - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
  - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings*: The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
  2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
  2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. 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, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. 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, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 6 – BONDS AND INSURANCE

### 6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, 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. 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 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then 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 bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

### 6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is



maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, 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.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

### 6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
  - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
  - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
  2. claims for damages insured by reasonably available personal injury liability coverage.
  3. 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.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
    - a. Such insurance shall be maintained for three years after final payment.
    - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
  2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
  3. Broad form property damage coverage.
  4. Severability of interest.
  5. Underground, explosion, and collapse coverage.
  6. Personal injury coverage.
  7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
  8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against 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. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
  2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
  3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
  4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
  5. be appropriate for the Work being performed and provide protection from claims that 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.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

#### 6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, 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.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

#### 6.05 *Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable 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 Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
  - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
  - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
  - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
  6. extend to cover damage or loss to insured property while in transit.
  7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
  8. allow for the waiver of the insurer's subrogation rights, as set forth below.
  9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
  10. not include a co-insurance clause.
  11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
  12. include performance/hot testing and start-up.
  13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

## 6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, 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 insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
  - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
  - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.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, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

## 6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

## **ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES**

### *7.01 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.
- 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.

### *7.02 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, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

### *7.03 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, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work 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.

#### 7.04 "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 Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item 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 is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that 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, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, 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
      - 4) it is not objectionable to Owner.
    - 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.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.



- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

#### 7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
  - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
  - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
  - 3. 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:
    - a. shall certify that the proposed substitute item will:
      - 1) perform adequately the functions and achieve the results called for by the general design,
      - 2) be similar in substance to that specified, and
      - 3) be suited to the same use as that specified.
    - b. will state:
      - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
      - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
      - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
    - c. will identify:
      - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
  - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
  - C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
  - D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
  - E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
  - F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

#### 7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. 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 the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. 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.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. 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.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

- O. 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 money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

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

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, 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 the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

#### 7.09 *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.

#### 7.10 *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 or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

#### 7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent 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, other work in progress, 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 Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
  - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
  - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
  - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.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 at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
  - F. Contractor's duties and responsibilities for safety and protection 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 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
  - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

#### 7.13 *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.

#### 7.14 *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.

#### 7.15 *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.

#### 7.16 *Shop Drawings, Samples, and Other Submittals*

##### A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
  - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
  - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
  - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each 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 of that submittal, and that Contractor approves the 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 set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

##### 1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- 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 7.16.D.

2. *Samples:*
  - a. Contractor shall submit the number of Samples required in the Specifications.
  - b. Contractor shall 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 7.16.D.
3. 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. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- 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 or to safety precautions or programs incident thereto.
  3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
  4. Engineer's review and approval of a Shop Drawing or Sample 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 7.16.A.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 will document any such approved variation from the requirements of the Contract Documents in a Field Order.
  5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
  6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
  7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.



8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

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.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on 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;
  6. the issuance of a notice of acceptability by Engineer;
  7. any inspection, test, or approval by others; or
  8. any correction of defective Work by Owner.

- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

#### 7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.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 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
  - 1. the 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.

#### 7.19 *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 Laws and Regulations.
- 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, 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, 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 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

## **ARTICLE 8 – OTHER WORK AT THE SITE**

### **8.01 *Other Work***

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, 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.

## 8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
  - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
  - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

## 8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. 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.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all 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 damage, delay, disruption, or interference.

## **ARTICLE 9 – OWNER'S RESPONSIBILITIES**

### **9.01 *Communications to Contractor***

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

### **9.02 *Replacement of Engineer***

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

### **9.03 *Furnish Data***

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

### **9.04 *Pay When Due***

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

### **9.05 *Lands and Easements; Reports, Tests, and Drawings***

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

### **9.06 *Insurance***

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

### **9.07 *Change Orders***

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *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.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

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

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

**ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION**

10.01 *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.

10.02 *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 10.08. 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.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. 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.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. 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, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

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

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, 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 15.06.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 10.08 shall also apply to the Resident Project Representative, if any.

#### 10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

### **ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK**

#### 11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
  - 1. *Change Orders:*
    - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
    - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
  - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an



adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize minor changes in the Work if the changes 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. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.02 *Owner-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. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.03 *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, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

#### 11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. 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, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
  2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
  3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, 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 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
    - b. for costs incurred under Paragraph 13.01.B.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 Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
    - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    - 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 11.04.C.2.a through 11.04.C.2.e, inclusive.

#### 11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

#### 11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
  2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
  3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

#### 11.07 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. 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;
  2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
  4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

#### 11.08 *Notification to Surety*

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

### **ARTICLE 12 – CLAIMS**

#### 12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
  - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
  - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
  - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
  - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## **ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### 13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
  1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
  2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
  1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and 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 13.01.
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, as imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to 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 6.05), 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 communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *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 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here 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 Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole 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, Change Proposal, Claim, set-off, or other 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 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, 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.

## 13.02 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*: Contractor agrees that:
  - 1. 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
  - 2. 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*: 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.

### 13.03 *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. Payments to Contractor for Unit Price Work will be based on actual quantities.
- 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. 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 the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price 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;
  - 2. there is no corresponding adjustment with respect to any other item of Work; and
  - 3. Contractor believes that it 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 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

### **14.01 Access to Work**

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

### **14.02 Tests, Inspections, and Approvals**

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- 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, obtaining, and paying for all inspections and tests required:
  - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
  - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
  - 3. by manufacturers of equipment furnished under the Contract Documents;
  - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
  - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then 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, and provide all necessary labor, material, and equipment.
  - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages 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 pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  - 2. 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, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *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, then 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.

#### 14.07 *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, 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, then 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 14.07, 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, 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 incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. 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 14.07.

## **ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

### **15.01 Progress Payments**

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 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 during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *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, a warehouse bond, 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.
- C. *Review of Applications:*
1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
  2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
    - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
    - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
  4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
    - a. to supervise, direct, or control the Work, or
    - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
    - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
    - d. to make any examination to ascertain how or for what purposes Contractor has used the money 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 15.01.C.2.
  6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
    - a. the Work is defective, requiring correction or replacement;
    - b. the Contract Price has been reduced by Change Orders;
    - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
    - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
  - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. the Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. the Contract Price has been reduced by Change Orders;
  - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
  - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. 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;
  - l. there are other items entitling Owner to a set off against the amount recommended.
- 2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, 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, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

#### 15.03 *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 and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- 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 preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- 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. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
  - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work 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 15.03 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 6.05 regarding builder's risk or other property insurance.

#### 15.05 *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, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 15.06 *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, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
  - d. a list of all disputes that Contractor believes are unsettled; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

**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 have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. 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 15.07. 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. *Completion of Work:*** The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

**D. *Payment Becomes Due:*** Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

#### 15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

#### 15.08 *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 Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such other adjacent areas;
  - 2. correct such defective Work;
  - 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 to 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. 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 repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- 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, 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 are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION**

### **16.01 *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 written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

### **16.02 *Owner May Terminate for Cause***

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and 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);
  - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
  - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
  - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, 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 complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.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 the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses,

and damages exceeds 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.

- F. 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, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### 16.03 *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; and
  - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

#### 16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) 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 16.03.
- 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 are not intended to preclude Contractor from submitting a Change Proposal 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 17 – FINAL RESOLUTION OF DISPUTES**

### **17.01 *Methods and Procedures***

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
  - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
  - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
  - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
  - 2. agree with the other party to submit the dispute to another dispute resolution process; or
  - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

## **ARTICLE 18 – MISCELLANEOUS**

### **18.01 *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, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
  - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

### **18.02 *Computation of Times***

- A. When any period of time is referred to in the Contract 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.

### **18.03 *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. 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.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Headings*

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

**SECTION 00800**  
**SUPPLEMENTARY CONDITIONS**

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These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC® C-700 (2013 Edition). All provisions that are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated 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.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

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**ARTICLE 1 – DEFINITIONS AND TERMINOLOGY**

SC-1.01 The following have been modified:

Add the following sentence to **"4. Bid"** **"Use of the words Bid and Proposal is interchangeable throughout this Contract."**

Add the following sentence to **"26. Notice of Award"** **"When requested by OWNER, the Notice of Award may be issued by the ENGINEER."**

Add the following sentence to **"27. Notice to Proceed"** **"When requested by OWNER, the Notice to Proceed may be issued by ENGINEER."**

Add the following new defined terms:

**"49. Product - As used in the Project Manual, includes materials, fabrications, systems and equipment."**

**"50. Construct - As used in the Project Manual, means to furnish and install, complete and ready for intended use."**

**ARTICLE 2 – PRELIMINARY MATTERS**

SC-2.01 Delete Paragraph 2.01 B. in its entirety and insert the following in its place:

**"B. Evidence of Contractor's Insurance: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies of insurance (including all endorsements, and identification of applicable self-insured retentions and deductibles) required to be provided by Contractor in Article 6. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision."**

- SC-2.01 Delete Paragraph 2.01 C. in its entirety.
- SC-2.02 Delete Paragraph 2.02 A. in its entirety and insert the following new paragraph in its place:

**“A. Owner shall furnish to Contractor four (4) copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully executed counterpart of the Agreement). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.”**

Add the following immediately after 2.02 B.:

**“C. Engineer is not custodian of Public Records related to this Project.”**

- SC-2.03 Add the following immediately after 2.03 A.3.:

**“4. Contractor shall perform no portion of the Work at any time without Contract Documents or, where specified, approved Shop Drawings for such portion of the Work.”**

#### **ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK**

- SC-4.01 A. Delete in its entirety and substitute in its place:

**“4.01 Commencement of Contract Times: Notice to Proceed**

**A. The date of commencement of the Work is the date established in a Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the OWNER-CONTRACTOR Agreement or such other date as may be established therein.”**

- SC-4.01 Add the following Paragraph 4.01 B. and C. as follows:

**“B. Contractor shall perform no portion of the Work at any time without Contract Documents or, where specified, approved Shop Drawings for such portion of the Work.**

**“C. By executing the Contract, Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents.”**

- SC-4.02 Add following paragraph:

**“B. If Contractor does not start actual construction in the field in accordance with his submitted schedule, he may be liable for the cost of Engineer’s Resident Project Representative (RPR) until actual construction commences.”**



**ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

- SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03 B.:
- “C. The following report(s) of explorations and tests of subsurface conditions at or adjacent to the Site are known to Owner:**
    - 1. Report prepared by Universal Engineering Sciences entitled ‘Report of a Geotechnical Exploration’, shall be made available by Addendum. The Technical Data contained in such report upon whose accuracy Contractor may rely are Soil Boring Logs.**
  - D. The following drawings of physical conditions relating to existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities) are known to Owner: None.”**
- SC-5.06 Delete Paragraphs 5.06 A. and 5.06 B. in their entirety and insert the following:
- “A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner or Engineer.**
  - B. Not Used.”**

**ARTICLE 6 – BONDS AND INSURANCE**

- SC-6.02 Add the following paragraph immediately after Paragraph 6.02 B.:
- “1. Contractor may obtain worker’s compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the project is located, (b) is certified or authorized as a worker’s compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker’s compensation insurance for similar projects by the state within the last 12 months.”**
- SC-6.02 Delete Paragraph 6.02 D. in its entirety.
- SC-6.02 Paragraph 6.02 E.: Delete the words “or Contractor” in the paragraph.
- SC-6.03 Add the following new paragraph immediately after Paragraph 6.03 J.:
- “K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:**
    - 1. Workers’ Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:**

<b>State:</b>	<u><b>Statutory</b></u>
<b>Federal, if applicable (e.g., Longshoreman’s):</b>	<u><b>Statutory</b></u>
<b>Jones Act coverage, if applicable:</b>	
<b>Bodily injury by accident, each accident</b>	<b>\$ <u>N/A</u></b>
<b>Bodily injury by disease, aggregate</b>	<b>\$ <u>N/A</u></b>

**Employer's Liability:**

Bodily injury, each accident	\$ <u>100,000</u>
Bodily injury by disease, each employee	\$ <u>500,000</u>
Bodily injury/disease aggregate	\$ <u>100,000</u>

Foreign voluntary worker compensation Statutory

**2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:**

General Aggregate	\$ <u>2,000,000</u>
Products - Completed Operations Aggregate	\$ <u>1,000,000</u>
Personal and Advertising Injury	\$ <u>1,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000</u>

**3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:**

**Bodily Injury:**

Each person	\$ <u>1,000,000</u>
Each accident	\$ <u>1,000,000</u>

**Property Damage:**

Each accident	\$ <u>100,000</u>
<i>[or]</i>	
Combined Single Limit of	\$ <u>1,000,000</u>

**4. Excess or Umbrella Liability (Optional):**

Per Occurrence	\$ <u>N/A</u>
General Aggregate	\$ <u>N/A</u>

**Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages, where applicable.**

5. Contractor's Pollution Liability:

Each Occurrence	\$ <u>N/A</u>
General Aggregate	\$ <u>N/A</u>

If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following: N/A

7. Contractor's Professional Liability:

Each Claim	\$ <u>N/A</u>
Annual Aggregate	\$ <u>N/A</u>

*[See Paragraph 6.03.H of the General Conditions.]*

8. *[Here list additional types and amounts of insurance that may be required by Owner.]*"

SC-6.05 A. Delete Paragraph 6.05 A. of the General Conditions and substitute the following in its place:

**"Contractor shall provide and maintain installation floater insurance for property under the care, custody, or control of Contractor. The installation floater insurance shall be a broad form or "all risk" policy providing coverage for all materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work. Coverage under the Contractor's installation floater will include:**

1. any loss to property while in transit,
2. any loss at the Site, and
3. any loss while in storage, both on-site and off-site.

**Coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable. The Contractor will be solely responsible for any deductible carried under this coverage and claims on materials, supplies, machinery, fixture, and equipment that will be incorporated into the Work while in transit or in storage. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them."**

## ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC-7.02 C. Add the following new paragraph immediately after Paragraph 7.02 B.:

**"Contractor shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal**

holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.”

SC-7.03 Add the following after Paragraph 7.03 C.:

**“D. The use of asbestos or asbestos-based fiber materials is prohibited in this Project.”**

SC-7.03 Add the following new paragraph immediately after Paragraph 7.03.D:

**“E. The Occupational Safety and Health Administration excavation safety standards, 29 CFR 1926.650 Subpart P trench safety standards are in effect during the period of construction of the Project. In compliance with current State of Florida statutes, the Contractor or subcontractor performing trench excavation work on the Project shall comply with the applicable trench safety standards.”**

SC-7.18 Add the following new paragraph immediately after Paragraph 7.18 C.2:

**“D. In conformance with the requirements of Section 725.06, Florida Statutes, the specific considerations for CONTRACTOR’s promises are:**

- 1. One dollar (\$1.00) in hand paid by OWNER, ENGINEER, and ENGINEER’s employees to CONTRACTOR, receipt whereof is hereby acknowledged and the adequacy of which CONTRACTOR accepts as completely fulfilling the obligations of OWNER, ENGINEER, and ENGINEER’s employees under the requirements of Section 725.06, Florida Statutes, and;**
- 2. The entry of OWNER and CONTRACTOR into the construction contract because, but for CONTRACTOR’s promises as contained in the General Conditions, OWNER would not have entered into the construction contract with CONTRACTOR.”**

## **ARTICLE 8 – OTHER WORK AT THE SITE**

SC-8.04 Add the following new paragraph immediately after Paragraph 8.03 D.:

**“8.04 Claims Between Contractors:**

- A. Should CONTRACTOR cause damage to the work or property of any other contractor at the Site, or should any claim arising out of CONTRACTOR’s performance of the Work at the Site be made by any other contractor against CONTRACTOR, OWNER or ENGINEER, CONTRACTOR shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law.**
- B. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless OWNER, ENGINEER and the officers, directors, partners, employees, agents and other consultants and subconsultants of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees**

and charges of engineers, architects, attorneys, and other professionals and court arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against OWNER, ENGINEER or ENGINEER's Consultants to the extent said claim is based on or arises out of CONTRACTOR's performance of the Work. Should another contractor cause damage to the Work or property of CONTRACTOR or should the performance of work by any other contractor at the Site give rise to any other Claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER or ENGINEER or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from OWNER or ENGINEER on account of any such damage or Claim.

- C. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of another contractor, and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Times attributable thereto, CONTRACTOR may make a Claim for an extension of times in accordance with Article 11. An extension of the Contract Times shall be CONTRACTOR's exclusive remedy with respect to OWNER and ENGINEER for any delay, disruption, interference, or hindrance caused by any other contractor. This paragraph does not prevent recovery from OWNER or ENGINEER for activities that are their respective responsibilities."

#### ARTICLE 9 – OWNER'S RESPONSIBILITIES

- SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

**"SC-9.13 Owner will furnish an "Owner's Site Representative" to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner's Site Representative is not Engineer's consultant, agent, or employee. Owner's Site Representative will be Wesley Peacock. The authority and responsibilities of Owner's Site Representative follow: Those of the building official."**

#### ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

- SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.A:

**"B. On this Project, by agreement with the Owner, Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work."**

## **ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

SC-15.01 D.1. In the first line of Paragraph 15.01.D.1, change “Ten days...” to read “Forty-five days...”.

SC-15.03 B. Add the following new subparagraph to Paragraph 15.03 B.:

- “1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.”**

## **ARTICLE 17 – FINAL RESOLUTION OF DISPUTES**

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

### **“17.02 Mediation**

- A. All matters subject to final resolution under this Article will be decided by mediation in accordance with the rules of the mediation agency mutually agreed upon by Owner and Contractor, subject to the conditions and limitations of this paragraph. This agreement to mediate and any other agreement or consent to mediate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction. The mediator will be mutually agreed upon by both parties.**
- B. The demand for mediation will be filed in writing with the other party to the Contract and with the selected mediator or mediation provider, and a copy will be sent to Engineer for information. The demand for mediation will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for mediation should include specific reference to Paragraph SC-17.02.D below.**
- C. No mediation arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer’s consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
  - 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the mediation; and**
  - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the mediation and which will arise in such proceedings.****

- D. The award rendered by the mediator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.
- E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- F. The fees and expenses of the mediators and any mediation service shall be shared equally by Owner and Contractor.”

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02:

**“17.03 Attorneys’ Fees: For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys’ fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, mediator, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties’ initial demand or defense positions in comparison with the final result.”**

**END OF SECTION**

**SECTION 00814**

**SWORN STATEMENT UNDER SECTION 287.133(3)(a),  
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to Nassau County School Board, Nassau County, Florida

by \_\_\_\_\_  
[print individual's name and title]

for \_\_\_\_\_  
[print name of entity submitting sworn statement]

whose business address is

\_\_\_\_\_

and (if applicable) its Federal Employer Identification Number (FEIN) is \_\_\_\_\_

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement: \_\_\_\_\_.)

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision or any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:

1. A predecessor or successor of a person convicted of a public entity crime: or

2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.



6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. **[indicate which statement applies.]**

\_\_\_ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

\_\_\_ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

\_\_\_ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. **[attach a copy of the final order]**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

\_\_\_\_\_  
[signature]

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 2020

Personally known \_\_\_\_\_

\_\_\_\_\_

OR Produced identification \_\_\_\_\_

Notary Public - State of \_\_\_\_\_

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

\_\_\_\_\_  
(Printed typed or stamped  
commissioned name of notary public)

**SECTION 00900**

**ADDENDA AND MODIFICATIONS**

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Bidding addenda and/or modifications issued prior to signing of the construction agreement are to be attached hereto.

**END OF SECTION**

## SECTION 01000

### ABBREVIATIONS

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#### PART 1 - GENERAL

#### 1.01 ABBREVIATIONS AND DESCRIPTIONS (WHERE APPLICABLE):

ABS	ACRYLONITRILE BUTADIENE STYRENE	CNR	CORNER
ABV	ABOVE	CO	CLEAN OUT
ACP	ASBESTOS CEMENT PIPE	CONC	CONCRETE
AFF	ABOVE FINISH FLOOR (REF. ELEV.)	CONT	CONTINUOUS
AFG	ABOVE FINISH GRADE (REF. ELEV.)	COORD	COORDINATE
ALUM	ALUMINUM	CPLG	COUPLING
ALT	ALTERNATE	CPP	CORRUGATED PLASTIC PIPE
APRX	APPROXIMATE(LY)	CPVC	CHLORINATED POLYVINYL CHLORIDE
ARCH	ARCHITECT(URAL)	CUL	CULVERT
ARV	AIR RELEASE VALVE	CV	CHECK VALVE
ASPH	ASPHALT	CY	CUBIC YARD
ASSY	ASSEMBLY	C/C	CENTER TO CENTER
BE	BURIED ELECTRIC	DBL	DOUBLE
BF	BOTTOM FACE	DEMO	DEMOLITION
BFO	BURIED FIBER OPTIC	DI	DUCTILE IRON
BFV	BUTTERFLY VALVE	DIA	DIAMETER
BITUM	BITUMINOUS OR BITUMASTIC	DIM	DIMENSION
B	BASELINE	DIP	DUCTILE IRON PIPE
BLDG	BUILDING	DOT	DEPARTMENT OF TRANSPORTATION
BLK	BLOCK	DR	DRAIN
BM	BENCH MARK	DW	DRIVEWAY
BOC	BACK OF CURB	DWG	DRAWING
BOT	BOTTOM	E	EAST
BT	BURIED TELEPHONE-CABLE	EA	EACH
BV	BALL VALVE	ECC	ECCENTRIC
BW	BOTH WAYS	EF	EACH FACE
C, CND	CONDUIT	EL, ELEV	ELEVATION
CAP	CAPACITY	ELEC	ELECTRIC(AL)
CATV	CABLE TELEVISION	EMER	EMERGENCY
CCUA	CLAY COUNTY UTILITY AUTHORITY	EP	EDGE OF PAVEMENT
CFM	CUBIC FEET PER MINUTE	EPDM	ETHYLENE PROPYLENE DIENE MONOMER
CFS	CUBIC FEET PER SECOND	ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE
CI	CAST IRON	EQUIP	EQUIPMENT
CIP	CAST IRON PIPE	ESMT	EASEMENT
℄	CENTERLINE	EST	ESTIMATE(D)
CLF	CHAIN LINK FENCE	EW	EACH WAY
CLR	CLEAR OR CLEARANCE	EWTB	EACH WAY TOP & BOTTOM
CM	CONCRETE MONUMENT	EXP	EXPANSION
CMP	CORRUGATED METAL PIPE	EX, EXIST	EXISTING
CMU	CONCRETE MASONRY UNIT	EXT	EXTERIOR

