



ENNIS INDEPENDENT SCHOOL DISTRICT



Project Manual

for

Engineering and Site Drainage Remedies Crockett Early Childhood Center

for the

Ennis Independent School District

January 29, 2021

PBK Project No. P2100600AR



ISSUE FOR CONSTRUCTION



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Consultants

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PROJECT MANUAL
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Issued for Construction

Each specification section included herein is listed in the Project Manual Table of Contents. Seals and signatures do not apply to documents not included herein, including but not necessarily limited to documents in Division 00, geotechnical and other reports, etc.

<p>Architect of Record:</p> <p>Daniel Lee Osborne</p> <p>R.A. # 22212</p>	 <p>1/29/2021</p>	
<p>Engineer of Record, Civil:</p> <p>John D. Blacker</p> <p>P.E. # 68300</p>		

DOCUMENT 00 40 11 - FELONY CONVICTION NOTIFICATION

Note: The Statement of Affirmation Must Be Notarized

STATEMENT OF AFFIRMATION

"The undersigned affirms that he/she is duly authorized to provide this information by the person(s) or business entity making the proposal, and the information provided below concerning felony convictions has been personally and thoroughly reviewed, and verified, and is, therefore, current, true and accurate to the best of my knowledge."

Firm's

Name: _____ Address: _____

"a. _____ My firm is a publicly held corporation, therefore, this reporting requirement is not applicable."

"b. _____ My firm is not owned nor operated by anyone who has been convicted of a felony."

"c. _____ My firm is owned or operated by the following individual(s) who has/have been convicted of a felony:"

Name of Felon(s) _____

Details of Conviction(s) _____

PLEASE CHECK a, b, or c ABOVE AND SIGN BELOW

Offeror's

Name _____ Position/Title _____

Offeror's

Signature _____ Date _____

Subscribed and sworn to me on this _____ day of _____

Notary Public

My Commission expires _____

END OF DOCUMENT 00 40 11

NOTE: THIS DOCUMENT MUST BE EXECUTED AND SUBMITTED WITH PROPOSAL

DOCUMENT 00 40 17 - CERTIFICATION OF CRIMINAL HISTORY RECORD INFORMATION

REVIEW BY CONTRACTOR-EMPLOYER

Certifying Affidavit submitted to:

Name of School District: _____

Mailing Address: _____

Project: _____

STATE OF TEXAS §

COUNTY OF §

(1) The undersigned representative, on behalf of the contracting firm identified below, swears and affirms to Ennis Independent School District (the "District") that such firm has obtained, reviewed and verified, from a law enforcement or criminal justice agency or a private entity that is consumer reporting agency governed by the Fair Credit Reporting Act (15 U.S.C. §§ 1681 et seq.) the criminal history record information of all employees hired **before January 1, 2008**, who (a) have or will have continuing duties related to the contracted services, and (b) have or will have direct contact with students. Such employees are identified by name on Schedule **A** (contractor shall provide and attach hereto). The undersigned further swears and affirms no employees who meet the requirements of (a) and (b) herein and/or identified on Schedule **A** have been convicted of any offense identified in Section 22.085 of the Texas Education Code.

(2) The undersigned representative, on behalf of the contracting firm identified below, swears and affirms to the District, that such firm has obtained, reviewed and verified, from the Texas Department of Public Safety criminal clearinghouse, the national criminal history record information of all employees hired **on or after January 1, 2008**, who (a) have or will have continuing duties related to the contracted services, and (b) have or will have direct contact with students. Such employees are identified by name on Schedule B (contractor shall provide and attach hereto). The undersigned further swears and affirms no employees who meet the requirements of (a) and (b) herein and/or identified on Schedule B have been convicted of any offense identified in Section 22.085 of the Texas Education Code.

(3) The undersigned firm swears and covenants that no present or future employee will provide services to the Project that involve direct contact with students unless and until such employee's national criminal history record information has been reviewed and cleared as required by Paragraph (2) above, and an updated Certification has submitted by the contracting firm to the District with an updated Schedule B identifying such employees. In the event of an emergency, an employee who has not been previously certified may only provide services that involve direct contact with students if such employee is escorted by a District representative.

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

(4) The undersigned firm swears and covenants that, upon receipt of information, directly or indirectly, that any employee of the contracting firm has been convicted of an offense identified in Section 22.085 of the Texas Education Code, the contracting firm will immediately remove such employee from the Project and notify the District.

(5) Furthermore, if requested by the District, the name, driver's license number, and any other information required by the DPS will be submitted to the District for any person on either Schedule A or Schedule B.

_____, being duly sworn, affirms and certifies that he/she is the
_____ (position) of _____ (contracting firm),
and that all statements and acknowledgements contained herein are true and correct, and that he/she
has the authority to bind such firm to the covenants set out above.

SUBSCRIBED AND SWORN TO BEFORE ME this _____ day of _____.

Notary Public _____ State of _____

My Commission expires _____

END OF DOCUMENT 00 40 17

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

DOCUMENT 00 40 18 - CONFLICT OF INTEREST QUESTIONNAIRE

INSTRUCTIONS

According to Local Government Code, Chapter 176, a person or an agent of a person who contracts or seeks to contract for the sale or purchase of property, goods, or services with Ennis Independent School District must file a completed Conflict of Interest Questionnaire with the District Legal Department not later than the seventh business day after the date that the person begins contract discussions or negotiations with the District or submits to the District an application, response to a request for proposals or bids, correspondence, or another writing related to a potential agreement with the District.

This Conflict of Interest Questionnaire must be filed annually by September 1 as long as the person or the agent of the person continues to contract or seek to contract for the sale or purchase of property, goods, or services with the District or not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.

The completion of the Conflict of Interest Questionnaire is not needed if the person is an employee of a governmental entity and is acting in the employee's official capacity.

Explanation of the Conflict of Interest Questionnaire

1. Name of person doing business with the District.
2. Check the box if you are filing an update to a previously filed questionnaire.
3. Describe each affiliation or business relationship with an employee or contractor of the District who makes recommendations to a District officer with respect to expenditure of money. **If no affiliation or business relationship exists, state "NONE."**

Examples:

If your spouse, parent, or child is the District's Director of Purchasing and a bid is being submitted to the Purchasing Department, this relationship must be reported.

If your spouse, parent, or child is the Principal at a School and your business may sell items directly to that school, this relationship must be reported.

If you or your spouse, parent, or child is in business with a District employee that would be making a recommendation concerning a purchase or sales transaction involving you, the relationship must be reported.

If you employ or do business with a spouse, parent, or child of a District employee that would be making a recommendation concerning a purchase or sales transaction involving you, the relationship must be reported.

If you are a District employee and would be making a recommendation concerning a purchase or sales transaction involving you, the relationship must be reported.

If your spouse, parent, or child is a teacher that does not make recommendations concerning purchasing or sales transactions, this relationship should **not** be reported.

If your spouse, parent, or child is a Principal at a School and a bid is being considered by a separate department such as Facilities Planning (Construction Department), this relationship should **not** be reported.

4. Describe each affiliation or business relationship with a person who is a District officer and who appoints or employs a District officer that is the subject of this questionnaire. **If no affiliation or**

business relationship exists, state "NONE."

Example:

If you or your spouse, parent, or child is related to, employs, or is in business with a District officer or their spouse, parent, or child, this relationship must be reported.

5. Name of District officer with whom you have an affiliation or business relationship.

For each person listed under question #4, complete page 2. If answers to A, B, and C are NO, indicate the name of the District officer, but do not complete section D.

6. Describe any other affiliation or business relationship that might cause a conflict of interest.

Example:

If your neighbor or friend is a District employee that would be making a recommendation concerning a purchase or sales transaction involving you and you feel that your relationship with this employee could affect their recommendation, this relationship must be reported.

If any other situation exists that would result in a conflict of interest, the relationship must be reported.

7. Sign and date this form.

Submit the completed form to the District. If any disclosures are indicated under questions #3 or #4, the form will be posted on the District's website.

END OF DOCUMENT 00 40 18

FILL CONFLICT OF INTEREST QUESTIONNAIRE ON NEXT PAGE

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

Page 2

5 Name of local government officer with whom filer has affiliation or business relationship. (Complete this section only if the answer to A, B, or C is YES.)

This section, item 5 including subparts A, B, C & D, must be completed for each officer with whom the filer has affiliation or business relationship. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income from the filer of the questionnaire?

☐

Yes

☐

No

B. Is the filer of the questionnaire receiving or likely to receive taxable income from or at the direction of the local government officer named in this section AND the taxable income is not from the local governmental entity?

☐

Yes

☐

No

C. Is the filer of this questionnaire affiliated with a corporation or other business entity that the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐

Yes

☐

No

D. Describe each affiliation or business relationship.

6 Describe any other affiliation or business relationship that might cause a conflict of interest.

7

Signature of person doing business with the governmental entity

Date

DOCUMENT 00 40 21 - PREVAILING WAGE RATES

The following information is from Chapter 2258 Texas Government Code:

2258.021. Right to be Paid Prevailing Wage Rates.

- (a) A worker employed on a public work by or on behalf of the state or a political subdivision of the state shall be paid:
 - (1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and
 - (2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.
- (b) Subsection (a) does not apply to maintenance work.
- (c) A worker is employed on a public work for the purposes of this section if the worker is employed by a contractor or subcontractor in the execution of a contract for the public work with the state, a political subdivision of the state, or any officer or public body of the state or a political subdivision of the state.

2258.023. Prevailing Wage Rates to be Paid by Contractor and Subcontractor; Penalty.

- (a) The contractor who is awarded a contract by a public body or a subcontractor of the contractor shall pay not less than the rates determined under Section 2258.022 to a worker employed by it in the execution of the contract.
- (b) A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, \$60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract.
- (c) A contractor or subcontractor does not violate this section if a public body awarding a contract does not determine the prevailing wage rates and specify the rates in the contract as provided by Section 2258.022.
- (d) The public body shall use any money collected under this section to offset the costs incurred in the administration of this chapter.
- (e) A municipality is entitled to collect a penalty under this section only if the municipality has a population of more than 10,000.

2258.051. Duty of Public Body to Hear Complaints and Withhold Payment.

A public body awarding a contract, and an agent or officer of the public body, shall:

- (1) take cognizance of complaints of all violations of this chapter committed in the execution of the contract; and
- (2) withhold money forfeited or required to be withheld under this chapter from the payments to the contractor under the contract, except that the public body may not withhold money from other than the final payment without a determination by the public body that there is good cause to believe that the contractor has violated this chapter.

PREVAILING WAGE RATES

Effective July 15, 2019

Texas - Dallas/Fort Worth Area

CLASSIFICATION	2019 HOURLY RATE
ASBESTOS WORKER	\$17.88
BRICKLAYER; MASON	\$18.96
CARPENTER; CASEWORKER	\$17.29
CARPET LAYER; FLOOR INSTALLER	\$21.25
CONCRETE FINISHER	\$15.17
DATA COMM/TELE COMM	\$33.13
DRYWALL INSTALLER; CEILING INSTALLER	\$17.08
ELECTRICIAN	\$21.70
ELEVATOR MECHANIC	\$37.50
FIREPROOFING INSTALLER	\$17.25
GLAZIER	\$17.67
HEAVY EQUIPMENT OPERATOR	\$23.25
INSULATOR	\$18.56
IRONWORKER	\$19.20
LABORER, GENERAL	\$11.83
LATHERER; PLASTERER	\$17.00
LIGHT EQUIPMENT OPERATOR	\$19.80
METAL BUILDING ASSEMBLER	\$15.50
MILLWRIGHT	\$26.13
PAINTER; WALL COVERING INSTALLER	\$14.33
PIPEFITTER	\$29.50
PLUMBER	\$19.10
ROOFER	\$19.00
SHEET METAL WORKER	\$19.70
SPRINKLER FITTER	\$20.38
STEEL ERECTOR	\$28.88
TERRAZZO WORKER	\$19.42
TILE SETTER	\$14.17
WATER PROOFER; CAULKER	\$17.00

This document was developed by PBK Architects, Inc., in strict accordance with Chapter 2258 of the Texas Government Code

Worker Classification Definition Sheet

CLASSIFICATION	DEFINITION
ASBESTOS WORKER	Worker who removes and disposes of asbestos materials.
BRICKLAYER; MASON	Craftsman who works with masonry products, stone, brick, block, or any material substituting
CARPENTER; CASEWORKER	Worker who build wood structures or structures of any material which has replaces wood.
CARPET LAYER; FLOOR INSTALLER	Worker who installs carpets and /or floor coverings, vinyl tile.
CONCRETE FINISHER	Worker who floats, trowels, and finishes concrete.
DATA COMM/TELE COMM	Worker who installs data/telephone and television cable and associate equipment and
DRYWALL; CEILING INSTALLER	Worker who installs metal framed walls and ceiling, drywall coverings, ceiling grids, and
ELECTRICIAN	Skilled craftsman who installs or repairs electrical wiring and devices. Includes fire alarm
ELEVATOR MECHANIC	Craftsman skilled in the installation and maintenance of elevators.
FIREPROOF ING INSTALLER	Worker who sprays or applies fire proofing materials.
GLAZIER	Worker who installs glass, glazing, and glass framing.
HEAVY EQUIPMENT OPERATOR	Includes but not limited to all CAT tractors, all derrick-powered, all power operated cranes, back hoos, back fillers, power operated shovels, winch trucks, and all trenching
INSULATOR	Worker who applies, sprays, or installs insulation.
IRONWORKER	Skilled craftsman who erects structural steel framing and installs structural concrete Rebar.
LABORER, HELPER	Worker qualified for only unskilled or semi-skilled work. Lifting, carrying materials or tools,
LATHERER; PLASTERER	Worker who installs metal framing and lath. Worker who applies plaster to lathing and installs
LIGHT EQUIPMENT OPERATOR	Includes but not limited to, air compressors, truck crane drivers, flex planes, building elevators,
METAL BUILDING ASSEMBLER	Worker who assembles pre-made metal buildings.
MILLWRIGHT	Mechanic specializing in the installation of heavy machinery, conveyance, wrenches, dock
PAINTER; WALL COVERING INSTALLER	Worker who prepares wall surfaces and applies paint and/or wall coverings, tape, and bedding.
PIPEFITTER	Trained worker who installs piping systems, chilled water piping and hot water (boiler) piping,
PLUMBER	Skilled craftsman who installs domestic hot and cold-water piping, waste piping, storm system
ROOFER	Worker who installs roofing materials, Bitumen (asphalt and coal tar) felts, flashings, all types
SHEET METAL WORKER	Worker who installs sheet metal products, Roof metal, flashings and curbs, ductwork,
SPRINKLER FITTER	Worker who installs fire sprinklers systems and fire protectant equipment.

STEEL ERECTOR	Worker who erects and dismantles structural steel frames of buildings and other structures.
TERRAZZO WORKER	Craftsman who places and finishes Terrazzo
TILE SETTER	Worker who prepares wall and/or floor surfaces and applies ceramic tiles to these surfaces.
WATER PROOFER; CAULKER	Worker who applies water proofing material to buildings. Products include sealant, caulk, sheet

DOCUMENT 00 50 00 - TEXAS STATUTORY PERFORMANCE BOND
(Penalty of this bond must be 100% of contract amount)

Bond No.: _____

KNOW ALL MEN BY THESE PRESENTS, that: _____
(hereinafter called the Principal), as principal, and _____
a corporation organized and existing under the laws of the State of _____
authorized and admitted to do business in the State of Texas and licensed by the State of Texas to
execute bonds as Surety (hereinafter called the Surety), as Surety, are held and firmly bound unto

(hereinafter called the Obligee) in the amount of _____

Dollars(\$_____) for the payment whereof, the said Principal and Surety bind
themselves, and their heirs, administrators, executors, successors and assigns, jointly and severally,
firmly by these presents.

WHEREAS, the Principal has entered into a certain written contract with the Obligee, dated the _____
day of _____, 20____, for

Engineering and Site Drainage Remedies Crockett Early Childhood Center
1701 W Lampasas St, Ennis, TX 75119
Ennis, Texas 75119
ENNIS INDEPENDENT SCHOOL DISTRICT

which contract is hereby referred to and made a part hereof as fully and the same extent as if copied at
length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal
shall faithfully perform the work in accordance with the plans, specifications and contract documents, then
this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the
Texas Government Code and all liabilities on this bond shall be determined in accordance with the
provisions of said Chapter to the same extent as if it were copied at length herein.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this Instrument this
_____ day of _____, 20____.

Principal (Seal)

Surety Address _____ By: _____

Surety (Seal)

Surety Telephone Number _____ By: _____
Attorney-in-Fact

END OF DOCUMENT 00 50 00

ENGINEERING AND SITE DRAINAGE REMEDIES
CROCKETT EARLY CHILDHOOD CENTER
ENNIS INDEPENDENT SCHOOL DISTRICT

PBK
P2100600AR

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

DOCUMENT 00 65 02 - WAIVER AND RELEASE OF LIENS

PART 1 GENERAL

1.1 SUMMARY

- A. Document Includes: Applicability and use of statutory Waiver and Release of Lien forms promulgated by the Legislature of the State of Texas for construction projects in Texas.
- B. Related Requirements:
 - 1. The Contract for Construction (also referred to as the Agreement or the Contract)
 - 2. Conditions of the Contract (General, Supplementary, and other conditions, if any)
 - 3. Section 01 29 00 Payment Procedures
 - 4. Section 01 77 00 Contract Closeout
 - 5. Section 01 77 01 Closeout Procedures

1.2 REFERENCES

- A. Texas Property Code, Chapter 53, Subchapter L, Sections 53.281 thru 53.287 (includes the standard forms attached herewith immediately following this section):
 - 1. Form 1: Conditional Waiver for Progress Payments
 - 2. Form 2: Unconditional Waiver for Progress Payments
 - 3. Form 3: Conditional Waiver for Final Payments
 - 4. Form 4: Unconditional Waiver for Final Payments

PART 2 PRODUCTS (*not used*)

PART 3 EXECUTION

3.1 SELECTION AND USE OF WAIVER AND RELEASE OF LIEN FORMS

- A. Based on answers to the following questions, use the applicable form for the occasion:
 - 1. Is the payment a *progress* payment (partial, not final), or a *final* payment?
 - 2. Is the release *unconditional* (for a payment already received), or *conditional* (given in anticipation of a payment not yet received)?
- B. Submit the applicable form, properly executed (filled out, signed and dated) and notarized, on each occasion required (see other portions of the Contract Documents, including but not necessarily limited to the related requirements documents cited above).
- C. The wording of these forms is prescribed by the State of Texas. Questions regarding their use, execution, etc. should be directed to user's own attorney experienced in construction or lien law. This document is not to be interpreted as rendering legal advice.
- D. Even if the Contract Documents do not explicitly require submittal of Waivers and Releases of Liens for every payment (for example, omitting them for monthly progress payments), the Owner reserves the right, at its sole discretion, to require applicable Waivers and Releases of Liens, executed and notarized, for any or all payments.

END OF DOCUMENT A1
(*see following pages for standard forms*)

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

FORM 1: CONDITIONAL WAIVER FOR PROGRESS PAYMENTS

PROJECT NAME: _____
OWNER'S NAME: _____ PROJECT NUMBER _____

CONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

On receipt by the signer of this document of a check from _____ (maker of check) in the sum of \$ _____ payable to _____ (payee or payees of check) and when the check has been properly endorsed and has been paid by the bank on which it is drawn, this document becomes effective to release any mechanic's lien right, any right arising from a payment bond that complies with a state or federal statute, any common law payment bond right, any claim for payment, and any rights under any similar ordinance, rule, or statute related to claim or payment rights for persons in the signer's position that the signer has on the property of _____ (owner) located at _____ (location) to the following extent:
_____ (job description).

This release covers a progress payment for all labor, services, equipment, or materials furnished to the property or to _____ (person with whom signer contracted) as indicated in the attached statement(s) or progress payment request(s), except for unpaid retention, pending modifications and changes, or other items furnished.

Before any recipient of this document relies on this document, the recipient should verify evidence of payment to the signer.

The signer warrants that the signer has already paid or will use the funds received from this progress payment to promptly pay in full all of the signer's laborers, subcontractors, materialmen, and suppliers for all work, materials, equipment, or services provided for or to the above referenced project in regard to the attached statement(s) or progress payment request(s).

Date _____
_____ (Company name)
By _____ (Signature)
_____ (Printed/Typed name)
_____ (Title)

SWORN AND SUBSCRIBED before me at _____, _____, This _____ day of _____, 20____ A.D.

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

Notary Public in and for the state of _____

FORM 2: UNCONDITIONAL WAIVER FOR PROGRESS PAYMENTS

PROJECT NAME: _____
OWNER'S NAME: _____ PROJECT NUMBER _____

NOTICE: THIS DOCUMENT WAIVES RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. IT IS PROHIBITED FOR A PERSON TO REQUIRE YOU TO SIGN THIS DOCUMENT IF YOU HAVE NOT BEEN PAID THE PAYMENT AMOUNT SET FORTH BELOW. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL RELEASE FORM.

UNCONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

The signer of this document has been paid and has received a progress payment in the sum of \$_____ for all labor, services, equipment, or materials furnished to the property or to _____ (person with whom signer contracted) on the property of _____ (Owner) located at _____ (location) to the following extent: _____ (job description). The signer therefore waives and releases any mechanic's lien right, any right arising from a payment bond that complies with a state or federal statute, any common law payment bond right, any claim for payment, and any rights under any similar ordinance, rule, or statute related to claim or payment rights for persons in the signer's position that the signer has on the above referenced project to the following extent:

This release covers a progress payment for all labor, services, equipment, or materials furnished to the property or to _____ (person with whom signer contracted) as indicated in the attached statement(s) or progress payment request(s), except for unpaid retention, pending modifications and changes, or other items furnished.

The signer warrants that the signer has already paid or will use the funds received from this progress payment to promptly pay in full all of the signer's laborers, subcontractors, materialmen, and suppliers for all work, materials, equipment, or services provided for or to the above referenced project in regard to the attached statement(s) or progress payment request(s).

Date _____

By _____ (Company name)

By _____ (Signature)

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

_____ (Printed/Typed name)

_____ (Title)

SWORN AND SUBSCRIBED before me at _____, _____, This ____ day of _____.
20____ A.D.

Notary Public in and for the state of _____

(END OF ATTACHED FORMS)

NOTE: THIS DOCUMENT MUST BE SUBMITTED WITH COMPETITIVE SEALED PROPOSAL FORM

**DOCUMENT 00 72 00 - SAMPLE CONTRACT FOR CONSTRUCTION AND GENERAL CONDITIONS
OF THE CONTRACT FOR CONSTRUCTION**

PART 1 -

- A. The General Conditions of the Contract for Construction, AIA Document A201, 2017 Edition, referenced as the General Conditions, are a part of the Contract Documents.
- B. The Contractor is specifically directed, as a condition of the Contract, to acquaint itself with the Articles of the General Conditions and to notify and apprise its subcontractors and other entities of the conditions governing the Contract for Construction.
- C. No contractual adjustments shall be due for failure of each entity to fully acquaint itself with the General Conditions.
- D. The General Conditions of the Contract shall be amended by Supplementary Conditions.
- E. The provisions of the General and Supplementary Conditions and Division 1 General Requirements apply to the work specified in each Section of the Contract Specifications and indicated on the Contract Drawings.

END OF DOCUMENT 00 72 00



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

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

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

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

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

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

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

§ 1.1.2 The Contract

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

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

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

§ 1.1.8 Initial Decision Maker

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

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining

provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

§ 1.3 Capitalization

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

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

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

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

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

§ 1.6 Notice

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

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

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building

information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

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

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

§ 2.2 Evidence of the Owner's Financial Arrangements

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

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

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

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

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

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

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

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the

site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

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

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

§ 2.4 Owner's Right to Stop the Work

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

§ 2.5 Owner's Right to Carry Out the Work

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

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

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

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

capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

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

§ 3.3 Supervision and Construction Procedures

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

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

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

§ 3.4 Labor and Materials

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

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

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

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

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

§ 3.6 Taxes

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

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

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

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

§ 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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

§ 3.9 Superintendent

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

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

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

§ 3.10 Contractor's Construction and Submittal Schedules

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

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

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

§ 3.11 Documents and Samples at the Site

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

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

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

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

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

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

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

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

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

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

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

time and in the form specified by the Architect.

§ 3.13 Use of Site

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

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

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

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

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

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

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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

§ 4.2 Administration of the Contract

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

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

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

§ 4.2.4 Communications

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

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

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

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

Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

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

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

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

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

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

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

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

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

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

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

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

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

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the

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

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

§ 5.3 Subcontractual Relations

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

§ 5.4 Contingent Assignment of Subcontracts

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

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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

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

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

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

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

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

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

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

§ 6.2 Mutual Responsibility

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

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

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

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

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

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

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

§ 7.2 Change Orders

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

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

§ 7.3 Construction Change Directives

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

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

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

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

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

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

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

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

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

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

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

§ 7.4 Minor Changes in the Work

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

ARTICLE 8 TIME

§ 8.1 Definitions

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

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

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

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

§ 8.2 Progress and Completion

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

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

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

§ 8.3 Delays and Extensions of Time

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

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

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

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable

by the Owner to the Contractor for performance of the Work under the Contract Documents.