FB	FLAT BAR	IP	IRON PIPE
FD	FLOOR DRAIN	IPS	INTERNATIONAL PIPE STANDARD; IRON PIPE SIZE
FDN	FOUNDATION	JB	JUNCTION BOX
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	JT	JOINT
FF	FINISH FLOOR	K	KIP(1,000 LB)
FH	FIRE HYDRANT	KVA	KILOVOLT-AMPERE
FIG	FIGURE	KW	KILOWATT
FIN	FINISH(ED)	L	LEFT
FIN GR	FINISH GRADE	LAB	LABORATORY
FJ	FLANGED JOINT	LAV	LAVATORY
FL	FLANGE(D)	LB	POUND
FM	FORCE MAIN	LF	LINEAR FEET
FPM	FEET PER MINUTE	LP	LIGHT POLE
FPS	FEET PER SECOND	LR	LONG RADIUS
FPT	FEMALE PIPE THREAD	LS	LUMP SUM
FRP	FIBERGLASS REINFORCED PLASTIC	LWL	LOW WATER LEVEL
FT	FOOT OR FEET	MAINT	MAINTAIN OR MAINTENANCE
FW	FINISHED WATER	MAN	MANUAL(LY)
F/F	FACE TO FACE	MAX	MAXIMUM
G	GAS MAIN	MCC	MOTOR CONTROL CENTER
GAL	GALLON(S)	MES	METERED END SECTION
GALV	GALVANIZED	MECH	MECHANICAL
GIP	GALVANIZED IRON PIPE	MFR	MANUFACTURE
GND	GROUND	MG	MILLION GALLON(S)
GPD	GALLONS PER DAY	MGD	MILLION GALLONS PER DAY
GPH	GALLONS PER HOUR	MH	MANHOLE
GPM	GALLONS PER MINUTE	MIN	MINIMUM; MINUTE(S)
GPS	GALLONS PER SECOND	MISC	MISCELLANEOUS
GR	GRADE	MJ	MECHANICAL JOINT
GS	GALVANIZED STEEL	MON	MONUMENT
GSP	GALVANIZED STEEL PIPE	MPH	MILES PER HOUR
GV	GATE VALVE	MPT	MALE PIPE THREAD
HB	HOSE BIBB	MTD	MOUNTED
HDPE	HIGH-DENSITY POLYETHYLENE	MW	MANWAY; MONITORING WELL
HGT	HEIGHT	N	NORTH
HR	HAND RAIL	NE	NORTHEAST
HOA	HAND-OFF-AUTO SWITCH	NIC	NOT IN CONTRACT; NOT INCLUDED
HORIZ	HORIZONTAL	NOM	NOMINAL
HP	HORSEPOWER	NO	NUMBER
HR	HOUR	NPT	NATIONAL PIPE THREAD
HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	NPW	NON-POTABLE WATER
HWL	HIGH WATER LEVEL	NTS	NOT TO SCALE
HWY	HIGHWAY	NW	NORTHWEST
ID	INSIDE DIAMETER	N/A	NOT APPLICABLE
IF	INSIDE FACE	OA	OVERALL DIMENSION
IN	INCH(ES)	OC	ON CENTER
INF	INFLUENT	OD	OUTSIDE DIAMETER
INT	INTERSECTION	OF	OUTSIDE FACE
INTR	INTERIOR	OH	OVERHEAD
INV	INVERT	OHE	OVERHEAD ELECTRIC

OPT	OPTIONAL	SLV	SLEEVE
O&M	OPERATION AND MAINTENANCE	SP	SERVICE POLE, DROP POLE
PAVT,PVMT	PAVEMENT	SPEC	SPECIFICATION
PC	POINT OF CURVE	SQ	SQUARE
PE	PLAIN END	SR	STATE ROAD
PI	POINT OF INTERSECTION	SS	SANITARY SEWER, STAINLESS STEEL
PL	PLATE	ST	STREET
PLF	POUNDS PER LINEAR FOOT	STA	STATION
POB	POINT OF BEGINNING	STD	STANDARD
PP	POWER POLE	STL	STEEL
PPD	POUNDS PER DAY	STRUCT	STRUCTURAL
PPM	PARTS PER MILLION	SW	SOUTHWEST
PRES	PRESSURE	SWD	SIDEWATER DEPTH
PRV	PRESSURE REDUCING VALVE	SYM	SYMBOL
PS	PUMP STATION	SYMM	SYMMETRICAL
PSF	POUNDS PER SQUARE FOOT	S/W	SIDEWALK
PSI	POUNDS PER SQUARE INCH	TAN	TANGENT
PSIA	POUNDS PER SQUARE INCH ABSOLUTE	TBM	TEMPORARY BENCH MARK
PSIG	POUNDS PER SQUARE INCH GAGE	TBR	TO BE REMOVED
PT	POINT OF TANGENCY	TC, TOC	TOP OF CONCRETE
PV	PLUG VALVE	TDH	TOTAL DYNAMIC HEAD
PVC	POLYVINYL CHLORIDE	TEL, TELE	TELEPHONE
PW	POTABLE WATER	TEMP	TEMPORARY
PWR	POWER	TF	TOP FACE
Q	FLOW	TG	THREADED JOINT
QTY	QUANTITY	THD	THREAD(ED)
R, RAD	RADIUS	THK	THICK(NESS)
RCP	REINFORCED CONCRETE PIPE	TOB	TOP OF BANK
RD	ROAD	TOE	TOE OF SLOPE
RED	REDUCER	TOS	TOE OF SLOPE; TOP OF STEEL
REBAR	REINFORCING STEEL BARS	TP	TELEPHONE POLE, TOP OF PAVEMENT
REF	REFERENCE	TR	TO REMAIN
REINF	REINFORCE(D)(ING)(MENT)	TV	TELEVISION
REQD	REQUIRED	TYP	TYPICAL
REST	RESTRAINED	T&B	TOP AND BOTTOM
RM	ROOM	UG	UNDERGROUND
RPM	REVOLUTIONS PER MINUTE	UGE	UNDERGROUND ELECTRIC
RR	RAILROAD	UN	UNION
RT	RIGHT	UTIL	UTILITY
RW	RAW WATER	V	VOLT(S)
RWM	RAW WATER MAIN	VAC	VACUUM
ROW,R/W	RIGHT-OF-WAY	VAR	VARIABLE
S	SEWER; SOUTH	VCP	VITRIFIED CLAY PIPE
SAN	SANITARY SEWER	VEL	VELOCITY
SCHED	SCHEDULE	VERT	VERTICAL
SE	SOUTHEAST	VFD	VARIABLE FREQUENCY DRIVE
SECT	SECTION	VOL	VOLUME
SF	SQUARE FOOT OR FEET	W	WATER, WEST
SHT	SHEET(ED)(ING)	WL	WATER LINE
SJ	SLIP JOINT	WM	WATER MAIN

WS	WATER SURFACE
WTP	WATER TREATMENT PLANT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
WWTP	WASTEWATER TREATMENT PLANT
W/	WITH
W/O	WITHOUT
XFER	TRANSFER
XFMR	TRANSFORMER
YD	YARD(S)
YR	YEAR(S)

**END OF SECTION**

## SECTION 01020

### DIRECT PURCHASE PROCEDURES

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#### PART 1 - GENERAL

- 1.01 RELATED DOCUMENTS:** The General Provisions of the Contract, including the General Conditions, Supplementary Conditions, and Special Conditions (if any), along with the General Requirements apply to the Work specified in this Section. All bids are to be submitted with all applicable taxes included.
- 1.02 DESCRIPTION:** The Owner is tax exempt from sales tax on the purchase of construction materials. The Owner has elected to exercise this right to purchase directly various construction materials, supplies, and equipment that may be a part of this Contract. Such direct purchase shall be without any additional cost to the Owner. The Owner will, via Construction Purchase Orders (CPO), purchase the materials, and the Contractor shall assist the Owner in the preparation of the purchase orders. The materials shall be purchased from the Vendors selected by the Contractor for the price originally negotiated by the Contractor.
- 1.03** The Contract Amount shall be reduced by the net, undiscounted amount of the purchase orders plus all sales taxes. This reduction in the Contract Amount will occur through Deductive Change Order which will reference the Construction Purchase Order effecting the change.
- 1.04** Issuance of Construction Purchase Orders by the Owner shall not relieve the Contractor of any of his responsibilities regarding material purchases or installations, with the exception of the payments for the materials as purchased. The Contractor shall remain fully responsible for coordination, correct quantities ordered, submittals, protection, storage, scheduling, shipping, security, expediting, receiving, installation, cleaning, and all applicable warranties. The Contractor must maintain his Builder's Risk policy to include materials stored on-site and materials installed on-site.
- 1.05** No payment will be made for materials stored off-site. Payment is contingent on the receipt of properly verified and approved delivery tickets.
- 1.06 TERMS:** For the purpose of this Section, the following terms will be defined:
- A. Material: Any material, supply, or item of equipment intended for permanent installation in the Project.
  - B. Vendor: A company supplying materials to the Project, whether such provision includes installation or not.

- C. List of Vendors: A list of Vendors whose materials are required for the construction for the Project and which is submitted to the Owner by the Contractor for approval.
- D. Vendor Purchase Order (VPO): A material list and price quote by a Vendor required for issuance of a Construction Purchase Order by the Owner.
- E. Construction Purchase Order (CPO): An authorization issued by the Owner for the supply of stated materials and agreement to pay quoted price for material upon verification of delivery.
- F. Delivery Ticket: A receipt issued by the Vendor on a business-like form indicating the date, quantity, and type of materials delivered to the site and referencing a Vendor's invoice or the Construction Purchase Order.

## **PART 2 - PRODUCTS**

(Not Applicable)

## **PART 3 - EXECUTION**

**3.01 LIST OF ITEMS TO BE DIRECT PURCHASED:** All materials, supplies, or equipment that have a total or aggregate cost of \$2,000.00 or more.

**3.02** Within ten (10) days of executing the Agreement, the Contractor shall submit a List of Vendors and materials for the items listed above to the Owner. The list shall contain the following information:

1. Vendor's full business name
2. Vendor's agent assigned to the Project
3. Vendor's business telephone number
4. Materials the Vendor will supply

**3.03** Upon approval by the Owner, each Subcontractor, or Vendor if no Subcontractor is involved in the installation of the material, shall issue a Vendor's Purchase Order (VPO) addressed to the Owner and submitted to the Contractor for review and approval prior to submission to the Owner's representative. The VPO shall contain the following minimum information:

1. Date of issuance
2. Project name and location
3. Vendor's full business name
4. Vendor's full business address
5. Vendor's business telephone number and fax number
6. Description of materials
7. Quantity of each material



8. Unit cost of each material
9. Extended price of each material (quantity times unit cost)
10. Sales tax on materials
11. Any applicable shipping and handling charges
12. Total price (extended prices plus sales tax, shipping, and handling charges)
13. Signature and printed or typed name of the authorizing agent for the Subcontractor or Vendor

**3.04** The Owner will issue a Construction Purchase Order in the amount of the Vendor's Purchase Order less the sales tax. The Construction Purchase Order will contain the following minimum information:

1. Date of issuance
2. Project name and location
3. Vendor's full business name
4. Vendor's full business address
5. Reiteration of the authorized quantity, material, description, unit cost, and extended price for each material
6. Shipping and handling charges
7. Total price
8. Signature and printed or typed name of approving agent for the Owner
9. Signature and printed or typed name of authorizing agent for the Owner

The CPO will be sent directly to the Vendor with a copy retained by the Owner and copies sent to the Subcontractor, Contractor, and Engineer.

**3.05** Upon receipt of the CPO by the Vendor, the Vendor shall issue an invoice to the Owner for payment on materials. The invoice shall clearly reference the CPO number.

**3.06** All materials are to be received on the Construction Site with the Vendor's delivery ticket. Delivery tickets are to be collected, verified as to accuracy, quantity, and product, and signed by the Contractor, or the Contractor's on-site representative, and given to the Owner's representative on a daily basis. All delivery tickets are to be sealed in an envelope with the delivery date neatly printed on the front of the envelope.

**3.07** The Owner will issue payment to the Vendor for the amount of the Vendor's invoice upon receipt of the verified delivery tickets. The Owner shall provide a payment schedule to the Contractor and any Subcontractor or Vendor upon request. In order to maintain timely payments, it will be the responsibility of the Subcontractor/Vendor and the Contractor to process delivery tickets in accordance with the payment schedule. Upon payment of invoice, the Owner will provide a list of payments to the Engineer and Contractor.

**3.08** Examples of the following forms are included in this Section:

1. List of Vendors
2. Vendor Purchase Order

**END OF SECTION**





## SECTION 01060

### REGULATORY REQUIREMENTS

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#### **PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS:** The general provisions of the Contract, including General and Supplementary Conditions apply to the work specified in this section.

**1.02 SPECIFIED CODES:**

- A. The design of the work is based on the requirements of the latest editions of the Florida Building Code, Florida Fire Prevention Code, Florida Accessibility Code, NFPA 70 National Electric Code, NFPA 101 Life Safety Code, and National Fire Protection Association requirements, whichever is most stringent.
- B. The site work is based on the latest edition of the Florida Department of Transportation, Standard Specifications for Road and Bridge Construction, hereinafter referred to as the Florida DOT Specifications or DOT Spec.
- C. The Contractor shall ensure the work complies to the aforementioned codes and regulations as they apply to the project whether or not specifically referenced elsewhere.

**1.03 REFERENCE STANDARDS:**

- A. Except as otherwise required by Paragraph 1.02, all products and workmanship shall conform to best quality materials and practices recognized by agencies, associations, councils, etc., specified in individual sections.
- B. In the absence of specified agencies, associations, councils, etc., the Contractor shall conform to the requirements of the most widely recognized standards for each particular portion of the work.

**1.04 PERMITS:**

- A. Building Permit: If required, the Contractor shall apply for and obtain a building permit from the Nassau County School Board Building Official.
- B. FDEP NPDES: Contractor shall apply for and obtain an NPDES permit for Stormwater Discharge from Large and Small Construction Activity. Application shall include Stormwater Pollution Prevention Plan. See Section 02370.

- C. A Saint Johns River Water Management District (SJRWMD) Environmental Resource Permit (ERP) has been applied for concurrent with this bid and will be issued by Addendum once received. Construction of the project shall be performed so as to allow the Owner to meet the requirements and stipulations of this permit.

**1.05 FEES:** Contractor shall be responsible for all fees associated with the permits for which he applies.

**1.06 SUBMITTALS:**

- A. Copy of Application
- B. Copy of Approved Permit

**END OF SECTION**

## SECTION 01300

### SUBMITTALS

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#### PART 1 - GENERAL

##### 1.01 TYPES OF SUBMITTALS:

- A. Construction Schedules: The Contractor shall prepare and submit to the Owner and Engineer within two weeks of the "Notice to Proceed" a construction schedule showing the proposed dates for starting and completing each of the various branches of work. The schedule shall be in the form of a bar graph with a representation of the schedule of costs by months.
- B. Manufacturer's data shall include all standard published information describing products, systems, methods, and performance. Include manufacturer's name and address and associations with which manufacturer of his products comply.
- C. Shop drawings and schedules shall include items, products, materials, methods, anchorages, details, or any other information required to fabricate items of the work and complete the installation which is not specifically stated or described on manufacturer's data.
- D. Installation instructions shall include all information required from a manufacturer or fabricator to have his product installed. This may be included as a shop drawing if such are required.
- E. Warranties and Guarantees required by the Contract Documents shall begin on the official date of substantial completion of the project or any portion thereof, into which the warranted or guaranteed item was installed, constructed, or otherwise made operational. All warranties and guarantees shall be in effect for a minimum of one year unless specified for a longer period. Include all specific items covered, company names and addresses, and names of persons authorized to warrant or guarantee item(s) if not a blanket coverage.
- F. Certifications and test reports of products, materials, and performance for compliance with specified requirements shall specifically address the work and shall contain the name, signature, and address of persons authorized to make such certifications.
- G. Evidence of compliance to instructions shall be copies of transmittal letters or letter of verification duly signed by authorized persons.

- H. Operation and Maintenance Manuals shall include all literature required to properly operate and maintain any equipment installed in the work and shall include names and addresses of manufacturers and authorized service and/or parts representatives, dealers, and shall be delivered on or before date of beneficial occupancy.
- I. Samples required shall be as specified and shall include identifications of the specific item and specification section to which the sample applies.

**1.02 COPIES OF SUBMITTALS:**

- A. All submittals shall be made electronically via email.
- B. Operation and Maintenance Manuals may be submitted electronically for preliminary review. Upon approval of the Engineer, three (3) paper copies shall be submitted.
- C. If electronic submittal is not available or if specifically requested by Owner, the minimum number of copies of submittals shall be submitted as follows and does not include numbers of copies required by the Contractor for his distribution purposes.

1.	Manufacturers' Data:	4
2.	Shop Drawings and Schedules:	4
3.	Installation Instructions:	4
4.	Warranties and Guarantees:	4
5.	Certifications and Test Reports:	4
6.	Evidences:	4
7.	Operation and Maintenance Manuals:	3
8.	Samples:	3
9.	Progress Schedule:	4 Monthly

- D. As soon as practical after the date of execution of the Owner/Contractor Agreement and within 30 days, the Contractor will make all required submittals.

**1.03 REVIEW OF SUBMITTALS:**

- A. All submittals required by the Contract Documents shall be sent to the Engineer.
- B. Copies of submittals to be returned for the Contractor's use will be processed and emailed/mailed to the Contractor within 14 days of receipt of each submittal by the Engineer.



- C. Review of submittals is only for conformance with the design concept of the project or work and does not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents nor from responsibility for errors and omissions in the submittals.
- D. Submittals received without the Contractor's signed "Checked and Approved" stamp on each copy will be returned without action and noted as such or "RWA."
- E. Any submittals or portions thereof which are processed and returned to the Contractor will be marked "Approved," "Approved as Noted," "Revise and Resubmit," or "Not Approved."
- F. Submittals which refer to information or data not included in the submittal (excluding the Contract Documents) will not be checked.

**1.04 DOCUMENTS:**

- A. All documents including letters, letters of transmittal, and requests generated by the Contractor shall be on standard letter or legal size paper and include Contractor's name, the Owner's project number, Engineer's project number, date, and be signed by authorized personnel.
- B. Letters of transmittal shall also clearly identify each part of the submittal with specification section number and indicate the number of copies of each part. Letter requesting substitutions shall contain the same information.
- C. All submittals for approval shall be individually numbered by the Contractor in sequence of order of submission. Resubmittal of revised submittals shall bear the same numbers and be clearly marked "Resubmittal No. \_\_\_\_\_".

**1.05 COLORS:**

- A. The Engineer, in noting and marking submittals, shall use the color green.
- B. The Contractor, in noting and marking submittals, shall use the color red.
- C. Marks or notations of any other color on submittals shall be disregarded.

**1.06 ON-SITE RECORDS:** The Contractor shall have at least one set of complete, approved submittals and shop drawings on the jobsite at all times when such work is in progress.

**END OF SECTION**

## SECTION 01301

### ADMINISTRATIVE REQUIREMENTS

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#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES:**

Preconstruction Meeting;  
Progress Meetings; and  
Construction Progress Schedule

#### **PART 2 - PRODUCTS**

(Not Applicable)

#### **PART 3 - EXECUTION**

##### **3.01 PRECONSTRUCTION MEETING:**

- A. Engineer will schedule a meeting after Notice of Award.
- B. Attendance Required:
  - 1. Nassau County School Board, Nassau County, Florida
  - 2. Engineer
  - 3. Contractor
- C. Agenda:
  - 1. Execution of Nassau County School Board - Contractor Agreement, if not already completed.
  - 2. Submission of executed bonds and insurance certificates, if not already completed.
  - 3. Distribution of Contract Documents
  - 4. Submission of list of Subcontractors, schedule of values, and progress schedule
  - 5. Designation of personnel representing the parties to Contract
  - 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, change orders, and Contract closeout procedures
  - 7. Scheduling

- D. Contractor shall record minutes and distribute copies within two days after meeting to participants, with two copies to Engineer, Nassau County School Board of Nassau County, Florida, and those affected by decisions made.

### **3.02 PROGRESS MEETINGS:**

- A. Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job Superintendent, major Subcontractors and Suppliers, Nassau County School Board, Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
  - 1. Review minutes of previous meeting
  - 2. Review of Work progress
  - 3. Field observations, problems, and decisions
  - 4. Identification of problems that impede, or will impede, planned progress
  - 5. Review of submittals schedule and status of submittals
  - 6. Review of off-site fabrication and delivery schedules
  - 7. Maintenance of progress schedule
  - 8. Corrective measures to regain projected schedules
  - 9. Planned progress during succeeding work period
  - 10. Coordination of projected progress
  - 11. Maintenance of quality and work standards
  - 12. Effect of proposed changes on progress schedule and coordination
  - 13. Other business relating to Work.
- E. Contractor shall record minutes and distribute copies within two days after meeting to participants, with two copies to Engineer, Nassau County School Board, participants, and those affected by decisions made.

### **3.03 CONSTRUCTION PROGRESS SCHEDULE:**

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

**END OF SECTION**

**SECTION 01302  
JESSICA LUNSFORD ACT**

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**PART 1 GENERAL**

**1.01 ADMINISTRATIVE REQUIREMENTS**

- A. Nassau County School Board requires Venders and Contractors to have Level 2 Screening - Florida Statutes 1012.32 and House Bill 1877 approved by the Governor Chapter 2005-28 (Jessica Lunsford Act).

See Section 01 30 01 Jessica Lunsford Requirements. For additional information see Nassau County School District web site at:

[http://www.edline.net/pages/Nassau\\_County\\_School\\_District/Department/Administrative\\_Services/Jessica\\_Lunsford\\_Act](http://www.edline.net/pages/Nassau_County_School_District/Department/Administrative_Services/Jessica_Lunsford_Act)

1. All personnel, under this construction contract, permitted access to this school site must be identified with ID tag indicating specific individual Level 2 screening has been certified.
2. Screening means fingerprinting through the Nassau County School District's specified provider, cleared by a NCSB official after a review of the criminal history record produced by the FDLE and FBI.

**1.02 JESSICA LUNSFORD CLEARANCE QUICK REFERENCE GUIDE**

To obtain clearance under the Jessica Lunsford Act in order to enter a school site, please do the following:

- For general information, contact the NCSB Office of Administrative Services at (904) 491-9906.

Sharyl Wood, Executive Director  
Cindy Williams, Secretary  
Location: 1201 Atlantic Avenue, Fernandina Beach, Florida 32034

- Fingerprinting for the Nassau County School Board is done through Fieldprint. Instructions for scheduling appointments can be found on the NCSB website, [www.nassau.k12.fl.us](http://www.nassau.k12.fl.us), under "Business" then "Jessica Lunsford Act". Refer to the document Fingerprinting and/or "Badge Only" Appointments.
- If you have previously been fingerprinted, please tell us. You may not need to be fingerprinted again. Criminal histories for individuals fingerprinted within

the past 5 years can be accessed through the FDLE shared database, provided that they were submitted under the vendor ORI.

- If you are already cleared in another school district, you have been fingerprinted within the last 5 years, and your fingerprints are on the FDLE shared database, you will only need to provide certain information. Follow the instructions under the section of this website ATTENTION: PREVIOUSLY FINGERPRINTED VENDORS, INTERNS, AND PRE-INTERNS.
- If you have the uniform statewide badge, you will not need any other badge unless you are working on a school construction site. Workers on school construction sites are required to wear a red Nassau County School District vendor badge.
- If you have not previously been fingerprinted, or if your record cannot be accessed on the shared database:

Prior to scheduling a fingerprinting appointment, read the document **Fingerprinting and/or "Badge Only" Appointments** on this website. Fill out the form **Fingerprints and/or "Badge Only" - Personal Information Form**. When these steps are completed, go to [www.fieldprintflorida.com](http://www.fieldprintflorida.com) to schedule an appointment and pay for fingerprinting/badging.

Make sure you select "I know my Fieldprint Code" when scheduling your fingerprinting or badging appointments. **Enter the code shown on the document Fingerprinting and/or "Badge Only" Appointments. IMPORTANT!!**

**The cost for fingerprinting including issuance of the statewide uniform badge is \$86.50.** Payment is made at the time you schedule your fingerprinting appointment. Credit cards and electronic checks are accepted. There is no on-site payment.

- Once you're fingerprinted, we will receive a copy of your criminal history record, usually within 48 - 72 hours.
- Each cleared individual will be issued an ID badge which must be worn at all times.
- The process of receiving a badge will take up to 14 days from the date of fingerprinting or applying for the badge. Temporary expedited badges are available from the school district for \$10 and must be picked up at 1201 Atlantic Avenue, Fernandina Beach, Florida.
- When working at a school, please sign in when you arrive and sign out when you leave.
- Clearance/badges are good for up to five years. The expiration date is five years from the date of original fingerprinting (regardless of when the badge

was obtained). Also, if you are no longer working for the employer under which you were cleared, your badge is considered to be expired. The individual or company should notify Sharyl Wood at (904) 491-9905 and return the badge to 1201 Atlantic Avenue, Fernandina Beach, Florida 32034. If you are cleared while working for one company, your clearance can be transferred to another company if you get a different job.