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

§ 9.2 Schedule of Values

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

§ 9.3 Applications for Payment

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

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

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

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

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

§ 9.4 Certificates for Payment

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

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The

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

§ 9.5 Decisions to Withhold Certification

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

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

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

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

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

§ 9.6 Progress Payments

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

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

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

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

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

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

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

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

§ 9.7 Failure of Payment

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

§ 9.8 Substantial Completion

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

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

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

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

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

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

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

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

§ 9.10 Final Completion and Final Payment

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

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

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

constitute a waiver of Claims.

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

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

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

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

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

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

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

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

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

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

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

§ 10.2.8 Injury or Damage to Person or Property

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

§ 10.3 Hazardous Materials and Substances

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

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

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

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

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

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

§ 10.4 Emergencies

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

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the

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

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

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

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

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

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The

Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

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

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

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

§ 11.5 Adjustment and Settlement of Insured Loss

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

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

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

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

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

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

Contractor's expense.

§ 12.2.2 After Substantial Completion

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

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

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

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

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

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

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

§ 13.2 Successors and Assigns

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

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

§ 13.3 Rights and Remedies

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

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

§ 13.4 Tests and Inspections

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

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

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

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

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

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

§ 13.5 Interest

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

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

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

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

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

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

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

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

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

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

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

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

§ 14.3 Suspension by the Owner for Convenience

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

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

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

§ 14.4 Termination by the Owner for Convenience

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

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

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

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

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

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

§ 15.1.2 Time Limits on Claims

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

§ 15.1.3 Notice of Claims

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

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

§ 15.1.4 Continuing Contract Performance

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

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

§ 15.1.5 Claims for Additional Cost

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

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section

15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

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

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly

consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.



AIA® Document A201® – 2017

General Conditions of the Contract for Construction

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

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

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

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

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

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

§ 1.1.2 The Contract

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

§ 1.1.3 The Work

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

§ 1.1.4 The Project

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

§ 1.1.5 The Drawings

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

§ 1.1.6 The Specifications

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

§ 1.1.7 Instruments of Service

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

§ 1.1.8 Initial Decision Maker

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

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining

provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

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

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

§ 1.3 Capitalization

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

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

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

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

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

§ 1.6 Notice

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

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

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building

information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

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

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

§ 2.2 Evidence of the Owner's Financial Arrangements

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

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

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

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

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

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

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

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the

site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

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

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

§ 2.4 Owner's Right to Stop the Work

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

§ 2.5 Owner's Right to Carry Out the Work

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

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

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

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

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

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

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

capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

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

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

§ 3.3 Supervision and Construction Procedures

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

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

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

§ 3.4 Labor and Materials

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

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

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

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes

remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

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

§ 3.6 Taxes

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

§ 3.7 Permits, Fees, Notices and Compliance with Laws

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

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

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

§ 3.7.4 Concealed or Unknown Conditions

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

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

§ 3.8 Allowances

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

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and

- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

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

§ 3.9 Superintendent

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

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

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

§ 3.10 Contractor's Construction and Submittal Schedules

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

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

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

§ 3.11 Documents and Samples at the Site

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

§ 3.12 Shop Drawings, Product Data and Samples

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

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

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

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

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

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

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

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

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

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

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

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

time and in the form specified by the Architect.

§ 3.13 Use of Site

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

§ 3.14 Cutting and Patching

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

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

§ 3.15 Cleaning Up

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

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

§ 3.16 Access to Work

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

§ 3.17 Royalties, Patents and Copyrights

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

§ 3.18 Indemnification

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

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

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

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

§ 4.2 Administration of the Contract

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

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

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

§ 4.2.4 Communications

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

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

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

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

Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

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

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

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

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

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

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

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

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

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

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

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

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

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the

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

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

§ 5.3 Subcontractual Relations

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

§ 5.4 Contingent Assignment of Subcontracts

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

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

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

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

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

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

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

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

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

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate

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

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

§ 6.2 Mutual Responsibility

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

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

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

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

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

§ 6.3 Owner's Right to Clean Up

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

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

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

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

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

§ 7.2 Change Orders

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

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

§ 7.3 Construction Change Directives

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

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

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

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

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

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

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

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

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

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

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The

Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

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

§ 7.4 Minor Changes in the Work

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

ARTICLE 8 TIME

§ 8.1 Definitions

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

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

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

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

§ 8.2 Progress and Completion

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

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

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

§ 8.3 Delays and Extensions of Time

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

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

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

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable

by the Owner to the Contractor for performance of the Work under the Contract Documents.

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

§ 9.2 Schedule of Values

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

§ 9.3 Applications for Payment

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

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

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

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

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

§ 9.4 Certificates for Payment

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

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The

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

§ 9.5 Decisions to Withhold Certification

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

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

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

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

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

§ 9.6 Progress Payments

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

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

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

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers

to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

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

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

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

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

§ 9.7 Failure of Payment

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

§ 9.8 Substantial Completion

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

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

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

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

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

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

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

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

§ 9.10 Final Completion and Final Payment

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

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

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

constitute a waiver of Claims.

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

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

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

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

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

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

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

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

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

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

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

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

§ 10.2.8 Injury or Damage to Person or Property

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

§ 10.3 Hazardous Materials and Substances

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

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

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

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

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

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

§ 10.4 Emergencies

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

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the

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

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

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

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

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 Failure to Purchase Required Property Insurance. If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

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

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The

Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

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

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

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

§ 11.5 Adjustment and Settlement of Insured Loss

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

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

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

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

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

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

Contractor's expense.

§ 12.2.2 After Substantial Completion

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

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

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

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

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

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

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

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

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

§ 13.2 Successors and Assigns

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

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

§ 13.3 Rights and Remedies

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

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

§ 13.4 Tests and Inspections

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

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

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

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

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

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

§ 13.5 Interest

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

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

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

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

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

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

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

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

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

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

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

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

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

§ 14.3 Suspension by the Owner for Convenience

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

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

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

§ 14.4 Termination by the Owner for Convenience

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

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

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

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

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

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

§ 15.1.2 Time Limits on Claims

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

§ 15.1.3 Notice of Claims

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

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

§ 15.1.4 Continuing Contract Performance

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

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

§ 15.1.5 Claims for Additional Cost

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

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section

15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

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

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly

consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

**SUPPLEMENTARY CONDITIONS
TO THE AIA DOCUMENT
A201-2017 GENERAL CONDITIONS**

SUPPLEMENTARY CONDITIONS TO THE CONTRACT FOR CONSTRUCTION

The following supplements modify the "General Conditions of the Contract for Construction", AIA Document A201, Sixteenth Edition, 2017. Where a portion of the General Conditions is modified or deleted by these Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect. As appropriate, for purposes of this Request for Proposal, the term "Bid" shall mean "Proposal" and the term "Bidder" shall mean "Offeror", wherever they appear in the Construction Documents.

ARTICLE 1 -- GENERAL PROVISIONS

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENT

Delete Section 1.1.1 in its entirety and substitute the following:

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

To the extent any provision in the Supplementary Conditions to these AIA Document A201-2017 General Conditions, issued by Owner, conflicts with any provision in the Supplementary Conditions issued by the Architect; the Supplementary Conditions to these AIA Document A201-2017 General Conditions issued by Owner shall control.

1.1.3 THE WORK

Add the following sentence at the end of this section:

It also includes all supplies, skill, supervision, transportation services and other facilities and things necessary, proper or incidental to the carrying out and completion of the terms of the contract and all other items of cost or value needed to produce, construct and fully complete the public work identified by the Contract Documents.

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Sections:

- 1.2.1.2** Precedence of the Contract Documents: The most recently issued Document takes precedence over previous issues of the same Document. The order of precedence is as follows with the highest authority listed as "1".
- .1** Contract Modifications (such as Change Orders) signed by the Contractor and Owner.
 - .2** The Agreement. (AIA Document A101-2017)
 - .3** The Supplementary Conditions
 - .4** The General Conditions of the Contract for Construction
 - .5** Addenda, with those of later date having precedence over those of earlier date

.6 Drawings and Specifications

Should these Documents disagree in themselves, the Architect and Owner will select the appropriate method for performing the Work, to facilitating avoiding increase in the Contract cost.

1.2.1.3 Relation of Specifications and Drawings: To be equivalent in authority and priority.

Should they disagree in themselves, or with each other, prices shall be based on the most expensive combination of quality and quantity of Work indicated. In the event of the above mentioned disagreements, the resolution shall be determined by the Architect and Owner.

1.6 NOTICE

Delete the text of Section **1.6.1** in its entirety and substitute the following:

1.6.1 Written notice shall be deemed to have been duly served if delivered in person to the individual or a member of the firm or entity or to an officer at the corporation for which is was intended, or if delivered at or sent by certified mail, or by registered or certified mail, or by courier service providing proof of delivery, to the last business address known to the party giving notice, or if delivered by facsimile or other electronic communications to the offices of the person or corporation for which it was intended. For facsimiles or other electronic communications received after 5:00 p.m. on a business day, or on a weekend or legal holiday on which the recipient's offices are closed, notice shall be deemed to have been duly served on the next business day.

Delete the text of Section **1.6.2** in its entirety.

Add Section **1.9** as follows:

1.9 MISCELLANEOUS OTHER DEFINITIONS

1.9.1 ADDENDA, ADDENDUM

Documents issued by the Architect prior to execution of the Owner Contractor Agreement for this Project that modify or clarify the Proposal Documents. All addenda become a part of the Contract Documents.

1.9.2 ALTERNATE PROPOSAL(S)

A separate amount stated on a separate Proposal Form which, if accepted by the Owner, will be added to or deducted from the Base Proposal. If accepted, the work that corresponds to the alternate proposal will become part of the agreement between Owner and Contractor. Alternate proposals shall remain valid for the same period of time as the Base Proposal after receipt of proposals, regardless if an Owner Contractor Agreement has been executed, unless indicated otherwise herein.

1.9.3 APPROVED, APPROVED EQUIVALENT, APPROVED EQUAL, OR EQUAL

The terms Approved, Approved Equivalent, Approved Equal, and Or Equal, relate to the substitution of products or systems approved in writing by the Architect. Refer to Paragraph 3.4.2, Substitution of Products and Systems, for procedures which must be followed after award of contract. The substitution procedure process to be followed prior to receipt of proposals is described in the Instructions to Bidders.

1.9.4 BASE PROPOSAL

The Contractor's proposal for the Work, not including any Alternates.

1.9.5 CONTRACT TIME

The period of time which is established in the Contract Documents for Substantial Completion of the Work.

1.9.6 DATE OF AGREEMENT

The date the Owner formally awards a Contract for Construction of the Work. This date will be inserted in the first page of the Agreement between Owner and Contractor and shall be referenced in Performance Bond and Payment Bond forms. See also Date of Commencement of Work.

1.9.7 DATE OF COMMENCEMENT OF THE WORK

The date of a written Notice to Proceed to the Contractor for a given portion of the Work. This date constitutes day zero (0) of the stated Contract Time. The Notice to Proceed will be issued after the District has received and validated the Contractor's Payment Bond, Performance Bond and Insurance.

1.9.8 DATE OF FINAL COMPLETION

The end of construction. See AIA Document A201, Section 9.10.

1.9.9 DAY

The following days are referenced in the documents:

- .1 Calendar Days. Extensions of time granted for Regular Work Days lost, if any, will be converted to Calendar Days.
- .2 Holidays: The days officially recognized by the construction industry in this area as a holiday; normally limited to the observance days of New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and the day after and Christmas Day.
- .3 Regular Work Days: All calendar days except holidays, Saturdays, and Sundays. Requests for extensions of time shall be requested on the basis of Regular Work Days, and those days, if approved, will be converted to calendar days by multiplying by a factor of one and four-tenths (1.4).
- .4 No time extensions will be allowed due to inclement or adverse weather days.

1.9.10 NOTICE TO PROCEED

A notice that may be given by the Owner to the Contractor that directs the Contractor to start the Work. It may also establish the Date of Commencement of the Work.

1.9.11 PROVIDE

Whenever the word "provide" is used in these documents, it shall mean the same as "furnish and install".

1.9.12 PUNCH LIST

A comprehensive list prepared by the Contractor prior to Substantial Completion to establish all items to be completed or corrected; this list may be supplemented by the Architect or Owner. See AIA Document A201, Section 9.8.

1.9.13 UNIT PRICES

A cost for a unit of work as described in the Contract Documents. The Owner may add or deduct Unit Price work at the amounts stated on the Proposal Form and such amounts shall not be subject to additional mark up by the Contractor or his subcontractors."

ARTICLE 2 – OWNER

2.1 GENERAL

Delete the text of Section 2.1.1 in its entirety and substitute the following:

2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. All parties understand that only the Board of Trustees for the Owner acting as a body corporate has the authority to bind the Owner with respect to all matters requiring the Board's approval under current policy of the Board of Trustees for the Owner, including, but not limited to, Change Orders. Except as otherwise provided in Section 4.2.1, the Architect does not have authority to bind the Owner with respect to matters requiring the Owner's approval or authorization. The term "Owner" means the Owner or the Owner's authorized representative.
Delete the text of Section 2.1.2 in its entirety.

2.2 EVIDENCE OF THE OWNER'S FINANCIAL ARRANGEMENTS

After the first sentence of Section 2.2.1, delete the remainder of Section 2.2.1 in its entirety.
Delete Sections 2.2.2 and 2.2.3 in their entirety.

2.3 INFORMATION AND SERVICES REQUIRED OF THE OWNER

Delete Section 2.3.6 in its entirety and replace it with the following:

2.3.6 The Contractor will be furnished free of charge 25 copies of the Drawings and 25 copies of the Project Manual. These copies may have been used during the Bid/Proposal process and it is the Contractor's responsibility to determine their completeness and to request replacement of any missing portions. Additional new copies will be furnished at the cost of reproduction, postage, and handling.

2.5 OWNER'S RIGHT TO CARRY OUT THE WORK

Delete the text of Section 2.5. in its entirety and substitute the following:

If the Contractor defaults or neglects to carry out the work in accordance with the Contract Documents and fails, after receipt of written notice from the Owner, to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case, an appropriate Change Order shall be issued

deducting from payments then or thereafter due the Contractor the actual cost of correcting such deficiencies, including the Owner's expenses and compensation for the Architect's additional services and expenses made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to the prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner within thirty (30) days of receipt of written notice from the Owner therefor.

Add Section **2.6** as follows:

2.6 OWNER'S LACK OF LIABILITY TO THIRD PARTY

2.6.1 The Owner is not responsible for the acts and/or omissions of, or contractually involved with, any subcontractors, suppliers of labor or materials, and/or their respective employees or agents or any other third-party claimants. Such claimants shall not constitute third party beneficiaries under this contract. The Contractor and/or his Surety solely shall deal with, take responsibility for, and be liable to such parties under this Contract. Contractor will indemnify and defend the Owner from any legal actions against Owner for unpaid bills of subcontractors.

Add Section **2.7** as follows:

2.7 OWNER'S RIGHT TO OCCUPY THE PROJECT

2.7.1 The Owner shall have the right to occupy or use without prejudice to the right of either party, any completed or largely completed portions of the project, notwithstanding the time for completing the entire work or such portions may not yet have expired. Such occupancy and use shall not constitute acceptance of any work not in accordance with the Contract Documents. If the Contractor determines that said occupancy may cause a delay to the completion of the project, he shall notify the Owner in writing immediately.

2.7.2 Refer to Article 11 Insurance and Bonds regarding property insurance requirements in the event of such occupancy.

2.7.3 If Contractor has not completed the obligations of the Contract Documents by the dates established by subsequent Amendments to the Agreement Between Owner and Construction Manager, the Owner shall have the right to occupy or use the entire project.

ARTICLE 3 -- CONTRACTOR

3.1 GENERAL

Add Section **3.1.4** as follows:

3.1.4 The Contractor must be fully qualified under any state or local licensing laws for Contractors in effect at the time and at the location of the work. The Contractor is responsible for determining that all of his subcontractors and prospective subcontractors are duly licensed in accordance with the law.

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

Delete the last sentence of Section **3.2.4** in its entirety and substitute the following:

If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities provided such errors, inconsistencies, omissions, differences, or nonconformities could not have been ascertained from a careful study of the Contract Documents.

Add Sections **3.2.5**, **3.2.6** and **3.2.7** as follows:

3.2.5 The Contractor shall make a reasonable attempt to interpret the Contract Documents before asking the Architect for assistance in interpretation. The Contractor shall not ask the Architect for observation of work prior to the Contractor's field superintendent's personal inspection of the work and his determination that the work of all major subcontractors, to allow the subcontractor to demonstrate his understanding of the documents to the Architect and to allow the subcontractor to ask for any interpretation he may require.

3.2.6 If, in the opinion of the Architect, the Contractor does not make a reasonable effort to comply with the above requirements of the Contract Documents and this causes the Architect or his Consultants to expend an unreasonable amount of time in the discharge of the duties imposed on him by the Contract Documents, then the Contractor shall bear the cost of compensation for the Architect's additional services made necessary by such failure. The Architect will give the Contractor prior notice of intent to bill for additional services related to Sections 3.2.5, 3.2.6 and 3.7 before additional services are performed.

3.2.7 If the Contractor has knowledge that any of the products or systems specified will perform in a manner that will limit the Contractor's ability to satisfactorily perform the work or to honor his Warranty, he shall promptly notify the Architect in writing, providing substantiation for his position. Any necessary changes, including substitutions of materials, shall be accomplished by appropriate Modification.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Delete the last sentence of Section **3.3.1** in its entirety and substitute the following:

If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures, but only to the extent the Owner would be responsible for any such losses or damages under state and/or federal law.

Add Sections **3.3.4** and **3.3.5** as follows:

3.3.4 The Contractor is especially cautioned to coordinate the routing of mechanical and electrical items prior to commencing these operations.

3.3.5 Contractor shall bear sole responsibilities for design and execution of acceptable trenching and shoring procedures, in accordance with Texas Government Code, Section 2166.303 and Texas Health and Safety Code, Subchapter C, Sections 756.021, et seq. On trench excavations in excess of 5 feet in depth, Contractor shall pay a qualified engineer, experienced in the engineering design and preparation of drawings and specifications for compliance with state requirements for trenching and shoring, to prepare and professionally seal detailed drawings and specifications directing Contractor in the safe execution of trenching and shoring.

3.3.6 Any time that the Contractors' employees, subcontractors and their agents and employees, and other persons or entities performing portions of the work for or on behalf of the Contractor or any of its subcontractors are on site, the work shall be supervised by a qualified employee of the Contractor.

3.4 LABOR AND MATERIALS

Delete Section **3.4.2** in its entirety and replace it with the following:

3.4.2 The materials, products, and the systems covered by these specifications have been selected as a standard because of quality, particular suitability, or record of satisfactory performance. It is not intended to preclude the use of equivalent or better materials, products, or systems provided that same meets the requirements of the particular project and have been approved in an addendum as a substitution prior to the submission of bids. If prior written approval in an addendum has not been obtained, it will be assumed that the Bid is based upon the materials, products, and systems described in the Bidding Documents and no substitutions will be permitted, except as provided hereinafter.

.1 If, after award of contract, the Contractor or one of his Subcontractors, or Suppliers determines that any of the products or systems specified will perform in a manner that will limit the Contractor's ability to satisfactorily perform the work or to honor the Warranty, the Contractor shall promptly notify the Architect, in writing, providing detailed substantiation for his position. Any changes deemed necessary by the Owner and Architect, including substitution of materials and change in Contract Sum, either upward or downward, if any, shall be accompanied by appropriate Modification.

.2 After the Contract has been executed, the Owner and Architect will consider a formal request for the substitution of products on the Work in place of those specified only under the conditions set forth in specification referring to Product Options and Substitutions.

.3 Requests for substitution, received by the Architect later than forty five (45) days after "Notice to Proceed" or "Date of Commencement of the Work" (whichever occurs first), may result in additional costs to the Owner. Contractor agrees to reimburse the Owner through deductive Change Order to the Contract, for all costs associated with such requests.

- .4 By making request for substitutions based on Subparagraph 3.4.2 above, the Contractor
 - .1 represents that the Contractor has personally investigated the proposed substitute product and determined that it is equivalent or superior in all respects to that specified, and is suitable for the intended purpose;
 - .2 represents that the Contractor will provide the same warranty for the substitution that the Contractor would for that specified;
 - .3 certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect's redesign costs, and waives all claims for additional costs related to the substitution which subsequently become apparent; and
 - .4 will coordinate the installation of the accepted substitute, making such changes as may be required for the Work to be complete in all respects.
- .5 Substitution requests shall be submitted on the forms included herein and in accordance with the process established in specification referring to Product Options and Substitutions.

Add the following Sections after Section 3.4.3

- 3.4.3**
- .1 State law prohibits possession and/or use of alcohol and tobacco products on school property at all times.
 - .2 State law prohibits weapons or firearms on school property.
 - .3 There shall be zero tolerance for fraternization with students, teachers and any other school district personnel, Contractor will immediately remove any employee that violates this provision from the project.
 - .4 No glass bottles shall be brought on the construction site or Owner's property by any construction personnel.

3.5 WARRANTY

Delete the text of Section 3.5.1 in its entirety and substitute the following:

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

Add Sections 3.5.3, 3.5.4 and 3.5.5 as follows:

3.5.3 In the event of failure in the Work, including a specified product, whether during construction, or the correction period (which shall be one (1) year from the Date of Substantial Completion, except where a longer period is specified), the Contractor shall take prompt and appropriate measures to assure correction or replacement of the defective Work or any portion thereof, including manufactured products, whether notified by the Owner or the Architect. Upon correction of warranty items, the Contractor shall provide the Owner and Architect with written notification of said correction (including a brief description of the defect and corrective measures taken). This obligation shall survive acceptance of the Work under the Construction Contract.

3.5.4 The Contractual Correction Period for this Project is one (1) year from the date of Substantial Completion, except for any extended warranties as specified within the Contract Documents. Items of Work not completed until after the deadline for Substantial Completions shall have their warranties (general and any extended warranty periods) extended by the period of time between the deadline for Substantial Completion and the actual completion of the Work. Such warranties shall be submitted to the Owner in writing, documenting such time extensions. This correction period shall not restrict or modify extended warranties called for or provided on systems, equipment or other specific portions of the Work.

3.5.5 The Contractor shall accompany the Owner and Architect for a complete reinspection of the Project approximately eleven (11) months after the Date of Substantial Completion and shall promptly complete any observed or reported deficiencies in the Work, including any uncompleted Punch List items or outstanding and incomplete warranty items. The contractor shall provide written notification to the

Owner and Architect when said Punch List items and/or additional deficiencies observed have been corrected. This obligation shall survive acceptance of the Work under the Construction Contract.

3.6 TAXES

Delete Section **3.6** in its entirety and substitute the following:

The Owner qualifies for exemption from State and Local Sales and Use Taxes pursuant to the provision of Article 20.04(f) of the Texas Limited Sales, Excise and Use Tax Act. Taxes normally levied on the purchase, rental and lease of materials, supplies and equipment used or consumed in performance of the Contract may be exempted by issuing to suppliers an exemption certificate in lieu of tax. Exemption certificates comply with State Comptroller of Public Accounts Ruling No. 95-0.07. Any such exemption certificate issued in lieu of tax shall be subject to State Comptroller of Public Accounts Ruling No. 95-0.09, as amended. Failure by the Contractor or Subcontractors to take advantage of the Owner's exemption and to obtain such exemption certificate shall make him responsible for paying taxes incurred on materials furnished on the Project without additional cost to or reimbursement by the Owner.

3.7 PERMITS, FEES, NOTICES AND COMPLIANCES WITH LAWS

After Section **3.7.1**, add the following Sections:

- 3.7.1**
- .1** The Owner shall pay directly to the governing authority the cost of all permanent property utility assessments and similar utility connection charges.
 - .2** The Contractor shall pay directly all temporary utility charges (excluding permanent power), utility district/company inspection fees, temporary tap charges, and temporary water meter charges and any other similar fees assessed by jurisdictional authority having control over this Project. The Contractor shall secure and pay for all governing authorities' permit fees.
 - .3** Fees payable to the Texas Department of Licensing and Regulation (TDLR) for document review relative to the Elimination of Architectural Barriers Act shall be paid by the Owner and the Architect will submit the documents to the TDLR for review and approval.
 - .4** The Contractor shall pay for all measures required for the SWPPP.

3.8 ALLOWANCES

Delete Section **3.8** in its entirety and substitute the following:

3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct and approve in writing.

3.9 SUPERINTENDENT

Delete Section **3.9.1** in its entirety and substitute the following:

3.9.1 The Contractor shall employ a competent superintendent, project manager and necessary assistants who shall be in attendance at the Project site during performance of the Work, including Punch List work. The superintendent and project manager shall represent the Contractor, and unless provided otherwise in Section 3.1.1, communications given to the superintendent or project manager shall be binding as if given to the Contractor.

3.10 CONTRACTOR'S CONSTRUCTION AND SUBMITTAL SCHEDULES

Delete Section **3.10.1** and substitute the following:

3.10.1 Within 30 days of being awarded a Contract, the Contractor shall prepare and submit for the Owner and Architect's review, a construction schedule for the Work, with critical path clearly defined. The schedule shall not exceed time limits current under the Contract Documents. For further schedule requirements refer to specification section regarding project schedules in the Project Manual.