**END OF SECTION**

**SECTION 01370**  
**SCHEDULE OF VALUES**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION:**

- A. Work Included: Provide a detailed breakdown of the agreed Contract Sum showing values allocated to each of the various parts of the work as specified herein and in other provisions of the Contract Documents.
- B. Related Work: Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

**1.02 QUALITY ASSURANCE:**

- A. Use required means to assure arithmetical accuracy of the sum described.
- B. When requested by the Engineer, provide copies of the subcontracts or other data acceptable to the Engineer for substantiating the sums described.

**1.03 SUBMITTALS:**

- A. Prior to first application for payment, submit a proposed schedule of values in the form of a Shop Drawing Submittal to the Engineer.
  - 1. Meet with the Engineer and determine data, if any, required to be submitted.
  - 2. Secure the Engineer's approval of the values prior to submitting first application for payment.

**END OF SECTION**



## SECTION 01391

### VISUAL DOCUMENTATION

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#### PART 1 - GENERAL

- 1.01 DESCRIPTION OF WORK:** Prior to commencing the Work, the Contractor shall perform a comprehensive photographic study of the Project to serve as a record of preconstruction conditions.
- 1.02 QUALITY ASSURANCE:** The color photographs shall be prepared by a responsible commercial firm or Contractor personnel known to be skilled and regularly engaged in the business of preconstruction color photographic documentation.
- 1.03 SUBMITTALS:** Contractor shall submit preconstruction photos describing the existing conditions. Photos shall be submitted in an electronic format (e.g., flash drive, CD, DVD or email).

#### PART 2 - PRODUCTS

- 2.01 GENERAL:** All equipment, accessories, materials, and labor to perform this service shall be furnished by the Contractor.
- 2.02 QUALITY:** The total photography system shall reproduce bright, sharp, clear pictures with accurate colors.

#### PART 3 - EXECUTION

##### **3.01 PROCEDURES:**

- A. All photography shall be done during times of good visibility. No photography shall be done during precipitation, mist, or fog. The photography shall be done only when sufficient sunlight is present to properly illuminate the subjects of recording and to produce bright, sharp pictures of those subjects.
- B. Photos shall include all surface features located within the zone of influence of construction. Such coverage shall include, but not be limited to, existing valves, meter boxes, fire hydrants, driveways, sidewalks, curbs, pavements, striping, ditches, mailboxes, landscaping, culverts, fences, signs, walls, etc., within the area covered.

- 3.02 PROGRESS MEETINGS:** If requested, at each progress meeting, the Contractor shall provide additional photographic evidence of the construction at various stages of completeness.

**END OF SECTION**

## SECTION 01400

### QUALITY CONTROL

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#### **PART 1 - GENERAL**

**1.01 DESCRIPTION OF REQUIREMENTS:** Specified quality control requirements for the work are indicated throughout the Contract Documents and are not repeated herein. The requirements of this Section are primarily related to performance of the work beyond furnishing of manufactured products. The term "Quality Control" includes, but is not necessarily limited to, inspection and testing and associated requirements. This Section does not specify or modify Engineer's duties relating to quality control and Contract enforcement.

#### **1.02 RESPONSIBILITY FOR INSPECTIONS AND TESTS:**

- A. Unless otherwise noted, all testing and inspections required by these specifications shall be performed by a properly certified entity. All costs associated with the testing and inspections shall be the Contractor's responsibility. The Contractor shall also be responsible for all tests or inspections required by any entity having jurisdictional control over the work.
- B. Costs for those required services by independent testing laboratories are recognized to be included in the Contract Sum.
- C. It is recognized that required inspection and testing programs are intended to assist the Contractor, Owner, Engineer and governing authorities in nominal determination of probable compliance with requirements for certain elements of work. The program is not intended to limit the Contractor's regular quality control program as needed for general assurance of compliances.
- D. No failure of test agencies, whether engaged by Owner or Contractor, to perform adequate inspections or tests or to properly analyze or report results, shall relieve the Contractor of responsibility for fulfillment or requirements of Contract Documents.

#### **1.03 QUALITY ASSURANCE:**

- A. **General Workmanship Standards:** Except as more definitively specified, the Contractor shall comply with recognized workmanship quality standards within the industry as applicable to each unit of work. It is a requirement that each category of trades person or installer performing the work is prequalified, to the extent of being familiar with applicable and recognized quality standards for that category of work, and being capable of workmanship complying with those standards.

- B. The Contractor shall engage independent testing laboratories complying with "Recommended Requirements for Independent Laboratory Qualification" as published by American Council of Independent Laboratories and specializing in type(s) of inspections and tests required. Exception: where another qualification standard is indicated or use of prime product manufacturer's test facilities is acceptable.
- C. When requested by the Engineer, submit proof of qualification for agency(s) engaged or to be engaged to perform inspection and testing services. If, after review of the submitted information, the Engineer determines that the agency's qualifications are unsatisfactory, the Contractor shall engage an alternate agency at no additional cost to the Owner.

**1.04 PRODUCT DELIVERY - STORAGE - HANDLING:** Handle, store and protect materials and products, including fabricated components, by methods and means which will prevent damage, deterioration, and losses including theft (and resulting delays), thereby ensuring highest quality results as the performance of the work progresses. Control delivery schedules so as to minimize unnecessary long-term storage at project site prior to installation. Contractor shall provide covered storage for all new equipment on the site which is not intended for outside installation. Electrical, hydraulic and pneumatic connections on all equipment shall be protected from the elements.

**1.05 CODES AND STANDARDS:**

- A. Work of this Project shall comply with all applicable Codes and Standards in effect at the time of the Bid Opening Date of this Project. Codes include, but are not necessarily limited to, the following:
  - 1. Florida Building Code
  - 2. Florida Fire Prevention Code
  - 3. Florida Administrative Code
  - 4. Department of Economic Opportunity, Florida Building Commission
  - 5. National Fire Protection Agency
  - 6. American Society of Civil Engineers/Structural Engineering Institute
  - 7. Underwriter's Laboratory Assembly Requirements
  - 8. Florida Department of Transportation Standard Specifications for Road and Bridge Construction
  - 9. American Concrete Institute
  - 10. American Institute of Steel Construction Manual
  - 11. OSHA CFR 29, Parts 1926 and 1910

**PART 2 - PRODUCTS**

(Not Applicable)

## **PART 3 - EXECUTION**

### **3.01 PREPARATION FOR INSTALLATION:**

- A. Preinstallation Conferences: Well in advance of installation of every major unit of work which requires coordination with other work, the Contractor shall meet at project site with installers and representatives of manufacturers and fabricators who are involved in or affected by the unit of work, and in its coordination or integration with other work which has preceded or will follow.
- B. The Contractor shall advise the Engineer of scheduled meeting dates. At each meeting the Contractor shall review the progress of other work and preparations for the particular work under consideration, including requirements of Contract Documents, product data, quality control samples, possible conflicts, compatibility problems, time schedules, weather limitations, structural limitation, governing regulations, safety, inspection and testing requirements, required performance results, recording requirements, and protection. The Contractor shall record significant discussion of each conference, and agreements and disagreements, along with final plan of action. The Contractor shall distribute a record of the meeting promptly to all concerned parties, including the Engineer.
- C. The Contractor shall not proceed with the work if associated preinstallation conference cannot be concluded successfully. The Contractor shall instigate actions to resolve impediments to performance of the work and meet at earliest date feasible.
- D. Installer's Inspection of Conditions: The Contractor shall require the fabricator and installer of each major unit of work to inspect substrate to receive the work, and conditions under which the work will be performed, and to report unsatisfactory conditions (in writing to the Contractor and the Engineer). Do not proceed with the work until unsatisfactory conditions have been corrected in a manner acceptable to the fabricator and installer.

### **3.02 INSTALLATION QUALITY CONTROL:**

- A. Manufacturer's Instructions: Where installation includes manufactured products, comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in the Contract Documents.
- B. The Contractor shall inspect each item of materials or equipment immediately prior to installation and reject damaged and defective items.

- C. Provide attachment and connection devices and methods for securing work properly as it is installed; true to line and level, and within recognized industry tolerances, if not otherwise indicated. Allow for expansions and building movements. Provide uniform joint widths in exposed work, organized for best possible visual effect. Refer questionable visual effect choices to Engineer for final decision.
- D. The Contractor shall recheck measurements, dimensions, and elevations of the work as an integral step of starting each installation. The Contractor shall notify the Engineer of any discrepancies.
- E. Install work during conditions of temperature, humidity, exposure, forecasted weather, and status of project completion which will ensure best possible results for each unit of work, in coordination with entire work. Isolate each unit of work for noncompatible work as required to prevent deterioration.
- F. Coordinate enclosure (closing-in) of work with required inspections and tests, so as to avoid necessity of uncovering work for that purpose.
- G. Mounting Heights: Except as otherwise indicated, mount individual units of work at industry-recognized standard mounting heights, for applications indicated. Refer questionable mounting height choices to Engineer for final decision.
- H. Adjust, clean, lubricate, and restore marred finishes and protect newly installed work to ensure that it will remain without damage or deterioration during the remainder of the construction period.

**END OF SECTION**

## SECTION 01500

### CONSTRUCTION FACILITIES

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#### **PART 1 - GENERAL**

**1.01 DESCRIPTION:** The following criteria shall govern the furnishing of and paying for temporary construction and service items. Such items shall be instituted at the beginning and maintained for the life of the work or until removal or termination is approved by the Engineer.

#### **1.02 TEMPORARY FACILITIES:**

- A. Drinking Water: The Contractor shall provide cool water with dispensing utilities.
- B. Construction Water: The Owner shall make available temporary water for construction through existing outlets at the project site, free of charge, provided the Contractor is not careless or wasteful with his water usage. The Contractor shall provide either meters or proper backflow devices in order to comply with regulations concerning backflow and cross connection.
- C. The Owner shall make available construction power through existing 120V power outlets at the project site. It shall be the Contractor's responsibility to provide additional temporary electrical power for construction should the Owner's existing outlets and distribution devices not be suitable for construction purposes.
- D. Toilet Facilities: The Contractor shall furnish a portable, job-site toilet enclosure facility through a local company specializing and licensed in this business. The toilet enclosure shall be located on the project site at a point approved by the Owner. It shall be maintained daily by the supplying company and removed from the project site upon completion of the project.
- E. A complete first aid kit supplied in accordance with applicable OSHA standards and suitable for a project of this size, shall be kept in this facility and fully maintained for the duration of this project.

#### **1.03 SITE MAINTENANCE:**

- A. General: The Contractor shall provide security, as necessary or required, to protect work and property at all times.
- B. Rodents and Other Pests: The Contractor, through debris removal, etc., shall control the creation of rodent or pest problems. Should such develop, the Contractor shall secure services of exterminator to control.

- C. Debris Control: Keep premises clean and free from accumulation of debris and rubbish. Provide trash and debris receptacles and require use. Remove from site at least weekly.
- D. Cleaning: As work is completed by trades, areas of work shall be cleaned in preparation for next trade, inspections or general safety of property and person.
- E. Project Safety: The Contractor shall comply with all applicable governmental and insuring company requirements relative to construction and project safety. Either the superintendent or another company representative on the site during all working hours shall be trained in project safety and designated as Contractor's Safety Director in compliance with Owner's safety program, if applicable.

**END OF SECTION**

## SECTION 01570

### TEMPORARY TRAFFIC CONTROL

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#### PART 1 - GENERAL

- 1.01 DESCRIPTION:** The work to be performed under this Section shall include furnishing all materials and labor necessary to regulate vehicular and pedestrian traffic in accordance with the requirements set forth and as shown on the drawings.
- 1.02 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS:** The work under this Contract shall be in strict accordance with the following codes and standards.
- A. Local, Municipal, County, State and Federal Codes and Ordinances.
  - B. Florida Department of Transportation (DOT) Standard Index 600 Series.
- 1.03 SUBMITTALS:** Provide record copy of proposed project Temporary Traffic Control (TTC) including location of detours, signage, barricades, and personnel.

#### PART 2 - PRODUCTS

(Not Applicable)

#### PART 3 - EXECUTION

- 3.01 CONSTRUCTION IN LOCAL, COUNTY, STATE AND FEDERAL HIGHWAY RIGHT-OF-WAY:**
- A. Construction within local, county, state, and federal highway right-of-way shall be made in full compliance with all requirements of the Florida Department of Transportation and to the satisfaction of the local governing bodies.
  - B. All necessary barricades, flagmen, detours, message signs, lights, and other protective measures shall be provided for the protection of both pedestrian and vehicular traffic.
  - C. Detours and road closures lasting more than 8 hours shall be advertised a minimum of one (1) week in advance with lighted message boards in each direction of traffic.
  - D. The Contractor shall be responsible for coordinating with local emergency services regarding all detours or road closures prior to performing the work.

**END OF SECTION**



**SECTION 01700**  
**PROJECT CLOSEOUT**

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**PART 1 - GENERAL**

**1.01 DESCRIPTION:**

- A. Summary of Work: The Contractor shall provide all final paperwork and perform all punch list work necessary to complete the project.

**1.02 SUBMITTALS:**

- A. One (1) copy of Redline Record Drawings for Engineer's review and comment.
- B. Four (4) copies of Final Record Drawings in 24"x36" sheet format signed and sealed by Florida Registered Land Surveyor or Professional Engineer and certified by the Contractor with Contractor's original signature.
- C. One (1) copy of Final Record Drawing electronic files in AutoCAD 2007 or later version and PDF formats.
- D. Two (2) copies of the following Items:
  - 1. Final Request for Payment
  - 2. Final Release of Lien (Prime and Subprime)
  - 3. Consent of Surety
  - 4. Warranties and Bonds
  - 5. Inspection Certificates (Electrical, Plumbing, Equipment, etc.)
  - 6. Regulatory Testing Requirements (Hydrostatic, Leakage, Disinfection, etc.)
- E. Three (3) Copies of Operation and Maintenance Manual Data.

**PART 2 - PRODUCTS**

**2.01 REDLINE RECORD DRAWINGS AND FINAL RECORD DRAWINGS:**

- A. The Contractor shall maintain a working set of Redline Record Drawings that shall be maintained daily with all notations clearly indicated in RED ink on a set of Construction Drawings.
- B. The Redline Record Drawings shall correctly and accurately show all changes from the Contract Documents made during construction.

- C. The Redline Record Drawings shall be neat and legible.
- D. Final Record Drawings shall be prepared electronically in AutoCAD and include surveyed information which shall be performed by a professional engineer or land surveyor registered in the State of Florida.
- E. Final Record Drawings shall be certified by the Contractor and Surveyor as correct and shall be signed by both entities.
- F. Final Record Drawings shall show all elevations and horizontal control of all storm sewer, gravity sewers including laterals, electric cables, television cables, telephone cables, force mains, and water mains which are crossed.
  - 1. Storm Sewer and Paving: Final Record Drawings shall show the following information:
    - a. Inlets: Location and elevation of top of grate, slots, and invert(s).
    - b. Manholes: Location and elevation of top rim and invert(s).
    - c. Stub-outs: Size and length installed.
    - d. Pipe: Size, length, and material installed, end treatments and inverts.
    - e. Paving: As constructed elevations corresponding to plan elevations.
    - f. Ponds and Swales: Top of bank and toe of slope elevations at 50' O.C., include detailed information for pond control structures including dimensions and elevations of weirs, orifices, and overflow devices.
  - 2. Street Lighting: Final Record Drawing shall show the following information:
    - a. Conduit: Size, depth and location.
    - b. Junction & Pull Boxes: Size and location.
    - c. Street Lamps: Location, mounting height and unit description.

**2.02 INSPECTION CERTIFICATES, BONDS, WARRANTIES AND GUARANTEES:**

Upon completion of project, and prior to submission of certificate for final payment, the Contractor shall have the electrical, plumbing and other work, as applicable, inspected by proper authorities as required by the specifications and all applicable codes, laws and ordinances. Before final payment will be made, the Contractor shall submit copies of all bonds and guarantees as required.

### **PART 3 - EXECUTION**

- 3.01 RECORDS:** Daily records of changes in location of piping, fixtures and other items shall be kept and recorded on the Redline Record Drawings. The Contractor shall review the Final Record Drawings and certify that all data furnished is accurate and truly represents the work actually installed. No Final Record Drawing information will be accepted from subcontractors.
- 3.02 SUBMITTAL:** The Project shall not be considered to be in substantial completion until Final Record Drawings have been submitted and accepted by the Engineer. Prior to final payment the Final Record Drawings shall be revised by the Contractor to reflect any changes which have occurred since the substantial completion submittal.
- 3.03 FINAL INSPECTION:**
- A. Final inspection will be held upon completion of the project. The Contractor shall notify the Owner, upon completion, to arrange an inspection tour of the completed project.
  - B. The Contractor and the Owner's Representative shall be present for the inspection.
- 3.04 RELEASE OF LIEN STATEMENT:** The Contractor shall submit with his request for final payment sworn statements from himself and each subcontractor, material, or labor suppliers who have filed a "Notice to Owner" that all work has been completed and that all bills for labor, materials, and subcontractor's work on the project have been paid in full.
- 3.05 CONSENT OF SURETY:** The Contractor shall submit, with his request for final payment, a consent of Contractor's Surety to final payment.
- 3.06 WARRANTIES AND BONDS:**
- A. Warranties and Bonds shall begin on the official date of Substantial Completion and shall be in effect for a minimum of one year from that date unless a longer period is stated in the product technical specification.
  - B. Warranties and bonds shall at a minimum include all labor, materials and equipment necessary to restore the installed product to a fully functional and satisfactory condition for a period of one year past Substantial Completion.
- 3.07 CLEANING:** The Contractor shall remove all stains, spots, marks and dirt from all finished surfaces caused by this work. All items shall be cleansed in accordance with the manufacturers' written instructions.

**END OF SECTION**

## SECTION 02115

### LANDSCAPE AND TREE PROTECTION

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#### **PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK:** Contractor shall make every reasonable effort to protect all landscaping and trees in the area of his operations. Trees and landscaping damaged or destroyed as a result of Contractor's operations shall be replaced with plants of identical species and of similar size, unless directed otherwise by Engineer. Contractor shall make every possible effort to save any tree of four-inch diameter or larger, including minor adjustment to the pipe routing. Changes in pipe routing must be approved by the Engineer. Any tree which is not designated for removal but which will significantly interfere with construction shall be trimmed by a qualified tree surgeon. Contractor shall minimize tree removal and tree trimming operations to as great an extent as possible. All costs associated with tree and landscape protection and/or replacement shall be borne by the Contractor.

**1.02 QUALITY ASSURANCE:** Engage a qualified tree surgeon to perform the following work:

- A. Remove branches from landscaping and trees which are to remain, if required for new construction.
- B. Recommend procedures to compensate for loss of roots and perform initial pruning of branches and stimulation of root growth where removed to accommodate new construction.
- C. Perform repair work for damages incurred by new construction.

**1.03 JOB CONDITIONS:** Provide temporary fencing, barricades, or guards to protect from damage trees and other plants which are to remain.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS:**

- A. Tree Pruning Compound: Waterproof, antiseptic, elastic, and free of kerosene, coal tar, creosote, and other substances harmful to plants. Pruned or damaged trees shall be treated with the following:
  - 1. Pine trees (all species): A mixture of twelve percent (12%) Benzene Hexachloride (BHC) emulsifiable concentrate shall be mixed at the rate of one (1) pint of BHC per gallon of #2 fuel oil. Spray damaged area liberally. Spray the rest of the tree from ground level to a height

of six feet (6'). Spraying of damaged trees shall be completed within five (5) days after injury occurs.

2. Hardwood (all species except pine): An application of asphalt-type tree pruning paint will be applied to the damaged area. The paint shall be applied in sufficient quantity so as to form an airtight seal. Spraying or painting of damaged trees shall be performed within twenty-four (24) hours after the injury occurs. In the case of damage to "specimen" hardwoods, the inspecting Engineer may require the Contractor to retain a skilled and licensed tree surgeon to properly treat the damage. No compensation shall be made to the Contractor for treating damaged trees.
- B. Root Protection Compound: Where the roots of trees 4 inches or more in diameter are cut due to Contractor's operations, exposed roots shall receive an application of Subdue 2E Fungicide as manufactured by Novartis. Application of fungicide shall be in strict accordance with manufacturer's recommendations.

### **PART 3 - EXECUTION**

#### **3.01 GENERAL:**

- A. Protection of Landscaping: Contractor may, in lieu of replacing disturbed/damaged landscaping and trees, store landscaping and trees removed by his operations in suitable containers for replanting. Containers shall be adequately sized to contain the plant's root mass. Suitable topsoil shall be packed into container in sufficient quantity to cover the plant's root system. Contractor shall water containerized plants as necessary to keep them healthy. A record of each containerized plant's original location prior to removal shall be kept by the Contractor so that each plant may be replanted in its proper location. Any replaced or replanted landscaping which, in the opinion of the Engineer, appears unhealthy shall be replaced with similar size and species of plant by the Contractor at no cost to the Owner for a period of up to 90 days after the date of contract completion.
- B. Repair and Replacement of Trees: Repair trees damaged by construction operations, in a manner acceptable to the Engineer. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees. Remove and replace dead and damaged trees which are determined by the tree surgeon to be incapable of restoration to normal growth pattern. If trees over six inches in caliper measurement (taken 12 inches above grade) are required to be replaced, provide new trees of six inches caliper size, and of the same species. Any replaced or replanted trees which, in the opinion of the Engineer, appear unhealthy shall be replaced with similar size and

species of tree by the Contractor at no cost to the Owner for a period of 365 days after the date of contract completion.

- C. Cleanup and Disposal: Remove excess excavation, displaced trees, and trimmings, and dispose of off the Owner's property in a manner approved by local agencies.

**END OF SECTION**

## SECTION 02210

### SOIL BORINGS

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#### **PART 1 - GENERAL**

##### **1.01 DESCRIPTION:**

- A. The soil boring logs contained in the Geotechnical Report are provided for the Contractor's information only. The logs are only intended to provide a general indication of the soils at the site and may vary away from the boring location. The Contractor shall satisfy himself as to the character and amount of different soil materials, groundwater and subsurface conditions to be encountered in the work to be performed. Subsurface information included in these specifications is the result of borings made at the exact locations shown only. While the borings show the subsurface conditions at their respective exact locations, local variations in soils and groundwater conditions will be encountered.
  
- B. It is to be expressly understood that the Owner or Engineer will not be responsible for any interpretation or conclusion drawn therefrom.

#### **PART 2 - PRODUCTS**

(Not Applicable)

#### **PART 3 - EXECUTION**

- 3.01** Although the borings do not reveal every subsurface condition, the geotechnical engineer has made general recommendations from the information provided by the boring logs. The Contractor shall consider all recommendations made in this report to be the minimum requirements for placement of soil and soil preparation on this project.

**END OF SECTION**

## SECTION 02220

### DEMOLITION

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#### **PART 1 - GENERAL**

##### **1.01 DESCRIPTION OF WORK:**

- A. The extent of demolition work is shown on the drawings or called for in the specifications.
- B. Demolition includes the complete wrecking and removal and disposal of selected structures, walks, paving and other materials as shown on the drawings and specified.
- C. Demolition includes removal and disposal of utility services and appurtenances to such except as otherwise shown or specified.
- D. Trees and plants which are to remain and must be protected are indicated on the Drawings. Perform trimming and tree repair work for damages incurred or anticipated to occur by new construction to the satisfaction of the Engineer.

##### **1.02 SUBMITTALS:**

- A. Schedule Demolition: Submit written schedule of methods and operations of demolition to the Engineer for approval prior to the start of work. Include in the schedule the coordination for shut-off, capping, street interruption and continuation of utility services as required.
- B. Provide a detailed sequence of demolition and removal work to ensure the uninterrupted progress of the Owner's operations.

##### **1.03 JOB CONDITIONS:**

- A. Occupancy: Structures and other items to be demolished will be vacated and discontinued in use immediately prior to the start of demolition work.
- B. Condition of Items to be Demolished: The Owner assumes no responsibility for the actual condition of items to be demolished. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner insofar as practicable. However, variations within the items may occur by Owner's removal and salvage operations prior to the start of the demolition work. Contractor shall verify in writing to the Engineer, safe conditions prior to the commencement of demolition work.



- C. Protections: Ensure the safe passage of persons around the area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities and persons.
  - 1. Erect temporary covered passageways to maintain existing fire exits and as otherwise required by authorities having jurisdiction.
  - 2. Provide interior and exterior shoring, bracing, or support to prevent movement or settlement or collapse of structures to be demolished and adjacent facilities to remain.
  - 3. Provide temporary fencing, barricades, or guards to prevent unauthorized personnel from entering the construction zone.
- D. Damages: Promptly repair damages caused to adjacent facilities by demolition operations at no cost to the Owner.
- E. Utility Services: Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by the Owner. Timely notice shall be given to all parties affected by temporary interruptions to existing utilities, as acceptable to the governing authorities.
- F. Provide temporary fencing, barricades, or guards to protect trees and other plants which are to remain from damage.

## **PART 2 - PRODUCTS**

(Not Applicable)

## **PART 3 - EXECUTION**

### **3.01 DEMOLITION:**

- A. Pollution Controls: Use water sprinkling, temporary enclosures and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.
- B. Clean adjacent structures and improvements of dust, dirt and debris caused by demolition operations to the satisfaction of the Engineer or governing authorities. Return adjacent areas to condition existing prior to the start of the work.

- C. Noise Pollution: Comply with all applicable sections of Federal, State, local and OSHA Regulations for noise pollution control, suppression and equipment.
- D. Structure Demolition: Demolish structures completely and remove from the site. Use such methods as required to complete the work within the limitations of governing regulations. Use of explosives is NOT ALLOWED.
- E. Demolish paving (asphaltic or concrete) in small sections. Where new paving abuts, saw cut existing paving to provide straight, clean perimeter for new.
- F. Below-Grade Construction:
  - 1. Demolish and remove below-grade construction and concrete slabs on grade.
  - 2. Filling Basements and Voids: Completely fill below-grade areas and voids resulting within the work area and from the demolition of structures.
  - 3. Use satisfactory soil materials as specified in Section 02300 - Earthwork.
- G. Dispose of any existing trash piles, garbage, or debris encountered at the site.
- H. Disposal of Demolished Materials: Remove from the site debris, rubbish, excess excavations, displaced trees, trimmings and other materials resulting from demolition operations and clearing and grubbing. Burning or disposal of removed materials from demolished structures shall not be permitted on project site unless authorized by Owner. Dispose of material in an approved manner meeting local requirements. Contractor shall pay all expenses including landfill fees associated with the disposal of material.

### **3.02 PROTECTION OF TREES AND PLANTS:**

- A. Protect root systems from damage due to materials in solution caused by run-off or spillage during mixing and placement of construction materials or drainage from stored materials. Protect root systems from flooding, erosion or excessive wetting resulting from dewatering operations.
- B. Repair and Replacement of Trees:
  - 1. Repair trees or plants damaged by construction operations in a manner acceptable to the Engineer. Make repairs promptly after

damage occurs to prevent progressive deterioration of damaged trees.

2. See Section 02230.3.05 for tree replacement requirements.

**END OF SECTION**

## SECTION 02230

### SITE CLEARING, STRIPPING AND GRUBBING

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#### **PART 1 - GENERAL**

##### **1.01 DESCRIPTION OF WORK:**

- A. The General Requirements are made a part of this section as fully as if repeated herein.
- B. Work includes but is not limited to:
  - 1. Site clearing.
  - 2. Stripping and removal or stockpiling topsoil.
  - 3. Grubbing and removal of vegetation within site boundaries or within limits shown on drawings.
  - 4. Tree removal within building and paving limits and as indicated.
  - 5. Protection of existing trees to remain.
  - 6. Protection of streets, roads, adjacent property, and other facilities to remain.
  - 7. Disposal of all cleared materials.
  - 8. Disposal of all grubbed materials.

##### **1.02 SUBMITTALS:**

- A. Permit for transportation and disposal of debris.
- B. Disposal tickets from landfill.
- C. U.S. Department of Forestry Burn Permit.

**1.03 DISPOSAL OF MATERIAL:** Remove all cleared and grubbed materials from project site.

##### **1.04 REGULATORY REQUIREMENTS:**

- A. See Section 02370 for FDEP NPDES Permit requirements.

- B. U.S. Department of Forestry Burn Permit requirements.

## **PART 2 - PRODUCTS**

(Not Applicable)

## **PART 3 - EXECUTION**

### **3.01 GENERAL:**

- A. Segregation of Materials: Contractor shall be responsible for segregating dissimilar materials. Suitable fill, unsuitable fill, organics and/or trash shall not be mixed. Contractor shall stockpile material types independent of each other.
- B. Safety Procedures: The performance of the work shall be in strict compliance with all Local, State and Federal Regulations. This shall include, but not be limited to, Florida Trench Safety Act (F.S. 553.6) and OSHA 29 CFR 1926.651 and 1926.652.
- C. Trench excavations over 5 feet deep must provide a protective system for all personnel in the hole. Trench excavations over 20 feet in depth must provide a protective system designed by a Florida Registered Professional Engineer.

### **3.02 CLEARING:**

- A. Limits of Clearing: Remove trees and other vegetative matter only as required for construction of the project.
- B. Remove all trees and shrubs to ground level and grub as described below.
- C. Remove all dead trees, dead shrubs, rubbish, debris, weeds, vines and undergrowth to ground level.
- D. Remove all other obstructions resting on or protruding through surface of existing ground.
- E. Do not pull up or rip out roots of trees and shrubs that are to remain. If excavation through roots is required, excavate by hand and cut roots with fine tooth saw.

### **3.03 STRIPPING TOPSOIL:**

- A. Strip existing vegetation layer from areas of site to receive improvements and remove from site prior to stripping topsoil for storage and reuse.

- B. After stripping vegetation layer, remove existing topsoil 6-inches deep minimum from areas of site to receive fill and store for later use. Coordinate with Owner for temporary storage location.
  - 1. Existing topsoil is property of Contractor (unless claimed by Owner) with restriction that topsoil is to be used first for Project landscape topsoil requirements and second for fill and backfill.
  - 2. After Project fill, backfill, and landscape topsoil requirements are satisfied, remove excess existing topsoil from site. Do not remove existing topsoil from site without Owner's prior approval.
- C. Do not include clay, stones larger than 3/4", weeds, roots, rubbish or any other foreign material in the stock piled topsoil.

### **3.04 GRUBBING:**

- A. All areas to receive improvements shall be root raked; minimum of two (2) passes perpendicular to each other.
- B. Remove all stumps, roots over 1 inch in diameter, and matted roots to the following depths:
  - 1. Footings, slabs on grade, bottom slabs of structures: Completely.
  - 2. Walks: 24 inches.
  - 3. Roads and parking areas: 36 inches.
  - 4. Areas to be grassed or landscaped: 12 inches.
- C. In case of footings, slabs on grade, bottom slabs of structures, roads and parking areas, or other construction on fills, greater depth shall apply.
- D. Unless further cut is required, fill depressions made by grubbing and compact to density of surrounding soil.

### **3.05 PROTECTION OF TREES:**

- A. A visible barrier shall be constructed of 2x4 lumber standing 48" high and placed continuously 6 feet from the trunk of the tree or plant to remain.
- B. Barrier shall be secured in place and covered in safety orange netting.
- C. Barriers shall be completely removed at the conclusion of construction activities.
- D. Protect root systems from damage due to materials in solution caused by runoff or spillage during mixing and placement of construction materials or

drainage from stored materials. Protect root systems from flooding, erosion or excessive wetting resulting from dewatering operations.

E. Repair and Replacement of Trees to Remain:

1. Repair trees or plants damaged by construction operations in a manner acceptable to the Engineer. Make repairs promptly after damage occurs to prevent progressive deterioration of damaged trees.
2. If trees die during the course of the project or within the warranty period, the Contractor shall remove them, and grind the stumps if the Owner so wishes, at no charge to the Owner.
3. Trees that die during construction shall be replaced with same species, Grade A and 3" DBH. Trees shall be furnished and planted by the Contractor at no cost to the Owner.

**3.06 CLEAN-UP:**

- A. Remove from site trees, shrubs, uprooted stumps, vegetative layer, and surface debris. All material shall be disposed of legally.
- B. Remove and dispose of all stockpiled topsoil not claimed by Owner.
- C. Do not bury cuttings, stumps, roots, and other vegetative matter or burn waste material on site without prior authorization from Owner.
- D. Clean pavement, sidewalks and drainage features of debris and dirt.
- E. At the Contractor's discretion, he may acquire (at his expense) a burn permit from the Florida Department of Forestry and/or any other government agency having jurisdiction over the activity.
  1. All materials not completely consumed by the activity shall be removed from the site and legally disposed of.
  2. It shall be the Contractor's responsibility to comply with all Federal, State, and Local regulations governing the burning of vegetative debris.

**END OF SECTION**

## SECTION 02240

### DEWATERING

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#### **PART 1 - GENERAL**

- 1.01 RELATED DOCUMENTS:** The General Provisions of the Contract, including the General Conditions, Supplementary Conditions and Special Conditions (if any), along with the General Requirements, apply to the work specified in this Section.
- 1.02 DESCRIPTION:** The Work to be performed under this section shall include furnishing all equipment and labor necessary to remove storm or subsurface waters from excavation areas in accordance with the requirements set forth and as shown on the drawings.
- 1.03 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS:** The dewatering of any excavation areas and the disposal of the water shall be in strict accordance with the latest revision of all local and state government rules and regulations. The Contractor shall obtain any required dewatering permit from the appropriate agencies prior to commencing dewatering operations.
- 1.04 SUBMITTALS:** Prior to the start of construction the Contractor shall provide a dewatering plan describing the surfacewater and groundwater controls which will be employed to control water levels in excavations so that construction is not inhibited.
- A. Plan shall include temporary culverts, barricades and other protective measures to prevent damage to property or injury to any person or persons.
  - B. Plan shall indicate disposal method and location of point discharge.
  - C. Proof of Compliance with Florida Department of Environmental Protection Rule 62-621.300(2) F.A.C. See Paragraph 3.02 B.

#### **PART 2 - PRODUCTS**

(Not Applicable)

#### **PART 3 - EXECUTION**

##### **3.01 PERFORMANCE:**

- A. General:
  - 1. The Contractor shall provide adequate equipment for the removal of storm or subsurface waters which may accumulate in any excavation.



2. The Contractor shall maintain groundwater levels as follows:
    - a. 2 feet (24") below foundation bearing elevation.
    - b. 2 feet (24") below pavement base bearing elevation.
    - c. 1 foot (12") below bottom of utility pipes and structures.
    - d. Bottom of trench or other excavation shall be dry so that work can proceed.
    - e. 1 foot (12") below any other working surface.
  3. System shall intercept water on all sides of area to be drawn down.
  4. Contractor shall adhere to submitted Dewatering Plan.
  5. Engines driving any proposed dewatering pumps shall be equipped with residential type mufflers.
- B. Acceptable Methods:
1. Wellpoint System.
  2. Trench and Sock Drain: Dewatering by trench pumping will not be permitted if migration of fine grained natural material from bottom, side walls or bedding material will occur.

### **3.02 DISPOSAL:**

- A. General:
1. Water pumped from an excavation shall be disposed (in strict compliance with all Local, State and Federal Regulations) or in the following:
    - a. Site Stormwater Pond or other Stormwater Facility serving the project.
    - b. Temporary disposal pit or trench.
  2. Direct discharge to waters of the state or other surface waters is strictly prohibited without prior written approval from the governing agency.
  3. No flooding of streets, roadways, driveways or private property shall be permitted.

B. Regulatory Requirements:

1. Contractor is responsible for acquiring and complying with all permits and approvals necessary to perform the dewatering activity.
  - a. The Florida Department of Environmental Protection may require testing of groundwater prior to dewatering (F.A.C. 62-621.300(2)) for each point source that discharges to waters of the State.
2. All waterways shall be protected from turbidity during the dewatering operation.

**3.03 RESTORATION:**

- A. All temporary drains, pipe or other non-soil materials shall be removed at the conclusion of the dewatering activity.
- B. Soils disturbed by the removal process shall be recompact and restabilized.

**END OF SECTION**

## SECTION 02300

### EARTHWORK

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#### **PART 1 - GENERAL**

##### **1.01 DESCRIPTION OF WORK:**

- A. Scope of Work: All labor, materials and equipment to complete the earthwork. Includes but is not limited to:
1. Compaction of on-site material.
  2. Grading and reshaping site.
  3. Importing and compacting fill as required.
  4. Compaction of material beneath building and paving.
  5. Removal of unsuitable material.
  6. Excavation and construction of drainage ditch.
  7. Utility Trench Earthwork.
- B. Supervision and Testing: All work specified herein shall be under the supervision of a Soils Engineer. The Contractor shall pay for all testing specified in this Section of the Specifications.
- C. Field Engineering: The Owner has established lot lines and benchmark datum. The Contractor shall employ and pay for the services of a licensed surveyor who shall make all required surveys for establishing all points, lines, grades, and levels, and otherwise fully and completely lay out all the work required by the Contract.
- D. Unusual Conditions: Should any unusual conditions arise, the Engineer shall be contacted for instructions prior to continuation of earthwork operations.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS:**

- A. Suitable On-Site or Imported Fill/Backfill:
1. Well graded material conforming to ASTM D2487 (SW, SP) or AASHTO A-3 free from debris, organic material, fat clays, brick, lime, concrete, and other material which would prevent adequate performance of the backfill.
  2. Fill shall consist of an inorganic, non-plastic, granular soil containing less than 10 percent material passing the No. 200 mesh sieve.

- B. Topsoil:
1. Well graded sandy material with composited organic content in accordance with ASTM D5268.
  2. Material shall be friable, free draining, surface soil reasonably free of grass, roots, weeds, sticks, and trash.
  3. Material shall be free of odors.
  4. Material shall have a pH between 5.9 and 7.0 unless otherwise required by the sod supplier or landscaper.
  5. Topsoil used under athletic fields or other landscape features finished with specialty grasses shall be treated with a pre-emergent herbicide in accordance with the supplier and chemical manufacturer's instructions.
- C. Crushed Stone/Gravel: Washed, narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2 inch sieve and 0 to 5 percent passing No. 8 sieve.

### **PART 3 - EXECUTION**

#### **3.01 PROCEDURE:**

- A. General Excavation: Upon completion of site clearing, the area of the proposed structures shall be excavated to the subgrade elevation where excavation is required.
- B. Removal of Unsuitable Material: Where soft material occurs at subgrade elevations within the limits of construction, the Contractor shall excavate such material down to suitable foundation material or to a depth of two feet, whichever is less, and backfill with suitable material obtained from grading operations or borrow. Backfill shall be deposited in successive layers of not more than eight inches in thickness. Each layer shall be compacted to 95% as hereinafter specified.
- C. Soil Preparation: The term "95% relative compaction" shall mean soils densification to 95% of the materials theoretical maximum dry density as determined by Modified Proctor Test (ASTM D1557).
1. The area beneath any building or structure should be cut or filled (12-inch lifts) to the proposed base of slab/foundation bearing elevation. The area should then be moisture conditioned and rolled

with pneumatic-tired or vibratory compaction equipment until the underlying soils have been densified to 95% relative compaction to a tested depth of two (2) feet below the base of the slab/foundation including a distance 5' horizontally beyond the new construction in all directions.

2. The area beneath any proposed pavement should be cut or filled (12-inch lifts) to the proposed subgrade bearing elevation. The area should then be moisture conditioned and rolled with pneumatic-tired or vibratory compaction equipment until the underlying soils have been densified to 98% relative compaction to a tested depth of two (2) feet below the base material including a distance 3' horizontally beyond the new construction in all directions.
3. All prepared areas shall be proof rolled prior to acceptance. Soft areas identified in the proof rolling process shall be overexcavated, backfilled with suitable material and recompacted until compliance is achieved.

D. Compaction and Preparation:

1. Existing soils shall be densified using a 3 to 4 ton static weight roller to 95% or 98% of the maximum material density in accordance with the Modified Proctor Analysis (ASTM D1557) as specified.
2. Additional fill shall be placed in loose lifts no greater than 12" in depth and densified to 95% or 98% of the maximum material density in accordance with the Modified Proctor Analysis (ASTM D1557) as specified.

### 3.02 TESTING:

A. Soil test shall be made as follows:

1. For each type of fill material used, obtain a moisture density relationship determination test in accordance with the Modified Proctor Method ASTM D1557.
2. Obtain in-place density test using the Nuclear, Sandcone, or Shelby Tube Method unless noted otherwise elsewhere in the Contract Documents. Two density tests shall be obtained in every lift for each structure. Areas which fail to meet the compaction requirements shall be re-compacted then retested until passing results are achieved. Density tests for pipeline trenches shall be the isolated footings and at three hundred foot intervals in the trench.

- B. Location of in-place density tests shall be referenced to column lines, edge of pavement and to elevation datum. Reports shall be furnished to the Engineer as specified in the Section "Submittals".

**END OF SECTION**

## SECTION 02370

### EROSION AND SEDIMENTATION CONTROL

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#### **PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS:** The General Provisions of the contract, including the General Conditions, Supplementary Conditions and Special Conditions, along with the General Requirements, apply to the work specified in this Section.

**1.02 SUMMARY:**

- A. Includes But Not Limited To: Provide, install, maintain, and remove erosion and sedimentation controls as described in Contract Documents and as required by Contractor's Pollution Prevention Plan.
- B. Related Sections:
  - 1. Section 02230 - Site Clearing, Stripping and Grubbing.
  - 2. Section 02240 - Dewatering.
  - 3. Section 02300 - Earthwork.

**1.03 REFERENCES:**

- A. Florida Department of Transportation (Latest Editions):
  - 1. Standard Specification for Road & Bridge Construction.
  - 2. Design Standards for Design, Construction, Maintenance and Utility Operations on the State Highway System.
- B. Florida Department of Environmental Protection:
  - 1. Rule 62-621 Generic Permits
- C. Environmental Protection Agency (EPA):
  - 1. National Manual of Stormwater Best Management Practices.

**1.04 QUALITY ASSURANCE:** Contractor shall be certified by the Florida Department of Environmental Protection as an Erosion and Sedimentation Control Professional.

**1.05 SUBMITTALS:**

- A. Provide copy of application and stormwater pollution prevention plan as submitted to Florida Department of Environmental Protection as required by 02370 3.02 A.

- B. Provide a copy of Notice of Termination (NOT) of coverage under FDEP Generic Permit for Large and Small Construction Activities.
- C. Name of Certified FDEP Professional and a copy of the page of the permit application identifying the FDEP individual and their contact information.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS:**

- A. Filter Fabric: Florida Department of Transportation Class D-3 material.
- B. Sand Cement Bags:
  - 1. Portland Cement: ASTM C150 Type I/II material.
  - 2. Fine Aggregate: Clean silica sand or other inert natural material of similar characteristics.
    - a. 97% material passing No.4 sieve.
    - b. 20% material passing No.100 sieve.
    - c. 5% material passing No. 200 sieve.
  - 3. Sacks: Provide sacks of uniform size made of jute, cotton, or scrim reinforced paper capable of holding the sand cement mixture without leakage. Sacks shall provide a finished unit approximately 12x18x6 inches in measurement. Material shall be permeable and absorptive enough to permit passage of water to provide for hydration of cement. Materials shall be biodegradable and contain no asphalt, oil, or plastic lamination.
- C. Rubble:
  - 1. Provide clean, hard, durable rubble free of pollutants consisting of broken stone, concrete, or masonry. Material shall be free of reinforcing wire or steel rebar.
  - 2. Material shall have a minimum nominal dimension of 3 inches for any given piece of rubble.
- D. Fiber Rolls:
  - 1. Tube shaped rolls of straw, flax, rice, coconut fiber, or compost.
  - 2. Rolls shall be wrapped with UV degradable polypropylene netting or biodegradable netting.



- E. Silt Fence: Florida Department of Transportation Type III silt fence meeting all requirements of FDOT Index 103 of the 2010 version of the Standard Indices.
- F. Seed for Temporary Erosion Control:
  - 1. Winter Months (October to March): Annual Rye Grass.
  - 2. Summer Months (April to September): Millet Grass.
- G. Water: Clean and potable.

### **PART 3 - EXECUTION**

#### **3.01 PERFORMANCE:**

- A. General:
  - 1. Provide and maintain temporary erosion and sedimentation control measures from time site is disturbed to time permanent controls, paving, landscaping, and site restoration measures are able to perform erosion and sedimentation control functions.
  - 2. Clean-out, repair, and maintain control structures as necessary to enable them to perform properly.
  - 3. Prevent pollution of streams, water impoundments, and channels leading to them with chemicals, fuels, lubricants, bitumens, raw sewage, and other harmful waste.
- B. Sediment Barriers/Silt Fence:
  - 1. Place fence as shown on Drawings and as necessary to maintain regulatory compliance with Contractor's Pollution Prevention Plan.
  - 2. At a minimum, Silt Fence shall be installed along all downstream project property lines and between any construction activity and all waterways, water bodies, sewer inlets and wetlands.
- C. Fiber Rolls: Place rolls as shown on Drawings and as necessary to maintain regulatory compliance with Contractor's Pollution Prevention Plan.
- D. Seed or Sod:
  - 1. All areas disturbed by construction, and to remain unpaved or outside the building envelope, shall be stabilized by permanent seed and

mulch or sod, as described elsewhere in the Contract Documents. Refer to Section 02921 for permanent grassing requirements.

2. Areas that will be regraded or otherwise disturbed later during construction may be seeded with a temporary seed mix to obtain temporary erosion control.

E. Sand-Cement Bag Rip Rap:

1. Proportion sand and cement in the ratio of 5 cubic feet of sand to 94 lbs of cement.
2. Fill sacks to uniform size. Keep at least 6 inches of the sacks unfilled to allow for tying and closure.
3. Place sacks as shown on the Drawings. Place sacks in a running bond type pattern. Align sacks/bags so that continuous joints are perpendicular to the primary flow and staggered joints are parallel to the primary flow.
4. Stake alternating bags in place with an 18" length of #3 rebar centered in bag. Set top of bar 1" below surface of bag.
5. After placement saturate bags with water.

F. Rubble:

1. Place rubble as required by Drawings or Specifications.
2. Dump rubble in place so as to provide a minimum depth of 18 inches.
3. Ensure that rubble does not segregate so that smaller pieces evenly fill the voids between the larger pieces.

### 3.02 REGULATORY REQUIREMENTS:

A. Florida Department of Environmental Protection (FDEP) - NPDES Program.

1. Contractor shall notify Florida Department of Environmental Protection of proposed construction and file Notice of Intent (NOI) to use Generic Permit for Stormwater Discharge from Large and Small Construction Activities with Florida Department of Environmental Protection.
2. Contractor shall be responsible for application fee and preparation of all attachments. Attachments shall include a Pollution Prevention Plan.

- a. The minimum requirements for pollution prevention are described on the Contract Drawings and in these Specifications.
  - b. The Contractor may use the pollution controls presented in these documents as the basis for his Pollution Prevention Plan.
  - c. The Contractor shall supplement the Contract Drawings and Specifications as necessary to satisfy the Contractor's permit application and the Contractor's means and methods of construction.
3. It shall be the Contractor's responsibility to familiarize himself with the permit conditions and maintain the site in a condition that will be compliant with the permit.
  4. Any testing or other requirements required by the governing agency to remain compliant or in response to a non-compliance event shall be the financial and material burden of the Contractor.
  5. Contractor shall notify FDEP of conclusion of project and submit a notice of termination (NOT) coverage.

### **3.03 DUST CONTROL:**

- A. Contractor shall make every effort to limit the transport of windborne dust and particulates from the disturbed site.
- B. Soil erosion due to wind shall be controlled with the application of water to dampen soil.

### **3.04 REPAIR AND RESTORATION:**

- A. If any seed is washed out before germination, repair damage, refertilize and reseed.
- B. Maintain silt fence in a functional condition. Repair any damage immediately. Implement a routine maintenance schedule for all erosion schedule. All erosion control features shall be inspected immediately following all storm events.