Add the following clause to Section **3.10.2**:

3.10.2 Requirements for the submittal schedule are outlined in specification section 01 32 16, Construction Progress Schedules. If the Contractor fails to submit a submittal schedule or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any

increase in the Contract Sum or extension of the Contract Time based on the time required for review of submittals.

Add Section **3.10.4** as follows:

3.10.4 The Contractor shall submit to the Architect, with each monthly Application for Payment; a copy of the progress schedule updated to reflect the current status of the project. The Contractor shall take whatever action necessary to assure that the project completion schedule is met.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add Section **3.11.1** as follows:

3.11.1 The Contractor shall post all Addenda on Construction Documents prior to commencing work in the site.

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

At Section **3.12.5**, add the following Sections:

- 3.12.5** .1 If, in the opinion of the Architect, the Shop Drawings, Product Data, Samples and similar submittals are incomplete, indicate an inadequate understanding of the work covered by the submittals, or indicate a lack of study and review by the Contractor prior to submittal to the Architect, the submittals will be returned, unchecked, to the Contractor for correction of these three deficiencies and subsequent resubmittal. Additional service charges as outlined in 3.2.6 may be charged by the Architect in this event.
- .2 The Architect will take no action on Shop Drawings, Product Data, and Samples that have not first been certified, by stamped, signed notation, as having been checked and approved by the Contractor for use in the Work, or that are not specifically required by the Contract Documents.

At Section **3.12.7**, correct the word "approved" in the last line to read "accepted".

At Section **3.12.8**, correct "Architect's approval" in the last line to read "Architect's acceptance".

At Section **3.12.9**, correct "Architect's approval" in the last line to read "Architect's acceptance" and add the following Section:

3.12.9.1 Deviation from the requirements of the Contract Documents indicated on shop Drawings, Product Data, and Samples, does not constitute the required notification "in writing."

Add Sections **3.12.11** and **3.12.12** as follows:

3.12.11 The Contractor shall submit complete Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents to the Architect at least thirty (30) days prior to the date the Contractor needs the reviewed submittals returned. Where colors are to be selected by the Architect, submit all Samples in adequate time to allow the Architect to prepare a complete selection schedule. In general, all submittals requiring color selection shall be submitted to the Architect within four weeks of the date of the contract for construction.

3.12.12 The Contractor shall submit digital PDF's of Shop Drawings, Product Data, and similar submittals in the proper format according to the procedures stipulated within the Contract Documents. Digitally submitted Shop Drawings will be reviewed and marked by the Architect and/or his consultants and returned to the Contractor for his use, distribution, correction or resubmittal as required. Contractor corrections or revisions shall be resubmitted to the Architect in accordance with same procedures. The digitally marked up prints will be retained by the Architect and his consultants. Samples shall be submitted directly to the Architect for review.

Add Section **3.12.13** as follows:

3.12.13 The Contractor shall provide MEP coordination drawings within a schedule mutually agreed upon by the Team and prior to installing the Work, showing how all piping, ductwork, lights, conduit, equipment, etc. will fit into the ceiling space allotted, including clearances required by the manufacturer, by code, or in keeping with good construction practice. Space for all trade elements must be considered on the same drawing. Drawings shall be at 1/4 inch per foot minimum scale and shall include invert elevations and sections required to meeting intended purpose. The Contractor may propose an alternate method of accomplishing MEP coordination. If the alternate method is approved by the Team, it may be utilized.

3.14 CUTTING AND PATCHING

Add Section **3.14.3** as follows:

3.14.3 Leave all chases, holes and openings, straight and true, of proper size, and cut them into existing work as may be necessary for the proper installation of the work. Consult with all Subcontractors concerned, regarding proper locations and size. In case of conflict between requirement for cutting and patching and any other requirement of the Work, submit request for direction before proceeding with the Work. In case of failure to leave or cut them in the proper place, openings shall be cut afterward at no expense to the Owner. No excessive cutting will be permitted, nor shall any piers or other structural members be cut without prior approval. After such work has been installed, satisfactorily and carefully fit around, close up, repair, patch, and point up all cuts. Work shall be done with proper tools by workmen of the particular trade to which work belongs and shall be done without extra expense to the Owner. No description of specific cutting, patching, digging, etc., required for the work under a Specification Section that may be required for the proper accommodation of that work to the work of other trades shall relieve the Contractor from responsibility described above.

3.15 CLEANING UP

Add Section **3.15.3** as follows:

3.15.3 Prior to the Architect's inspection for Substantial Completion the Contractor shall clean exterior and interior surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces; clean equipment and fixtures to a sanitary condition; replace air filters in mechanical equipment; clean roof, gutters, and downspouts; remove obstructions and flush debris from drainage systems; clean site; sweep paved areas and rake clean other surfaces; remove trash and surplus materials from the site.

3.18 INDEMNIFICATION

Delete Sections **3.18.1** and **3.18.2** in their entirety and replace them with the following:

3.18.1 TO THE FULLEST EXTENT PERMITTED BY LAW, CONTRACTOR SHALL INDEMNIFY DEFEND AND HOLD HARMLESS THE OWNER AND ITS TRUSTEES, OFFICERS, AGENTS, AND EMPLOYEES (COLLECTIVELY, THE "INDEMNIFIED PARTIES") FROM AND AGAINST ALL CLAIMS, LOSSES, EXPENSES, COSTS, DEMANDS, SUITS, CAUSES OF ACTION, AND DAMAGES, INCLUDING WITHOUT LIMITATION, ATTORNEYS' FEES AND EXPENSES, ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH OF ANY EMPLOYEE OF CONTRACTOR, ITS AGENTS, OR ITS SUBCONTRACTORS OF EVERY TIER, EVEN IF THE BODILY INJURY, SICKNESS, DISEASE OR DEATH IS CAUSED BY OR ALLEGED TO HAVE BEEN CAUSED BY THE NEGLIGENCE, FAULT OR STRICT LIABILITY OF ANY OF THE INDEMNIFIED PARTIES.

FOR ALL CLAIMS NOT ADDRESSED IN THE ABOVE PARAGRAPH, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER AND ITS TRUSTEES, OFFICERS, AGENTS, AND EMPLOYEES AND (COLLECTIVELY, THE "INDEMNIFIED PARTIES"), FROM AND AGAINST ALL CLAIMS, LOSSES, EXPENSES, COSTS, DEMANDS, SUITS, CAUSES OF ACTION, AND DAMAGES, INCLUDING WITHOUT LIMITATION, ATTORNEYS' FEES AND EXPENSES, OF ANY NATURE WHATSOEVER ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE WORK TO BE PERFORMED UNDER THIS AGREEMENT, BUT ONLY TO THE EXTENT OF THE NEGLIGENCE OR OTHER FAULT OF THE CONTRACTOR, ITS AGENTS, REPRESENTATIVES, EMPLOYEES OR SUBCONTRACTORS OF ANY TIER.

3.18.2 It is understood and agreed that Subparagraph 3.18 above is subject to, and expressly limited by, the terms and conditions of TEX. CIV. PRACT. & REM. CODE ANN. 130.001-130.005 (Vernon Supp. 1989), as amended or modified, or any successor statute. Contractor shall not be obligated under Subparagraph 3.18 to indemnify or hold harmless Architect or any agent, servant of employee of Architect from liability or damage that is caused by or results from:

- .1** defects in plans, designs or specifications prepared, approved or used by the Architect; or
- .2** negligence of the Architect in the rendition or conduct of professional duties called for or arising out of the Contract Documents and the plans, designs or specifications that are a part of the Contract Documents; and arises from:

SUPPLEMENTARY CONDITIONS

- .1 personal injury or death;
- .2 property injury; or
- .3 any other expense that arises from personal injury, death or property injury.

Add Section **3.18.3** as follows:

3.18.3 It is agreed with respect to any legal limitations, now or hereafter in effect and affecting the validity or enforceability of the indemnification obligation under Paragraph 3.18, such legal limitations are made a part of the indemnification obligation and shall operate to amend the indemnification obligation to the minimum extent necessary to bring the provision into conformity with the requirements of such limitations, and as so modified, the indemnification obligation shall continue in full force and effect.

Add Sections **3.19**, **3.20**, and **3.21** as follows:

3.19 RECORD DRAWINGS

Add the following Paragraphs in their entirety:

3.19 REPRODUCIBLE RECORD DRAWINGS

3.19.1 At the completion of the Project, the Contractor shall submit to the Owner one (1) complete set of drawings with all changes made during construction, including concealed mechanical, electrical and plumbing items. Drafting shall be compatible with original drawings and the Contractor shall submit these as hard copies. The record drawings shall exclude the seal of the Architect and/or Engineer and shall have a statement added to indicate the purpose of the drawings (i.e., "RECORD DRAWING"). The Contractor shall also submit to the Owner one (1) CD-ROM containing the following:

- .1 Final Record Drawings;
- .2 Final Specifications;
- .3 Copy of final Construction Contract, including all Change Orders.
- .4 CPR;
- .5 AEA;
- .6 Copies of minutes to all Project meetings.

3.19.2 The Contractor shall also provide the Owner with one (1) set of Record Drawings on a non-rewritable CD in AUTO CAD 14 format. The record drawings including specifications shall be 100% complete (including properly dated and executed warranties, complete technical instructions to the Owner, etc.) prior to delivery to the Architect for review. The record documents must be delivered to the Architect thirty (30) days prior to receipt of the Contractor's Final Application for Payment. The record drawings shall exclude the seal of the Architect and/or Engineer and shall have a statement added to indicate the purpose of the drawings (i.e., "RECORD DRAWING").

3.20 PREVAILING WAGE RATES

3.20.1 As required by Chapter 2258 of the Texas Government Code Title 10 Prevailing Wage Rate, no employee used in this construction may be paid less than the minimum prevailing wage rate in effect for the Owner.

3.20.2 The Contractor and each Subcontractor and Sub-subcontractor shall pay to all laborers, workmen, and mechanics employed in execution of this Contract not less than rates set forth by law and as noted in the following Wage Rate Scale (See CB-23 through CB-25), for each craft or type of workman or mechanic needed to execute Contract.

3.20.3 Determination of prevailing wages shall not be construed to prohibit payment of more than the rates identified.

3.21 ANTITRUST VIOLATIONS

3.21.1 Contractor hereby assigns to Owner any and all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 U.S.C.A. Section 1 et.seq. (1973). The Contractor shall include this provision in his contracts with each Subcontractor and Supplier. Each Subcontractor shall include such provision in contracts with Sub-subcontractors and suppliers.

3.22 THIRD-PARTY BENEFICIARY

3.22.1 No person or entity shall be deemed to be a third-party beneficiary of any provision(s) of this Contract; nor shall any provision(s) hereof be interpreted to create a right of action or otherwise permit anyone not a signatory party to the Contract to maintain an action for personal injury or property damage.

ARTICLE 4 – ARCHITECT

4.2 Administration of the Contract

Delete Section **4.2.2** in its entirety and substitute the following:

4.2.2 The Architect, as a representative of the Owner, will visit the site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the work, and (3) to determine in general if the work is being performed in a manner indicating that the work, when fully completed, will be in accordance with the Contract documents. The Architect will be required to make on-site inspections as necessary to keep the Owner informed of the progress of the Work and as necessary to guard the Owner against defects and deficiencies in the Work. The Architect will neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

Delete Section **4.2.6** in its entirety and substitute the following:

4.2.6 The Architect shall have authority to reject Work that does not conform to the Contract Documents. The Architect shall be required to promptly notify the Owner of any non-conforming Work and shall reject such non-conforming Work unless the Owner objects to the rejection in writing within twenty-four (24) hours of such notification. Whenever the Architect considers it necessary or advisable for implementation of the intent of the Contract documents, the Architect will have authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not such Work is fabricated, installed or completed. Performance of any additional inspection or testing, which would result in additional cost to the Owner, shall require advance notice to and approval of the Owner. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work, except when the Contractor's inability to perform the Work is a result of design flaw, error or omission.

Add the following Section **4.2.8.1**:

4.2.8.1 Allowance Expenditure will be authorized using Allowance Expenditure authorizations (AEA) executed by the Owner, the Architect and the Contractor. All Allowance Expenditure Authorizations will be incorporated into the contract by Change Order at the completion of the project. Work authorized by an AEA may be invoiced as it is completed.

Delete Section **4.2.13** in its entirety and substitute the following:

4.2.13 All decisions on matters relating to aesthetic effect shall initially be made by the Architect; however, all such decisions are subject to the Owner's written approval.

ARTICLE 5 – SUBCONTRACTORS

5.1 DEFINITIONS

At the end of Section **5.1.1** add the following sentence:

Wherever relevant, the term "Subcontractor" shall also include a person, or entity who supplies material or equipment for the Project.

At the end of Section **5.2.4**, add the following sentence:

Prior to such change the Contractor shall notify the Architect of his intent and reasons for such proposed changes.

5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

Delete the last sentence of Section **5.4.1** in its entirety and substitute the following:

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract, but only to the extent permitted by law. Delete the last sentence of Section 5.4.3 in its entirety.

ARTICLE 7 -- CHANGES IN THE WORK

7.1 GENERAL

Delete the text of Section 7.1.2 in its entirety and substitute the following:

7.1.2 A Change Order shall be based on agreement among the Owner, Contractor, and Architect, except when the Contract balance is amended as a result of Owner's Right to Carry out the Work under Section 2.4.1 or the Owner's assessment of liquidated damages as allowed by the Contract Documents. A Construction Change Directive requires agreement by the Owner or the Owner's representative and Architect, and may or may not be agreed to by the Contractor; an order for a minor change may be issued by the Architect alone.

7.2 CHANGE ORDERS

Add the following Subparagraph 7.2.2:

7.2.2 Methods used in determining adjustments to the Contract Sum shall be determined in one or more of the ways listed below. The first method listed shall be used unless the Architect determines that the method is inappropriate, in which case another method shall be selected:

- .1** By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. Where additional Work is involved, any lump sum over the amount of \$100.00 shall be broken down to represent the estimated cost of labor and materials plus mark-ups to cover overhead and profit.
- .2** To compensate the Contractor, Subcontractor, or Sub-subcontractor actually performing a part of the Work for the combined cost of overhead and profit, the performing party shall be entitled to a single mark-up not to exceed 10% of the estimated cost of that part of the Work.
- .3** To compensate (a) the Contractor for the combined cost of overhead and profit on Work performed by Subcontractors, or (b) Subcontractors for the combined cost of overhead and profit on Work performed by Sub-subcontractors, the Contractor or Subcontractor shall be entitled to a single mark-up not to exceed 5% of the subcontract amount.
- .4** When a Sub-subcontractor performs the Work of a change, the maximum mark-up not to exceed 10% for combined overhead and profit shall be used only by the Sub-subcontractor. The Contractor and Subcontractor would each be entitled to a single mark-up not to exceed 5% of the cost to them for the Subcontractor and Sub-subcontractor, respectively.
- .5** By Unit Prices stated in the Contract Documents or subsequently agreed upon. Additional mark-ups for overhead and profit will not be allowed in Unit Price work.
- .6** By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee.
- .7** Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.2.2 shall be limited to the costs established in Sections 7.3.7.1 through 7.3.7.5.

7.3 CONSTRUCTION CHANGE DIRECTIVES

Delete text of Subparagraph 7.3.3 in its entirety and substitute the following:

7.3.3 The cost or credit to the Owner resulting from a change in the Work shall be determined in one or more ways listed below. The first method listed shall be used unless the Architect determines that the method is inappropriate, in which case another method shall be

selected.

.1 By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. Where additional Work is involved, the lump sum shall represent the estimated cost of labor and materials plus markups to cover overhead and profit:

To compensate the Contractor or Subcontractor actually performing a part of the Work for the combined cost of overhead and profit, the performing party shall be entitled to a single markup not to exceed 10% of the estimated cost of that part of the Work.

To compensate the Contractor for the combined cost of overhead and profit on work performed by Subcontractors, the Contractor shall be entitled to a single markup not to exceed 10% of the subcontract amount.

When a Sub-subcontract performs the Work of a change, the 10% markup for combined overhead and profit shall be used only by the Sub-subcontractor. The Contractor and Subcontractor would each be entitled to a single markup not to exceed 10% of the cost to them from the Subcontractor and Sub-subcontractor respectively.

.2 By unit prices stated in the Contract Documents or subsequently agreed upon. Additional markups for overhead and profit will not be allowed in Unit Price Work.

.3 By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee.

Add Section 7.5 as follows:

7.5 ALLOWABLE MARKUPS FOR CHANGES IN THE WORK

7.5.1 Unless otherwise directed, the procedure and markup of the costs for additional work shall be determined in the following manner:

.1 Upon Change Proposal request, the Contractor shall quote the cost for changes in the work showing separately, credits and additional costs broken down by headings used in the Schedule of Values. Further breakdown into units of labor and materials may be required if agreement on cost cannot be reached using the breakdown by headings. The final cost shall be the amount of the Total Contract Value Change shown on the Change Proposal signed by the Contractor and Owner. For general construction work, not subcontracted, the Contractor shall consider as costs the actual invoice amount for additional materials, the sales tax on additional materials when applicable, the wages paid for additional direct labor, plus the Contractor's usual markup of wages to cover additional labor related costs such as insurance, taxes and fringe benefits.

.2 On changes executed within the Owner's Contingency Allowance, Contractor shall have included costs for combined overhead and profit, to the extent permitted by the Contract Documents, and General Conditions costs, including the cost of superintendents, field office expense, temporary facilities and services, small hand tools, construction equipment not specifically provided for the change in hand, home office expense, bond and building insurance premiums, and managing the Subcontractor's work, in his Base Contract amount. Allowed overhead and profit fee on Owner's Contingency Allowance changes to be included in the total cost to the Owner shall be based as follows:

.1 For each Subcontractor or Sub-subcontractor involved, for Work performed by that Subcontractor's or Sub-subcontractor's own forces, ten percent (10%) of the cost.

.2 For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractors, five percent (5%) of the amount due the Sub-subcontractors.

7.5.2 If any additional Work is authorized outside of or in excess of the Owner's Contingency Allowance, the combined overhead and profit for this work shall be based as follows:

- .1 For the Contractor, for Work performed by the Contractor's own forces, a maximum total markup of ten percent (10%) of the actual cost.
- .2 For Work performed by the Contractor's Subcontractor(s), five percent (5%) of the amount due the Subcontractor(s).
- .3 For each Subcontractor or Sub-subcontractor involved, for work performed by that Subcontractor's or Sub-subcontractor's own forces, a maximum markup of ten percent (10%) of the actual cost.
- .4 For each Subcontractor, for work performed by the Subcontractor's Sub-subcontractors, five percent (5%) of the amount due the Sub-subcontractor.
- .5 The combined total markup from all categories and tiers above shall not exceed fifteen percent (15%).
- .6 Cost to which overhead and profit is to be applied shall be determined in accordance with Section 7.3.7.

7.5.3 In order to facilitate checking of quotations for extras or credits, all proposals, (except those so minor that their propriety can be seen by inspection), shall be accompanied by a complete and detailed itemization of costs including labor, materials, and Subcontracts. Labor and materials shall be itemized in the manner prescribed above. Where major cost items are Subcontracts, they shall be itemized also. In no case will a change be approved without such itemization.

7.5.4 Change orders, as they are accepted by the Owner, shall be entered under heading "Change Orders" in the next current Request for Payment.

7.5.5 All credits to or deductions from the Contract Sum (with the exception of the return of unused allowances) shall be calculated using the same methodology set forth in this Section 7.5, including a credit of ten percent (10%) for the Contractor's overhead and profit included in the Contract Sum.

ARTICLE 8 -- TIME

8.1 DEFINITIONS

At Section **8.1.4**, add the following sentence:

See further definition of "Day" in Section **1.9.10**.

8.3 DELAYS AND EXTENSIONS OF TIME

Delete Section **8.3.1** in its entirety and substitute the following:

8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other unforeseeable causes beyond the Contractor's control, or by other causes which the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine. There shall be no extension of the Contract Time for inclement or adverse weather. For any excusable delays, Contractor will be solely responsible for its own costs arising in connection with any such delay, and no adjustment will be made to the Contract Sum (including extended general conditions) to account for damages to the Contractor.

Add Sections **8.3.4** and **8.3.5** as follows:

8.3.4 The parties hereto agree that time is of the essence of this Contract and that pecuniary damages would be suffered by the Owner if the Contractor does not substantially complete all Work called for in the Contract Document by the specified date, which damages are, by their very nature, difficult of ascertainment. It is therefore expressly agreed, as a part of the consideration inducing the Owner to execute this Contract that the Owner may deduct from the final payment made to the Contractor a sum equal to \$1,000.00 per phase for each and every Calendar Day beyond the agreed date which the contractor has agreed to for Substantial Completion for each phase of the Work included in the Contract Documents. It is expressly understood that said sum per day is agreed upon as a fair estimate of the pecuniary damages which will be sustained by the Owner in the event that the Work is not substantially completed within the agreed time, or with the legally extended time, if any, otherwise provided for herein.

Said sum shall be considered as liquidated damages only, and in no sense shall be considered a penalty or forfeiture; said damage being caused by additional compensation to personnel, and other miscellaneous increased costs, all of which are difficult of exact ascertainment.

8.3.5 Failure to complete and close-out the Project, and complete all Punch List items, within ninety (90) days after the scheduled Substantial completion date will additionally entitle the Owner to deduct from the final payment made to the Contractor a sum equal to \$1,000.00 per phase, for each and every Calendar Day beyond the 90-day close-out period for each phase. It is expressly understood that said sum per day is agreed upon as a fair estimate of the pecuniary damages which will be sustained by the Owner in the event that the Project close-out does not occur on a timely basis. Said sum shall be considered as liquidated damages only and in no sense shall be considered a penalty or forfeiture; said damage being caused by additional compensation to personnel, and other miscellaneous increased costs, all of which are difficult of exact ascertainment. If the Contractor is delayed through no fault of the Owner, the Substantial Completion is not achieved by the agreed contract completion date, the Project close-out period of ninety (90) days will not be extended by the number of days of delay past the actual Substantial completion date and will remain based upon the agreed contract completion date.

Add Sections **8.3.6**, **8.3.7**, **8.3.8** and **8.3.9** as follows:

8.3.6 Extensions of time granted for causes described herein will be granted on the basis of 1.4 Calendar Days extension for each Regular Working Day lost.

8.3.7 Each Bidder shall include in his proposed Contract Time an adequate allowance of inclement or adverse weather days. Contractor shall not be entitled to any extension of the Contract Time adjustment to the Contract Sum due to inclement or adverse weather.

ARTICLE 9 -- PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

Add Section **9.1.1.1** as follows:

9.1.1.1 The Owner is exempt from payment of Texas State Sales Tax on materials required for the Work. Therefore, to comply with the law, the Contract Sum shall be broken down into the amount of cost for labor and the amount of cost for materials. This breakdown shall be provided by the Contractor within ten (10) days of award of Contract.

9.2 SCHEDULE OF VALUES

Add the following Sections:

9.2.1 General Contractor's cost for Contractor's fee, bonds and insurance, General Conditions, etc., shall be listed as individual line items.

9.2.2 Schedule of Values shall break each line into materials and labor. Once approved by the Owner and Architect, it shall be used as basis for reviewing Application for Payment but not be taken as evidence of market or other value.

9.2.3 Contractor's cost for various construction items shall be detailed. For example, concrete work shall be subdivided into footings, grade beams, floor slabs, paving, etc. These subdivisions shall appear as individual line items.

9.2.4 On major subcontracts, such as mechanical, electrical, and plumbing, the Schedule shall indicated line items and amounts in detail, (for example; underground, major equipment, fixtures, installation of fixtures, start up, etc.)

9.2.5 Costs for subcontract work shall be listed without any addition of General Contractor's costs for overhead, profit or supervision.

9.2.6 The Contractor shall include a value for the coordination documents/drawings on the schedule of values.

9.2.7 The Contractor shall include a value for the correction of deficiencies noted by the Commissioning Agent and the Test, Adjust and Balance consultant on the schedule of values for each sub-contractor subject to commissioning and test, adjust and balance requirements.

9.3 APPLICATIONS FOR PAYMENT

Delete Sections **9.3.1** and **9.3.2** in their entirety and replace them with the following:

9.3.1 No later than 3 working days prior to the first Wednesday of each month, submit an itemized Application for Payment, supported by such data sustaining the Contractor's right to payment as the Owner or Architect may require, and reflecting retainage, as provided elsewhere in the Construction Documents. Information on the form shall be divided into the same last day of the month preceding, which shall also be the basis of payment or as agreed by the Owner, Contractor and Architect by verification at the site, prior to submittal.

9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work which have been properly authorized by Construction Change Directives but not yet included in Change Orders.

9.3.2 Payments will be made on account of materials or equipment 1) incorporated in the Work; 2) suitably stored at the site; or 3) suitably stored at some off-site location, provided the following conditions are met for off-site storage:

- .1 The location must be agreed to, in writing, by the Owner and Surety.
- .2 The location must be a bonded warehouse.
- .3 Surety must agree, in writing, to each request for payment.
- .4 The Contractor must bear the cost of the Owner's and Architect's expenses related to visiting the offsite storage area for confirmation.

Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance (naming the Owner as insured) and transportation to the site for those materials and equipment stored off the site. Under no circumstances will the Owner reimburse the Contractor for down payments, deposits, or other advance payments for materials or equipment.