### **3.05 CLEANING:**

- A. Remove temporary controls and accumulated sediments when permanent facilities are able to perform function and when approved by Engineer.

- B. Remove accumulations of silt and other erosion products from all permanent facilities.

**END OF SECTION**

## SECTION 02590

### UNDERGROUND FACILITIES

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#### **PART 1 - GENERAL**

**1.01 DESCRIPTION:** Work under this Section consists of furnishing all tools, equipment, and labor as described herein.

**1.02 SUBMITTALS:**

- A. Submit sketches of all conflicts and proposed resolution of conflicts.
- B. Record Drawings shall depict all Underground Facilities encountered in the work.

#### **PART 2 - PRODUCTS**

(Not Applicable)

#### **PART 3 - EXECUTION**

**3.01 INSTALLATION:**

- A. Location of Underground Facilities:
  - 1. Underground Facilities are underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any other encasements containing such facilities, including those which convey electricity, gases, compressed air, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
  - 2. Prior to excavation, the Contractor shall conduct an investigation into the location of all Underground Facilities. The objective of this investigation is to determine the locations of Underground Facilities in advance of actual construction in order to resolve ahead of time conflicts with the proposed work. Underground Facilities that are shown or indicated are based on limited information. The locations shown or indicated are only approximate and it is probable that there are Underground Facilities that are not shown or indicated.

3. The Contractor shall, by means of standard geophysical prospecting techniques, designate (to indicate by marking) the presence and approximate depths of Underground Facilities along the routes of proposed construction. All Underground Facilities within five (5) feet of the proposed work shall be designated.
4. The Contractor shall locate Underground Facilities to obtain accurate horizontal and vertical positions and may utilize any methods or procedures he deems appropriate for locating, but not damaging, the Underground Facilities. These methods may include, but not be limited to, careful hand excavation, pot-holing, and the use of ground penetrating radar (GPR). All Underground Facilities shall be located, both those shown or indicated and those that are not shown or indicated. The Contractor shall have full responsibility for the safety and protection of all Underground Facilities and repairing any damage thereto resulting from the work.
5. If an Underground Facility is uncovered or revealed which constitutes an unforeseen obstruction, the Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any work in connection therewith, give notice to the Engineer. The Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is needed in the Contract 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.

**END OF SECTION**

## SECTION 02630

### STORM SEWER COLLECTION SYSTEM

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#### PART 1 - GENERAL

**1.01 DESCRIPTION:** Work under this Section consists of furnishing all materials, supplies, equipment and labor in accordance with the requirements set forth herein and as shown on the Drawings.

**1.02 RELATED DOCUMENTS:** The General Provisions of the Contract, including the General Conditions, Supplementary Conditions and Special Conditions (if any), along with the General Requirements, apply to the work specified in this Section.

**1.03 APPLICABLE CODES, STANDARDS AND SPECIFICATIONS:** The work under this Contract shall be in strict accordance with the following codes and standards.

- A. All Local, County, Municipal and Federal Codes.
- B. American National Standards Institute (ANSI).
- C. American Society for Testing and Materials (ASTM).
- D. American Water Works Association (AWWA).
- E. American Association of State Highway and Transportation Officials (AASHTO).
- F. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction.
- G. St. Johns River Water Management District (SJRWMD).
- H. Florida Department of Environmental Protection (FDEP).
- I. Florida Building Code (FBC).

**1.04 REFERENCED CODES AND STANDARDS:**

- A. American Association of State Highway & Transportation Officials (AASHTO)/ American Society for Testing and Materials (ASTM):
  - 1. ASTM C76/ AASHTO M 170, Round Reinforced Concrete Pipe.
  - 2. ASTM C139, Concrete Masonry Units for Construction of Catch Basins and Manholes.

3. ASTM C150, Portland Cement.
4. ASTM C443, Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
5. ASTM C478, Precast Reinforced Circular Concrete Manhole Sections.
6. ASTM C497, Determining Physical Properties of Concrete Pipe or Tile.
7. ASTM C507 / AASHTO M 207, Reinforced Concrete Elliptical Culvert, Storm Drain and Sewer Pipe.
8. ASTM C655/ AASHTO M 242, Reinforced Concrete D-Load Culvert, Storm Drain and Sewer Pipe.
9. ASTM C890 Minimum for Structural Design Loading for Monolithic or Sectional Precast Concrete Water and Wastewater Structures.
10. ASTM C923, Resilient Connectors between Reinforced Concrete Manhole Structures, Pipes and Materials.
11. ASTM C1433, Precast Reinforced Concrete Box Sections for Culverts, Storm Drains and Sewers.
12. ASTM D1248, Standard Specification for Polyethylene Plastics Molding and Extrusion Materials.
13. ASTM D2321, Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.
14. ASTM D3350, Standard Specification for Polyethylene Plastics Pipe and Fitting Materials.
15. AASHTO M 252, Specification for Corrugated Polyethylene Drainage Tubing, 3 to 10 Inch Diameter.
16. AASHTO M 294 Type S, Specification for Corrugated Polyethylene Pipe, 12 to 36 Inch Diameter.
17. ASTM F405, Standard Specification for Corrugated Polyethylene Tubing and Fittings, 4" to 8" diameter.
18. ASTM F667, Standard Specification for Large Diameter Corrugated Polyethylene Tubing and Fittings, 10" to 24" diameter.



19. ASTM F477, Standard Specification for Elastomeric Seals.
  20. AASHTO M 294, Standard Specification for Corrugated Polyethylene Pipe, 12" to 24" diameter.
  21. AASHTO M 190, Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches.
  22. ASTM A798, Installing Factory-Made Corrugated Steel Pipe for Sewers and Other Applications.
  23. ASTM A760/ AASHTO M 36, Metallic (zinc or aluminum) Coated Corrugated Steel Culverts.
  24. AASHTO M 196, Corrugated Aluminum Alloy Culverts and Underdrains.
  25. ASTM A762, AASHTO M 245, Precoated, Galvanized Steel Culverts and Underdrains.
  26. ASTM F2306/F2306M-07 Standard Specification for 12 to 60 in. [300 to 1500 mm] Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications
- B. Manufacturer's name and model numbers are listed to establish a standard of quality. Equivalent items of other manufacturers are acceptable upon approval by the Engineer.

#### **1.05 SUBMITTALS:**

- A. Submit manufacturer's certification of materials' conformance to specifications.
- B. Submit manufacturer's literature, catalog data, and installation instructions.
- C. Precast shop drawings indicating all dimensions, finishes, reinforcement, and accessories for each unit.
- D. As-built drawings in compliance with Section 01700, Project Closeout. As-built drawings of the drainage system shall be provided prior to making permanent above pipe improvements.
- E. Comply with Section 01300, Submittals.

## **1.06 PRODUCT DELIVERY AND HANDLING:**

- A. Exercise care to prevent damage of product during loading, transporting, unloading and storage.
- B. Do NOT drop pipe or fittings.
- C. Do not store directly on ground and assure that materials are kept clean.
- D. Store material in areas approved by the Owner.
- E. Store material in such a manner as to not create a nuisance or safety hazard.

## **1.07 QUALITY CONTROL:**

- A. Contractor shall make a timely submittal of as-built drawings of the stormwater system and prior to making permanent above pipe improvements.
- B. Installed pipe slopes shall not deviate by more than 5% of the specified slope for each run.
- C. Structure inverts and control elevations shall not deviate by more than 0.10 feet from the specified elevation.
- D. Pipe slopes and inverts not meeting the standards of this section shall be relaid to the required slope or invert at the contractor's expense. Failure to correct a deficient item shall be cause for the contractor to forfeit payment for the materials and installation costs incurred for the item.

## **PART 2 - PRODUCTS**

### **2.01 PIPE:**

- A. General: Pipe shall be furnished free from defects impairing strength and durability and should be of best commercial quality for purpose specified. Structural properties shall be sufficient to safely sustain or withstand strains to which it is normally subjected.
- B. Pipe Materials:
  - 1. Reinforced Concrete Circular Pipe (RCP) and Elliptical Pipe (ERCP):
    - a. Specification: ASTM C76 (RCP), C507 (ERCP).
    - b. Thickness: Class III.
    - c. Reinforcing: 65 ksi: Steel mesh.

2. Corrugated Polyethylene Pipe (CPP):
  - a. Specification: AASHTO M 294, ASTM F405, ASTM F667, AASHTO M 252, ASTM F2306.
  - b. Advanced Drainage Systems Air Chamber N-12 WT “watertight pipe” or approved equal.
  - c. Dual wall HDPE pipe with smooth interior lining and exterior corrugations.
  - d. Provide manufacturer installed “anti-float” perforations.

C. Pipe Joints:

1. Reinforced Concrete Pipe (RCP & ERCP):
  - a. Bell & Spigot with Rubber Gaskets: ASTM C443.
2. Corrugated Polyethylene Pipe (CPP):
  - a. Couplings: ASTM F405, ASTM D3212, ASTM F1417.
  - b. All joints shall be rated as Watertight.

D. Filter Fabric:

1. Specification: FDOT Specification Section 985 (Geotextile Fabrics).
2. Class D-3 Material.

## 2.02 PRECAST UNITS:

A. Manholes, Inlets, and Catch Basins:

1. Manholes, inlets, and catch basins shall be constructed of precast reinforced concrete rings, precast reinforced sections, or cast-in-place concrete. Manholes, inlets, and catch basins shall be in accordance with State of Florida Department of Transportation standard details.
  - a. Precast Reinforced Concrete Rings: Rings or sections shall have an inside diameter as indicated on the Drawings, and shall be not less than 48 inches in diameter. Wall thickness shall conform to requirements of ASTM C76, except that lengths of the sections may be shorter as conditions require. Tops shall conform to ASTM C478. Top section shall be eccentric cone type.

- b. Precast Reinforced Concrete Manhole Risers and Tops: Design, material and installation shall conform to requirements of ASTM C478. Top sections shall be eccentric.
- c. Flat top manhole tops shall be reinforced concrete as detailed on the Drawings.
- d. Precast Catch Basins: Concrete for precast sections shall have a minimum compressive strength of 4,000 psi at 28 days, ASTM A615, Grade 60 reinforcing steel, rated for AASHTO HS20 44 loading with 30 percent impact, and conform to ASTM C857.
- e. Brick Mortar: Precast Reinforced Concrete Ring and Riser Structures: By volume, 1 part of Portland cement and 2 parts sand. Water in mixture shall produce a stiff, workable mortar, but shall not exceed 5½ gallons per sack of cement.
- f. Frames and covers shall be cast iron conforming to ASTM A48.
  - 1. The frame and cover shall be rated for HS20-44 loading, have a studded pattern on the cover with the Owner's name and the words "storm sewer" stamped into the surface. The studs and the lettering shall be raised 5/16 inch.
  - 2. The cover shall be a minimum of 24 inches in diameter and shall have four 3/4 inch vent holes and two lifting slots. The bearing surface of the frame and cover shall be machine finished. The cover shall fit firmly on the frame without movement when subject to traffic.
- g. Grates shall be cast grey iron conforming to ASTM A48 in accordance with Florida Department of Transportation standard details.. The grate shall fit firmly on the frame without movement when subject to traffic.
  - 1. All grates shall be traffic rated for HS20-44 loading.
  - 2. All grates shall be fitted with an eyebolt and chain secured to the concrete to prevent unauthorized removal.
  - 3. The shape and size of waterway openings shall be as shown on the Drawings



## **PART 3 - EXECUTION**

### **3.01 EXCAVATION:**

- A. General: The Contractor shall perform all excavation of every description and of whatever substances encountered to the depths indicated on the Drawings or as necessary. This shall include all necessary clearing and grubbing of any foreign substance encountered within the structure or trench area. Excavated material suitable for backfill shall be piled in an orderly manner at a sufficient distance from the trench to prevent slides or cave-ins.
- B. Protection of Existing Facilities and Utilities: All existing improvements such as pavements, conduit, poles, pipes, and other structures shall be carefully supported and fully protected from injury and, in case of damage, they shall be restored by the Contractor without compensation. Existing utilities and other underground obstructions are shown on the plans, but the accuracy of the locations and depths is not guaranteed. The Contractor shall contact all utilities prior to construction and arrange for the necessary assistance in locating and protecting the existing utilities. The Contractor shall be responsible for damages to these existing utilities and shall, in case they are damaged, restore them to their original condition at no cost to the Owner.
- C. Trench Excavation: The minimum width of the trench shall be equal to the outside diameter of the pipe at the joint plus 8 in. each side of pipe for unsheeted or sheeted trench, with the maximum width of trench measured at the top of the pipe not to exceed the outside pipe diameter plus 24 in., unless otherwise shown on the Drawings. Trench walls shall be maintained vertical from the bottom of the trench to a line measured at the top of the pipe. From the top of the pipe to the surface of the trench walls shall be as vertical as possible under soil conditions.

No more than 150 linear feet of trench shall be open in advance of the completed pipe laying operation without prior approval of the Engineer. Pipe trenches across roadways and driveways shall be backfilled as soon as the pipe is installed. Where, in the opinion of the Engineer, adequate detour facilities are not available, no trench shall be left open across a roadway or commercial property driveway where adequate detour routes are not available for a period in excess of 30 minutes, or as directed by the governing authority. No trench shall be left open across any roadway or driveway for more than one daylight period. It shall be the Contractor's responsibility to provide traffic control and barricades as necessary.

- D. Shoring, Sheet piling, and Bracing: The Contractor shall design, furnish, install, and maintain all shoring, sheet piling, and bracing or provide other approved facilities required to perform and protect the excavation and as necessary for the safety of the public, the employees, and the preservation of existing roads, structures and other utilities. The top of such sheet piling left in place

shall be cut off at a minimum elevation of 2.5 ft below finished grade. All work shall be in accordance with the Florida Trench Safety Act. See Section 02300 for additional requirements.

- E. Boulder Removal: All rocks, stones, boulders, or concrete having any dimension larger than permitted to be used for backfill in the paragraph entitled "Backfilling" of these Specifications, shall be removed from the site and disposed of by the Contractor.
- F. Trash Removal: Non-hazardous waste material encountered within the trench section including, but not limited to, household solid waste, wood, tires, and plastic shall be removed from the site. Under no circumstances, shall this material be reburied.
- G. Disposal of Excess Materials: The Contractor shall dispose of the excavated materials not required or suitable for backfill. All surplus excavated material which is suitable for fill shall become property of the Contractor and shall be disposed of by the Contractor at his expense.
- H. Unsuitable Soil Conditions and Over Depth Excavation: Overexcavate and backfill as required by Section 02300, Earthwork.

### **3.02 INSTALLATION OF STORM SEWER PIPE:**

- A. Manufacturer's Instructions: Storm sewer pipe shall be handled, stored and installed in strict accordance with the pipe manufacturer's instructions. A copy of the manufacturer's instructions shall be kept at the site of the work at all times by the Contractor.
- B. The trench shall be excavated as specified and the bottom of the trench shall be shaped to give sufficient uniform circumferential support to the lower one-fourth of each pipe.
- C. Pipe laying shall proceed upgrade.
- D. Lay pipes true to line and grade. Gravity flow sewer shall be laid with bells facing upgrade.
- E. Do not lay pipe on unstable material, in wet trench, or when trench and weather conditions are unsuitable for the work.
- F. Support pipe on compacted bedding material. Excavated bell holes only large enough to properly make the joint.
- G. Inspect pipes and fittings for defects before installation. Defective materials shall be plainly marked and removed from the site. Cut pipe shall have smooth regular ends at right angles to axis of pipe.

- H. Clean interior of all pipe thoroughly before installation. When work is not in progress, open ends of pipe shall be closed securely to prevent entrance of storm water, dirt or other substances.
- I. Lower pipe into trench carefully and bring to proper line, grade, and joint. After jointing, interior of each pipe shall be thoroughly wiped or swabbed to remove any dirt, trash or excess jointing materials.
- J. Where cleaning of the pipe after laying is difficult because of the small diameter, the Contractor shall keep a suitable swab or drag in the pipe and shall pull the swab forward past each joint immediately after the jointing operation.
- K. Jointing: The bell and spigot surfaces shall be wiped free of dust, dirt, gravel, or other foreign material before the application of the lubricant sealer. The resilient joint shall be connected by first brushing upon the mating surfaces the proper lubricant sealer as recommended by the pipe manufacturers. The spigot end shall then be centered on grade into the bell end of the last downstream pipe length and shoved home and properly seated with the application of moderate force by a pry or lever device. The pipes shall be jointed no later than five minutes after the application of the lubricant sealer. Jointing for connections with existing mains, or other special joints, shall be approved by the Engineer before use.
  - 1. All joints shall be wrapped in a 30" wide layer of filter fabric. Fabric shall be centered on the joint and completely surround the pipe with a 18" lap.
- L. Do not lay sewer pipe in same trench with another pipe or other utility unless authorized by the engineer.
- M. Do not walk on pipe in trenches until covered by layers of fill to a depth of 12 inches over the crown of the pipe.
- N. Connections to Manholes or Inlets:
  - 1. Pipe connections to concrete manholes or inlets shall be made with resilient connectors.
  - 2. Watertight gaskets shall be fitted to the pipe and embedded in the grouted annular space in accordance with the manufacturer's requirements.
- O. It is the responsibility of the Contractor to install the stormsewer pipe as shown on the Drawings. The Contractor shall survey the newly installed line before backfilling to determine the actual invert elevations of the pipe. If the calculated slope is below the minimum acceptable requirements, the



Contractor shall remove and relay the storm sewer pipe at his own expense before further installation continues. The Contractor shall submit the as-built information to the Engineer at the end of each work day. This information will be included in the daily inspection report. Constructed slopes shall not vary more than 5% from the design value.

### **3.03 PRECAST UNIT INSTALLATION:**

- A. **Installing Sections:** Precast concrete sections shall be set so the manhole will be vertical and with sections in true alignment. Joint surfaces of the base of previously set section shall have an O-ring installed in the recess or shall be sealed with pre-molded plastic joint sealer "RAMNEK". If "RAMNEK" is used, joints shall be pre-primed.
- B. **Non-Metallic Non-Shrink Grout:** All holes in sections used for their handling and the annular space between the wall and entering pipes shall be thoroughly plugged with Masterflow 713 Plus as manufactured by the BASF, or any approved equal non-shrinking mortar or grout, applied and cured in strict conformance with the manufacturer's recommendations so that there will be zero leakage through openings and around pipes.
  - 1. The mortar shall be finished smooth and flush with the adjoining interior and exterior manhole wall surfaces.
  - 2. Non-concrete pipe connections shall be fitted with a resilient connector to provide a watertight connection between the pipe and the manhole.
- C. **Membrane Curing Compound:** As soon as grout is hydrated to the point where it will not be marred by such application and within two (2) hours after installing grout, the Contractor shall apply an approved membrane curing compound conforming to ASTM C309-74, Type 1, Class B to the finished mortar surfaces both inside and outside the manhole. Submission of alternate mortars or grouts should include an alternate membrane curing compound or indicate which of the above approved products is proposed for use.
- D. **Grade Adjustment:** For grade adjustment in setting the manhole frame, brick masonry shall be used on top of manhole slabs and precast concrete manhole cones in accordance with the Drawings. Mortar shall be one part cement and two parts sand; lime shall not be used.
- E. **Setting Manhole Frames:** Manhole frames and covers shall be set to conform accurately to the finished ground or pavement surface as established by the Contract Drawings, unless otherwise directed by the Owner. Frames on manhole cones shall be set concentric with the masonry and in a full bed of mortar so that the space between the top of the manhole

masonry and the bottom flanges of the frame shall be completely filled and made water tight. A ring of mortar at least one inch thick and pitched to shed water away from the frame shall be placed around the outside of the bottom flange. Mortar shall extend to the outer edge of the masonry and shall be finished smooth and flush with the top of the flange.

- F. Flow Channels: Flow Channels in manhole base shall be formed of Class "C" concrete and/or brick rubble and mortar while the manholes are under construction. Cut off pipes at inside face of the manhole and construct the invert to the shape and sizes of pipe indicated. All inverts shall follow the grades of the pipe entering the manholes. Changes in direction of the sewer and entering branch or branches shall be laid out in smooth curves of the longest possible radius which is tangent to the centerlines of adjoining pipelines.

### **3.04 BACKFILLING:**

- A. Material: All backfill shall be suitable fill as described in Section 02300 and as further described below:
1. Bedding and Pipe Embedment: The material in the bedding, around the pipe and to a depth of 1 ft. over the pipe, shall be sand or a mixture of sand, shell or crushed stone properly graded and mixed so that fine grain material from the side walls of the trench or backfill above the embedment will not migrate into the backfill material. The backfill shall meet the following limitations.
    - a. Concrete Pipe: All material shall pass through a 3/4 in. square opening laboratory sieve.
    - b. Corrugated Metal and Plastic Pipe: All materials shall pass through a 1/2 in. square opening laboratory sieve.
  2. Above Pipe Embedment: The material shall be suitable fill as described in Section 02300, Earthwork.
  3. Top of Backfill: The top 6 inches of the backfill shall be topsoil (as defined in Section 02300, Earthwork) in areas to be landscaped or grassed.
  4. Additional Fill: If sufficient suitable backfill material is not available from the excavation, additional fill meeting the above requirements shall be provided by the Contractor at no expense to the Owner.

B. Placing and Compaction:

1. Bedding and Pipe Embedment: The backfill shall be placed by hand under and around the pipe to the springline and compacted. Particular care shall be taken to ensure that the backfill at the pipe haunch is free from voids and is properly compacted. The backfill shall be compacted to a density of not less than 98% of maximum as determined by AASHTO T 180.
  - a. Above Pipe Embedment in Areas of Permanent Pavement: The backfill shall be placed in layers having a depth that will permit proper compaction as described in Section 02300. The backfill shall be compacted to a density of not less than 98% of maximum as determined by AASHTO T 180.
  - b. Above Pipe Embedment In Areas Not Under Permanent Pavement: Within rights-of-way or other areas where permanent pavement does not exist or is not proposed the backfill material above 1 ft. over the pipe shall be compacted to a density of not less than 90% of the maximum density, as determined by AASHTO T 180.
2. In areas where unpaved, stabilized roads exist, the Contractor shall restore the road to its original grade and condition. The finished stabilized road shall have a minimum LBR value of 50 for the top 12" of the roadbed.
3. Miscellaneous: Backfilling around manholes, cleanouts, and other structures shall be accomplished in the same manner as the connected pipe. Extreme care shall be used in backfilling wellpoint holes to prevent voids and settlement. If necessary, the holes should be plugged with a concrete slurry, such plugging to be at the expense of the Contractor.
4. Compaction: Shall be by hand or by mechanical tampers. Care shall be taken that the pipe is not struck by the tamper. Compaction by flooding may be allowed by written authorization of the Engineer although this will not release the Contractor of the responsibility to meet the required density.
5. The Contractor is to compact the backfill in such a manner to prevent settlement. Although the requirements of Paragraph 3.04 may be met, nonsettlement is not assured and Contractor is not relieved of his responsibility by such compliance.
6. Pipe shall be laid and backfilled so that pipe deflection does not exceed five (5) percent.

7. All pipe shall laid to within 5% of the specified slope. Structure inverts shall be within 0.10 ft of the vertical elevation shown on the Drawings.
8. Corrugated plastic pipe shall receive a minimum of 24" of cover. In the event that 24" of cover cannot be provided, the Contractor shall notify the Engineer immediately.
9. The Contractor shall perform soil density tests as described in Section 02300, Earthwork.
10. All testing shall be paid for by the Contractor by a qualified testing laboratory of his choosing.