The Contractor acknowledges that the review of materials and/or equipment stored off the side is an additional service of the Architect, and the Contractor shall be charged for that service. The cost for such service will be established by the Architect and is not subject to appeal.

Add Section **9.3.4** as follows:

9.3.4 The Contractor shall submit requests for payment in quadruplicate, using AIA Document G702, Application and Certificate of Payment, as the cover sheet. Continuation sheets showing in detail the amounts requested, etc., shall be submitted using AIA Document G703, Continuation Sheet, or a computerized version of these documents previously approved for use. The information provided on the continuation sheets in the Description of the Work and Scheduled Values columns shall match the corresponding information shown on the approved Schedule of Values. All blank spaces on AIA Document G702, Application and Certificate of Payment, must be completed and the signatures of the Contractor and Notary Public shall be original on each form. By submitting his application for payment, the Contractor certifies that the individual signing the application is authorized to do so.

9.7 FAILURE OF PAYMENT

Delete the phrase "or awarded by binding dispute resolution." Replace all references to "seven days" to "ten days."

9.8 SUBSTANTIAL COMPLETION

At Section **9.8.2**, add the following sentence at the end:

Should the Architect determine that the Contractor's List of Items to be Completed or Corrected lacks sufficient detail or requires extensive supplementation, the list will be returned to the Contractor for revision, and inspection for determining the Date of Substantial Completion will be delayed until the List submitted is a reasonable representation of the work to be done.

Add Sections **9.8.6** and **9.8.7** as follows:

9.8.6 In order for the project or a major portion thereof to be considered substantially complete, the following conditions must be met:

- .1 All inspections by governmental authorities having jurisdiction over the project must have been finalized, any remedial work required by those authorities must have been completed, and Certificates of Occupancy and similar governmental approval forms must have been issued and copies delivered to the Owner and Architect.
- .2 All work, both interior and exterior, shall have been completed and cleaned except minor items which if completed after occupancy, will not, in the Owner's opinion, cause interference

SUPPLEMENTARY CONDITIONS

to the Owner's use of the building or any portion thereof. A significantly large number of items to be completed or corrected will preclude the Architect from issuing a Certificate of Substantial Completion. The Owner and Architect will be the sole judge of what constitutes a significantly large number of items.

The following items are a partial specific list of requirements, as applicable to the Project, that must be completed prior to established Substantial Completion.

1. All fire alarm system components must be completed and demonstrated to the Owner.
2. Local fire marshal approval certificate, or similar Certificate of Occupancy from the governing agency, must be delivered to the Owner.
3. All exterior clean-up and landscaping must be complete.
4. All final interior clean-up must be complete.
5. All HVAC air and water balancing must be complete.
6. All required commissioning must be complete.
7. All Energy Management Systems must be complete and fully operational and demonstrated to the Owner.
8. All communications equipment, telephone system, and P.A. systems must be complete and demonstrated to the Owner.
9. All final lockset cores must be installed and all final Owner directed keying completed.
10. All room plaques and exterior signage must be completed.
11. All Owner demonstrations must be completed including kitchen equipment, HVAC equipment, plumbing equipment, and electrical equipment.
12. A final certificate of occupancy must be signed by the Contractor and delivered to the Owner.

9.8.7 After the date of Substantial Completion of the Project is evidenced by the Certificate of Substantial Completion, the Contractor will be allowed a period of time within which to correct all deficiencies attached to the Certificate of Substantial Completion as outlined in Section 8.3.4 of these supplementary conditions. Failure of the Contractor to complete such corrections within the stipulated time will be reported to the contractor's surety. In this report, the Contractor and surety will be informed that, should correction remain incomplete for fifteen (15) days, the Owner may initiate action to complete corrective work out of the remaining Contract funds in accordance with Article 14.2.

- .1 Should corrective work following Substantial Completion require more than one reinspection after notification by the Contractor that corrections are complete, the cost of subsequent inspections may also be deducted from the Contract funds remaining unpaid to the Contractor.

9.10 FINAL COMPLETION AND FINAL PAYMENT

Add Section **9.10.6** as follows:

9.10.6 Final Payment, constituting the entire unpaid balance of the Contract Sum, shall be paid by the Owner to the Contractor thirty-one (31) days after Substantial Completion of the Work unless otherwise stipulated in the Certificate of Substantial Completion, provided the Work has then been completed, the Contract fully performed, all Contract Close Out Documents have been submitted, reviewed and approved by the Architect and Owner, and the Final Certificate for Payment has been issued by the Architect. The final payment will not be made until all of these conditions have been satisfied.

ARTICLE 10 -- PROTECTION OF PERSONS AND PROPERTY

Add Sections **10.2.9** and **10.2.10** as follows:

10.2.9 The performance of the foregoing services by the Contractor shall not relieve the Subcontractors of their responsibilities for the safety of persons and property and for compliance with all applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to the conduct of the Work.

10.2.10 The Contractor shall be responsible for taking all precautions necessary to protect the Work in place from any foreseeable weather conditions which could cause any potential damage to portions or all Work in place. The Contractor shall be responsible for performing all repairs and/or replacement of any

Work that results from foreseeable weather conditions, with no extension to the Contract Time or Contract Sum.

10.3 HAZARDOUS MATERIALS

Delete the text of Section **10.3.1** in its entirety and substitute the following:

10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing. The Owner, Contractor and Architect shall then proceed in the same manner described in section 10.3.2.

Delete the text of Sections **10.3.3**, **10.3.4** and **10.3.5** in their entirety.

Delete the text of Section **10.3.6** in its entirety and substitute the following:

10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a governmental agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all costs and expenses thereby incurred, but only to the extent provided by law.

Add Section **10.3.7** as follows:

10.3.7 As part of the construction contract close out process, and prior to receiving payment of any of the retainage, the Contractor and his subcontractors shall submit notarized statements pertaining to the above referenced hazardous materials.

ARTICLE 11 -- INSURANCE AND BONDS

Delete the text of Section **11.1.1** its entirety and replace with the following:

11.1.1 The Contractor agrees and acknowledges that the Owner maintains an Owner Controlled Insurance Program ("OCIP"). The Contractor and all Subcontractors of any tier are required to comply with the terms of the OCIP, as set forth in Attachment A, which is incorporated into the Contract. Eligible Contractors and Subcontractors will be required to complete the OCIP enrollment process in order to participate in the OCIP as Enrolled Parties. Certain types of Contractors are not eligible to participate, as set forth in the section entitled "Excluded Parties" in Attachment A. The Owner will procure and maintain at all times during the performance of this Contract, and for extension periods for Completed Operations, the following coverage for all Enrolled Parties at Owner's expense: Worker's Compensation, Employer's Liability, Commercial General Liability, Umbrella/Excess Liability, and Builder's Risk. The Contract Sum shall not include payments to any Contractor or Subcontractor for the costs of insurance being provided under the OCIP, except as expressly permitted in Attachment A.

Delete the text of Section **11.3** in its entirety.

Delete the text of Section **11.4** in its entirety and replace with the following:

11.4 PERFORMANCE BOND AND PAYMENT BOND

Add the following Sections:

11.4.1 The Contractor shall provide a Performance Bond, in the penal sum equal to one hundred percent (100%) of the Contract Sum, if the formal Contract is in excess of One Hundred Thousand Dollars (\$100,000.00) and a Labor and Material Payment bond, in the penal sum equal to one hundred percent (100%) of the Contract sum if the formal contract is in excess of Twenty Five Thousand Dollars (\$25,000.00).

11.4.2 The Work will not be started until the bonds and issuing companies have been accepted as satisfactory by the Owner. The original bonds will be delivered to the Owner with an attached authorized power of attorney. Such Bonds shall be issued by a company authorized to do business in the

State of Texas with an A.M. Best Company rating of a least A-X and included on the U.S. Department of the Treasury Listing of Approved Sureties (Dept. Circular 570).

11.4.3 The Performance Bond Form and the Payment Bond Form included herein shall be executed and submitted to the Architect in duplicate prior to commencement of the work. The surety companies must be acceptable to the Owner and licensed admitted carriers in the State of Texas; and the companies must appear in a current Federal Treasury list as Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring companies.

11.4.4 Each bond shall be of penal sum equal to one hundred percent (100%) of the Contract Sum and shall be compatible with the provisions of the governing authority. The Contractor shall file copies of each bond with the county clerk and furnish the Owner with a file receipt. The bonds shall remain in force throughout the warranty period of the contract. The Work will not be started until the bonds and issuing companies have been accepted as satisfactory by the Owner. The original bonds will be delivered to the Owner with an authorized power of attorney attached.

11.4.5 Claims must be sent to the Contractor and his Surety in accordance with Article 5160, Revised Civil Statutes. The Owner will furnish in accordance with such Article, a copy of the Payment Bond as provided therein to claimants upon request. All claimants are cautioned that no lien exists on the funds unpaid to the contractor on such Contract, and that reliance on notices sent to the Owner may result in loss of their rights against the Contractor and/or his Surety. The Owner is not responsible in any manner to a claimant for collection of unpaid bills, and accepts no responsibility because of any representation by any agent or employee.

11.5 WORKER'S COMPENSATION INSURANCE COVERAGE

Delete the text of Section **11.5** in its entirety. Refer to Attachment A.

ARTICLE 12—UNCOVERING AND CORRECTION OF WORK

12.2.1 BEFORE SUBSTANTIAL COMPLETION

After Section **12.2.1** add the following Sections:

12.2.1.1 In the event of failure of a specified project, either during construction or the correction period, the Contractor shall take appropriate measures with the manufacturer of the product to assure correction or replacement of the defective products.

12.2.1.2 Refer to 01 77 00, Closeout Procedures in Division One for further terms regarding warranties which will be required prior to final payment.

12.2.2 AFTER SUBSTANTIAL COMPLETION

After Section **12.2.2** add the following Section:

12.2.2.1 Approximately eleven months after substantial completion, the contractor shall accompany the Owner and Architect on an "end of the one year correction period" reinspection of the Project. Additional deficiencies observed or reported shall be corrected by the Contractor.

12.3 ACCEPTANCE OF NONCONFORMING WORK

Number the existing provision as Section **12.3.1**, and add Section **12.3.2** as follows:

12.3.2 The Owner's use and/or occupancy of any or all of the Project site shall never be construed as an acceptance of Work not in conformance with Contract Documents. The Owner reserves the right to enforce provisions of the Contract unless the Owner's acceptance is provided to the Contractor in writing.

ARTICLE 13—MISCELLANEOUS PROVISIONS

Add Sections **13.7** and **13.8** as follows:

13.7 EQUAL OPPORTUNITY

13.7.1 The contractor shall maintain policies of employment as follows:

.1 The Contractor and the Contractor's Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

13.8 CRIMINAL BACKGROUND CHECKS

The Contractor/Subcontractor shall certify the Criminal Background Check, as stated in Board Policy CJA and the form included herein, as required by Texas Education Code Section 22.0834 and Texas Administrative Code Section 153.1101 and 153.1117, and shall comply with all requirements of such laws and policy.

ARTICLE 14—TERMINATION OR SUSPENSION OF THE CONTRACT

Delete the text of Section 14.1.3 in its entirety and substitute the following:

14.1.3 If one of the reasons described in Section 14.4.1 or 14.4.2 exists, the Contractor may, upon seven day's written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed as of the date of the notice, plus costs of demobilization.

14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

Delete the text of Section **14.4.3** in its entirety and substitute the following:

14.4.3 In the case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed up to date of receipt of the notice of termination, plus costs of demobilization.

ARTICLE 15—CLAIMS AND DISPUTES

15.1 CLAIMS

Delete the text of Section **15.1.1** in its entirety and substitute the following:

15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, adjustment or interpretation of contract terms, payment of money, extension of time or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner, Architect, and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. Nothing herein shall require the Owner to make or file a Claim in order to assess liquidated damages provided for in the Contract Documents.

15.1.2 TIME LIMITS ON CLAIMS

Delete the last sentence of Section **15.1.2** in its entirety.

15.1.3 NOTICE OF CLAIMS

Delete the second sentence of Section **15.1.3** in its entirety and substitute the following:

Claims by either party must be initiated within ninety (90) days after occurrence of the event giving rise to such Claim or within ninety (90) days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

15.1.6 CLAIMS FOR ADDITIONAL TIME

Delete the text of **Section 15.1.6.2** in its entirety and substitute the following:

15.1.6 .2 Adverse weather conditions shall not be the basis for a Claim for additional time or additions to the Contract Sum.

15.1.7 CLAIMS FOR CONSEQUENTIAL DAMAGES

Delete the text of Section **15.1.7** in its entirety.

15.2 INITIAL DECISION

Delete the text of Section **15.2.1** in its entirety and substitute the following:

15.2.1 Claims, excluding those alleging an error or omission by the Architect or those arising after expiration of the period for correction of the Work, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. If the parties are unable to agree, any claim, dispute or matters arising out of the contract between the Architect, Owner and Contractor or any combination of those parties shall be submitted to a court of appropriate jurisdiction.

Delete the text of Section **15.2.5** in its entirety and substitute the following:

15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefore; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties, but subject to mediation, if both parties so agree, and subject to legal or equitable proceedings in a court having jurisdiction thereof. It is understood and agreed that, in the event that any dispute, controversy, or conflict arises during the design and construction of the Project or following its completion, the parties hereto will cooperate in good faith, if possible, to resolve the issues without resorting to litigation.

Delete the text of Sections **15.2.6** and **15.2.6.1** in their entirety.

Add the following Section **15.2.9**

15.2.9 The prevailing party in any judicial proceeding arising from the Contract Documents shall recover its reasonable and necessary attorneys' fees.

15.3 MEDIATION

15.3.1 Delete the text of **15.3.1** in its entirety.

Delete Section **15.3.2** in its entirety and replace with the following:

15.3.2 The parties may mutually agree to resolve their claims by mediation which, unless the parties mutually agree otherwise, shall be in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to the Contract. Mediation shall proceed in advance of legal or

equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing unless stayed for a longer period of agreement of the parties or court order.

15.4 ARBITRATION

Delete the text of Sections **15.4.1** through **15.4.3** and **15.4.4.1** through **15.4.4.3** in their entirety.

These Additional Supplementary Conditions are entered into as of the date indicated on the AIA Standard Form of Agreement.

OWNER:

CONTRACTOR:

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

SECTION 01 11 00 - SUMMARY OF WORK

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 PROJECT DESCRIPTION

- A. Engineering and Site Drainage Remedies
Crockett Early Childhood Center
1701 W Lampasas St, Ennis, TX 75119

1.2 SCOPE OF WORK

- A. The Work shall consist of select demolition, regrading and new construction to the existing facility as described in the Construction Documents and Specifications.
- B. New work and renovations shall include but shall not be limited to the following: Demo and remove existing Play Ground and tree, fencing and gates, remove and salvage / relocation of existing Play Ground Equipment.
- C. Salvaged Materials
1. Owner may salvage all items deemed reusable or necessary to keep from facilities to be demolished prior to the start of demolition.
 2. Contractor shall remove and turn additional items over to the Owner, as directed.
 3. Contractor shall demolish, remove, and salvage all other items of demolished work.

1.3 CONTRACTS AND USE OF SITE

- A. Contractor Use of Premises:
1. Confine operations at site to areas permitted by:
 - a. Law
 - b. Ordinances
 - c. Permits
 - d. Contract Documents
 2. Do not unreasonably encumber site with materials or equipment.
 3. Assume full responsibility for protection and safekeeping of products stored on premises.
 4. Obtain and pay for use of additional storage or work areas as needed for operations.
 5. Contractor shall establish secured staging area for work and coordinate and provide for safe passage and exit from building areas during construction, as determined by City and Owner.
 6. Contractor shall coordinate all construction activities with Owner.
 7. Owner reserves the right to perform construction operations with its own forces or to employ separate contractors on portions of the Project. Contractor shall coordinate with this work in terms of providing site access, work space, and storage space, cooperation of work forces, scheduling, and technical requirements.
 8. Coordinate all utility shutdowns with Owner and, as required, with local utility companies, prior to commencement of shutdown.
- B. Owner Occupancy:
1. Partial Owner Occupancy: The Owner reserves the right to place and install equipment in completed areas of the building, prior to Substantial Completion provided that such occupancy does not interfere with completion of the Work.

- Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.
2. A Certificate of Substantial Completion will be executed in accordance with conditions of the Contract.
 3. Contractor shall obtain a Certificate of Occupancy from local building officials prior to Owner occupancy.
 4. Prior to partial Owner occupancy, mechanical and electrical systems shall be fully operational. Required inspections and tests shall have been successfully completed. Upon occupancy the Owner will provide operation and maintenance of mechanical and electrical systems in occupied portions of the building.
 5. Prior to partial Owner occupancy, emergency and life safety systems shall be fully operational. Emergency and life safety systems include, but are not limited to, fire sprinkler systems, fire alarm systems, and emergency egress devices. For emergency exiting purposes, the path of travel shall be clearly delineated and functional. If required, temporary barricades shall separate on-going construction from occupied spaces as allowed by the governing agency holding jurisdiction over the Project. Required inspections and tests shall have been successfully completed. Upon occupancy the Owner will provide operation and maintenance of emergency and life safety systems in occupied portions of the building.
- C. Owner-Furnished Items:
1. The Owner may provide items to the Contractor for installation in accordance with manufacturer's recommendations and instructions.
 2. The Owner will arrange and pay for delivery of Owner-furnished items in accordance with the Contractor's Construction Schedule, and will inspect deliveries for damage.
 3. If Owner-furnished items are damaged, defective, or missing, through no fault of the Contractor, the Owner will arrange for replacement.
 4. The Contractor is responsible for designating the delivery dates of Owner-furnished items in the Contractor's Construction Schedule and for receiving, unloading, and handling Owner-furnished items at the site. The Contractor is responsible for protecting Owner-furnished items from damage, including damage from exposure to elements, and to repair or replace items damaged as a result of his operations.
- D. Coordination with Work by Owner and by Owner's Separate Contractors:
1. The Owner reserves the right to perform other work for the Project, and to engage other separate contractors to perform other work for the Project. Provide site access, space allocation, scheduling, scheduling coordination, coordination of work forces and coordination of technical requirements with other contractors that may be selected and employed by Owner to perform other work simultaneously and in conjunction with the Work of This Contract.
- E. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor

is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any resulting loss or damage but only to the extent the Owner would be responsible for any such losses or damages under state and/or federal law.

- F. The Architect will neither have control over or charge of, nor be responsible for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract, except as noted in the above paragraph.
- G. No demolition will be allowed above, below, adjacent to or near any occupied areas of the existing building.

1.4 PROTECTION OF EXISTING PROPERTY

- A. Contractor shall provide and maintain adequate protection of all Owner's existing property during duration of Project.
- B. Contractor shall verify location of all existing underground pipelines on site with the owner of such pipelines and authorities having jurisdiction and shall provide and maintain adequate protection of all such pipelines during duration of Project.
- C. Protection of Trees:
 - 1. Provide wood barricades around trees and shrubs at their drip line in traffic areas to protect them from construction operations until Substantial Completion, or until barricade removal is directed by Architect.

1.5 USE OF ASBESTOS FREE MATERIALS, PRODUCTS AND SYSTEMS

- A. The Contractor is reminded to refer to Document AB, Instructions to Offerors for requirements regarding asbestos containing materials (ACM).

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Refer to Specification Sections.

PART 3 - EXECUTION

3.1 CONSTRUCTION SCHEDULE

- A. The Owner has a critical need for the work to begin upon Notice to Proceed and shall be Substantially Complete by a date to be determined.
- B. Refer to Section 01 32 16 for other scheduling requirements, and to Document AB - Supplementary Conditions for information concerning liquidated damages

END OF SECTION 01 11 00

SECTION 01 25 13 - PRODUCT SUBSTITUTION PROCEDURES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Specified product compliance, and product quality assurance
- B. Specific administrative and procedural requirements for handling requests for substitutions made prior to award of Contract.
- C. Requirements for product delivery, storage and handling.

1.2 RELATED REQUIREMENTS

- A. Instructions to Offerors: Product options and procedures for submittal of requests for substitutions during the Proposal period.

1.3 DESCRIPTION OF REQUIREMENTS

- A. Definitions: Definitions used in this Section are not intended to negate the meaning of other terms used in the Contract Documents, including such terms as "specialties", "systems", "structure", "finishes", "accessories", "furnishings", "special construction", and similar terms. Such terms are self-explanatory and have recognized meanings in the construction industry.
 - 1. Products: Shall mean items purchased for incorporation in the Work, regardless of whether they were specifically purchased for the project or taken from the Contractor's previously purchased stock. The term "product" as used herein includes the terms "material", "equipment", "system", and other terms of similar intent.
 - a. Named Products: Are those identified by the use of the manufacturer's name for a product, including such items as a make or model designation, as recorded in published product literature, of the latest issue as of the date of the Contract Documents.
 - b. Specified Products: same as Named Products.
 - 2. Materials: Shall mean products that must be substantially cut, shaped, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form units of work.
 - 3. Equipment: Is defined as a product with operational parts, regardless of whether motorized or manually operated, and in particular, a product that requires service connections such as wiring or piping.

1.4 PRODUCT QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same generic kind, from a single source, for each unit of work.
 - 1. When it is discovered that specific products are available only from sources that do not or cannot produce an adequate quantity to complete project requirements in a timely manner, consult with the Architect/Engineer for a determination of what product quantities are most important before proceeding. The Architect/Engineer will designate those qualities, such as visual, structural, durability, or compatibility, that are most important. When the Architect/Engineer's determination has been

made, select products from those sources that produce products that possess the most important qualities, to the fullest extent possible.

- B. Compatibility of Options: Compatibility of products is a basic requirement of product selection. When the Contractor is given the option of selecting between two (2) or more products for use on the project, the product selected must be compatible with other products previously selected, even if the products previously selected were also Contractor options. The complete compatibility between the various choices available to the Contractor is not assured by the various requirements of the Contract Documents, but must be provided by the Contractor.
- C. Or Equal:
 - 1. Where the phrase "or equal", "or equivalent", "or Architects approved equal", or similar phrasing, occurs in the Proposal Documents, do not assume that materials, equipment, or methods of construction will be approved by the Architect unless the item has been specifically approved for this Work by the Architect.
 - 2. The decision of the Architect shall be final.
- D. Where a proposed substitution involves the work of more than one (1) contractor, each contractor involved shall cooperate and coordinate the work with each other contractor involved, so as to provide uniformity and consistency and to assure the compatibility of products.
- E. Foreign Product Limitations: "Foreign products" as distinguished from "domestic products" are defined as products that are either manufactured substantially (50 percent or more of value) outside of the United States and its possessions, or produced or supplied by entities known to be substantially owned (more than 50 percent) by persons who are not citizens of nor living within the United States and its possessions.
 - 1. Except under one (1) of the following conditions, select and provide domestic, not foreign, products for inclusion in the Work.
 - a. There is no domestic product available that complies with the requirements of the Contract Documents.
 - b. Available domestic products that comply with the requirements of the Contract Documents are available only at prices or other procurement terms that are substantially higher (25 percent or more) than for available foreign products that comply with the requirements of the Contract Documents.
 - c. At the discretion of the Architect or Owner.
 - 2. Final determination and acceptance will be the responsibility of the Architect.
- F. Standards: Refer to Section 01 42 00, References for the applicability of industry standards to the products specified for the Project, and for the acronyms used in the text of the Specification Sections.

1.5 SUBSTITUTIONS OF PRODUCTS

- A. The products described in the Proposal Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution. The materials and equipment named in, and the procedures covered by these specifications have been selected as a standard because of quality, particular suitability or record of satisfactory performance. It is not intended to preclude the use of equal or better materials or equipment provided that same meets the requirements of the particular project and is approved in an Addendum as a substitution prior to the submission of proposals.

- B. No substitution will be considered prior to receipt of proposals unless written request for approval has been received by the Architect at least seven (7) days prior to the date for receipt of proposals. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including drawings, cuts, performance and test data and any other information necessary for an evaluation. The Architect's decision of approval or disapproval of a proposed substitution shall be final.
- C. If the Architect approves any proposed substitution prior to receipt of proposals, such approval will be set forth in an Addendum. Offerors shall not rely upon approvals made in any other manner.
- D. The Architect and Owner reserve the right to disapprove the use of any manufacturer who in their judgment is unsuitable for use on the Project and that decision will be final
- E. The following are not considered as substitutions:
 - 1. Revisions to the Contract Documents, when requested by the Owner, Architect, or any of their consultants are considered as "changes" not substitutions.
 - 2. Specified Contractor options on products and construction methods included in Contract Documents are choices made available to the Contractor and are not subject to the requirements specified in this Section for substitutions.
 - 3. Except as otherwise provided in the Contract Documents, the Contractor's determination of and compliance with governing authorities do not constitute "substitutions" and do not constitute a basis for change orders.
- F. The following may be considered as a reason for a request for substitution:
 - 1. The request is directly related to an "or approved equal" clause or similar language in the Contract Documents.
 - 2. The specified product or method of construction cannot be provided within the Contract Time in accordance with paragraph below concerning availability of specified items.
 - 3. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 - 4. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other consideration of merit, after deducting offsetting responsibilities the Owner may be required to bear. These additional responsibilities may include such considerations as additional compensation to the Architect/Engineer for redesign and evaluation services, the increased cost of other work by the Owner or separate contractors, and similar considerations.
 - 5. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
 - 6. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
 - 7. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provides the required warranty.
- G. Availability of specified items:
 - 1. Verify prior to submittal of Proposal that all specified items will be available in time for installation during orderly and timely progress of the work.

2. In the event specified items will not be so available, notify the Architect prior to receipt of Proposals. Submit Request for Substitutions in accordance with this section.
 3. The request will not be considered if the product or method cannot be provided as a result of the Contractor's failure to pursue the work promptly or coordinate activities properly.
 4. Costs of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will be back-charged as necessary and shall not be borne by the Owner.
- H. A request constitutes a representation that Offeror:
1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 2. Will provide same warranty for Substitution as for specified product, except when inability to provide specified Warranty is reason for request for substitution as described above.
 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 5. Will reimburse the Owner and pay for all costs, including Architect/Engineer's redesign and evaluation costs resulting from the use of the proposed substitution, or for review or redesign services associated with re-approval by authorities having jurisdiction.
- I. **No substitutions will be considered after the Award of Contract.**

1.6 SUBSTITUTION REQUEST SUBMITTAL

- A. Requests for Substitutions: Submit three (3) copies of each request for substitution. In each request identify the product or fabrication or installation method to be replaced by the substitution; include related Specifications Section and Drawing numbers, and complete documentation showing compliance with the requirements for substitutions. Include, as appropriate, with each request, the following information:
1. Product data, drawings and descriptions of products, fabrication and installation procedures.
 2. Samples, where applicable or requested.
 3. A detailed comparison of the significant qualities of the proposed substitution with those of the work originally specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect, where applicable.
 4. Coordination information, including a list of changes or modifications needed by other parts of the work and to construction performed by the Owner and separate Contractors that will become necessary to accommodate the proposed substitution.
 5. A statement indicating the effect the substitution will have on the Contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 6. Cost information, including a proposal of the net change, if any in the Contract Sum.
 7. Certification by the Contractor to the effect that, in the Contractor's opinion, after thorough evaluation, the proposed substitution will result in work that in every significant respect is equal-to or better than the work required by the Contract Documents, and that it will perform adequately in the application indicated. Include the Contractor's waiver of rights to additional payment or time that may

subsequently become necessary because of the failure of the substitution to perform adequately.

8. A statement indicating the Contractor will reimburse the Owner and pay for all costs, including Architect/Engineer's re-design and evaluation costs resulting from the use of the proposed substitution.

- B. Work-Related Submittals: The Contractor's submittal of, and the Architect/Engineer's acceptance of, Shop Drawings, Product Data, or Samples which are related to work not complying with the Contract Documents, does not constitute an acceptance or valid request for a substitution, nor approval thereof.

1.7 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. General: Deliver, store, and handle products in accordance with manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft. Control to prevent overcrowding of construction spaces or overloading of structure. In particular, coordinate delivery and installation to ensure minimum holding or storage times for items known or recognized to be flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other sources of loss.
 1. Deliver products to the site in the manufacturer's sealed containers or other packaging system, complete with labels intact, and instructions for handling, storage, unpacking, installing, cleaning and protecting.
 2. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of product.
 3. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
 4. Store products at the site or in a bonded and insured off-site storage facility or warehouse in a manner that will facilitate inspection and measurement of quantity or counting of units. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
 5. Store heavy materials away from the project structure or in a manner that will not endanger the supporting construction.

PART 2 - PRODUCTS

2.1 GENERAL PRODUCT COMPLIANCE

- A. General: Requirements for individual products are indicated in the Contract Documents; compliance with these requirements is in itself a contract requirement. These requirements may be specified in any one (1) of several different specifying methods, or in any combination of these methods. These methods include the following:
 1. Proprietary
 2. Descriptive
 3. Performance
 4. Compliance with Reference Standards

Compliance with codes, compliance with graphic details, allowances, and similar provisions of the Contract Documents also have a bearing on the selection process.

- B. Procedures for Selecting Products: The Contractor's options in selecting products are limited by requirements of the Contract Documents and governing regulations. They are not controlled by industry traditions or procedures experienced by the Contractor on previous construction projects. Required procedures include, but are not limited to the following for the various indicated methods of specifying:
 1. Proprietary and Semi-Proprietary Specification Requirements:

- a. Single Product Name: Where only a single product or manufacturer is named, provide the product indicated, unless the specification indicates the possible consideration of other products. Advise the Architect/Engineer before proceeding, when it is discovered that the named product is not a reasonable or feasible solution.
 - b. Two (2) or More Product Names: Where two (2) or more products or manufacturers are named, provide one (1) of the products named, at the Contractor's option. Exclude products that do not comply with specification requirements. Do not provide or offer to provide an unnamed product, unless the specification indicates the possible consideration of other products. Advise the Architect/Engineer before proceeding where none of the named products comply with specification requirements, or are not feasible for use. Where products or manufacturers are specified by name, accompanied by the term "or approved equal" or similar language, comply with this Section regarding "substitutions" to obtain approval from the Architect/Engineer for the use of an unnamed product.
2. Non-Proprietary Specification Requirements: Where the specifications name products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to the use of these products only, the Contractor may, at his option, use any available product that complies with the Contract requirements.
3. Descriptive Specification Requirements: Where the specifications describe a product or assembly generically, in detail, listing the exact characteristics required, but without use of a brand name, provide products or assemblies that provide the characteristics indicated and otherwise comply with Contract requirements.
4. Performance Specification Requirements: Where the specifications require compliance with indicated performance requirements, provide products that comply with the specific performance requirements indicated, and that are recommended by the manufacturer for the application indicated. The manufacturer's recommendations may be contained in published product literature, or by the manufacturer's individual certification of performance. General overall performance of a product is implied where the product is specified for specific performances.
5. Compliance with Standards, Codes, and Regulations: Where the specifications require only compliance with an imposed standard, code or regulation, the Contractor has the option of selecting a product that complies with specification requirements, including standards, codes, and regulations.
6. Visual Matching: Where matching an established sample is required, the final judgment of whether a product proposed by the Contractor matches the sample satisfactorily will be determined by the Architect. Where there is no product available within the specified product category that matches the sample satisfactorily and also complies with other specified requirements, comply with the provisions of this Section regarding "substitutions" and other Contract Documents for "change orders" for the selection of a matching product in another product category, or for non-compliance with specified requirements.
7. Visual Selection: Except as otherwise indicated, where specified product requirements include the phrase "...as selected from the manufacturer's standard colors, patterns, textures..." or similar phrases, the Contractor has the option of selecting the product and manufacturer, provided the selection complies with other specified requirements. The Architect is subsequently responsible for selecting the color, pattern and texture from the product line selected by the Contractor.

8. Allowances: Refer to individual sections of the specifications and Section 01 21 00, Allowances for an indication of product selections that are controlled by established allowances, and for the procedures required for processing such selections.
- C. Producer's Statement of Applicability: Where individual specification sections indicate products that require a "Statement of Applicability" from the manufacturer or other producer, submit a written-certified statement from the producer stating that the producer has reviewed the proposed application of the product on the project. This statement shall state that the producer agrees with or does not object to the Architect/Engineer's specification and the Contractor's selection of the product on the project is suitable and proper.

2.2 SUBSTITUTIONS

- A. Condition: The Contractor's request for substitution will be received and considered when extensive revisions to Contract Documents are not required, when the proposed changes are in keeping with the general intent of the Contract Documents, when the request is timely, fully documented and properly submitted, and when one (1) or more of the above conditions are satisfied, all as judged and determined by the Architect/Engineer; otherwise the requests will be returned without action except to record non-compliance with these requirements.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. General: Except as otherwise indicated in individual sections of these specifications, comply with the manufacturer's instructions and recommendations for installation of the products in the applications indicated.
- B. Anchor each product securely in place, accurately located and aligned with other work.
- C. Clean exposed surfaces and protect surfaces as necessary to ensure freedom from damage and deterioration at time of acceptance.
- D. Products and assemblies shall be installed complete, in-place, watertight and structurally sound.

3.2 INSTALLATION OF APPROVED SUBSTITUTIONS

- A. Coordinate all approved substitutions with adjacent work.
- B. Comply with the manufacturer's and/or supplier's instructions and recommendations for installation of the products in the applications indicated.
- C. Provide all items required by manufacturer and/or supplier regarding installation, i.e. supplemental supports, anchors, fasteners, painting, etc. whether or not indicated or specified.

END OF SECTION 01 25 13

REQUEST FOR SUBSTITUTION

Contract Award Date: _____

To: _____

Substitution Requested By: _____

Project Name and Number: _____

We submit for consideration the following product in lieu of the specified item for the above project:

Drawing No.	Specification Section	Paragraph	Specified Item
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_____	_____	_____	_____
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Proposed Substitution: _____

Request is made during ____ bidding ____ construction period.

Submit in accordance with Section 01 33 00.

1. Technical data, cost, and time information relating to changes to Construction Documents required by proposed substitution.
2. Detailed comparison of proposed substitution and specified product including but not limited to warranty, significant variations, qualifications of manufacturers, and maintenance.
3. Complete technical data, detailed shop drawings, samples, installation procedures, warranty, and substantiating data marked to indicate equivalent quality and performance to that specified. Manufacturer sell sheets are not acceptable submittals.

Cause for Request: _____

Cost saving realized by Owner _____

Does substitution affect adjacent work, Construction Documents, cost, schedule, quality, and related submittals?

Yes ____ No ____ On separate sheet, explain affects to the work, documents, schedule, and submittals.

The Contractor is responsible for associated costs and additional time of the proposed substitution including costs incurred by the Architect for evaluation of substitution and changes to the documents. Describe costs for changes to design, including engineering and detailing costs caused by the requested substitution.

Warranty: Is the warranty for the requested substitution the same or different? Yes ____ No ____

Explain Differences: _____

Contractor Certification:

In making a request for substitution, the Contractor certifies that:

1. The proposed substitution has been thoroughly researched and evaluated and determined as equivalent or superior to specified product or material, will fit into space provided, and is compatible with adjacent materials.
2. It will provide the same or better warranty for the proposed substitution at no additional cost to the Owner.
3. Cost data is complete and includes related costs under the Contract. Claims for additional costs related to the proposed substitution that may subsequently become apparent are waived.
4. It will assume the responsibility for delays and costs caused by the proposed substitution, if approved, are accepted by the Contractor unless delays are and costs are specifically mentioned and approved in writing by the Owner and the Architect.
5. It will assume the liability for the performance of the substitution and its performance.
6. The installation of the proposed substitution is coordinated with the work and with changes required for the work.
7. It will reimburse the Owner and Architect for evaluation and redesign services associated with the substitution request and, when required, by approval by governing authorities.

Submitted by:

Signature of Contractor

Title

Firm

Telephone

Date

Signature shall be by the individual authorized to legally bind the Contractor's to the above terms. Failure to provide legally binding signature will result in retraction of approval.

FOR USE BY ARCHITECT:

____ Accepted ____ Accepted as Noted
____ Not Accepted ____ Received Too Late

By: _____

Date: _____

Remarks: _____

FOR USE BY OWNER:

____ Accepted ____ Not Accepted

By: _____

By: _____

Remarks: _____

End of Document

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Change procedures.
- B. Defect assessment.

1.2 GENERAL

- A. Coordinate requirements of this Section with the requirements of the General and Supplementary Conditions of the Contract concerning change procedures.

1.3 CHANGE PROCEDURES

- A. Submittals: Submit name of individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Minor Changes: The Architect/Engineer may advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions on Minor Change form or by other similar documents in the form issued by the Architect.
- C. Change Proposal Request: The Architect may issue a Change Proposal Request (CPR) or other similar request for proposal in the form issued by the Architect, including a detailed description of proposed change with supplementary or revised Drawings and Specifications, a change in Contract Time for executing the change and the period of time during which the requested price will be considered valid. Contractor will prepare and submit estimate in the form of a Change Proposal so as to not cause delays in the Project.
- D. Use of allowances must be approved by issuance of Allowance Expenditure Authorization (AEA) by Architect prior to modification of the schedule of values. The AEA may be comprised of a single executed Change Proposal, an accumulation of executed Change Proposals, or other similar documentation in the form allowed by the Architect in accordance with Document CB, Supplementary Conditions of the Contract.
- E. Contractor may propose changes which, in his opinion, will provide value to the Owner, by submitting a request for change to Architect, describing proposed change and its full effect on the Work. Include a statement describing reason for the change, and effect on Contract Sum/Price and Contract Time with full documentation and a statement describing effect on Work by separate or other Contractors. If accepted by Architect and approved by Owner, submit a Change Order in accordance with the requirements of this Section. This request will not be considered a substitution except as defined by Section 01 25 13, Product Substitution Procedures. Owner is not obligated to accept this request.
- F. Construction Change Directive: Architect/Engineer may issue directive, on AIA Form G713 Construction Change Directive or other similar document in the form issued by the Architect, and signed by Owner, instructing Contractor to proceed with change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in

the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute change.

- G. Document each quotation for change in cost or time with sufficient data to allow evaluation of quotation.
- H. Change Order Forms: AIA G701 - Change Order.
- I. Execution of Change Orders: The Architect will prepare and sign the Change Order, the contractor shall sign the Change Order indicating acceptance of the change, and then the Owner will execute the Change Order.
- J. Correlation Of Contractor Submittals:
 - 1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
 - 2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
 - 3. Promptly enter changes in Project Record Documents.

1.4 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements at no additional cost to the Owner.
- B. If, in the opinion of the Architect/Engineer or Owner, it is not practical to remove and replace the Work, the Architect will direct appropriate remedy or adjust payment.
- C. The defective Work may remain, but sum/price will be adjusted to new sum/price at the discretion of Architect or Owner.
- D. Individual specification sections may modify these options or may identify specific formula or percentage sum/price reduction.
- E. Authority of Architect/Engineer, or other appropriate agent identified to perform assessment by the Architect/Engineer or Owner, to assess defects and identify payment adjustments, is final.
- F. Non-Payment For Rejected Products: In addition to replacement of rejected Work, payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from transporting vehicle.
 - 4. Products placed beyond lines and levels of required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION 01 26 00

SECTION 01 29 00 - PAYMENT PROCEDURES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Procedures for submitting Applications for Payment.

1.2 GENERAL

- A. Coordinate requirements of this Section with the requirements of the General and Supplementary Conditions of the Contract concerning payment procedures.

1.3 SCHEDULE OF VALUES

- A. Submit printed schedule on AIA Form G703 - Continuation Sheet for G702 in accordance with Section 01 29 73, Schedule of Values. Contractor's standard form or electronic media printout will be considered but must be approved by the Owner.

1.4 APPLICATIONS FOR PAYMENT

- A. Submit four (4) notarized originals of each application on AIA Form G702 - Application and Certificate for Payment and AIA G703 - Continuation Sheet for G702 or other similar form approved by the Owner.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- C. Submit updated construction schedule with each Application for Payment.
- D. Payment Period: Submit at intervals stipulated in the Agreement in accordance with Document CB, Supplementary Conditions of the Contract.
- E. Only materials stored on the project site shall be paid for unless the materials are stored in a bonded warehouse.
- F. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Items which may be requested by the Architect or Owner to substantiate costs include, but are not limited to the following:
 - 1. Current Record Documents as specified in Section 01 77 00, Closeout Procedures, for review by Owner which will be returned to Contractor.
 - 2. Labor time sheets, purchase orders, or similar documentation.
 - 3. Affidavits attesting to off-site stored products.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF SECTION 01 29 00

SECTION 01 29 73 - SCHEDULE OF VALUES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 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. Coordinate requirements of this Section with the requirements of the General and Supplementary Conditions of the Contract concerning Schedule of Values.

1.2 QUALITY ASSURANCE

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

1.3 SUBMITTALS

- A. Prior to the first Application for Payment, submit a proposed schedule of values to the Owner, as outlined below:
 - 1. Meet with the Owner and determine additional data, if any, required to be submitted.
 - 2. Secure the Owner's approval of the schedule of values prior to submitting first Application for Payment.

1.4 SCHEDULE OF VALUES

- A. The Schedule of Values shall be broken down into item costs for each specification section as a minimum. After review by the Owner, the Schedule of Values shall be broken down into further items as required. (See following list and refer to the enclosed sample.). In addition, total each Specification Division separately.
- B. Schedule of Values - Items in addition to Specification Sections.
 - 1. Mobilization
 - 2. Clean Up
 - 3. Building Permit
 - 4. Bonds, Insurance
 - 5. Misc. Mechanical Accessories
 - 6. Demolition
 - 7. Rough-In Labor - (Electrical)
 - 8. Rough-In Material - (Electrical)
 - 9. Finish Labor - (Electrical)
 - 10. Finish Material - (Electrical)
 - 11. Allowances (listed separately)
 - 12. Record drawings and close-out documents
 - 13. Submittals listed separately per mechanical, electrical and plumbing
 - 14. Roof warranty as a line item

15. Donated items individually itemized at \$0.00 (zero dollars).

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 SCHEDULE OF VALUES

A. Refer to following sample.

END OF SECTION 01 29 73

SECTION 01 31 13 - PROJECT COORDINATION

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 REQUIREMENTS

- A. General: notify the Architect whenever there is need of clarification or interpretation of the Contract Documents prior to commencement of work.
- B. Commencement of work without Architect's prior notification means Contractor's acceptance of responsibility.
- C. Commencement of work without Architect's prior notification implies Contractor's understanding of conditions, assemblies, methods, or procedures.
- D. The project superintendent shall notify the Owner on an ongoing basis of ongoing work.

1.2 PRE-INSTALLATION CONFERENCE

- A. General: Notify the Architect 48 hours in advance of certain stages of construction, and, as required by the Architect, organize a pre-installation meeting with each trade individually prior to commencement of their portion of the Work. At a minimum, representatives of the Architect, the General Contractor's project superintendent, and the Sub-contractor's Foreman and Project Manager shall be present at each meeting. The Engineer shall be notified as applicable.
- B. As indicated in each specific section of this Project Manual, or as required by the Architect, these stages generally include, but are not necessarily limited to the following:
 - 1. Division 2 – (Selective) Demolition.
 - 2. 03 30 00 - Placing of reinforcing, formwork, and concrete.
 - 3. 05 50 00 - Miscellaneous metals.
 - 4. 09 91 00 - Painting and staining (each coat).
 - 5. Division 10 - Installation of specialty items and graphics.
 - 6. Division 11 - Installation of appliances, accessories and stage curtain systems.
 - 7. Division 12 - Installation of theater seating and bleachers.
 - 8. Divisions 22, 23 and 26 - Completion of roughing-in of plumbing, heating, air conditioning and electrical work (prior to concealment).
 - 9. Division 26 - Installation of all electrical fixtures.
 - 10. Divisions 22, 23 and 26 - Any and all testing specified for equipment, mechanical, electrical and plumbing systems.
 - 11. 31 00 00, 31 23 23.13, and Divisions 22, 23 and 26 - Compaction, inspection, testing, and covering of underground utilities.
- C. In addition to notifying the Architect, notify the Structural Engineer (48 hours) prior to the following stages:
 - 1. Drilling, reinforcing, and placing of first piers and footings.
 - 2. Placing first reinforcing and grade beams.
 - 3. Erecting structural steel elements.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 PRE-CONSTRUCTION CONFERENCE

- A. The Contractor shall contact Architect at least ten (10) days prior to commencing construction in order for Architect to schedule a pre-construction meeting with Contractor, Architect, and Owner. This meeting must occur prior to commencement of any construction.

3.2 CONFERENCES AND MEETINGS

- A. Refer to Section 01 31 19, Project Meetings for requirements pertaining to Pre-construction Conference, Progress Meetings, and Pre-installation Conferences.

END OF SECTION 01 31 13

SECTION 01 31 19 - PROJECT MEETINGS

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDE

- A. The Architect's:
 - 1. Scheduling of each meeting (pre-construction meeting, periodic project meetings, and specialty called meetings throughout the progress of the Work).
 - 2. Preparation of agenda for meetings.
 - 3. Presiding at minutes, including all significant proceedings and decisions.
 - 4. Recording, reproducing, and distributing copies of meeting minutes within two (2) working days, excluding weekends and holidays, after each meeting to:
 - a. All participants in the meeting.
 - b. All parties affected by decisions made at the meeting.
 - 5. Providing status report of allowance funds.
- B. The Contractor's:
 - 1. Making physical arrangement for meetings.
 - 2. Participation in all meetings and conferences.
 - 3. Scheduling attendance of Job Superintendent, Project Coordinator, and other parties affecting or affected by decisions made at meetings and conferences as their interests require.
 - 4. Scheduling Pre-installation conferences.
 - 5. Scheduling Pre-Closeout Meeting
 - 6. Providing updated schedules.
 - 7. Providing status reports/logs of CPRs, MCs, and shop drawings/submittals.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 PRE-CONSTRUCTION CONFERENCE

- A. Contractor shall contact Architect at least ten (10) days prior to commencing construction in order for Architect to schedule a pre-construction meeting with Contractor, Architect, and Owner. This meeting must occur prior to commencement of any construction.
- B. Architect will:
 - 1. Administer pre-construction conference for the establishment of communication methods, procedures and Owner requirements.
 - 2. Administer site mobilization conference for clarification of Owner and Contractor.
- C. Location: At Project site as designated by the Architect.
- D. Attendance:
 - 1. Contractor or Contractor's Representative
 - 2. Job Superintendent
 - 3. Project Coordinator (Manager)

4. Owner or Owner's Representative
 5. Major subcontractors
 6. Major suppliers
 7. Architect's Representative
 8. Architect's Field Representative
 9. Consultants as needed
 10. Others as appropriate
- D. Meeting Agenda, may include, but is not limited to:
1. Discussion on major subcontracts and suppliers and projected construction schedules.
 2. Critical work sequencing.
 3. Major equipment deliveries and priorities. Discussion of long lead time items.
 4. Project coordination and designation of responsible personnel.
 5. Procedures and processing of field decisions, proposal requests, submittals, minor changes, change orders and applications for payment.
 6. Method of distribution of Contract Documents.
 7. Procedures for maintaining Record Documents.
 8. Use of premises, office work and storage areas, on-site parking, and Owner's requirements.
 9. Construction facilities and temporary utilities.
 10. Housekeeping procedures.

3.2 PROGRESS MEETINGS

- A. Architect will:
1. Schedule project meetings throughout progress of the work at weekly intervals, and specially called meetings.
 2. Set agenda and administer said meetings.
 3. Preside at meetings.
 4. Record meeting minutes, including all significant proceedings and decisions.
 5. Reproduce and distribute copies of meeting minutes within two (2) working days, excluding weekends and holidays, after each meeting to:
 - a. All participants in the meeting.
 - b. All parties affected by decisions made at the meeting.
- B. Contractor shall:
1. Make physical arrangements for meetings.
- C. Attendance:
1. Contractor or Contractor's Representative
 2. Job Superintendent
 3. Project Coordinator (Manager)
 4. Owner or Owner's Representative
 5. Major subcontractors
 6. Major suppliers
 7. Architect's Field Representative
 8. Consultants as needed
 9. Others as appropriate
- D. Meeting Agenda, may include, but is not limited to:
1. Review and approval of minutes of previous meeting.
 2. Review of Work progress since previous meeting.
 3. Field observations, problems, and conflicts.

4. Review of off-site fabrication and delivery schedules.
5. Corrective measures and procedures to regain projected schedule.
6. Revisions to Construction Schedule.
7. Plan progress and schedule during succeeding work period.
8. Coordination of schedules.
9. Review submittal schedules and expedite as required.
10. Maintenance of quality standards.
11. Allowance balances.
12. Review of proposed changes and substitutions for:
 - a. Effect on Construction Schedule and on completion date.
 - b. Effect on other contracts of the Project.
13. Status of Allowance Expenditure Authorizations (AEAs).
14. Status of Change Proposal Requests (CPRs).
15. Status of Minor Changes (MCs).
16. Status of submittals, review of submittal log.
17. Other items and critical issues affecting Work.

3.3 PRE-INSTALLATION CONFERENCES

- A. In accordance with the requirements of Section 01 11 00, Notification of Architect Requirements, the Contractor will convene pre-installation conferences when required by individual specification Sections or as required by the Architect, prior to the Contractor commencing Work of the Section.
- B. Attendance, optional:
 1. General Contractor or Contractor's Representative
 2. Project Coordinator (Manager)
 3. Owner or Owner's Representative
 4. Architect's Project Manager (Project Executive)
- C. Attendance, required:
 1. Project Superintendent
 2. Architect's Field Representative
 3. Sub-contractor's Project Manager
 4. Sub-contractor's Foreman
 5. Engineer's Representative, as needed.
 6. Manufacturer's Representative, as needed.
 7. Governing Agency Official, as required
 8. Inspection Agency Representative, as required.
 9. Others affecting or affected by Work.
- D. Meeting Agenda, may include, but is not limited to:
 1. Review of conditions of installation.
 2. Preparation and installation procedures.
 3. Coordination with related work
 4. Review of the contract document requirements.
 5. Review of code enforcement or testing requirements.
 6. Questions related to work required.

3.4 PRE-CLOSEOUT MEETING

- A. In accordance with the requirements of Section 01 77 00, Closeout Procedures, the Contractor will convene a pre-closeout meeting when he considers the Work or designated

portion of the Work is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the work for its intended use.