### **3.05 CULVERT REMOVAL AND REPLACEMENT:**

- A. Culverts, catch basins, and other drainage structures that are removed or damaged during construction shall be replaced with materials and structures equal and similar to those removed or damaged. Manhole covers and gratings shall be set at the original elevations unless otherwise directed.
- B. The Contractor shall take precautions against the entry of excavated and other loose material resulting from his operations from entering catch basins, culverts and other drainage structures in the vicinity of his operations. He shall maintain the cleanliness of these drainage structures in a condition equal to that prior to the commencement of his operations during the construction. The Contractor shall be responsible for all damage to persons, roads, buildings, vehicles and other property resulting from the failure of the Contractor to maintain these drainage structures.

### **3.06 SYSTEM TESTING:**

- A. The Contractor shall furnish all necessary equipment and labor to perform testing of all gravity sewers as set forth in the following and shall conduct such tests in the presence of the Engineer and other authorized agencies, with five days advance written notice provided.
- B. The installed sewers shall be visually inspected by "lamping" between manholes, inlets, lampholes, or other structures in order to ascertain that they are clear and to correct alignment. The concentricity of the lamp image received shall be such that the diameter of said image shall have no vertical or horizontal reduction from that of the pipe inside diameter.
- C. All newly installed gravity sewers shall be televised. Televising shall occur immediately after sewers have been flushed so that areas of standing water can be observed.

1. The television camera used for the survey shall be one specifically designed and constructed for such survey with tilt and pan capabilities. Lighting for the camera shall be suitable to allow a clear picture of the entire periphery of the pipe. The camera shall be operative in 100% humidity conditions. The camera, television monitor, and other components of the video system shall be capable of producing a clear color video picture. The video camera shall include a title feature capable of showing on the recording the following information:
  - Client
  - Line Number
  - Line Type
  - Line Size
  - Date
  - Manhole Identification (both manholes)
  - Street Name
  - Ongoing Footage Counter
  - Contractor's Name
  - Tape ID Number
  - TV Direction
  - Tape Index
  - Comments
2. The video recording company shall prepare the final recording on DVDs or external hard drive for use by the Owner and the Engineer. A total of two sets shall be furnished, either on a 4.7 GB format DVD, suitable for playing on a standard DVD player, computer DVD drive or on a single external hard drive suitable for connection via USB port. The disk shall be bookmarked with a separate chapter title for each pipe run (structure to structure) that was recorded. The DVDs or files within the external hard drive shall not be copy righted or copy protected such that the Owner or Engineer will have the ability to make additional copies if necessary.
3. The camera shall be moved through the line, stopping when necessary to permit proper documentation of the sewer joint, lateral, defect or repair. In no case shall the television camera be pulled at a speed greater than 30 feet per minute.

**3.07 RESTORATION OF DAMAGED SURFACES, STRUCTURES, AND PROPERTY:**

Where pavement, trees, shrubbery, fences, or other property and surface structures not designated as pay items have been damaged, removed, or disturbed by the Contractor, whether deliberately or through failure to carry out the requirements of the contract documents, state laws, municipal ordinances, or the specific direction of the Engineer, or through failure to employ usual and reasonable safeguards, such property and surface structures shall be replaced and repaired at the expense of the Contractor to a condition equal to that before work began within a time frame approved by the Engineer at no cost to the Owner.

**3.08 CLEANUP:** The Contractor shall maintain the site of the work in a neat condition. The Contractor shall remove all excess materials, excess excavated materials, and all debris resulting from his operations within a time frame approved by the Engineer.

**END OF SECTION**

## SECTION 02740

### ASPHALTIC CONCRETE PAVING

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#### **PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK:** The extent of asphaltic concrete paving work is shown on the drawings.

**1.02 SUBMITTALS:**

- A. Material Certificates: Provide copies of material certificates including design mixes, signed by the Contractor, certifying that each specified material complies with, or exceeds, requirements.
- B. Copies of all compliance testing, certifications, and retests.
- C. Comply with Section 01300, Submittals.

**1.03 JOB CONDITIONS:**

- A. Weather Limitations: Apply prime and tack coats only when ambient temperature is above 50 degrees F and when temperature has not been below 35 degrees F for 12 hours immediately prior to application. Do not apply when base contains an excess of moisture.
- B. Construct asphalt concrete surface only when atmospheric temperature is above 50 degrees F and when base is dry. Base course may be placed when air temperature is above 30 degrees F and rising.
- C. Do not lay base or asphalt when free surface water is present on the material below.

**1.04 RELATED DOCUMENTS:** The General Requirements of the Contract, including the General Conditions, Supplementary Conditions, and Special Conditions (if any), along with the General Requirements, apply to the work specified in this Section.

**1.05 REFERENCES:**

- A. American Society For Testing And Materials (ASTM), latest edition:
  - 1. ASTM C131, Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
  - 2. ASTM D977, Standard Specification for Emulsified Asphalt.

3. ASTM D1075, Standard Test Method for the Effect of Water on Compressive Strength of Compacted Bituminous Mixtures.
  4. ASTM D1188, Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens.
  5. ASTM D1559, Standard Test Method for Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus.
  6. ASTM D2027, Standard Specification for Cutback Asphalt (Medium-Curing Type).
  7. ASTM D2041, Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures.
  8. ASTM D2397, Standard Specification for Cationic-Emulsified Asphalt.
  9. ASTM D2939, Standard Test Methods for Emulsified Bitumens Used as protective Coatings
  10. ASTM D2726, Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Saturated Surface-Dry Specimens.
  11. ASTM D3381, Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.
  12. ASTM D5167, Practice for Melting of Hot-Applied Joint and Crack Sealant and Filler for Evaluation.
  13. ASTM D5329, Standard Test Methods for Sealants and Fillers, Hot-Applied, for Joints and Cracks in Asphaltic and Portland Cement Concrete Pavements.
  14. ASTM D6690, Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
- B. American Association of Safety, Highway and Traffic Officials (AASHTO):
1. AASHTO M 173 Standard Specification for Concrete Joint-Sealer, Hot-Poured Elastic Type.
- C. Florida Department of Transportation (FDOT), latest edition:
1. FDOT 'Standard Specifications for Road and Bridge Construction.'
  2. FM – 5 – 515 'Florida Method of Test for Limerock Bearing Ratio.'

## **PART 2 - PRODUCTS**

### **2.01 MATERIAL:**

- A. Subgrade: All roadway stabilized subgrade, as required, shall comply with Section 914, of FDOT Standard Specifications.



- B. Base Course: Limerock Base - Material shall be as specified in Section 911, Limerock Material for Base and Stabilized Base, of the Standard FDOT Specifications. Limerock shall be mined from an FDOT approved source pit.
- C. Asphaltic Concrete Pavement: Asphalt pavement shall be Type SP, Fine, Traffic Level C. However, the wear course shall be Type SP-9.5 or 12.5 only. Materials shall conform to the following: Section 334, Superpave Asphalt Concrete; Section 901, Coarse Aggregate; Section 902, Fine Aggregate; Section 916, Bituminous Material; and Section 917, Mineral Filler of the FDOT Standard Specifications for Road and Bridge Construction (Latest Edition).
  - 1. Use of RAP (Recycled Asphalt Pavement) shall be limited to a maximum of 30% of mix by weight of total aggregate.
  - 2. If used, provide RAP with a minimum average asphalt content of 4.0% by weight.
  - 3. If used, RAP must be from a traceable source.
  - 4. RAP shall use a PG 58-22 binder.
- D. Priming: Prime coat shall be emulsified asphalt of a grade applicable to the base used meeting the requirements of Section 916, Bituminous Material of the FDOT Standard Specifications. Cover material for prime coat shall be hot asphalt coated sand meeting the requirements of Section 902, Fine Aggregate of the FDOT Standard Specifications.
- E. Tack Coat: Use RA-500 material meeting the requirements of section 916-2 of FDOT Standard Specifications.
- F. Striping: Marking and striping shall utilize products meeting or exceeding requirements as specified below.
  - 1. Thermoplastic pavement marking materials shall comply with the following: Section 971-1, General Requirements; Section 971-5, Thermoplastic Materials for Traffic Stripes of the FDOT Standard Specifications.
  - 2. Painted striping materials shall comply with the following: Section 971-1, General Requirements; Section 971-4, Fast Dry Solvent Traffic Paint; and Section 971-2, Glass Spheres of the FDOT Standard Specifications.
    - a. Parking stall striping shall be non-reflective.
- G. Raised Pavement Markers: Shall be FDOT Type 911-4"x4".

- H. Pre-emergent Herbicide:
  - 1. Selective-type pre-emergence control chemical suitable for use under pavement.
  - 2. Application personnel shall be certified in the state of Florida for application of agricultural chemicals.
- I. Seal Coat: Mineral reinforced asphalt emulsion. Comply with ASTM D2939 Test methods.
- J. Hot Mix Asphalt Sealant:
  - 1. Comply with ASTM D6690, ASTM D5329, AASHTO M 173.
  - 2. Product shall be a mix of asphaltic cement, reinforcing fillers, and synthetic rubbers.
  - 3. Acceptable Products: Beram 190, Crackmaster 3405, or approved equal.
- K. Traffic Signs:
  - 1. All signs shall conform to MUTCD requirements.
  - 2. Signs shall be made from 6061-T6 or 5052-H38 aluminum alloy in conformance with ASTM B209.
  - 3. All background sheeting applied to the panel shall be retroreflective in accordance with ASTM D4956.
  - 4. Posts shall be punched steel channel, perforated steel tube, or solid steel tube. All steel shall be hot dip galvanized.
  - 5. Signs shall be permanently affixed with a “born on” date that states date of manufacture and origin.
  - 6. All fasteners shall be 316 stainless steel.

## **PART 3 - EXECUTION**

### **3.01 INSTALLATION:**

- A. Survey and stake surfaces to show grading required by Contract Documents. Use a Florida Registered Professional Land Surveyor to provide all horizontal and vertical layout.

- B. Subgrade: Unless otherwise noted, subgrade shall be a minimum of twelve (12) inches deep and extend a minimum of 6 inches beyond the limits of base material and/or curbing. Contractor may, at his own discretion, increase the depth of the prepared subgrade as necessary to accommodate his equipment needs at no additional cost. Constructed stabilized subgrade shall be mixed, moisture conditioned and compacted to 98% of the maximum density (ASTM D1557). Prepared material shall provide a limerock bearing ratio (LBR) of 40. The subgrade shall be constructed as specified in Section 160, Stabilizing of the FDOT Standard Specifications for Road & Bridge Construction (Latest Edition).
1. Fine grade surface area to accommodate finish grades required by Contract Documents.
  2. Prepared surface shall be proof-rolled with a heavy pneumatic tired vehicle.
    - a. Proof-roll entire surface area a minimum of two passes in each direction.
    - b. Remove material from soft areas and replace with new material. Failing areas shall be reconstructed to the full depth of the material. If necessary, additional stabilizing material shall be added. Recompact and retest.
  3. Plasticity index shall not exceed 8 and liquid limit shall not exceed 30 in prepared material.
- C. Pre-emergent Herbicide:
1. Apply to prepared subgrade dispersed in liquid. Concentrate shall be such that Manufacturer's full recommended rate of chemical will be applied to every 1000 sq ft and liquid will penetrate a minimum of 2 inches.
  2. Application shall be no more than one day before installation of base.
  3. Take necessary precautions to protect adjoining property and areas designated for planting on building site.
- D. Limerock Base Course: Limerock shall be moisture conditioned and compacted to a LBR of 100. Thickness shall be as shown on the drawings. Base shall be constructed as specified in Section 200, Rock Base of FDOT Standard Specifications.
1. Surface shall be uniform and free of birdbaths.

2. Surface variations in prepared base material shall not exceed 1/4" when measured with a 12' straight edge.
  3. Base material shall extend a minimum of 6 inches beyond the limits of asphalt paving.
- E. Priming: All base material shall be primed. Prime coat shall be applied in accordance with Section 300, Prime and Tack Coats For Base Courses of the FDOT Standard Specifications. Cover material for prime coat shall be applied with approved distributor.
- F. Tack Coat: All existing asphalt and any concrete surfaces that will be in contact with the asphalt course shall receive a tack coat. Tack coat shall be applied in accordance with Section 300 Prime and Tack Coats For Base Courses of the FDOT Standard Specifications.
- G. Asphaltic Concrete Pavement: Thickness and Type shall be as shown on the drawings and shall be constructed as specified in Section 320, Hot Bituminous Mixtures-Plant, Methods, and Equipment; Section 330, Hot Bituminous Mixtures-Quality Assurance, General Construction Requirements and Acceptance Procedures; and Section 334, Superpave Asphaltic Concrete of the FDOT Standard Specifications for Road and Bridge Construction (Latest Edition).
1. Wear course shall be Type SP-9.5, SP-12.5 (Fine) only.
  2. Surface shall be uniform and free of birdbaths.
  3. Surface variations in wear surface shall not exceed 1/4" when measured with a 12' straight edge.
  4. Spreading:
    - a. Spread material in a manner that requires the least handling.
    - b. Where thickness of finished paving will be 3" or less, spread in one layer.
  5. Rolling:
    - a. After the material has been spread to the proper depth, roll until the surface is hard, smooth, unyielding, and true to the thickness and elevations shown on the Drawings.
    - b. Roll in at least two directions until no roller marks are visible.

6. Temperature: Asphalt mix shall be between 240 degrees Fahrenheit and 360 degrees Fahrenheit at time of placement
- H. Paving shall not proceed if subgrade and base are too wet or too dry. Subgrade and Base materials shall be within their respective acceptable range of optimum moisture content. Under no circumstances shall pavement be installed if standing water is present on the base material or during a rain event.

### **3.02 ASPHALT OVERLAY:**

- A. Existing asphalt surface to receive overlay shall be mechanically swept, pressure washed and cleaned of loose material. Asphalt surface shall be free of all vegetation and other debris for the limits of the work.
- B. Cracks over 1/4 inch in width shall be filled with a hot mix asphalt sealant in accordance with ASTM D5167 and the sealant manufacturers requirements.
- C. Exposed concrete and asphalt to be in contact with new asphalt shall receive a tack coat.
- D. Exposed base shall be primed and asphalt surface patched to match surrounding grade.
- E. Where localized depressions occur that exceed 1/2" in depth over 12 inches. The asphalt shall be sawcut, removed and the base replaced for its full depth. The asphalt surface shall be patched to match the surrounding grade prior to installation of final overlay.
- F. Where divotting or other depressions occur due to loss of asphalt and are entirely contained within the asphalt layer, the divot shall be patched with a hot or cold mix asphalt repair to match existing grade prior to installation of the final overlay.
- G. Curbing, asphalt edges or cracks within the paved area that exhibit vegetative growth shall be treated with an appropriate herbicide prior to installation of the new paving. Vegetation extending onto the asphalt surface shall be trimmed at the edge of pavement and removed.
- H. Where pavement edges have been damaged due to vehicular activity across the edge the contractor shall sawcut a new edge, remove all debris and install a hot or cold patch to original limits of pavement.
- I. Asphalt shall be spread and rolled as described in Paragraph 3.01 of this section. Except that the paving contractor shall identify the joints in the existing pavement and shall avoid matching these joints with the new paving. Existing pavement joints shall be centered as much as possible beneath the swath of new asphalt.

### **3.03 SEAL COATING:**

- A. Existing surface must be clean and free of all loose material. Vegetation shall be trimmed to the existing edge of pavement.
- B. Existing surface shall be swept and cracks cleaned with pressurized air or water.
- C. Cracks shall be filled to finish grade with a suitable crack filler in conformance with the manufacturers recommendations. Filler shall be compatible with the sealant product.
- D. All oil, grease, or gasoline damage to the existing surface shall be repaired prior to application of the seal coat.
- E. Application of the sealant shall be performed with a pressurized spray applicator or self propelled squeegee equipment.
- F. Hand application by brush or squeegee will only be allowed in areas where the practicality of mechanized equipment is prohibitive.
- G. Sealants shall not be applied when surface and ambient temperatures are expected to be below 50 degrees Fahrenheit during and for a period of 24 hours after application.

### **3.04 STRIPING:**

- A. Pavement marking and striping shall be applied in accordance with Section 709, Traffic Stripes and Markings-Two Reactive Components; Section 710, Painted Pavement Marking; and Section 711, Thermoplastic Traffic Stripes and Markings of the FDOT Standard Specifications for Road and Bridge Construction (Latest Edition). Type and location of marking to be used shall be as follows unless otherwise described on the Drawings:
  - 1. Thermoplastic Stripes: (100 mils, Minimum Thickness):
    - a. All striping to occur within Federal, State or Local right of way.
    - b. All striping on private property to be applied within a travel lane including:
      - 1) Stop Bars
      - 2) Directional Arrows
      - 3) Message Lettering
      - 4) Other Symbols applied within the travel lane.

2. Painted Stripes: (25 mils, Minimum Thickness):
  - a. Parking stalls and symbology
  - b. Solid and Skip lane designation striping on private property.
  - c. Curb striping
  - d. Temporary striping
- B. Thermoplastic striping shall be applied to asphalt pavement that has cured for a minimum of 14 days.
- C. Contract shall include temporary striping for all striping, messages and symbols that will receive thermoplastic striping as the permanent marking.
- D. Temporary striping shall be completed prior to substantial completion.
- E. Temporary striping shall be in place within 24 hours of pavement installation.
- F. Existing pavement, with modified traffic patterns, shall receive temporary striping in the event permanent striping is delayed or unavailable when traffic is allowed to use said pavement.
- G. Contractor shall provide temporary striping as necessary for the duration of the work.
- H. Where new automotive or pedestrian traffic patterns are to occur on existing pavement, all existing striping marking the old pattern shall be removed.
- I. If requested by local AHJ, all thermoplastic striping shall be certified for thickness and retro reflectivity by the installer in accordance with FDOT requirements.
- J. Permanently painted surfaces shall completely cover the asphalt surface below.

### **3.05 FIELD QUALITY CONTROL:**

- A. All work shall meet the requirements of the FDOT.
- B. Surface of completed work shall not contain irregularities greater than 1/4" when checked with a 12-ft. straight edge.
- C. Permanent painted stripes shall completely cover asphalt below. Bleed through of aggregate or asphalt within the painted area shall require additional coating at the Contractor's expense.

### 3.06 TESTING:

- A. Stabilized subgrade material tests shall be made as follows:
1. Determine optimum moisture/density relationship of stabilized subgrade material in accordance with ASTM D1557. Verify moisture content of in-place material (ASTM D2216) is within 4%  $\pm$  of optimum.
  2. Perform in-place density tests (ASTM D1557) in the compacted stabilized subgrade material at the rate of one test for every 5,000 sf or fraction thereof. Recompact areas which fail to meet compaction requirements, then retest until passing results are obtained. Reference test locations to easily identified points on Site Plan.
  3. Contractor shall perform bearing value tests on samples of in-place material by the Limerock Bearing Ratio (LBR) Method. One (1) test shall be performed for each 10,000 SF, or fraction thereof. For areas failing to meet the minimum LBR, additional stabilizing material shall be spread, mixed and retested until satisfactory results are obtained.
- B. Base material tests shall be made as follows:
1. Determine optimum moisture/density relationship of base material in accordance with ASTM D1557. Verify moisture content of in-place material (ASTM D2216) is within 2% ( $\pm$ ) of optimum. Moisture content shall be verified within 24 hours prior to paving operations.
  2. Perform in-place density tests in the compacted base material at the rate of one test for every 5,000 sf or fraction thereof. Recompact areas which fail to meet compaction requirements, then retest until passing results are obtained. Reference test locations to easily identified points on Site Plan.
  3. Contractor shall perform bearing value tests on samples of in-place material by the Limerock Bearing Ratio (LBR) Method. One (1) test shall be performed for each 10,000 SF, or fraction thereof. For areas failing to meet the minimum LBR, additional stabilizing material shall be spread, mixed and retested until satisfactory results are obtained.
  4. Base material shall be cored for thickness at the rate of one test for each 5,000 SF of surface area. Passing tests shall be within  $\frac{1}{2}$ " of specified thickness. Where material fails to meet the required thickness existing material shall be removed and subgrade cut down to accept additional material as required. Area shall be recompact and retested as required by Paragraph 3.04 B.2. above.



- C. Asphalt tests shall be made as follows:
1. At the start of paving operations, obtain one sample each of binder (if specified) and wearing surface asphalt delivered to the job. Conduct extraction and gradation analysis, Marshall Stability, and laboratory-compacted bulk specific gravity for each sample.
  2. Upon completion of paving, obtain at least two 4-inch diameter cores through the asphalt paving for all areas up to 10,000 SF and one additional core for each additional 10,000 SF or fraction thereof. Grout core holes with non-shrink grout after core removal. Reference test locations to easily identified points on the Site Plan.
  3. Measure each asphalt core for thickness and test for density. Compute the compaction percentage of each core, using the bulk specific gravity of the laboratory compacted specimen as the compaction standard.
  4. Asphalt thickness shall not be more than 1/4" thinner than the specified thickness.
- D. Copies of all testing shall be provided to the Owner and Engineer directly from the testing laboratory.
- E. All testing, retesting and remedial work shall be at the Contractor's expense.
- F. Failing results for any of the testing above shall be cause for rejection of all or part of the work performed. Contractor shall reconstruct deficient work at no additional cost to the Owner.

### **3.07 CLEANUP:**

- A. Contractor shall remove excess and waste material and properly dispose of off-site.
- B. Subsequent to Substantial Completion, the Contractor shall perform a final sweeping of all newly paved areas and existing pavement immediately adjacent to the work area as necessary to provide a clean and neat appearance.

**END OF SECTION**

## SECTION 02750

### CONCRETE PAVING, SIDEWALK AND CURB

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#### **PART 1 - GENERAL**

- 1.01 RELATED DOCUMENTS:** The General Provisions of the contract, including the General Conditions, Supplementary Conditions and Special Conditions, along with the General Requirements, apply to the work specified in this Section.
- 1.02 REFERENCES:** All work shall be in accordance with Section 522 Concrete Sidewalk, Section 350 Cement Concrete Pavement, and Section 520 Concrete Gutter, Curb Elements & Traffic Separator of the latest edition of the "Florida Department of Transportation Standard Specifications for Road and Bridge Construction" unless specifically stated or directed otherwise.
- 1.03 SUBMITTALS:**
- A. Material Certificates: Provide copies of material certificates including design mixes, signed by the Contractor, certifying that each specified material complies with, or exceeds requirements.
  - B. Provide manufacturer's literature and installation instructions for all concrete accessories such as joint filler and detectable warning textures.
  - C. Copies of all compliance testing and retests.
  - D. Comply with Section 01300, Submittals.

#### **PART 2 - PRODUCTS**

##### **2.01 CONCRETE MIX, DESIGN AND TESTING:**

- A. Comply with requirements of applicable FDOT Section 346 for Class I concrete mix design, sampling and testing, and quality control, and as herein specified.
- B. Design the mix to produce standard weight concrete consisting of portland cement, aggregate, air-entraining admixture and water to produce the following properties.
  - 1. Compressive Strength:
    - a. Sidewalks: 3,000 psi @ 28 days
    - b. Pavement: 4,000 psi @ 28 days
    - c. Curb: 3,000 psi @ 28 days
  - 2. Air Content: 3% to 6%.

C. Concrete placement slump shall not exceed plus or minus 1 inch from approved design slump.

D. Aggregates: Aggregate shall be 3/8" round with the following sieve graduation:

<u>Size</u>	<u>% Passing</u>
1"	100
3/4"	100
3/8"	90-100
#4	40-60
#8	0-10

E. Water: Potable, clean, fresh, free from oil, acid, organic matter or other deleterious substances.

**2.02 WELDED WIRE FABRIC:** ASTM A185, welded steel wire fabric, 65 ksi, flat sheets only.

**2.03 DEFORMED BARS:** ASTM A615, carbon steel, Grade 60.

**2.04 DETECTABLE WARNING TEXTURE:** Prefabricated resin mat with embeds for attachment to wet concrete or predrilled for manufacturer recommended anchor system. Truncated dome surface shall conform to ADAAG 4.29.2. Color shall contrast with concrete surface. Provide federal yellow or brick red as appropriate.