- B. Attendance, required:
1. Owner or Owner's Representative
 2. Project Coordinator (Manager)
 3. General Contractor or Contractor's Representative
 4. Project Superintendent
 5. Architect's Project Manager (Project Executive)
 6. Architect's Field Representative
 7. Engineer's Representative, as needed.
- C. Meeting Agenda, may include, but is not limited to:
1. Review of the contract document requirements for Substantial Completion and Project Closeout
 2. Review of Work which remains to be completed or corrected.
 3. Closeout Document review schedule and log
 4. Review of closeout procedures including, but not limited to Record Drawings, Warranties, Operation and Maintenance Manuals, and Owner Demonstrations and Start-up.
 5. Review of code enforcement or testing requirements.
 6. Questions related to work required.

END OF SECTION 01 31 19

SECTION 01 32 16 - CONSTRUCTION PROGRESS SCHEDULE

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Requirements for preparation of Construction Schedules for the Work of This Contract.
 - 1. Create a Construction Schedule using Critical Path Method (CPM) computer software capable of mathematical analysis of Precedence Diagramming Method (PDM) schedules. Provide printed activity listings and bar charts in formats described in this Section.
 - 2. Combine activity listings and bar charts with a narrative report to form the Contractor's Construction Schedule submittal to the Architect.
- B. Related Sections:
 - 1. 01 31 13 – Project Coordination
 - 2. 01 31 19 – Project Meetings
 - 3. 01 33 00 – Submittal Procedures
 - 4. 01 77 00 – Close-out Procedures

1.2 DEFINITIONS

- A. Activity: A task or discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling construction of the Project. Activities included in a construction schedule consume time and resources.
 - 1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.
 - 2. Predecessor activities are activities that must be completed before another given activity can be started.
- B. CPM: Critical Path Method, a method of planning and scheduling a construction project in which activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of the Project.
- C. Critical Path: The longest continuous chain of activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- D. Event: The starting or ending point of an activity.
- E. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and the Contract completion dates.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the following activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- F. Fragnet: A partial fragmentary network that breaks down activities into smaller activities for greater detail.

- G. Major Area: A story of construction, a separate building, or other significant construction element.
- H. Milestone: A key or critical point in time for reference or measurement.
- I. Network Diagram: A graphic diagram of a network schedule, showing activities and activity relationships.

1.3 SUBMITTALS

- A. Submittals Schedule: Arrange the following information in a tabular format.
 - 1. Specification section number and title
 - 2. Name of subcontractor
 - 3. Description of the Work covered
 - 4. Scheduled date for first submittal from vendor coordinated with construction schedule
 - 5. Scheduled date for Architect's final release or approval
 - 6. Submittal category (action or informational)
 - 7. Fabrication time
 - 8. Date material to be delivered to site
- B. Preliminary Construction Schedule:
 - 1. Phasing of construction:
 - a. Preconstruction services
 - b. Construction services
 - c. Major Areas
 - d. Close-out
 - 2. Owner coordinated activities as identified in the Contract Documents
 - 3. Milestones:
 - a. Project mobilization and demobilization
 - b. Concrete slab completion
 - c. Paving completion
 - d. Envelope dry-in
 - e. Climate control initiation
 - f. Final cleaning
 - g. Close-out
 - i. Final inspection and testing
 - ii. Owner training
 - iii. Punchlist re-walk
 - iv. Close-out document submission
 - 4. The scheduling software shall be capable of producing activity listings and bar charts with the following information for each activity in the schedule:
 - a. Activity ID
 - b. Activity Description
 - c. Estimated (Original) Duration
 - d. Percentage Complete
 - e. Early Start Date
 - f. Late Start Date
 - g. Early Finish Date
 - h. Late Finish Date
 - i. Free Float
 - j. Total Float
 - k. Activity Codes (for Major Areas, work types, specification sections, subcontractors, etc.)

5. Predecessor/successor listing sorted by Activity ID which meets the criteria outlined in this section and which is produced by the Contractor's approved scheduling software.
6. Include a logic network diagram with the first construction schedule submittal.

1.5 QUALITY ASSURANCE

- A. Pre-scheduling Conference: Conduct conference at Project site. Review method and procedures related to the Preliminary Construction Schedule and Project Construction Schedule, including but not limited to the following:
 1. Review software limitations and content and format for reports
 2. Verify availability of qualified personnel needed to develop and update schedule
 3. Discuss constraints
 4. Review delivery dates for Owner-furnished products
 5. Review schedule for work of Owner's separate constraints
 6. Review time required for review of submittals and re-submittals
 7. Review requirements for tests and inspections by independent testing and inspecting agencies
 8. Review time required for completion and startup procedures
 9. Review and finalize list of construction activities to be included in schedule
 10. Review submittal requirements and procedures
 11. Review procedures for updating schedule

1.6 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Project Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
 1. Secure time commitments for performing critical elements of the Work from parties involved.
 2. Coordinate each construction activity in the network with other activities and schedule in proper sequence.

1.7 RELIANCE UPON SCHEDULE

- A. The Construction Schedule as reviewed by the Architect will be an integral part of the Contract and will establish conditions for various activities and phases of construction.

PART 2 - PRODUCTS

2.1 PROJECT CONSTRUCTION SCHEDULE, GENERAL

- A. Prepare schedules using an industry-accepted software program developed specifically to manage construction project schedules.

2.2 PRELIMINARY CONSTRUCTION SCHEDULE

- A. Bar-Chart Schedule: Submit preliminary horizontal bar-chart-type construction schedule within ten (10) days of Notice of Award.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for the duration of construction.

2.3 PROJECT CONSTRUCTION SCHEDULE

- A. General: Prepare network diagrams using the Precedence Diagramming Method (PDM).
- B. CPM Schedule:
 - 1. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 - 2. Use "calendar days" as the unit of time, not to exceed the number of calendar days identified in the Contract Documents.
 - 3. Activity durations shall be limited to 15 calendar days, excepting only submittal review and approval, fabrication and delivery or other exceptions as approved by the Owner.
- C. Initial Issue of Schedule: Prepare initial network diagram from a list of straight "early start-total float" sort. Identify critical activities. Prepare tabulated reports showing the following:
 - 1. Description of activity
 - 2. Principal events of activity
 - 3. Immediate preceding and succeeding activities
 - 4. Designated critical path
 - 5. Early and late start dates
 - 6. Early and late finish dates
 - 7. Activity duration in workdays
 - 8. Total float or slack time
- D. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
 - 1. Identification of activities that have changed
 - 2. Changes in early and late start dates
 - 3. Changes in early and late finish dates
 - 4. Changes in activity durations in workdays
 - 5. Changes in the critical path
 - 6. Changes in total float or slack time
 - 7. Changes in the Contract Time

PART 3 - EXECUTION

3.1 PROJECT CONSTRUCTION SCHEDULE

- A. Meetings: Provide look-ahead schedule generated from construction schedule software for review at each Subcontractor Coordination and OAC Meeting.
- B. Project Construction Schedule Updating: At monthly intervals, on a regular monthly date specifically identified in the pre-construction conference, the Contractor shall update the schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting. Submit schedule with each application for payment.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including but not limited to, changes in logic, duration, actual starts and finishes, and activity duration.
 - 3. As the Work progresses, indicate Actual Completion percentage for each activity.

- C. Distribution: Distribute copies of approved schedule to Architect, Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their portion of the Work and are no longer involved in performance of construction activities.
- D. Recovery: If at any time during the course of the project, the critical path demonstrates the project is in excess of 15 calendar days behind schedule the Contractor shall provide within 5 days of notification, revisions to the schedule demonstrating the ability to return the project to the milestone and project delivery dates identified in the Contract Documents. In addition, the Contractor will revise all remaining work as necessary to reflect any changes in the planned execution.

END OF SECTION 01 32 16

SECTION 01 33 00 - SUBMITTAL PROCEDURES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 SUBMITTAL PROCEDURES

- A. Transmit to the Architect/Engineer each item indicated in individual specification sections with approved form identifying:
 - 1. Date of submission and dates of any previous submissions.
 - 2. Project title and number
 - 3. Contract identification
 - 4. Names of Contractor, Supplier, Manufacturer
 - 5. Pertinent drawing sheet and detail number, and specification section number, as appropriate
 - 6. Deviations from Contract Documents.
- B. Contractor shall be responsible for initial review prior to submittal to Architect/Engineer to verify adequacy and conformance to contract requirements. Lack of review by Contractor may be grounds for rejection.
- C. Apply Contractor's stamp, signed, to each item submitted, certifying that review and verification of products, field dimensions, adjacent construction work and coordination of information is in accordance with the requirements of the work and contract documents.
- D. Transmit each item in accordance with approved schedule, and in such sequence as to cause no delay in the work or in the work of any other Contractor. Allow minimum of ten (10) days for adequate Architect/Engineer review of each submittal. Time may vary according to scope and complexity of item under review. Allow adequate time in schedule for revisions and resubmittal as deemed necessary.
- E. Submit one (1) opaque print or copy of the submittal to the Architect plus one (1) electronic original. Transmit the printed copy of consultant and engineering submittals directly to respective consultants with a transmittal and the electronic original to the Architect. The Architect and Consultant will make up the printed copy and return to the Contractor upon completion of review. It will be the Contractors responsibility to scan and distribute the necessary quantity of copies of the reviewed submittal to all concerned parties.
- F. Submit each item according to individual specification sections and identified by Division, Section, and individual submittal number. Maintain log according to each Division.
- G. Revise and resubmit submittal as required; identify all changes made since previous submittal.
 - 1. Make any corrections or changes in the submittals required by the Architect/Engineer and resubmit until approved.
 - 2. Submit new submittal as required for initial submittal.

1.2 PROPOSED PRODUCTS LIST

- A. Within 30 days after date of Notice to Proceed, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.3 PRODUCT DATA

- A. Submit to Architect for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Submit the number of copies of product data and samples which the Contractor and his subcontractors need for their use PLUS two (2) additional sets for the Architect, one (1) additional set for the Owner and one (1) additional set for each of the Architect's consultants involved with the particular Section of Work.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project

1.4 MSDS SHEETS

- A. The Texas Asbestos Health Protection Rules (Title 25. Health Services, Part I. Texas Department of Health Chapter 295 - Occupational Health, Subchapter C - Texas Asbestos Health Protection) were approved and became effective on October 20, 1992, and amended March 27, 2003. The Rules established the procedures and means to implement the provisions of Senate Bill 1341 and House Bill 79.
- B. Pursuant to the above referenced Rules, submit MSDS Sheets showing that materials used in the Project, contain 1.0 percent or less asbestos. This requirement pertains to every material in every Section of the Specifications, as applicable to the Project, whether written therein, or not. Submit MSDS Sheets for materials, including, but not limited to the following, as applicable to the Project.
 - 1. Surfacing Materials:
 - a. acoustical plaster;
 - b. decorative plaster/stucco;
 - c. textured paint/coating;
 - d. spray applied insulation;
 - e. blown-in insulation
 - f. fire proofing insulation;
 - g. joint compound; and
 - h. spackling compounds
 - 2. Thermal System Insulation:
 - a. taping compounds (thermal)
 - b. HVAC duct insulation;
 - c. boiler insulation;
 - d. breaching insulation;
 - e. pipe insulation; and
 - f. thermal paper products
 - 3. Miscellaneous Material:
 - a. cement wallboard/siding;
 - b. asphalt/vinyl floor tile
 - c. vinyl sheet flooring/vinyl wall coverings;
 - d. floor backing;
 - e. construction mastic;
 - f. ceiling tiles/lay-in ceiling panels;
 - g. packing materials;
 - h. high temperature gaskets;
 - i. laboratory hoods/table tops
 - j. fire blankets/curtains;

- k. elevator equipment panels;
- l. elevator brake shoes;
- m. ductwork flexible fabric connections;
- n. cooling towers;
- o. heating and electrical ducts;
- p. electrical panel partitions;
- q. electrical cloth/electrical wiring insulation;
- r. chalkboards;
- s. roofing shingles/tiles;
- t. roofing felt;
- u. base flashing;
- v. fire doors;
- w. caulking/putties;
- x. adhesives/mastics; and
- y. wallboard

1.5 SHOP DRAWINGS

- A. Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. All dimensions indicated on the drawings are based on the specific models and manufacturers of products, equipment, fixtures and miscellaneous items specified. If the Contractor uses an approved product by another listed manufacturer which is different than the specific model and manufacturer listed in these specifications, then the Contractor shall be solely responsible for the coordination of any dimensional changes required, including structural, relocation of walls, equipment, fixtures, ceilings and miscellaneous items. When dimensional changes are required in these situations, the Contractor shall submit a proposed modification drawing to the Architect for approval prior to proceeding with the work. All causes and effects of the dimensional change shall be indicated on the Contractor's drawing submittal.

1.6 SAMPLES

- A. Submit for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Submit for aesthetic, color, or finish selection. Submit full range of manufacture's standard colors, textures, and patterns for Architect's selection.
- C. Submit samples to illustrate functional characteristics of the Product, with integral parts and attachment devices. Coordinate submittal of different categories for interfacing work.
- D. Submit the number specified in respective Specification Section; minimum of two (2), of which one (1) will be retained by Architect.
- E. Reviewed samples which may be used in the Work are indicated in individual specification sections.
- F. Samples will not be used for testing purposes unless specifically stated in specification section.

1.7 DESIGN DATA

- A. When required, submit for Architect/Engineer's knowledge as contract administrator or for Owner.
- B. Submit design data for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.8 TEST REPORTS

- A. In accordance with Section 01 45 23, Inspection and Testing Laboratory Services, submit test reports for Architect/Engineer's knowledge as contract administrator or for Owner. Architect will determine whether corrective action is required.
- B. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.9 CERTIFICATES

- A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Architect, in quantities specified.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect and Owner.
- D. Submit required certificates in duplicate.

1.10 GUARANTEES

- A. When specified in individual specification sections, submit warranties by manufacturer, installation/application subcontractor, fabricator, or Contractor to Architect, in quantities specified.
- B. Submit warranties in accordance with Section 01 77 00, Closeout Procedures.

1.11 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Architect for delivery to Owner in quantities specified.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- C. Submit required instructions in duplicate.

1.12 MANUFACTURER'S FIELD REPORTS

- A. Submit reports for Architect/Engineer's benefit as contract administrator or for Owner.
- B. Submit report in quantity specified or required within ten (10) days of observation to Architect for information. Architect will determine whether corrective action is required.

- C. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.13 ERECTION DRAWINGS

- A. When required, submit drawings for Architect/Engineer's benefit or for Owner.
- B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by Architect/Engineer or Owner. Architect will determine whether corrective action is required.

1.14 CONSTRUCTION PHOTOGRAPHS

- A. Provide photographs monthly of site and construction throughout progress of Work produced by an experienced photographer, acceptable to Architect/Engineer.
- B. Photographs: digital; sent to Architect via email, or provide on non-rewritable compact disk. Along with Application for Payment, include one (1) reproducible copy of contact sheet of all photographs taken during that period indicating Work completed and identified as stated below.
- C. Photograph project conditions five (5) days maximum prior to submitting indicating relative progress of the Work. Do not photograph conditions previously photographed if no work has proceeded. As able, take photographs from same position indicating same view in successive installments.
- D. Take photographs as evidence of existing project conditions as follows:
 - 1. Site: Take four (4) site photographs at project corners
 - 2. Interior views: Take two (2) minimum interior photographs of each space under construction from differing directions or as required.
 - 3. Exterior views: Take two (2) photographs of each elevation.
 - 4. Details: Take as required to document concealed conditions, including, but not limited to, underground construction, utility penetrations and installation, steel erection, concrete and masonry reinforcing, waterproofing and flashing, and roofing installation.
 - 5. Cavity wall: Provide photographic evidence that cavity wall was maintained clean and free of debris and excess mortar.
- E. Identify each photograph with name of Project, room or view, and date.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION 01 33 00

SECTION 01 35 16 - ALTERATION PROJECT PROCEDURES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. This Section contains general provisions and requirements pertaining to all remodeling, removal and relocation of Work in the existing building and becomes a part of each Section and Division performing remodeling, removal and relocation Work for this Project with the same force and effect as if written in full therein.
- B. Take all necessary precautions to keep trespassers out of the Work areas. Secure Work areas from entry when Work is not in progress.
- C. Perform all alterations, remodeling, demolition, removal and relocation of Work in strict accordance with Owner's instructions and applicable Federal, State and local health and safety standards, codes and ordinances. Where conflicts occur, the more restrictive requirement shall govern.

1.2 RELATED WORK

- A. Section 02 41 16 - Selective Demolition

1.3 EXISTING CONDITIONS

- A. Obvious existing conditions, installations and obstructions affecting the Work shall be taken into consideration as necessary Work to be done, the same as though they were completely shown or described.
- B. Items of existing construction indicated to remain upon completion of the Contract, but which require removal to complete the Work, shall be carefully removed and replaced as required. The replaced Work shall match its condition at the start of the Work unless otherwise required.
- C. Visit the site to determine by inspection all existing conditions, including access to the site, the nature of structures, objects and materials to be encountered, and all other facts concerning or affecting the Work. Information on the Drawings showing existing conditions does not constitute a guarantee that other items may not be found or encountered.
- D. Utilities: Do not interrupt existing utilities serving occupied or used facilities, except when authorized by the Architect in writing two (2) weeks in advance. Provide temporary services during interruptions to existing utilities.

PART 2 - PRODUCTS

2.1 SALVAGED MATERIALS

- A. The Owner reserves the right of first refusal on all salvage items. Remove remaining items from the site as Work progresses. Storage or sale of items on site is not permitted. Burning or burying of removed materials on site is not permitted.
- B. Store salvaged items in a dry, secure place on site.
- C. Salvaged items not required for use in repair of existing Work shall remain the property of the Owner.
- D. Do not incorporate salvaged or used material in new construction except with permission of the Architect.

2.2 PRODUCTS FOR PATCHING, EXTENDING AND MATCHING

- A. Contract Documents do not define products or standards of workmanship present in existing construction. Determine products by inspection and by use of the existing. Provide same or similar quality products or types of construction as that in existing structure when needed to patch or extend existing Work.
- B. If reasonably matching products are not obtainable, improve appearance by minor relocating of some existing products and grouping new ones in some pattern arranged by the Architect. Do not replace products scheduled for retaining because matching ones are not obtainable, except as directed by Change Order.

PART 3 - EXECUTION

3.1 PROTECTION OF WORK TO REMAIN

- A. Protect existing Work from damage. Use barricades, tarpaulins, temporary walls, plywood, planking, masking, or other suitable means and methods as approved by the Architect.
- B. If Work to remain in place is damaged, restore to original condition at no additional cost to the Owner.
- C. Concealed Conditions: If conditions cause changes in the Work from requirements of the Contract Documents, the Contract Sum will be adjusted in accordance with the General Conditions.

3.2 EXAMINATION

- A. Verify that areas are ready for alteration and remodeling.
- B. Discrepancies: Verify dimensions and elevations indicated in layout of existing work.
 - 1. Prior to commencing work, carefully compare and check Contract Documents for discrepancies in locations or elevations of work to be executed.
 - 2. Refer discrepancies among Drawings and existing conditions to Architect for adjustment before work affected is performed.

3.3 PREPARATION

- A. Construct temporary fire-rated partitions to separate existing occupied areas from construction and alteration areas. Comply with provisions of Division 01 Section "Temporary Facilities and Controls."
- B. Cut, move, or remove items as necessary for access to alteration and renovation Work.
 - 1. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, deteriorated masonry and concrete, and other deteriorated materials. Replace materials as specified for finished Work.
 - 2. Remove debris and abandoned items from area and from concealed spaces.
- C. Cutting and Removal: Perform cutting and removal work to remove minimum necessary, and in manner to avoid damage to adjacent work. Cut finish surfaces such as masonry, tile, plaster, or metals by methods to terminate surfaces in straight line at natural point of division.
- D. Prepare surface and remove surface finishes as necessary to provide for proper installation of new materials and finishes.
- E. Close openings in exterior surfaces to protect existing Work from weather and extremes of temperature and humidity. Insulate ductwork and piping to prevent condensation in exposed areas.

- F. Provide temporary barriers and closures to control operations to prevent spread of dust to occupied portions of building.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- B. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, provide insulated temporary enclosures. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
 - 2. Vertical Openings: Close openings of 25 sq. ft. or less with plywood or similar materials.
 - 3. Horizontal Openings: Close openings in floor or roof decks and horizontal surfaces with load-bearing, wood-framed construction.
 - 4. Install tarpaulins securely using fire-retardant-treated wood framing and other materials.
 - 5. Where temporary wood or plywood enclosure exceeds 100 sq. ft. in area, use fire-retardant-treated material for framing and main sheathing.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction. Remove and replace materials with mold.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 - 1. Protect porous materials from water damage.
 - 2. Protect stored and installed material from flowing or standing water.
 - 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 - 4. Remove standing water from decks.
 - 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 - 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 - 2. Keep interior spaces reasonably clean and protected from water damage.
 - 3. Periodically collect and remove waste containing cellulose or other organic matter.
 - 4. Discard or replace water-damaged material.
 - 5. Do not install material that is wet.
 - 6. Discard, replace or clean stored or installed material that begins to grow mold.
 - 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:

1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use permanent HVAC system to control humidity.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
- E. Wet and Water-Damaged Materials:
1. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 24 hours are considered defective.
 2. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record daily readings over a forty-eight hour period. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 3. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.6 PROCEDURES

- A. Refinishing At Removed Work: Cut below surface of substrate materials and patch over area of removal with finish materials so removal is not apparent.
- B. Remove and replace existing ceilings, and cut, patch, or replace existing walls, partitions and floors as may be necessary for access to valves, piping, conduit and tubing by mechanical and electrical trades as directed and approved by the Architect, and performed by the appropriate subcontractor for the Work involved, or by other properly qualified subcontractors.
- C. Patch and extend existing Work using skilled mechanics who are capable of matching existing quality and workmanship. Quality of patched or extended Work shall be not less than that specified for new Work.
- D. Cutting:
1. Concrete and Masonry: Saw cut where feasible.
 2. Plaster: Cut back to sound plaster on straight lines, and back-bevel edges of remaining plaster. Trim and prepare existing lath for tying of new lath.
 3. Woodwork: Cut back to a joint or panel line. Undamaged removed materials may be reused.
 4. Resilient Tiles: Remove in whole units to natural breaking points or straight joint lines with no damaged or defective existing tiles remaining where joining new construction.
 5. Salvaged Materials: Carefully remove to avoid damage, thoroughly clean and reinstall as indicated, or as directed.
 6. Doors: Remove in such a manner as to facilitate filling in of openings or installation of new Work, as required by Drawings.
 7. Structural Elements: Remove only as shown on the Structural Drawings. If not specifically shown, but removal is required, perform such removal or alteration only upon written approval of the Architect. Do not damage or alter any structural element of the existing building.
- E. Patching:
1. Match existing Work where possible; if unavailable, use salvage material for patching and provide totally new material in areas where salvage has been removed; consult with the Architect concerning locations for salvaging materials.
 2. Repairs or continuations of existing Work shall be relatively imperceptible in the finished Work when viewed under finished lighting conditions from a distance of six (6) feet.

3. Patching, Repairing and Finishing of Existing Work: Perform in compliance with the applicable requirements of the Specification Section covering the Work to be performed and the requirement of this Section.
- F. Erect scaffolding as necessary to gain access to the various parts of the Work. Provide structurally sound, rigidly braced and properly constructed scaffolding, shoring and bracing as necessary to positively protect the affected elements and building, and to support the activities or workmen and loads. Design and construction of scaffolds and supports shall be in accordance with applicable safety regulations. Material used shall be adequate to support anticipated loads with a properly calculated margin of safety.
- G. Noise Producing Equipment: Minimize use of noise producing equipment. Limit excessive noise to periods of vacancy or provide sound control. Arrange schedules in advance with the Architect.

3.7 PAINTING

- A. Preparation: Prepare patched areas as required for new Work. Wash existing painted surfaces with neutral soap or detergent, thoroughly rinse, and sand when dry.
- B. Painting and Finishing: Conform to the applicable provisions of the Painting Section. Prepare bare areas and patches in existing painted surfaces with specified primer and intermediate coats, sanded smooth and flush with adjoining surfaces.

3.8 DISPOSAL OF DEBRIS

- A. Remove material, debris and rubbish resulting from Work of this Section from the building and site as it accumulates. Keep all areas of Work in "broom clean" condition as the Work progresses.
- B. At completion of renovation and remodeling Work in each area, provide final cleaning and return space to a condition suitable for use by the Owner.

END OF SECTION 01 35 16

SECTION 01 42 00 - REFERENCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 DESCRIPTION OF WORK REQUIREMENTS

- A. General: This Section specifies procedural and administrative requirements for compliance with governing regulations and codes and standards imposed upon the Work. These requirements include the obtaining of permits, licenses, inspections, releases, and similar statements, as well as payments, associated with regulations, codes, and standards.
- B. "Regulations" is defined to include laws, statutes, ordinances, and lawful orders issued by governing authorities, as well as those rules, conventions and agreements within the construction industry which effectively control the performance of the Work regardless of whether they are lawfully imposed by governing authority or not.
- C. Governing Regulations: Refer to General and Supplementary Conditions for requirements related to compliance with governing regulations.

1.3 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized", "selected", "required", and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown", "noted", "scheduled", and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

- J. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference. Individual Specification Sections indicate which codes and standards the Contractor must keep available at the project site for reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Conflicting Requirements: Where compliance with two or more standards is specified, and where these standards establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents specifically indicate a less stringent requirement. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Architect/Engineer for a decision before proceeding.
- D. Minimum Quantities or Quality Levels: In every instance the quantity or quality level shown or specified is intended to be the minimum for the Work to be provided or performed. Unless otherwise indicated, the actual Work may either comply exactly, within specified tolerances, with the minimum quantity or quality specified, or may exceed that minimum within reasonable limits. In complying with these requirements, the indicated numeric values are either minimum or maximum values, as noted, or as appropriate for context of the requirements. Refer instances of uncertainty to the Architect/Engineer for decision before proceeding.

1.5 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the trade association, standards-producing organization, authorities having jurisdiction or other entity applicable to the context of the text provision.
- B. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the Agency.
- C. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations.

1.6 SUBMITTALS

- A. Permits, Licenses and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 - PRODUCTS

Not Used

ENGINEERING AND SITE DRAINAGE REMEDIES
CROCKETT EARLY CHILDHOOD CENTER
ENNIS INDEPENDENT SCHOOL DISTRICT
PART 3 - EXECUTION

PBK
P2100600AR

Not Used

END OF SECTION 01 42 00

SECTION 01 45 00 - QUALITY CONTROL

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 – GENERAL

1.1 SECTION INCLUDES

Quality Assurance: Requirements for material and product quality and control of installation.

- A. Tolerances
- B. References and Standards
- C. Mock-ups
- D. Testing Laboratory Services
- E. Inspection Services
- F. Manufacturers' field services

1.2 RELATED SECTIONS

- A. Section 01 41 00 – Regulatory Requirements
- B. Section 01 45 23 – Testing and Inspecting Services
- C. Section 01 33 00 - Submittal Procedures
- D. The Work of this Section shall be included as a part of all Sections of Work, whether referenced therein or not.

1.3 DESCRIPTION OF REQUIREMENTS

- A. Unless specifically noted otherwise, perform all Work shown, mentioned, or reasonably inferred and comply with all work restrictions.
- B. Many of the requirements specified elsewhere are included herein for reference and convenience. Where a conflict occurs between the Contract Documents, either within themselves or each other, the more stringent requirement or the most expensive combination of materials and workmanship shall prevail.
- C. Contractor shall:
 - 1. perform Work in accordance with the General Conditions, as specified herein, and with the quality control requirements of each Specification Section;
 - 2. perform Work in the highest quality workmanship, unless specified otherwise;
 - 3. join materials with a uniform and accurate fit so they meet with neat straight lines, free of smears, overlaps or irregularities, as applicable to the work;
 - 4. install all exposed materials appropriately level, plumb, and at accurate angles as shown and flush with adjoining materials;
 - 5. attach materials with sufficient strength, and with number and spacing of fasteners and attachments that will not fail until materials joined are broken or permanently deformed;
 - 6. use concealed fasteners, unless shown or directed otherwise.

1.4 QUALITY ASSURANCE AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturer's instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.5 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.6 REFERENCES AND STANDARDS

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Owner-Contractor Agreement except where specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. When specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- E. Neither contractual relationships, duties, responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.7 MOCK-UP REQUIREMENTS

- A. Tests will be performed under provisions identified in this section and identified in respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes in place for review.
- C. Accepted mock-ups shall be the comparison standard for remaining Work.

- D. Mock-up may be approved in phases as portions are completed.

1.8 TESTING SERVICES

- A. Owner will appoint, employ, and pay for specified services of an independent firm to perform testing.
- B. The independent firm will perform tests and other services specified in individual specification sections and as required by the Architect/Engineer, Owner, or authority having jurisdiction.
- C. Testing and source quality control may occur on or off the project site. Perform off-site testing as required by the Architect/Engineer or the Owner.
- D. Reports will be submitted by the independent firm to the Owner, Architect/Engineer, and Contractor, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- E. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify Architect/Engineer and independent firm 48 hours prior to expected time for operations requiring services, or as specified in individual specification sections.
 - 2. Make arrangements with independent firm and pay for additional samples and tests required.
- F. Testing does not relieve Contractor to perform Work to contract requirements.
- G. Re-testing required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Architect/Engineer. Payment for re-testing will be charged to the Contractor by deducting testing charges from the Contract Sum/Price.
- H. Refer to Section 01 45 23, Inspection and Testing Laboratory Services, for additional information concerning testing, and submittal procedures and requirements for Testing Reports.

1.9 INSPECTION SERVICES

- A. Owner will appoint, employ, and pay for specified services of an independent firm to perform inspection.
- B. The independent firm will perform inspections and other services specified in individual specification sections and as required by the Architect/Engineer, Owner, or authority having jurisdiction.
- C. Inspecting may occur on or off the project site. Perform off-site inspecting as required by the Architect/Engineer or the Owner.
- D. Reports will be submitted by the independent firm to the Owner, Architect/Engineer, and Contractor, indicating inspection observations and indicating compliance or non-compliance with Contract Documents.
- E. Cooperate with independent firm; furnish safe access and assistance by incidental labor as requested.

1. Notify Architect/Engineer and independent firm 48 hours prior to expected time for operations requiring services, or as specified in individual specification sections.
- E. Inspecting does not relieve Contractor to perform Work to contract requirements.
- F. Refer to Section 01 45 23, Inspection and Testing Laboratory Services, for additional information concerning inspections, and submittal procedures and requirements for Inspection Reports.

1.10 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as required, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect/Engineer within ten (10) days after receipt of Notice to Proceed, in advance of required observations. Observer subject to approval of Architect/Engineer and Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Refer to Section 01 33 00, Submittal Procedures, for additional information concerning submittal procedures and requirements for Manufacturers Field Reports.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION 01 45 00

SECTION 01 45 23 - TESTING AND INSPECTING SERVICES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. A qualified independent testing laboratory and/or geotechnical engineering service selected and paid by Owner and approved by Architect, will perform professional testing and laboratory services specified herein.
- B. Inspecting agency shall make and perform all inspections and tests in accordance with the rules and regulations of the building code, local authorities, Specifications of ASTM, and these Contract Documents.
- C. Materials and workmanship not meeting required standards or performance obligations are to be removed and replaced. Replacement and subsequent testing shall be at Contractor's expense.
- D. Where terms "Inspector" and "Laboratory" are used, they mean and refer to an officially designated and accredited inspector of the testing laboratory or geotechnical service engaged by Owner.
- E. All testing laboratory services will be provided and paid for by the Owner and the Contractor shall be notified as soon as possible.
- F. The Owner will pay for the initial laboratory services of materials that comply with the requirements of the Contract Documents. The Contractor shall pay for testing and re-testing of materials that do not comply with the requirements of the Contract Documents.
- G. Laboratory inspection shall not relieve the Contractor or Fabricator of his responsibility to furnish materials and workmanship in accordance with the Contract Documents.
- H. Contractor or Fabricator shall cooperate with the testing laboratory in all matters pertaining to the work.

1.2 RELATED REQUIREMENTS

- A. Conditions of the Contract: Inspections and testing required by laws, ordinances, rules, regulations, orders or approvals or public authorities.
- B. Respective Sections of Specifications. Certification of products.
- C. Each Specification Section Listed: Inspection and laboratory test required and standards for inspection and testing.
- D. Testing laboratory inspection, sampling and testing is required for:
 - 1. Section 31 00 00 - Earthwork
 - 2. Section 31 23 00 - Construction of Underground Utilities
 - 3. Section 31 32 13.19 - Soil Stabilization: As specified or required by geotechnical report and/or project conditions.
 - 4. Section 32 13 13 - Concrete Paving

5. Section 32 12 16 – Hot Mix-Hot Laid Asphaltic Concrete Paving
6. Section 03 30 00 - Cast-In-Place Concrete
7. Section 04 20 00 - Unit Masonry
8. Division 05 - Metals: As specified or required for structural steel, open web steel joists, steel deck, miscellaneous metals, etc.
9. As requested by the Construction Manager/Contractor, Owner, Architect, or Engineer(s).

1.3 QUALIFICATIONS

- A. Testing agencies shall meet requirements of ASTM E329, "Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction" and ASTM E543, "Standard Practices for Agencies Performing Non-Destructive Testing".
- B. Testing agencies shall be insured against errors and omissions by a professional liability insurance policy having a minimum limit of liability of \$500,000.00.
- C. Inspection and testing services of testing agency shall be under the direction of a Registered Engineer licensed in the State of Texas, charged with engineering managerial responsibility, and having a minimum of five (5) years engineering experience in inspection and testing of construction materials.
- D. Inspecting personnel monitoring concrete work shall be ACI certified inspectors.
- E. Primary inspectors performing structural steel inspection shall be currently certified AWS Certified Welding Inspectors (CWI), in accordance with the provisions of AWS QCI, "Standard and Guide for Qualification and Certification of Welding Inspectors". Inspector may be supported by assistant inspectors who may perform specific inspection functions under supervision of the inspector. Assistant inspectors shall be currently certified AWS Certified Associate Welding Inspectors (CAWI). Work of assistant inspectors shall be regularly monitored by the inspector, generally on a daily basis.
- F. Testing machines shall be calibrated at intervals not exceeding 12 months by devices of accuracy traceable to the National Bureau of Standards.

1.4 RESPONSIBILITIES OF CONTRACTOR

- A. See respective technical sections for specific requirements.
- B. Deliver to the laboratory, without cost to Owner, adequate quantities of representative samples of materials proposed for use which are required to be tested.
- C. Advise laboratory and Architect sufficiently in advance of construction operations to allow laboratory to complete any required checks or tests and to assign personnel for field inspection and testing as specified.
- D. Provide adequate facilities for safe storage and proper curing of concrete test samples on project site for the first 24 hours and also for subsequent field curing as required by ASTM C31.
- E. Furnish such nominal labor and equipment as is required to assist laboratory personnel in obtaining and handling samples at the site and in accessing work for inspection.

- F. Furnish concrete mix designs, in accordance with ACI 301, Section 3.9, made by an independent testing laboratory or qualified concrete supplier. Where mix designs by an independent testing laboratory are required, the laboratory shall be selected and paid by the Contractor.
- G. Obtain required inspections or approvals of the building official. All inspection requests and notifications required by building code are responsibility of the Contractor.
- H. Provide current welder certificates for each welder to be employed.
- I. Furnish fabrication/erection inspection and testing of all welds in accordance with AWS D1.1, Chapter 6.
- J. Prequalification of all welding procedures to be used in executing the work.

1.5 AUTHORITY AND DUTIES OF LABORATORY PERSONNEL

- A. A representative of the testing laboratory, who has reviewed and is familiar with the project and specifications, shall participate in all pre-construction conferences. He shall coordinate material testing and inspection requirements with the Contractor and his subcontractors consistent with the planned construction schedule. The laboratory representative shall attend, throughout the course of the project, such conferences as may be required or requested to address quality control issues.
- B. Laboratory personnel shall inspect and/or test materials, assemblies, specimens, and work performed, including design mixes, methods and techniques and report to the Architect the progress thereof.
- C. If material furnished and/or work performed fails to meet requirements of Contract Documents, laboratory inspector shall promptly notify the Construction Manager, Architect, Engineers, supplier and/or subcontractor providing or preparing the materials or work being tested of such failure.
- D. Laboratory technicians do not act as foremen, or perform other duties for Contractor. Work will be checked as it progresses, but failure to detect any defective work or materials shall not, in any way, prevent later rejection when such defect is discovered.
- E. Laboratory inspector is not authorized to revoke, alter, relax, enlarge, or release any requirement of the Contract Documents or to approve or accept any portion of work, except where such approval is specifically called for in the Specifications.
- F. Comply with all building code requirements for "Special Inspection" whether or not such inspections are specified herein.

1.6 SUBMITTALS

- A. Submit copies of reports of each and every inspection and test as follows:
 - 1. Owner, Program or Project Manager, Architect, and each Engineer or outside consultants regarding their particular phase of the project: One (1) each
 - 2. Construction Manager, if applicable, and Contractor: Two (2) each
- B. State in report all details of each inspection and test. Indicate compliance or noncompliance with requirements of Contract Documents. Also state in report any and all unsatisfactory conditions.

- C. In addition to furnishing a written report, notify Construction Manager, if applicable, and Contractor verbally of any uncorrected conditions or failures to comply with requirements of the Contract Documents, and immediately Fax corresponding report to the Architect and Engineer.
- D. At completion of each trade or branch of work requiring inspecting and testing, submit a final certificate attesting to satisfactory completion of work and full compliance with requirements of Contract Documents.
- E. Submit copies of test results, sealed by a Registered Engineer, to municipal authorities having jurisdiction, as required.

1.7 REFERENCED STANDARDS

- A. Latest adopted edition of all standards referenced in this Section shall apply, unless noted otherwise. In case of conflict between these Contract Documents and a referenced standard, the Contract Documents shall govern. In case of conflict between Contract Documents and the Building Code, the more stringent shall govern.

1.8 TESTING LABORATORY GUIDELINES AND PROCEDURES

- A. Technicians scheduled to perform specific testing services must be qualified to review and perform other services that overlap, i.e. earthwork, foundation inspections, rebar inspection, and concrete when scheduled concurrently at the Project site.
- B. Technician time for services performed will be reimbursed at a regular time rate. Compensation at the overtime rate will be considered for any hours over eight (8) hours spent at the job site on a single day, field testing services performed on a Saturday or Sunday, and any field services performed on a recognized holiday.
- C. There will be a three (3) hour minimum for each scheduled testing service. Vehicle charges will be included on a \$25.00 per trip basis.
- D. Cylinder pick-up will be handled by the technician performing test on a scheduled pick-up day. If there are no testing services scheduled, the cylinder pick-up fee will be \$40.00 on week days and \$50.00 on weekends and holidays with no technician or vehicle charge.
- E. The Contractor shall bear the responsibility of scheduling all of the test services. The Contractor and the testing laboratory shall assume full responsibility to coordinate the testing services. Cancellations and/or failed test will be reimbursable to the Owner by the responsible party for the cancellations or failure of a test or service.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 GENERAL

- A. Testing services shall include, but not be limited to those specified below or which are necessary or required during course of construction to ascertain specification compliance

and which may be deemed necessary by Architect, Engineer, or Owner to ensure the quality of the Work.

- B. The Owner reserves the right to add to or delete any or all inspection and testing specified herein, excluding testing as required by the applicable building codes.
- C. If conflicts arise between Drawings and Specifications, notify Architect immediately. In any case the most stringent requirements shall dictate procedure.

3.2 TESTING OF EARTHWORK

- A. Testing Services (As specified or required):
 - 1. References (As applicable for tests required):
 - a. American Society for Testing and Materials (ASTM)
 - 1) D698, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft³ (600 kN-m/m³))
 - 2) D2922, Standard Test Method for Density of Soil and Soil-Aggregate In Place By Nuclear Methods (Shallow Depth)
 - 3) D4318, Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
 - b. American Association of State Highway and Transportation Officials (AASHTO)
 - 1) T89, Determining the Liquid Limit of Soils
 - 2) T90, Determining the Plastic Limit and Plasticity Index of Soils
 - 3) T99, Moisture-Density Relations of Soils Using a 2.5 kg (5.5 lb) Rammer and a 305-mm (12-in) Drop
 - 4) T238, Density of Soil and Soil Aggregates In Place By Nuclear Methods (Shallow Depth)
 - 2. Perform sieve analysis to develop grain size distribution curves for materials to be used for subgrade, fill under slab-on-grade, and backfills.
 - 3. Establish the moisture density relation of soils to be used as fill using the method best suited to the type of fill material.
 - 4. Determine moisture content of all fill materials before placement and advise Contractor when it is or is not suitable to achieve required compaction.
 - 5. Determine Liquid Limit in accordance with ASTM D4318 or AASHTO T89, Plastic Limit in accordance with ASTM D4318, and Plasticity Index in accordance with ASTM D4318 of all fill material.
 - 6. Perform one (1) in place density test for each 2,500 square feet (280 square yards) of existing subgrade material.
 - 7. Perform Moisture-Density curve in accordance with ASTM D698 or AASHTO T99 for one (1) type of fill material. If the original choice of material does not meet the specifications, the Contractor shall pay for additional testing.
 - 8. Perform in place density tests of each lift of compacted fill at locations adequate to evaluate the degree of compaction of all fill areas. Conduct one (1) test for each 2,500 square feet (280 square yards) of each lift of compacted fill.
 - 9. Perform testing at a frequency of one in-place density and moisture test for each 75 lineal feet or less of utility trench, with a minimum of three tests per lift
- B. Reports: Submit reports with the following information:
 - 1. Type and condition of soil at footing bottoms.
 - 2. Level of water table in the excavated areas.
 - 3. Grain size distribution of fill materials (average of three (3) tests).
 - 4. Moisture density test results.

5. In place density test results with moisture content and relative density of each layer of compacted fill. Include with in place density test results, a plan showing location of each test.
6. Notify Architect by telephone within one (1) hour of the discovery of the following conditions and follow up telephone notification with written report.
 - a. Materials used, or degree of soil compaction not meeting specified requirements.
 - b. Frost and freeze protection requirements for excavation bottoms not being complied with.
 - c. Water in excavations which is not being removed prior to work being performed in excavation.

3.3 INSPECTION OF PIPED SITE UTILITIES

- A. Laboratory representative shall observe and report on the following:
 1. Proper alignment and grade of trenches.
 2. Pipe bedding and supports.
 3. Pipe, joints, jointing material, and thrust blocks prior to installation of pipe.
 4. Installation of pipe and joints.
 5. Testing of piped utilities performed by Contractor.

3.4 PAVING

- A. Testing Services:
 1. Perform field tests for moisture density properties:
 - a. Provide field testing of the sub-grade as described in Paragraph 3.2, A, above.
 - b. Paving sub-base, provide one (1) field test for every 5,000 square feet of area of crushed limestone or caliche sub-base, if any.
 - c. Lime treated sub-grade, provide one (1) field test for every 5,000 square feet of area of lime treated sub-grade, if any, for content of lime and sub-grade compaction.
 - d. Cement soil stabilization, if any, provide one (1) field test for every 5,000 square feet of area of cement stabilized sub-grade for content of cement and sub-grade compaction.

3.5 PIER DRILLING OPERATION

- A. A representative of a qualified geotechnical laboratory shall provide services herein specified.
- B. Laboratory representative shall make continuous inspections to determine that proper bearing stratum is obtained and utilized for bearing and that shafts are properly clean and dry before placing concrete.
- C. Laboratory shall furnish complete pier log showing the diameter, top and bottom elevations of each pier, casing required or not required, actual penetration into bearing stratum, elevation of top of bearing stratum, volume of concrete used, and deviations from specified tolerances.
- D. Laboratory representative shall make continuous inspections of drilled pier construction to check the following:
 1. Verify soundness of bearing stratum and desired penetration.
 2. Verify pier dimensions and reinforcing used.

3. Monitor condition of hole and removal of water and loose material from bottom.
 4. Monitor placement of concrete and use of tremie or pumps.
 5. Monitor the extraction of casing, if used.
- E. Request probe holes when deemed necessary to confirm safe bearing capacity.

3.6 CONCRETE REINFORCING STEEL AND EMBEDDED METAL ASSEMBLIES

- A. Inspect all concrete reinforcing steel prior to placing concrete for compliance with Contract Documents and approved shop drawings. All instances of noncompliance with Contract Documents and approved shop drawings shall be immediately brought to the attention of the Contractor for correction and then, if uncorrected, reported to the Architect.
- B. Laboratory representative shall observe and report on the following:
1. Number and size of bars.
 2. Bending and lengths of bars.
 3. Splicing.
 4. Clearance to forms, including chair heights.
 5. Clearance to sides and bottom of trench if soil formed.
 6. Clearance between bars or spacing.
 7. Rust, form oil, and other contamination.
 8. Grade of steel.
 9. Securing, tying, and chairing of bars.
 10. Excessive congestion of reinforcing steel.
 11. Installation of anchor bolts and placement of concrete around such bolts.
 12. Fabrication and installation of embedded metal assemblies, including visual inspection of all welds.
 13. Visually inspect studs and deformed bar anchors on embedded assemblies for compliance with Contract Documents. Check number, spacing and weld quality. If, after welding, visual inspection reveals that a sound weld or a full 360 degree fillet has not been obtained for a particular stud or bar, such stud or bar shall be struck with a hammer and bent 15 degrees off perpendicular and then bent back into position. Anchors failing this test shall be replaced.
- C. Provide a qualified, experienced inspector to inspect reinforcing steel. Inspector shall have a minimum of three (3) years experience inspecting reinforcing steel in projects of similar size.

3.7 CONCRETE INSPECTION AND TESTING

- A. Receive and evaluate all proposed concrete mix designs submitted by Contractor. If mix designs comply with Drawings and Specifications, the laboratory shall submit a letter to the Architect certifying compliance. Mix designs not complying with Drawings and Specifications shall be returned by the laboratory as being unacceptable. Check the proposed mixes for proportions, water cement ratio and slump in accordance with ACI 613 and 318.
- B. Comply with ACI 311, "Guide For Concrete Inspection" and ACI "Manual of Concrete Inspection" (SP-2).
- C. Sample and test concrete placed at the job site in accordance with ASTM C172. Each sample shall be obtained from a different batch of concrete on a random basis.

- D. All concrete shall be tested as follows:
 - 1. Mold and cure four (5) specimens from each sample.
 - a. for each 50 cubic yards or fraction thereof of structural building concrete; and
 - b. for each 100 cubic yards or fraction thereof of non-structural concrete and site work paving and sidewalks.
 - c. Laboratory cure two (2) cylinders in accordance with ASTM C192.
 - d. Field cure remaining cylinders in accordance with ASTM C31.
 - 2. TWO (2) specimens shall be tested at seven (7) days for information, two (2) shall be tested at 28 days for acceptance, and
 - 3. Store one (1) cylinder for testing at 56 days in the event the 28 days strength tests do not meet strength requirements.
- E. All deviations from the requirements of ASTM Specifications shall be recorded in the test report. Test concrete specimens in accordance with ASTM C39.
- F. Specimens for pumped concrete shall be taken at the discharge end of pumping equipment.
- G. Supervise curing and protection provided for test specimens in field, and transportation from the field to laboratory. Test cylinders shall be stored in the field 24 hours and then carefully transported to laboratory and cured in accordance with ASTM C31.
- H. Make one (1) strength test (four (4) cylinders) of each mix design of concrete placed in any one (1) day.
- I. Make one (1) slump test for each set of cylinders following procedural requirements of ASTM C143 and ASTM C172. Make additional slump tests whenever consistency of concrete appears to vary. Slump tests corresponding to samples from which strength tests are made shall be reported with strength test results. Other slump tests need not be reported.
- J. Determine total air content of air entrained normal-weight concrete sample for each strength test in accordance with ASTM C231.
- K. Determine air content and unit weight of lightweight concrete sample for each strength test in accordance with ASTM C173 and ASTM C567.
- L. Determine temperature of concrete sample for each strength test.
- M. Inspect each batch of concrete, monitor addition of mixing water to assure uniform consistency from truck to truck. Check mixing form mixers before mix begins to set and within time limits set forth in ASTM C94.
 - 1. Monitor addition of water and high-range water reducer to concrete at job site and length of time concrete is allowed to remain in truck during placement.
- N. Testing agency shall furnish and maintain a competent inspector at the mixing plant at the start of each day's mixing. Inspector shall examine concrete materials for compliance with Specifications and approved mix design, weighing and measuring devices, proportioning and mixing of materials, water and cement content of each batch, general operation of the plant, and transportation of concrete to jobsite. Inspector shall verify that amount of free surface moisture contained in fine and course aggregate has been properly accounted for in the concrete mixing to achieve required consistency and water cement ratio.

- O. Testing laboratory shall monitor addition of water to concrete at the jobsite and the length of time concrete is allowed to remain in the truck before placement. Inspector shall compare mixture with criteria on the approved mix design and report any significant deviation to the Architect, Contractor and concrete supplier. Do not permit addition of water which will exceed maximum water/cement ratio for the mix as given on the approved mix design.
- P. Observe placing of all concrete, except non-structural slabs-on-grade and site work. Observe and report on placing method, consolidation, cold joints, length of drop, and displacement of reinforcement. Report deficiencies to Contractor immediately for corrective action. Inspections may be reduced to a periodic basis when all procedures have been deemed satisfactory by the laboratory.
- Q. Test reports shall include but not be limited to the following information: date of concrete placement, concrete mix identification number or proportion of ingredients, truck ticket number, time test was made, time of batching, location of each placement, slump, unit weight, water content (microwave test) and air content of concrete sampled and date and results of strength test.
- R. Report promptly to Architect all details of reasons for rejection of any and all quantities of concrete. Give all information concerning locations of the concrete pours, quantities, date of pours, and other pertinent facts concerning concrete represented by the specimens.
- S. Testing laboratory shall certify each delivery ticket indicating class of concrete delivered (or placed), amount of water added and time at which cement and aggregate were dispensed into the truck, and time at which concrete was discharged from the truck.
- T. Evaluation and Acceptance:
 - 1. If measured slump, or air content of air entrained concrete, falls outside specified limits, a check test shall be made immediately on another portion of the same sample. In the event of a second failure, concrete shall be considered to have failed to meet the requirements of the specifications, and shall not be used in the structure.
 - 2. Strength level of concrete will be considered satisfactory if the averages of all sets of three (3) consecutive strength tests results are equal to, or exceed, specified strength and no individual test result (average of two (2) cylinders) is below specified strength by more than 500 psi.
 - 3. Completed concrete work will be accepted when requirements of "Specifications for Structural Concrete for Buildings", ACI 301, Chapter 18, have been met.
- U. Concrete Test Reports:
 - 1. Reports shall be made and distributed immediately after respective tests or inspections are made.
 - 2. Where reports indicate deviations from Contract Documents, they shall also include a determination of the probable cause of deviation and where applicable, a recommendation for corrective action.
- V. Furnish a statistical analysis for each class of concrete placed on the project in accordance with ACI 214 and ACI 318. Information shall be updated and distributed once a month as directed by the Architect. Information shall include, but not be limited to, the following:
 - 1. Strength tests at seven (7) days.
 - 2. Strength tests at 28 days of two (2) cylinder averages.
 - 3. 28-day moving average strength tests of last three (3) test groups.