**2.05 JOINT MATERIAL:** Closed cell expanded polyethylene foam of dimensions shown on Drawing.

**2.06 FORM MATERIALS:** Unless otherwise indicated, construct formwork with plywood, metal, metal framed plywood faced or other acceptable panel type materials to provide continuous, straight, smooth, exposed surfaces.

### **PART 3 - EXECUTION**

#### **3.01 CONCRETE SIDEWALK & PAVEMENT INSTALLATION:**

A. General: Sidewalk, Curb and Pavement shall be installed where indicated on the drawings. Width of surface shall be as called out on the drawings.

1. All sidewalk shall be a minimum of 4-inches thick and unreinforced.
2. All sidewalk at driveways or other areas subject to vehicular traffic shall be 6-inches thick with 6x6, W1.4xW1.4 welded wire fabric reinforcement. The length of 6-inch thick sidewalk shall extend 5' each side of gated entries.

3. All pavement shall be thickness described on drawings.

B. Surface Preparation:

1. Construct stabilized sub-grade within limits of proposed sidewalk or pavement and level with the underside of concrete. Stabilization material and procedures shall be as described in the FDOT Standard Specifications for Road and Bridge Construction.
  - a. Sidewalks: Construct 6" thick stabilized subgrade.
  - b. Pavement and Curb: Construct 12" thick stabilized subgrade.
2. Proof-roll prepared sub-grade surface to check for unstable areas and the need for additional compaction.
3. Remove loose material from the compacted sub-grade surface immediately before placing the concrete.
4. Sub-grade for sidewalks shall be compacted to a minimum of 95 percent of AASHTO T-180 density and achieve an LBR value of 40.
5. Density tests shall be required for every 300 LF of sidewalk installed, at a minimum.
6. Where failing density tests occur, Contractor shall be required to recompact and retest area in both directions from point of failure to insure proper compaction has been achieved.
7. Subgrade preparation and construction for a concrete pavement section shall be subject to the subgrade requirements described in Section 02740 Asphaltic Concrete Paving including all testing requirements.

C. Concrete Placement:

1. Do not place concrete until sub-base and forms have been checked for line and grade. Moisten if required to provide a uniform dampened condition at the time concrete is placed. Do not place concrete around meter boxes or other structures until they are completed to required finish elevation and alignment.
2. Place concrete using methods which prevent segregation of the mix. Consolidate concrete along the face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand-spreading and consolidation. Consolidate with care to prevent dislocation of reinforcing, dowels and joint devices. Do not use vibrators to push or move concrete in forms or chute.

3. Deposit and spread concrete in a continuous operation between transverse joints as far as possible. If interrupted for more than ½ hour place a construction joint.
4. Joints: Construct expansion, weakened-plane (contraction), and construction joints true-to-line with face perpendicular to surface of the concrete, unless otherwise indicated. Construct transverse joints at right angles to the centerline, unless otherwise indicated. When joining existing structures, place transverse joints to align with previously placed joints, unless otherwise indicated.
  - a. Weakened-Plane Joints: Construct weakened-plane joints for a depth equal to at least 1 1/4-inch thickness or 1/4 the pavement thickness whichever is greater, by sawing within six to eight hours of placement or formed during finishing operations. Place joints as described on drawings.
  - b. Construction Joints: Place construction joints at the end of all pours and at locations where placement operations are stopped for a period of more than ½ hour, except where such pours terminate at expansion joints. Construction joints shall be standard metal keyway-section form of appropriate height.
  - c. Expansion Joints:
    - (1) Provide premolded joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks and other fixed objects, unless otherwise indicated.
    - (2) Locate expansion joints as described on the drawings.
    - (3) Extend joint fillers full-width and depth of joint, and not less than ½" below finished surface where joint sealer is indicated. If no joint sealer, place top of joint filler flush with finished concrete surface.
    - (4) Furnish joint fillers in one-piece lengths for the full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together. Pieces shorter than 4' shall not be used unless specifically shown as such.
    - (5) Protect the top edge of the joint filler during concrete placement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.
    - (6) Fillers and Sealants: Comply with the requirements of these specifications for preparation of joints, materials installation, and performance and as herein specified.

D. Concrete Finishing:

1. After striking-off and consolidating concrete, smooth the surface by screeding and floating. Use hand methods only where mechanical floating is not possible. Adjust the floating to compact the surface and produce a uniform texture.
2. All sidewalk surfaces shall be cross sloped (1.0%) to provide positive drainage towards curbing or grassed area.
3. All pavement surfaces shall be sloped to grades shown on the drawings.
4. After floating, test surface for trueness with a 20' straightedge. Variations exceeding 1/4" for any two points within 10' shall not be acceptable. Distribute concrete as required to remove surface irregularities, and refloat repaired areas to provide a continuous smooth finish.
5. Work edges of slabs, gutters, back top edge of curb, and formed joints with an edging tool, and round 10 1/2" radius, unless otherwise indicated. Eliminate any tool marks on concrete surface.
6. After completion of floating and when excess moisture or surface sheen has disappeared, broom finish surface by drawing a fine-hair broom across concrete surface, perpendicular to the line of traffic.
7. Do not remove forms for 24 hours after concrete has been placed. After form removal, clean up ends of joints and point-up any minor honeycombed areas.

E. Curing: Protect and cure finished concrete paving and walks, as required. Use moist-curing methods for initial curing whenever possible or approved concrete curing compounds.

F. Repairs and Protections:

1. Repair or replace broken or defective concrete as directed by the Engineer.
2. Drill test cores where directed by the Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with portland cement concrete bonded to pavement with epoxy resin grout.
3. Protect concrete from damage until acceptance of work. When construction traffic is permitted, maintain pavement as clean as

possible by removing surface stains and spillage of materials as they occur.

4. Sweep concrete pavement and wash free of stains and discolorations, dirt and other foreign material just prior to final inspection.

**END OF SECTION**

## SECTION 02820

### CHAIN LINK FENCING

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#### **PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS:** Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work of this section.

**1.02 DESCRIPTION OF WORK:** Extent of chain link fences and gates is indicated on drawings.

**1.03 QUALITY ASSURANCE:** Provide chain link fences and gates as complete units controlled by a single source including necessary erection accessories, fittings and fastenings.

**1.04 SUBMITTALS:**

A. Product Data: Submit manufacturer's technical data, and installation instructions for metal fencing, fabric, gates and accessories.

B. Manufacturers Certification of Zinc-Coating Compliance.

**1.05 APPLICABLE PUBLICATIONS:**

A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.

B. American Society for Testing and Materials (ASTM):

1. A121 - Zinc Coated Carbon Steel Barbed Wire
2. A392 - Zinc Coated Steel Chain-Link Fence Fabric
3. A817 - Metal Coated Steel Wire for Chain-Link Fence Fabric and Marcellled Tension Wire
4. C94/C94M - Ready-Mixed Concrete
5. F567 - Installation of Chain-Link Fence
6. F626 - Fence Fittings
7. F668 - PVC Coated Steel Chain-Link Fence Fabric
8. F900 - Industrial and Commercial Swing Gates
9. F1043 - Strength and Protective Coatings on Metal Industrial Chain-Link Fence Framework
10. F1083 - Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.



## **PART 2 - PRODUCTS**

**2.01 POSTS AND FRAMEWORK:** ASTM F1083 Schedule 40 galvanized pipe, dimensions indicated for pipe, roll-formed and H-sections are outside dimensions, exclusive of coatings.

A. Galvanized Steel Fencing and Fabric:

1. Allied Tube and Conduit Corp.
2. American Fence Corp.
3. Approved equal.

B. Finish: Galvanized, ASTM F1043, Table 4 (Light industrial/Commercial fence framework), with not less than 2.0 oz. zinc per sq. ft. of surface, typical.

### **2.02 STEEL FABRIC:**

A. Fabric: No. 9 ga/ size steel wires, 2" mesh with top selvages knuckled for fabric 72" high and under, and both top and bottom selvages twisted and barbed for fabric over 72" high.

1. Furnish one-piece fabric height for fencing up to 12' high.

B. Fabric Finish: Galvanized, ASTM A 392, Class II, with not less than 2.0 oz. zinc per sq. ft. of surface.

### **2.03 FRAMING AND ACCESSORIES:**

A. Miscellaneous Framework, General: Galvanized steel, ASTM F1083, finish shall match posts and fabric

B. Fittings and Accessories, General: Galvanized Steel, ASTM F626, finish shall match posts and fabric

C. End, Corner, and Pull Posts: Minimum sizes as required for the purpose intended but no less than 2-3/8" (2" ID) Schedule 40 pipe for fences up to 4' high; no less than 2-7/8" (2-1/2" ID) Schedule 40 for fences up to 8' high; and no less than 3-1/2" (3" ID) Schedule 40 for fences up to 10' high.

D. Gate Posts: Furnish posts for supporting single gate leaf, or one leaf or a double gate installation, for nominal gate widths as follows:

<b>Leaf Width</b>	<b>Gate Post</b>	<b>lb./lin. ft.</b>
Up to 6'	3.5"x3.5" roll-formed or 2.875" OD pipe	4.85 section or 5.79
Over 6' to 13'	4.000" OD pipe	9.11

Leaf Width	Gate Post	lb./lin. ft.
Over 13' to 18'	6.625" OD pipe	18.97
Over 18'	8.625" OD pipe	28.55

- E. Line Post: Minimum size as required for the purpose intended but no less than 1-7/8" (1-1/2" ID) Schedule 40 pipe for fences up to 4' high; no less than 2-3/8" (2" ID) Schedule 40 for fences up to 8' high; and no less than 2-7/8" (2-1/2" ID) Schedule 40 for fences up to 10' high. The maximum horizontal spacing of line post shall be 10'.
- F. Top Rail: Minimum size as required for the purpose intended but no less than 1-5/8" (1-1/4" ID) Schedule 40 pipe.
- G. Intermediate Rail: Minimum size and frequency as required for the purpose intended but no less than 1-5/8" (1-1/4" ID) Schedule 40 pipe. Provide intermediate rail on fences over 5' high at sections adjacent to end, corner, pull and gate post.
- H. Truss Rod and Tightener: 5/16" steel rod (2,000lb load capacity) with finish to match fabric
- I. Bottom Tension Wire: Minimum size as required for the purpose intended but no less than 7 gauge galvanized steel wire, continuous along the bottom of all height fences.
- J. Wire Ties: 9 ga. galvanized steel to match fabric core material.
- K. Post Brace Assembly: Manufacturer's standard adjustable brace at end of gate posts and at both sides of corner and pull posts, with horizontal brace located at mid-height of fabric. Use same material as top rail for brace, and truss to line posts with 0.375" diameter rod and adjustable tightener.
- L. Post Caps: Provide weather-tight closure cap with loop to receive tension wire or top rail; one cap for each post.
- M. Stretcher Bars: One-piece lengths equal to full height of fabric, with minimum cross-section of 3/16" x 3/4". Provide one stretcher bar for each gate and end post, and 2 for each corner and pull post, except where fabric is integrally woven into post.
- N. Stretcher Bar Bands: Space not over 15" o.c. to secure stretcher bars to end, corner, pull and gate posts.

## 2.04 GATES:

- A. Fabrication: Fabricate perimeter frames of gates from metal and finish to match fence framework. Assemble gate frames by welding or with special fittings and rivets for rigid connections, providing security against removal or breakage connections. Provide horizontal and vertical members to ensure proper gate operation and attachment of fabric, hardware and accessories. Space frame members maximum of 8' apart unless otherwise indicated.
1. Provide same fabric as for fence, unless otherwise indicated. Install fabric with stretcher bars at vertical edges and at top and bottom edges. Attach stretcher bars to gate frame at not more than 15" o.c.
  2. Install diagonal cross-bracing consisting of 3/8" diameter adjustable length truss rods on gates to ensure frame rigidity without sag or twist.
  3. Provide barbed wire above gates, extend end members of gate frames 1'-0" above to member and prepare to receive 3 strands of wire. Provide necessary clips to securing wire to extensions.
- B. Swing Gates: ASTM F900, Fabricate perimeter frames on minimum 1.90" O.D. pipe.
- C. Gate Hardware: Provide hardware and accessories for each gate, galvanized per ASTM F 1083, and in accordance with the following:
1. Hinges: Self Closing, size and material to suit gate size, non-lift-off type, offset to permit 180 deg. gate opening. Provide 1-1/2 pair of hinges for each leaf over 6' nominal height.
  2. Latch: Self Latching, forked type or plunger-bar type to permit operation from either side of gate, with padlock eye as integral part of latch.
  3. Keeper: Provide keeper for vehicle gates, which automatically engages gate leaf and holds it in open position until manually released.
  4. Double Gates: Provide gate stops for double gates, consisting of mushroom-type, flush plate with anchors, set in concrete, and designed to engage center drop rod or plunger bar. Include locking device and padlock eyes as integral part of latch, permitting both gate leaves to be locked with single padlock.
  5. Sliding Gates: Provide manufacturer's standard heavy-duty inverted channel track, ball-bearing hanger sheaves, framing and supports, guides, stays, bracing, hardware, and accessories as required.

**2.05 CONCRETE:** Provide concrete consisting of portland cement, ASTM C 150, aggregates ASTM C 33, and clean water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 3,000 psi using at least 4 sacks of cement per cu. yd., 1" maximum size aggregate, maximum 3" (+/- 1") slump, and 2% to 4% entrained air.

### **PART 3 - EXECUTION**

**3.01 GENERAL:** Fences along property lines shall be set 6-inches inside the property line. Layout of property line fences shall be verified by a Florida Licensed Land Surveyor.

**3.02 INSTALLATION:** Do not begin installation and erection before final grading is completed, unless otherwise permitted. Install fence in accordance with ASTM F567, manufacturers printed instructions and as specified herein.

- A. Excavation: Hand excavate (using post hole digger) holes for post to diameters and spacing indicated, in firm, undisturbed or compacted soil. Existing concrete shall be drilled to the dimensions shown on the Drawings.
  - 1. If not indicated on drawings, excavate holes in earth for each post to minimum diameter recommended by fence manufacturer, but not less than 4 times largest cross-section of post.
  - 2. Unless otherwise indicated, excavate hole depths approximately 3" lower than post bottom, with bottom of posts set not less than 36" below finish grade surface.
- B. Setting Posts: Center and align posts in holes 3" above bottom of excavation.
  - 1. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment, and hold in position during placement and finishing operations.
  - 2. Unless otherwise indicated, extend concrete footings 2" above grade and trowel to a crown to shed water.
- C. Top Rails: Run rail continuously through post caps, bending to radius for curved runs. Provide expansion couplings as recommended by fencing manufacturer.
- D. Brace Assemblies: Install braces so posts are plumb when diagonal rod is under proper tension.

- E. Tension Wire: Install tension wires through post cap loops before stretching fabric and tie to each post cap with not less than 6 ga. galvanized wire. Fasten fabric to tension wire using 11 ga. galvanized steel hog rings spaced 24" o.c.
- F. Fabric: Leave approximately 2" between finish grade and bottom selvage, unless otherwise indicated. Pull fabric taut and tie posts, rails and tensions wires. Install fabric on security side of fence and anchor to framework so that fabric remains in tension after pulling force is released.
- G. Stretcher Bars: Thread through or clamp to fabric 4" o.c., and secure to posts with metal bands spaced 15" o.c.
- H. Gates: Install gates plumb, level and secure for full opening without interference. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.
- I. Tie Wires: Use U-shaped wire, conforming to diameter of pipe to which attached, clasping pipe and fabric firmly with ends twisted at least 2 full turns. Bend ends of wire to minimize hazard to persons or clothing.
  - 1. Tie fabric to line posts, with wire ties spaced 12" o.c. Tie fabric to rails and braces, with wire ties spaced 24" o.c. Tie fabric to tension wires, with hog rings spaced 24" o.c.
- J. Fasteners: Install nuts for tension bands and hardware bolts on side of fence opposite fabric side. Peen ends of bolts or score thread to prevent removal of nuts.
- K. Cane Bolt or Plunger Bar Pad: Provide a 12"x12"x8" concrete pad for any ground level device receiving a cane bolt or plunger bar. Pad shall be centered on the device. Concrete surface shall be flush with surrounding grade.

### **3.03 QUALITY ASSURANCE:**

- A. Gates shall swing or roll smoothly and latch without difficulty.
- B. All gate operations shall be capable of being performed by any able bodied Owner personnel with a minimum of effort.
- C. Gates shall be adjusted and aligned to the satisfaction of the Engineer prior to final acceptance.

### **3.04 CLEANING:**

- A. Remove waste fencing materials from the project site and dispose of off-site.
- B. Remove accumulations of silt and other erosion products from all permanent facilities.

**END OF SECTION**

## SECTION 02921

### GRASSING, SEEDING AND SODDING

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#### **PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS:** The General Provisions of the Contract, including the General Conditions, Supplementary Conditions and Special Conditions (if any), along with the General Requirements, apply to the work specified in this Section.

**1.02 SCOPE:** The work specified in this Section consists of the establishing of a stand of grass within the areas disturbed by construction, or otherwise described on the drawings, and maintaining such areas until completion and final acceptance of the project. The methods specified herein are grassing by seeding and grassing by sodding.

**1.03 JOB CONDITIONS:**

- A. Sodding: It is the intent of this section that all areas disturbed by construction and to remain unimproved by hardscape shall be stabilized with sod.
- B. Seeding: Seeding shall be required by the Engineer for temporary erosion control at his discretion.

**1.04 SUBMITTALS:**

- A. Seed Mix: Manufacturer's warranted analysis for percentages of mixture, purity and germination.
- B. Sod: State certification of origin and health of sod. Sod Supplier's recommended fertilizer application rates.
- C. Soil Test Results and soil amendment recommendations.
- D. Fertilizer: Manufacturer's literature and data describing NPK ratio and recommended application rates.
- E. Pre-emergent Herbicide: Manufacturer's literature and data describing proposed chemical and compatibility with grassing products.
- F. Proposed laser grading equipment for Athletic Field surface preparation.

## 1.05 QUALITY CONTROL:

- A. All work in this section shall be in accordance with Section 570-1 through 570-4 of the FDOT Standard Specifications (Latest Edition) for Road and Bridge Construction, except as modified herein.
- B. Finish grades on Athletic fields or other playing surfaces shall be set with laser guided equipment.
- C. All grassing operations shall provide a thick and vibrant covering of disturbed areas by final completion of the work. The requirement for adequate growth and coverage shall not be waived due to seasonal influences.
- D. The Contractor shall be responsible for scheduling the work to ensure grass has adequate time to take hold and to adjust mixes (with Engineer's approval) to meet the quality assurance standards required by this Section.
- E. Soil samples shall be taken and analyzed by a local extension office for pH, lime requirements and available nutrients (P, K, Ca, Mg).

## **PART 2 - PRODUCTS**

### 2.01 FERTILIZER:

- A. For bidding purposes, the fertilizer shall be considered 10-10-10 which has a chemical analysis as follows:

Total nitrogen:	not less than 10%
Available phosphoric acid:	not less than 10%
Water-soluble potash:	not less than 10%
- B. All fertilizer shall comply with state and local laws and regulations and shall be fully labeled at the time of delivery to the job site.
- C. Lime and pH adjustment shall be dependant on the results of the Soil Analysis.

### 2.02 SEED MIXTURE:

- A. Unless other types of seed are called for, seed shall be a mixture of twenty (20) parts of hulled Millet seed and eighty (80) parts of Bermuda seed thoroughly dry mixed immediately before sowing.



- B. Seed germination rates shall be as follows:
  - 1. Argentine Bahia Grass Seed shall have a minimum pure seed content of 95 percent with a minimum germination of 90 percent.
  - 2. Pensacola Bahia Grass Seed shall have a minimum pure seed content of 95 percent with a minimum active germination of 40 percent and a total germination of 80 percent including firm seed.
  - 3. Bermuda Grass Seed shall be of common variety with a minimum pure seed content of 95 percent with a minimum germination of 85 percent.
  - 4. Annual Type Rye Grass Seed shall have a minimum pure seed content of 95 percent with a minimum germination of 90 percent.
- C. Seed which has become wet or moldy shall not be used.
- D. During the period from October 15 to February 15, rye grass seed shall be added and thoroughly dry mixed with the regular mixture at the rate of twenty (20) pounds rye seed per one hundred (100) pounds of regular seed mixture.

**2.03 MULCH:** The mulch shall consist of Millet, Rye, or Bahia straw. Other types of mulch may be used only when approved by the Engineer.

**2.04 SOD:**

- A. Types: Generally, sod shall be Common Bermuda Grass in all typical applications and in non-maintained areas.
- B. The sod shall be taken up in commercial-size rectangles, preferably 12 x 24 inches or larger, or continuous rolls. The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be green, live, fresh, and uninjured, at the time of planting. It shall have a soil mat of sufficient thickness adhering firmly to the roots to withstand all necessary handling. It shall be reasonably free of weeds and other grasses. It shall be planted as soon as possible after being dug and shall be shaded and kept moist from the time it is dug until it is planted. The source of the sod may be inspected and approved by the Engineer prior to being cut for use in the work. After approval, the area from which the sod is to be harvested shall be closely mowed and raked as necessary to remove excessive top growth and debris.
- C. Approved devices, such as sod cutters, shall be used for cutting the sod and due care shall be exercised to retain the native root soil intact.

**2.05 HYDROMULCH SEED:** At the Contractor's option, Hydromulch Seed may be substituted for Seed and Mulch where required by Contract.

- A. State-approved of the latest season's crop delivered in original sealed packages bearing the producer's guaranteed analysis for percentages of mixtures, purity, germination, weedseed content, and inert material. Label in conformance with all applicable state seed laws. Wet, moldy, or otherwise damaged seed will be rejected. Field mixes will be acceptable when mix is performed on site in the presence of the Owners Representative.
- B. Composition: Proportion seed mixtures by weight as specified by Seed Manufacturer. Mixture shall be a combination of rye, millet and Common Bermuda.

**2.06 WATER:** The water shall be free of excess and harmful chemicals, acids, and alkalis or any substance which might be harmful to plant growth or obnoxious to traffic. Salt water shall not be used. The Contractor shall make all arrangements for obtaining and transporting water to the job site. All grassing shall be watered until grass is well established at the Contractor's expense.

**2.07 PRE-EMERGENT HERBICIDE:**

- A. Selective type pre-emergence control chemical suitable for use under the proposed grass or landscaped surface.
- B. Application personnel shall be certified in the State of Florida for application of agricultural chemicals.

### **PART 3 - EXECUTION**

**3.01 SCHEDULE:** Grass shall be in place by substantial completion of the project.

**3.02 PREPARATION OF GROUND:**

- A. Final grading and cleaning shall be completed prior to preparation of ground for grassing. Sod installer is not responsible for final grades, but shall not lay sod on soil that has not been properly prepared or is obviously damaged by erosion or heavy equipment, etc.
- B. The areas to be grassed shall be scarified or loosened to a depth of at least six (6) inches.
- C. All areas shall be smooth and free of large clods, roots and other materials which may interfere with the work or future mowing and maintenance operations.

- D. No subsequent operations shall be commenced until the Engineer, or designated representative, has approved the condition of prepared areas.
- E. Fertilizer, pH and Lime adjustments shall be spread and mixed in accordance with these specifications and the grass supplier's recommendations.
- F. Sod shall not be laid on soil too hot to receive new grass. If in question the Contractor shall lightly water the exposed soil and keep soil damp until sod is laid.

### **3.03 APPLICATION:**

- A. Fertilizer and soil amendments:
  - 1. As a minimum, Commercial fertilizer shall be spread uniformly over the area to be grassed at the rate of two (2) pounds per one thousand (1000) square feet or as recommended by the Grassing Supplier. No additional payment shall be made to achieve grass supplier's recommended fertilizer spread rate. Soil amendments shall include Lime and pH adjustments in accordance with the Soil Analysis.
  - 2. Immediately after the fertilizer and other soil amendment are spread, it shall be raked in and thoroughly mixed with the soil to a depth of approximately two (2) inches.
  - 3. Refertilize approximately sixty (60) calendar days after initial application if project has not been accepted prior to this time.
- B. Seeding: Where required, Seeding shall be done immediately after fertilizing, while the soil is still loose and moist. The seed shall be scattered uniformly over the area to be grassed by a mechanical hand spreader or other approved type of spreader.
  - 1. Mechanical Spreader:
    - a. Sow  $\frac{1}{2}$  seed in one direction and sow remainder at right angles to the first sowing.
    - b. Seeded areas shall be harrowed, raked, or otherwise worked to ensure seed is covered by soil.
    - c. After seeding firm entire area with appropriate rolling equipment or cultipacker.

2. Hydroseeding: Seed and slow release fertilizer shall be mixed with mulching medium and water to produce a homogenous slurry. Application shall be in accordance with manufacturer's mix requirements.

C. Mulch:

1. Immediately after completion of mechanical seeding, dry mulch shall be uniformly applied over the seeded area approximately one inch (1"), loose thickness.
2. The mulch shall then be cut uniformly into the soil so as to produce a loose mulched thickness of two inches (2") and rolled with a cultipacker, traffic roller or other suitable equipment.
3. After seeding and mulching is completed, the entire area shall be watered so as to provide optimum growth conditions for establishment of the grass.

D. Placement of Sod:

1. Sod shall be laid immediately after the application of the fertilizer.
2. Sodding shall be incorporated into the project at the earliest practical time in the life of the Contract, but no later than project substantial completion.
3. No sod which has been cut for more than seventy-two (72) hours shall be used unless specifically authorized by the Engineer, or his representative, after his careful inspection thereof.
4. Any sod which is not planted within twenty-four (24) hours after cutting shall be stacked in an approved manner and maintained properly moistened.
5. Sodding shall not be performed when weather and soil conditions are, in the Engineer's opinion, unsuitable for proper results.
6. The sod shall be placed on the prepared surface, with edges in close contact, and shall be firmly and smoothly embedded by rolling with approved roller.
7. Where sodding is used in drainage ditches, the setting of the pieces shall be staggered, such as to avoid a continuous seam along the line of flow. Along the edges of such staggered areas the offsets of individual strips shall not exceed six inches (6"). In order to prevent

erosion caused by vertical edges at the outer limits, the outer pieces of sod shall be tamped so as to produce a featheredge effect.

8. On areas where the sod may slide, due to height and slope, the Engineer may direct that the sod be pegged, with pegs driven through the sod blocks into firm earth, at suitable intervals. Any pieces of sod which, after placing, show an appearance of extreme dryness, shall be removed from the work.
9. Ponds shall be stabilized with sod as follows:
  - a. Dry Retention Pond
    - 1) All banks
    - 2) Ten feet beyond top of bank
    - 3) Pond bottom
  - b. Wet Detention Pond
    - 1) All pond banks to water elevation at time of sod placement.
    - 2) Ten feet beyond top of bank
10. All swales shall be sodded top of bank to top of bank.

E. Watering of Grassed Areas: The grassed areas shall be watered for the duration of the Contract so as to provide optimum growth conditions for the establishment of the grass. The water used shall be obtained from the construction well or other means at the Contractor's expense.

F. All areas of sod installation shall be rolled to remove bumps and ruts. The tolerance for acceptance of finished surfaces shall be as described in 02300 Earthwork.

### **3.04 MAINTENANCE OF GRASSED AREAS:**

A. The Contractor shall, at his expense, maintain the planted areas in a satisfactory condition until Final Acceptance of the Project. Such maintenance shall include:

1. Watering and mowing of all grassed areas.
2. Filling, leveling, grading, repairing and regrassing of any washouts or eroded areas, as may be necessary.
3. Refertilization of areas maintained more than 60 days beyond installation.

### **3.05 ACCEPTANCE:**

- A. All grass must be established upon final acceptance of the work. Established shall mean:
  - 1. Grass is rooted (leaves break before plant separates from soil).
  - 2. No bare spots greater than 1 SF.
  - 3. No deformation of grass due to Contractor equipment or erosion.
  - 4. No obviously diseased, infested, or dead zones.
  - 5. No exposed sod netting.
  - 6. No noxious weeds.
  
- B. Areas in which the establishment of the grass is not achieved, due to disease, infestations, bare spots or dead zones, shall be removed and replaced. All other areas shall be repaired in place prior to final payment.
  
- C. If a planted area must be replanted, replacement shall be at the Contractor's expense.

**3.06 CLEANUP:** All excess materials associated with this activity shall be removed from the site. Site shall be left in a neat and tidy condition, free from trash and debris.

**END OF SECTION**

## SECTION 16050

### GENERAL ELECTRICAL REQUIREMENTS

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#### PART 1 - GENERAL

**1.01 SECTION INCLUDES:** General information on electrical installation not covered elsewhere. This section applies to all other electrical sections.

**1.02 DEFINITIONS:** For the purposes of this contract, the term "Provide" shall mean to furnish and install services, material, and equipment complete and ready for intended use.

**1.03 ELECTRICAL SUBCONTRACTOR QUALIFICATIONS:** The electrical Subcontractor shall have at least 5 years of experience with projects of similar size and scope. Submit three example projects that verify this experience. Provide contact name and phone number for customer for each project.

**1.04 PROJECT DESCRIPTION:**

- A. This project includes all necessary labor and materials, including, but shall not be limited to the following:
1. Temporary electric service and electrical distribution for construction purposes.
  2. Permanent building service entrance equipment and feeder distribution.
  3. All underground electrical work.
  4. Motor control centers, panelboards and feeder and branch circuits to electrical devices, lighting fixtures, and other electrically operated equipment.
  5. Electrical equipment including disconnects, devices, switches, and light fixtures.
  6. Empty conduits and outlets for telephone system.
  7. Emergency standby power system. Including temporary backup power system, as necessary.
  8. Coordination with other subcontractors.

### **1.05 INTERPRETATION:**

- A. Specifications and Drawings shall be considered as supplementary to each other, requiring materials and labor indicated, specified, or implied by either Specifications or Drawings. Contradictions shall be presented to the Engineer for resolution.
- B. Interpretation of Specifications or Drawings, where deemed necessary, shall be made only by the Engineer.

### **1.06 CODES, STANDARDS, ORDINANCES, AND PERMITS:**

- A. The National Electrical Code (NEC), The Florida Building Code, National Electric Safety Code and OSHA shall establish the minimum requirements for installation, but in addition, all work shall also comply with Local, County or Municipal Code requirements. If there is a conflict between the NEC and local, state, county, or municipal codes, conform to the more stringent of the two. Similarly, if the local Authority Having Jurisdiction has not adopted the latest revision of the NEC and is still using an earlier version, conform to the more stringent of the two.
- B. Be familiar with local Code requirements and local Utility Company Standards for electrical service requirements, and make installation in accordance with such requirements.
- C. In case of conflict between the Contract Documents and a governing code or ordinance, such conflict shall be immediately brought to the attention of the Engineer for resolution.
- D. Apply for, obtain, and pay for all required permits and inspection certificates. Final payment is contingent upon delivery of such permits and certificates to the Engineer.

**1.07 SITE INSPECTION:** Visit the site and thoroughly inspect conditions affecting the Work before submitting Bid.

### **1.08 CUTTING AND PATCHING:**

- A. Place all sleeves, inserts, conduit hangers, etc. as construction progresses to avoid any unnecessary cutting of structural members. Cooperate with other Subcontractors in location of electrical equipment that may conflict with location of other equipment.
- B. Obtain authorization from the Engineer for any necessary cutting of building structure to facilitate installation of this work and do not proceed until authorization has been received. Limit necessary cutting and patching to the minimum size required for installation of conduit or apparatus.



## **1.09 SUBMITTALS:**

- A. Submit Shop Drawings, catalog sheets, wiring diagrams, or other descriptive data with sufficient information to establish design, quality and performance. Data shall describe apparatus, equipment, panels, fixtures, and other items requiring descriptive literature. Provide submittals as a single package including all required electrical items. Partial packages will not be reviewed. Submittals items shall be in accordance with the individual specification sections and include, but shall not be limited to, the following:
1. Service Equipment
  2. Panelboards
  3. Starters
  4. Disconnects and Fuses
  5. Switches
  6. Wiring Devices
  7. Wiring and Conduit
  8. Surge Protective Devices
  9. Transformers
  10. Light Fixtures and Ballasts
  11. Light Poles
  12. Automatic Transfer Switches
  13. Standby Generators
  14. Evidence of Contractor Qualifications and Experience (see para. 1.03)

## **1.10 MAINTENANCE DATA:**

- A. Collect and retain maintenance and service data supplied with equipment furnished and installed under this Contract until job completion, at which time deliver to the Engineer. Comply with Section 01730.
- B. Keep one set of prints current of any changes or variations by marking prints in a legible manner. Maintain As-Built drawings on a daily basis.

## **1.11 TEMPORARY ELECTRIC SERVICE:**

- A. Provide complete temporary system of power and lighting wiring for use during construction and for testing of equipment.
- B. When proposed work will interrupt an existing backup power system the contractor shall provide an appropriately sized temporary backup power system capable of providing interim coverage. The contractor shall provide a written plan of action to ensure back-up power is available at all times during construction of the project. All costs associated with the temporary back-up power system shall be the contractor's responsibility including, but not limited to: generator, fuel supply, automatic transfer switch, junction boxes, conduit, conductors, grounding, etc.

- C. Comply with OSHA and NEC including personnel ground-fault protection requirements.

#### **1.12 ELECTRIC SERVICE:**

- A. Primary electrical service and service transformer(s) will be provided by local utility. The configuration and equipment locations indicated are tentative. Contact Utility in advance and verify availability and configuration of electrical service as indicated.
- B. Provide all labor, materials and equipment not provided by the Utility in accordance with Utilities' installation policies and procedures. Should a significant installation conflict occur, notify the Engineer immediately for resolution before starting any work. The Contractor shall include any and all fees associated with establishing electrical power service in their bid.

**1.13 TELEPHONE SERVICE:** Provide all labor, materials and equipment not provided by the telephone company in accordance with the telephone company's installation policies and procedures. The Contractor shall include any and all fees associated with establishing telephone service in their bid.

#### **1.14 COORDINATION - GENERAL:**

- A. Drawings are generally diagrammatic. Review all project Drawings and coordinate all work with different trades prior to installing any work so that interferences between electrical work and ducts, piping, equipment, and structural work will be avoided. Do not install conduits, boxes and fittings in spaces required for equipment or piping.
- B. Furnish all necessary offsets in raceways, fittings, etc., required to properly install work so as to take up minimum space. Install all equipment to provide code required "working space".
- C. In case interference develops, the Contractor will decide which trade work must be relocated regardless of which was installed first. Damage from interference or rework caused by inadequate coordination with other trades shall be rectified without additional cost.
- D. Within 30 days following award of Contract, report to the Engineer in writing all real or potential errors, ambiguities and/or conflicts on electrical work or between trades.

#### **1.15 COORDINATION - ELECTRICAL/MECHANICAL:**

- A. Unless specifically required otherwise, make all power wiring connections to all water heaters, pumps, machinery, appliances, water coolers and other electrically-operated equipment as indicated on the

Drawings or as required. Furnish and install disconnect switches, starters and protective devices as indicated on the Drawings, except for items furnished with integral disconnect switches and/or starters. Coordinate the exact location of receptacles, flexible conduit, and disconnects for mechanical and plumbing equipment with the mechanical or plumbing contractor.

- B. Review approved Shop Drawings and verify final electrical characteristics and wiring before rough-in of power feeds to any equipment. When electrical data on approved Shop Drawings differs from contemplated design, make necessary adjustments to wiring, disconnect, and branch-circuit protection for equipment actually installed.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS:**

- A. All materials used in this project shall be new, unless otherwise noted, and listed by the Underwriters' Laboratories, Inc. as conforming to its standards where such standards have been established. These materials shall bear the UL label.
- B. Before purchasing any equipment, the Contractor shall reconfirm the availability of the project's voltage, phase, and service configuration with the Drawings.
- C. Where materials, equipment, apparatus or other products are specified by manufacturer, brand name, type or catalog number, such designation is to establish standards of desired design or quality and shall be basis of Bid.

## **PART 3 - EXECUTION**

- 3.01 CLEANUP:** After electrical installation, remove all rubbish, trash and debris from the site and dispose of in an approved manner.

**END OF SECTION**

## SECTION 16123

### WIRE AND CABLE

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#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES:**

- A. Wire and cable for 600 volts and less.
- B. Wiring connectors and connections.

##### **1.02 REFERENCES:**

- A. NECA (INST) - NECA Standard of Installation; National Electrical Contractors Association.
- B. NFPA 70 - National Electrical Code, National Fire Protection Association (edition adopted by Authority Having Jurisdiction).

##### **1.03 QUALITY ASSURANCE:**

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience and with service facilities within 100 miles (160 km) of Project.
- C. Products: Furnish products listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

#### **PART 2 - PRODUCTS**

##### **2.01 WIRING REQUIREMENTS:**

- A. Use only wire with Type THWN/THHN (dual rated) insulation in raceway. Wire shall be color coded per the NEC and as follows:
  - 1. 480/277V, 3 Phase, 4 Wire System: Brown, Orange, Yellow with White Neutral and Green Ground.
  - 2. 120/240V, 120/208V 1 Phase, 3 Wire System: Red and Black with White Neutral and Green Ground.
  - 3. 120/240V, 120/208V, 3 Phase, 4 Wire System: Black, Red, Blue with White Neutral and Green Ground.

- B. Use solid conductor for feeders and branch circuits #10 AWG and smaller. Use stranded conductors for feeders and branch circuits #8 AWG and larger.
- C. Use stranded conductors for control circuits.
- D. Use conductor not smaller than 12 AWG for power and lighting circuits.
- E. Use conductor not smaller than 14 AWG for control circuits.
- F. Provide 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet (25 m) or as indicated.
- G. Conductor sizes are based on copper. Wire shall be copper unless indicated otherwise.
- H. All single-phase circuits from 120/240V and 120/208V 3-phase panelboards shall have separate neutral conductors originating in the panelboard.

## **2.02 WIRE:**

- A. Description: Single conductor insulated wire.
- B. Conductor: Copper.
- C. Insulation Voltage Rating: 600 volts.
- D. Insulation: Thermoplastic material rated 90° C.

**2.03 INSTRUMENTATION CABLE:** Tinned copper, stranded, polyethylene insulated conductors; twisted pair, 100% aluminum/polyester shield with a No. 20 AWG tinned copper drain wire. Single pair cables shall be No. 18 AWG. Jacket insulation shall be rated not less than 300 volts and 60° C. Belden 9463, or equal.

## **PART 3 - EXECUTION**

**3.01 PREPARATION:** Completely and thoroughly swab raceway before installing wire.

### **3.02 INSTALLATION:**

- A. Route wire and cable as required to meet project conditions.
- B. Wire and cable routing indicated is intended to be diagrammatic.
- C. Where wire and cable destination is indicated and routing is not shown, determine exact routing and lengths required.

- D. Include wire and cable of lengths required to install connected devices within 10 ft (3000 mm) of location shown.
- E. No wiring shall be installed until the required raceway system, including junction, outlet and device boxes is completed. Install wiring before painting begins and protect against being painted.
- F. Branch circuit sizes are noted on the Drawings and must be continuous without reduction in size throughout their length except where connecting to fixtures or devices.
- G. Branch circuit wire sizes shall be increased as required where long runs will cause excessive voltage drop per NEC.
- H. Install wire and cable in accordance with the NECA "Standard of Installation."
- I. Use wiring methods indicated.
- J. Pull all conductors into raceway at same time.
- K. Use suitable wire pulling lubricant.
- L. Neatly train and lace wiring inside boxes, equipment, and panelboards.
- M. Clean conductor surfaces before installing lugs and connectors.
- N. Make splices, taps, and terminations to carry full capacity of conductors with no perceptible temperature rise.
- O. Use split bolt connectors for copper conductor splices and taps, #4 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
- P. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.

### **3.03 FIELD QUALITY CONTROL:**

- A. Perform field inspection and testing in accordance with Section 01400.
- B. Test wiring rated 600 volts and less to verify that no short circuits or accidental grounds exist. Perform insulation resistance tests on wiring No. 4 AWG and larger diameter using an instrument which applies voltage of approximately 500 volts to provide direct reading of resistance. Minimum resistance shall be 250,000 ohms.

**END OF SECTION**

## SECTION 16131

### CONDUIT

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#### **PART 1 - GENERAL**

##### **1.01 SECTION INCLUDES:**

- A. Conduit, fittings and conduit bodies.

##### **1.02 REFERENCES:**

- A. ANSI C80.1 - American National Standard Specification for Rigid Steel Conduit -- Zinc Coated; 1995.
- B. ANSI C80.3 - American National Standard Specification for Electrical Metallic Tubing -- Zinc Coated; 1995.
- C. ANSI C80.5 - American National Standard Specification for Rigid Aluminum Conduit; 1995.
- D. NECA (INST) - NECA Standard of Installation; National Electrical Contractors Association; 1993.
- E. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies; National Electrical Manufacturers Association; 1993.
- F. NEMA RN 1 - Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit; National Electrical Manufacturers Association; 1989.
- G. NEMA TC 2 - Electrical Plastic Conduit (EPC-40 and EPC-80); National Electrical Manufacturers Association; 1990.
- H. NEMA TC 3 - PVC Fittings for Use with Rigid PVC Conduit and Tubing; National Electrical Manufacturers Association; 1990.
- I. NFPA 70 - National Electrical Code, National Fire Protection Association (edition adopted by Authority Having Jurisdiction).

### **1.03 QUALITY ASSURANCE:**

- A. Conform to requirements of NFPA 70.
- B. Products: Listed and classified by Underwriters Laboratories, Inc. as suitable for purpose specified and shown.

### **1.04 DELIVERY, STORAGE, AND HANDLING:**

- A. Accept conduit on site. Inspect for damage.
- B. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.
- C. Protect PVC conduit from sunlight.

## **PART 2 - PRODUCTS**

### **2.01 CONDUIT REQUIREMENTS:**

- A. Conduit Size: Comply with NFPA 70.
  - 1. Minimum Size: 3/4 inch unless otherwise specified. This minimum size does not apply to flexible conduit.

### **2.02 FLEXIBLE METAL CONDUIT:**

- A. Description: Interlocked steel construction.
- B. Fittings: NEMA FB 1.

### **2.03 NON-METALLIC CONDUIT:**

- A. Description: NEMA TC 2; Schedule 40 PVC where underground,
- B. Fittings and Conduit Bodies: NEMA TC 3.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION:** Verify routing and termination locations of conduit prior to rough-in.



### 3.02 INSTALLATION:

- A. Install conduit in accordance with NECA Standard of Installation.
- B. All wiring shall be in conduit. Routing of conduit shown on Drawings is intended to be diagrammatic and where changes are necessary as a result of structural conditions, apparatus, or other causes, routing shall be changed to meet conditions. Conduit risers and offsets are not indicated on Drawings, but are intended to be installed as required. Conduit shall be selected according to location and code requirements.
- C. Flexible Metal Conduit or MC Cable or shall only be used for final connection to equipment with a maximum length of six feet. Nonmetallic flex conduit or tubing shall not be used.
- D. Underground conduit or conduit in concrete shall be PVC Schedule 40 (Type-EPC) unless indicated otherwise. Conduit under slab-on-grade shall be buried at least 12" below the vapor barrier. Conduit embedded in concrete slabs, walls, or beams shall not have an outside dimension more than one-third the overall thickness of the concrete in which they are imbedded. Conduit shall not be run lengthwise in footings. PVC conduit shall not be used aboveground unless specifically noted otherwise in the Drawings. Conduit containing signal wires for instruments shall be PVC coated aluminum.
- E. Per NEC paragraph 300-5 (d), provide warning tape or ribbon 12" above a service lateral conduit that is not encased in concrete.
- F. All metallic conduit terminating in outlet, junction or pull boxes and cabinets must terminate with bushing and double locknuts except exposed cast boxes, where they may be omitted. Conduit sizes 1-1/4" and above shall have insulating fiber bushings with double locknuts. Grounding type bushings must be used at points where grounding continuity is broken and at service entrance equipment.
- G. Arrange supports to prevent misalignment during wiring installation.
- H. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports.
- I. Do not attach conduit to ceiling support wires.
- J. Arrange conduit to maintain headroom and present neat appearance.
- K. Route exposed conduit parallel and perpendicular to walls. Do not run conduit exposed in occupied areas unless noted otherwise.

- L. Route conduit installed above accessible ceilings parallel and perpendicular to walls.
- M. Route conduit in and under slab from point-to-point.
- N. Do not cross conduits in slab.
- O. Maintain adequate clearance between conduit and piping.
- P. Maintain 12-inch (300 mm) clearance between conduit and surfaces with temperatures exceeding 104 degrees F (40 degrees C).
- Q. Cut conduit square using saw or pipecutter; de-burr cut ends.
- R. Bring conduit to shoulder of fittings; fasten securely.
- S. For conduit installed in floors that are in place before conduit is installed, properly seal around conduit, including any required fire chalk.
- T. Install no more than equivalent of four 90-degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use hydraulic one-shot bender to fabricate bends in metal conduit larger than 2-inch (50 mm) size.
- U. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.
- V. Provide suitable fittings to accommodate expansion and deflection where conduit crosses seismic and expansion joints complete with copper bonding jumper.
- W. Provide suitable pull string in each empty conduit except sleeves and nipples.
- X. Use suitable caps to protect installed conduit against entrance of dirt and moisture.
- Y. Ground and bond conduit.

**END OF SECTION**

## SECTION 16520

### EXTERIOR LUMINARIES

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#### **PART 1 - GENERAL**

**1.01 SECTION INCLUDES:** Exterior luminaries and accessories.

**1.02 REFERENCES:**

- A. ANSI C78.379 - American National Standard for Electric Lamps - Reflector Lamps - Classification of Beam Patterns.
- B. ANSI C82.1 - American National Standard Specifications for Fluorescent Lamp Ballasts.
- C. ANSI C82.4 - American National Standard for Ballasts for High-Intensity-Discharge and Low Pressure Sodium Lamps (Multiple-Supply Type).
- D. NFPA 70 - National Electrical Code, National Fire Protection Association (Edition Adopted by Authority Having Jurisdiction).

**1.03 SUBMITTALS:** Product Data (including photocells, timers, and lighting contactors): Provide dimensions, ratings, and performance data.

**1.04 QUALITY ASSURANCE:**

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Electrical Components: Listed and classified by Underwriters Laboratories, Inc. as suitable for the purpose specified and indicated.

#### **PART 2 - PRODUCTS**

**2.01 LUMINARIES:** Furnish products as indicated in Schedule included on the Drawings. Confirm mounting, type, voltage and wattage is correct before ordering.

**2.02 TIME SWITCHES AND OTHER LIGHTING CONTROL:**

- A. Lighting contactors shall be meet NEMA ICS and shall be electrically held. Contacts shall be rated as indicated.

- B. Photocells shall hermetically sealed cadmium-sulfide or silicon diode type cell rated for voltage of fixtures used with a minimum of 240 volts ac. Switch shall turn on at or below 3-foot candles and off at 2 to 10 foot candles. A time delay shall prevent accidental switching from transient light sources.

### **PART 3 - EXECUTION**

#### **3.01 INSTALLATION:**

- A. Install lamps in each luminary.
- B. Bond luminaries, metal accessories, and metal poles to branch circuit equipment grounding conductor. Provide supplementary grounding electrode at each pole.

**3.02 FIELD QUALITY CONTROL:** Operate each luminary after installation and connection. Inspect for improper connections and operation.

#### **3.03 CLEANING:**

- A. Clean electrical parts to remove conductive and deleterious materials.
- B. Remove dirt and debris from enclosure.
- C. Clean photometric control surfaces as recommended by manufacturer.
- D. Clean finishes and touch up damage.

**3.04 PROTECTION OF FINISHED WORK:** Relamp luminaries which have failed lamps at Substantial Completion.

**3.05 SCHEDULE: SEE DRAWINGS.**

**END OF SECTION**