4. Standard deviation and coefficient of variation based on 28 day strength tests.
 5. Average strength and number of 28 days tests for most recent month.
 6. Strength test one (1) cylinder at 56 days in the event the 28 days strength tests do not meet strength requirements.
- W. Test Footings (Shafts) (Piers) (Caissons): Same diameter and type as specified for other footings, placed in same manner. Accepted test footings may be used in the Work.
- X. Non-Compliant Test Reports: All test reports indicating non-compliance should be faxed immediately to all parties on the test report distribution list. Copies shall be on different colored paper.
- Y. Inspect application of curing compound and monitor all curing conditions to assure compliance with specification requirements. Report curing deficiencies to the Contractor immediately and submit a written report to the Architect.

3.8 TESTING OF NON-SHRINK GROUT

- A. Make one (1) strength test for all plates grouted and for all grout used in joints between members.
- B. Each test shall consist of four (4) cubes, two (2) to be tested at seven (7) days and two (2) at 28 days, made and tested in accordance with ASTM C109, with the exception that grout shall be restrained from expansion by a top plate.

3.9 STRUCTURAL STEEL

- A. Inspect structural steel during and after erection for conformance with Contract Documents and shop drawings. Review and report on fabricator's quality control procedures and capabilities.
- B. Field Inspection:
1. Proper erection of all pieces.
 2. Proper touch up painting of all shop primed structural steel exposed to view or in a crawl space.
 3. Proper installation of all bolts.
 4. Plumbness of structure and proper bracing.
 5. Proper field painting.
 6. Initial inspection of welding process and periodically thereafter, as necessary.
 7. Visual examination of all completed welds.
 8. Ultrasonic testing of all penetration field welds.
 9. Installation of field welded shear studs.
 10. Inspect all shop fabricated members, upon their arrival at the jobsite, for defects incurred during transit and handling.
 11. Measure and record camber of all beams upon arrival and before erection for compliance with specified camber. Measure lying flat with web horizontal. Members outside specified camber tolerance shall be returned to shop for correction.
- C. Qualifications of Welders: Fabricator and erector shall provide the testing laboratory with names of welders to be employed on work, along with certification that each welder has passed qualification tests within the last 12 months, using procedures covered in AWS D1.1, "Structural Welding Code - Steel", latest edition. Verify all welder qualifications.
- D. Inspection of field welding shall include the following:

1. Visually inspect fillet welds for size, soundness, and proper return around ends. Check for seams, folds, and delaminations.
 2. Visually inspect all welds for proper repair of painting.
 3. Ultrasonically test all penetration welds in accordance with ASTM E164.
 4. Inspect surfaces to be welded. Surface preparations, fit-up and cleanliness of surface shall be noted. Electrodes shall be checked for size, type and condition.
 5. Welding inspector shall be present during alignment and fit-up of members being welded, and shall check for correct surface preparation of root openings, sound weld metal, and proper penetration in the root pass. Where weld has not penetrated completely, inspector shall order the joint to be chipped down to sound metal, or gouged out, and re-welded. Root passes shall be thoroughly inspected for cracks. All cracks shall be gouged out and re-welded to two (2) inches beyond each end of crack.
 6. Inspector shall check that all welds have been marked with welder's symbol and shall mark welds requiring repairs and shall make a re-inspection. Inspector shall maintain a written record of all welds. Work completed and inspected shall receive an identification mark by the inspector. Unacceptable material and work shall be identified by word "reject" or "repair" marked directly on the material.
 7. Testing agency shall advise the Owner and Architect of any shop and/or field conditions which, in his opinion, may require further tests and examination by means other than those specified. Such further tests and examinations shall be performed as authorized by the Owner and Architect.
 8. Owner reserves the right to use ultrasonic or radiographic inspection to verify adequacy of all welds. Testing procedures and acceptance criteria shall be as specified in AWS D1.1.
 9. Weld quality to comply with the American Institute of Steel Construction Manual of Steel Construction.
 10. Percentage of weld tested will be determined by the number of welds that fail the initial testing.
 11. All welds that fail shall be re-welded and re-tested until they pass. Test two (2) additional welds for every weld failure at the Contractor's expense.
- E. Inspection of bolted construction shall be in accordance with AISC "Specification for Structural Steel Buildings" as follows:
1. All bolts shall be visually inspected to ensure that plies have been brought into snug contact.
 2. High strength bolting shall be inspected in accordance with Section 9 of the "Specifications for Structural Joints Using ASTM A325 or A490 Bolts".
- F. Inspection of stud welding shall be in accordance with Section 7.8, of the AWS D1.1, Structural Welding Code, and as follows:
1. Minimum of two (2) shear studs shall be welded at the start of each production period in order to determine proper generator, control unit and stud welder setting. These studs shall be capable of being bent 45 degrees from vertical without weld failure.
 2. When temperature is below 32 degrees F, one (1) stud in each 100 shall be tested after cooling. Studs shall not be welded below 0 degrees F or when surface is wet with rain or snow. If stud fails in the weld, two (2) new studs shall pass the test before resumption of welding.
 3. Visually inspect studs for compliance with Contract Documents. Check, number, spacing, and weld quality. If, after welding, visual inspection reveals that a sound weld or a full 360 degree fillet has not been obtained for a particular stud, such stud shall be struck with a hammer and bent 15 degrees off perpendicular in the

direction away from the missing weld. Studs failing under this test shall be replaced.

3.10 REINFORCING STEEL MECHANICAL SPLICES

- A. Inspection and Observation Services:
 - 1. Visually inspect and report on the completed condition of each mechanical splice of reinforcing steel.
 - 2. Each mechanical splice shall be visually inspected to ensure compliance with the I.C.B.O. Reports and the manufacturer's published criteria for acceptable completed splices.
 - 3. Special emphasis shall be placed on inspection of the end preparation of each bar to be spliced, as required by the I.C.B.O. Report.
- B. Reports: Submit reports to Architect with the following information:
 - 1. Submit copies of manufacturer's published criteria for acceptable completed splices prior to observing mechanical splices.
 - 2. Reports on each mechanical splice shall indicate location of the splice, size of bars spliced, and acceptability or rejection of splice. Reasons for rejection shall be shown on each report.

3.11 OPEN WEB JOISTS AND JOIST GIRDERS

- A. Inspect all joists at jobsite for conformance with specified fabrication requirements. Check welded connections between web and chord, splices, and straightness of members.
- B. Inspect installation of joists at jobsite. Check connections to supporting members, chord extensions, number of rows of bridging, and bridging connections for conformance with Contract Documents and referenced standards.
- C. Check welder qualification certificates for both shop and field welding operators.

3.12 METAL FLOOR DECK

- A. Field inspection shall consist of the following:
 - 1. Checking types, gauges and finishes for conformance with Contract Documents and shop drawings.
 - 2. Examination of composite floor deck exposed to crawl space, for damage to galvanizing due to welding or other construction activities. Galvanized composite floor deck shall be repaired in accordance with these specifications.
 - 3. Examination for proper erection of all metal deck, fastenings, reinforcing of holes, deck reinforcing, miscellaneous deck supports, hanger tabs, shear studs, deck closures, painting or other coating.
 - 4. Certification of welders.
 - 5. Field welded shear studs used to fasten metal floor decking to supporting steel shall be inspected and tested as described in the paragraph addressing structural steel.

3.13 METAL ROOF DECK

- A. Field inspection shall consist of the following:
 - 1. Checking types, gauges and finishes for conformance with Contract Documents and shop drawings.

2. Examination for proper erection of all metal deck, including fastenings at supports and side laps, reinforcing of holes, and miscellaneous deck supports.
3. Certification of welders.
4. Visual inspection of at least 25 (twenty-five) percent of all welds.

3.14 SPRAYED FIREPROOFING

- A. Verify that applied thickness, density, and bond strength of sprayed fireproofing meets fire rating requirements of approved design.
- B. Verify that installation meets fire rating requirements of approved design.
- C. Inspect and test for thickness as follows:
 1. Test twenty-five (25) percent of structural frame columns and beams in each building level.
 2. Test ten (10) percent of beams other than structural frame in each building level.
 3. Test one (1) slab per 5,000 square feet of building area.
- D. Inspection and test procedures in accordance with ASTM E605 and E736.

3.15 EXPANSION BOLT INSTALLATION

- A. Inspect drilling of each hole and installation of each expansion bolt for conformance with Contract Documents and shop drawings.
- B. Verify installation torque for each expansion bolt for compliance with manufacturer's installation instructions.

3.16 LIGHTWEIGHT INSULATING CONCRETE FILL

- A. Inspection and Observation Services (As required):
 1. Inspection of roof deck prior to start of work.
 2. Inspection during installation of insulation and lightweight insulating concrete fill work to ascertain compliance with Contract Documents.
 3. Observation of base ply fastener pull tests performed by Contractor to ascertain minimum withdrawal resistance of 40 pounds per fastener.
- B. Testing Services (As required):
 1. References (As applicable for tests required):
 - a. American Society for Testing and Materials (ASTM)
 - 1) C177, Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties By Means of the Guarded-Hot-Plate Apparatus
 - 2) C495, Test Method for Compressive Strength of Lightweight Insulating Concrete
 - 3) C578, Specification for Rigid, Cellular Polystyrene Thermal Insulation
 2. Test EPS insulation board for thermal insulation value in accordance with ASTM C177.
 3. Test lightweight insulating concrete fill in accordance with ASTM C495 for:
 - a. Mix design compressive strength.
 - b. Mix design wet and dry density range.
 - c. Number of Tests:
 - 1) One (1) per 5,000 square feet

- 2) Not less than one (1) for each day's work
4. Test EPS insulation board for density in accordance with ASTM C578.

3.17 TESTING OF ROOFING

- A. Inspection and Observation Services (As required):
 1. Inspection of roof deck prior to start of work.
 2. Inspect on-site condition of stored roofing materials.
 3. Inspection during roofing, roof insulation, and sheet metal work to ascertain compliance with Contract Documents.
 4. Observation of roof test cuts performed by Contractor to ascertain that they are properly made.
 5. Observation of patching of roof test cuts to ascertain that they are properly made.
- B. Testing Services (As required):
 1. Perform dissection and analysis on cuts provided by Contractor to confirm number of plies, bonding of plies, weight of bitumen and softening temperature to ascertain compliance with specifications.

3.18 MASONRY

- A. Inspection and Observation Services:
 1. Inspection of placement of reinforcement including condition, grade, size, location, spacing, and lap splices.
 2. Review mortar design mixes.
 3. Inspection of laying, mortaring, and grouting of concrete masonry units and elements.
- B. Testing Services:
 1. References (As applicable for tests required):
 - a. ASTM International (ASTM)
 - 1) C140, Standard Test Methods of Sampling and Testing Concrete Masonry Units
 - 2) C780, Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry
 - 3) C1019, Standard Test Method for Sampling and Testing Grout
 - 4) E447-97, Standard Test Methods for Compressive Strength of Laboratory Constructed Masonry Prisms
 2. Testing of Concrete Masonry Units (CMU):
 - a. Preconstruction: Perform the following tests in accordance with ASTM C140.
 - 1) Compressive Strength
 - 2) Absorption
 - 3) Weight
 - 4) Moisture Content
 - 5) Dimensions
 3. Mortar Tests:
 - a. Preconstruction: Perform the following tests in accordance with ASTM C780 on each type of mortar mix used on the Project.
 - 1) 28 Day Compressive Strength
 - 2) Water Retention

- b. Construction: Perform 28 day compressive strength test in accordance with ASTM C780 on each type of mortar mix used on the Project at the rate of one (1) test per 2,000 square feet of masonry.
- 4. Refer to and include work for reinforcing steel specified in Paragraphs 3.5 and 3.6 above.
- 5. Grout Tests:
 - a. Preconstruction: Perform the following tests in accordance with ASTM C1019 on each type of grout mix used on the Project.
 - 1) Slump Test
 - 2) 28 Day Compressive Strength
 - 3) Construction: Perform 28 day compressive strength test in accordance with ASTM C1019 on each type of grout mix used on the Project at the rate of one (1) test per 2,000 square feet of masonry.
 - 4) Prism Test: Perform preconstruction 28 day compressive strength test on concrete masonry walls in accordance with ASTM E447-97, Method B.

END OF SECTION 01 45 23

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. Specific administrative and procedural minimum actions are specified in this Section, as extensions of provisions in other Contract Documents. These requirements have been included for special purposes as indicated. Nothing in this Section is intended to limit types and amounts of temporary work required, and no omission from this Section will be recognized as an indication that such temporary activity is not required for successful completion of the Work and compliance with requirements of the Contract Documents. Provisions of this Section are applicable to, but are not limited to the temporary power, temporary water, temporary heat, field office, mobile telephone, sanitary facilities, storage facilities, signs, barriers, security, construction fence, cleaning, first aid facilities, fire protection, construction aids, parking facilities, storm water control and pollution prevention plan, as further expanded in this Section.

1.2 JOB CONDITIONS

- A. General: Establish and initiate use of each temporary facility at time first reasonably required for proper performance of the Work. Terminate use and remove facilities at earliest reasonable time, when no longer required or when permanent facilities have, with authorized use, replaced their need.
- B. Conditions of Use:
 - 1. Install, operate, maintain and protect temporary facilities in a manner and at locations which will be safe, non-hazardous, sanitary, and protective of persons and property, and free of deleterious effects.
 - 2. Be responsible for overloading or excess use of or damage resulting from the overloading or excess use of existing utilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Materials, not specifically described herein, but required for proper completion of Work of this Section, may be new or used as selected by the Contractor, but shall be of design, type, size, and strength recommended to suit intended purpose.
- B. Items required to protect the tenants, workmen, and public from danger, shall be sufficiently designed to protect them. Where required, exclude the public from all hazards.

PART 3 - EXECUTION

3.1 UTILITIES

- A. Temporary Power: Provide temporary power and all wiring, lamps, distribution of power, and equipment required for construction, inspection and testing of Work.
- B. Temporary Water: Provide temporary water and all hoses and equipment required for construction, inspection and testing of Work.
- C. Temporary Climate Control: Provide temporary climate control (heating, cooling and humidity control) required for construction of Work.

1. Provide heat to prevent freezing and to avoid damage to materials in storage, during and after installation, and during curing and drying of materials and finishes. Provide and maintain such dependable source of supply of heat, cooling, and humidity control as necessary until the Work is accepted. No open fire heaters will be permitted. No mold, mildew, rust, or sagging materials due to humidity will be allowed. Contractor shall remediate any and all evidence of mold, mildew, or rust per applicable state standards and requirements.

3.2 FIELD OFFICE

- A. Furnish a job trailer installed at a suitable location on site for use by the Contractor and the Architect.
- B. Provide and maintain a weather tight building with operable and lockable door and windows, to serve as a job office available to the Contractor, subcontractors, and the Owner and Architect. Provide lights, electricity, air conditioning and heat, as required. Remove office from premises when one can be set up inside the building. Provide job telephone and other miscellaneous items as outlined below.
 1. Provide a separate locked room to serve as an office for the Owner and Architect, of an area of 100 SF, or provide in a separate building in close proximity to Contractor's office.
 2. Contractor's office shall be of a size, and furnished, so that it may be used for small progress meetings.
 3. Provide adequate artificial lighting, heating and cooling to provide comfortable conditions for occupants.
 4. Provide direct line telephone service, for both voice communication and facsimile machines at Contractor's office and Owner/Architect's office.
 5. Provide high speed wireless internet access (provide access to the Owner and Architect); DSL or broadband. Dial-up connection is not acceptable.
 6. Maintain a complete set of Construction Documents, Submittals, Record Documents, and other pertinent information for Contractor, Architect, Engineer, and Owner use.
 7. Furnishings Required:
 - a. For Contractor's office: Racks and files for Contract Documents and for Record Documents; conference table and chairs; and desks and chairs as required by Contractor.
 - b. For Owner/Architect's office: One four (4) drawer metal file cabinet, one lay-out drafting table 36 inch by 72 inch by 36 inch high; and drafting stool. Provide one drawing rack for 30 inch by 42 inch drawings. The Contractor will pay the monthly phone charges for all calls and base service charges for phone lines and fax lines that are brought into the Owner/Architect office. Provide the Owner and Architect with a key to the Owner/Architect office only.

3.3 MOBILE TELEPHONE

- A. Furnish and maintain a mobile telephone for his superintendent's use for the duration of the Project.

3.4 SANITARY FACILITIES

- A. Furnish and maintain temporary sanitary facilities. Comply with regulations of State Department of Health and other authorities having jurisdiction. The Contractor may not use the Owner's facilities.

3.5 STORAGE FACILITIES

- A. Provide and maintain adequate weathertight lockable storage facilities, raised above the ground, with sides and top enclosed.

- B. Replace materials improperly stored and damaged by weathered conditions.
- C. Remove storage facilities when materials can be stored within the structure in a weathertight condition.
- D. Provide for temporary freeze protection as needed.

3.6 SIGNS

- A. Furnish and install a project sign 6'-0" by 8'-0" in size. Image will be provided to the graphics printing company by the Architect after Award of Contract. Contractor will be responsible for the cost of printing the image, mounting the sign on an aluminum substrate and installing the sign at the site. The sign will include the name of the project, District, name and title of Board of Trustees, District Superintendent, Contractor, Architect, and each of the project consultants.
- B. Other signs permitted at the site:
 - 1. Warning signs.
 - 2. Directional signs.
 - 3. Identification signs at field offices.
 - 4. Emergency medical services sign.
 - 5. Signs required by Authorities Having Jurisdiction
 - 6. Storm Water Pollution Prevention Plan sign (SWPPP)
- C. Contractor shall allow no other signs to be displayed at the project site, unless authorized by the Owner.

3.7 BARRIERS

- A. Provide temporary barricades on all portions of the site adjacent to the construction and accessible to the public.

3.8 TREE AND PLANT PROTECTION

- A. Locate and clearly flag existing trees, shrubs and other vegetation designated to remain or to be relocated. Protect and maintain in healthy condition.
- B. Provide approved barriers around trees and plants designated to remain to protect against vehicular traffic, stored materials, dumping, chemically injurious materials, water puddling, and continuous running water.
- C. Tree and Plant Protection: Install temporary fencing or other barriers located as indicated, or if not indicated, outside the drip line of trees, to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- D. Restoration and Replacement:
 - 1. Restore damaged vegetation to a condition as good as or better than its condition at commencement of operations under this Contract.
 - 2. Employ a licensed arborist to repair tree and shrub damage.
 - 3. Replace damaged trees that cannot be restored to full growth, as determined by arborist.

3.9 SECURITY

- A. Determine if and when watchmen are necessary for protection of the Work, and provide such services when necessary. Neither the provision of watchmen nor the failure to provide watchmen shall relieve the Contractor of responsibility in event of injury to persons or damage to property.

3.10 CONSTRUCTION FENCE

- A. Provide a minimum 6 feet-0 inch high chain link construction fence around the perimeter of the construction area for the duration of the construction period. Said temporary construction fence shall have lockable access gates necessary to adequately access the site in order to execute the project. Access gates shall be locked at the completion of each day's work.

3.11 CLEANING

- A. Trash removal: Clear the building and site of trash at least once a week. When rapid accumulation occurs, make more frequent removals. Remove highly combustible trash such as paper and cardboard daily. Dumpsters will not be allowed to overflow and should be emptied on a regular basis.
- B. Disposition of Debris: Remove debris from site and make legal disposition. Locations for disposal shall be of the Contractor's choice within the above restriction. Neither debris nor material may be buried or burned at the site. Take necessary precautions to prevent accidental burning of materials by avoiding large accumulations of combustible materials.
- C. Final Cleaning: Thoroughly clean the Work, including the removal of smudges, marks, stains, fingerprints, soil, dirt, paint spots, dust, lint, discolorations, and other foreign materials.

3.12 TEMPORARY FIRST AID FACILITIES

- A. Provide first aid equipment and supplies, with qualified personnel continuously available to render first aid at the site.
- B. Provide a sign, posted at the field office telephone, listing the telephone numbers for emergency medical services: Physicians, ambulance services and hospitals.

3.13 TEMPORARY FIRE PROTECTION

- A. Provide a fire protection and prevention program for employees and personnel at the site; and provide and maintain fire extinguishing equipment ready for instant use at all areas of the Project and at specific areas of critical fire hazard.
- B. Equipment:
 - 1. Hand extinguishers of the types and sizes recommended by the National Board of Fire Underwriters to control fires from particular hazards.
 - 2. Barrels of water with buckets designated for fire-control purposes.
 - 3. Water hoses connected to an adequate water pressure and supply system.
 - 4. Construction period use of permanent fire protection system.
- C. Enforce fire-safety discipline:
 - 1. Store volatile materials in an isolated, protected location.
 - 2. Avoid accumulations of flammable debris and waste in or about the Project.
 - 3. Prohibit smoking in the vicinity of hazardous conditions.
 - 4. Closely supervise and provide fire watches as required by authorities having jurisdiction during and after welding and torch-cutting operations in the vicinity of combustible materials and volatile conditions.
 - 5. Supervise locations and operations of portable heating units and fuel.
- D. Contractor shall maintain fire-extinguishing equipment in working condition, with current inspection certificate attached to each extinguisher.

3.14 CONSTRUCTION AIDS

Provide construction aids and equipment required to assure safety for personnel and to facilitate the execution of the Work; Scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other equipment.

- A. Maintain all equipment in a first-class, safe condition.

3.15 PARKING FACILITIES

Coordinate location of parking for personnel and employees at the facility to avoid interference with traffic, walks, work and storage areas, or with materials-handling equipment.

- A. Grade and provide drainage facilities to assure runoff of rainwater and to avoid blockage of flow from adjacent areas.

3.16 STORM WATER CONTROL & POLLUTION PREVENTION PLAN (If Required)

- A. Grade and provide drainage facilities to assure runoff of rainwater and to avoid blockage of flow from adjacent areas. Refer to Civil Drawings for additional requirements.
- B. Provide and maintain a Storm Water Pollution Prevention Plan in accordance with Federal EPA requirements.
- C. File an EPA "Notice of Intent" Form with the EPA before construction begins.

END OF SECTION 01 50 00

SECTION 01 60 00 - PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- B. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.
 - 1. Show compliance with requirements for comparable product requests.
 - 2. Architect will review the proposed product and notify Contractor of its acceptance or rejection.
- C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.
- D. Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.
- E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
 - 4. Store materials in a manner that will not endanger Project structure.
 - 5. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
- F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. Provide products that comply with the Contract Documents, are undamaged, and, unless otherwise indicated, are new at the time of installation.
 - 1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
 - 2. Where products are accompanied by the term "as selected," Architect will make selection.
 - 3. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:
 - 1. Products:
 - a. Where requirements include "one of the following," provide one of the products

- listed that complies with requirements.
- b. Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.
- 2. Manufacturers:
 - a. Where requirements include "one of the following," provide a product that complies with requirements by one of the listed manufacturers.
 - b. Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.
 - 3. Basis-of-Design Product: Provide the product named, or indicated on the Drawings, or a comparable product by one of the listed manufacturers.
- C. Where Specifications require "match Architect's sample," provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
- D. Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Architect will consider Contractor's request for comparable product when the following conditions are satisfied:
- 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 - 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications.
 - 3. List of similar installations for completed projects, if requested.
 - 4. Samples, if requested.

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 60 00

SECTION 01 73 29- CUTTING AND PATCHING

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. Definition: "Cutting and Patching" includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and patching required to restore surfaces to their original undamaged condition, including original fire rating of fire rated construction.
 - 1. Cutting and patching is performed for coordination of the work for access or inspection, to obtain samples for testing, as indicated or required, to remove/replace defective work or work not conforming to the contract documents, to permit alterations to be performed, or for other similar purposes.
 - 2. Cutting and patching performed during the manufacture of products or during the initial fabrication, erection, or installation processes is not considered to be "cutting and patching" under this definition. Drilling of holes to install fasteners and similar operations are also not considered to be "cutting and patching".
- B. Refer to other Sections of these Specifications for specific cutting and patching requirements and limitations applicable to individual units of work.
 - 1. Unless otherwise specified, requirements of this Section also apply to mechanical and electrical work.

1.2 QUALITY ASSURANCE

- A. Visual requirements - Do not cut and patch work exposed on the building's exterior or in its occupied spaces, in a manner that would, in the Architect's opinion, result in lessening the building's aesthetic qualities. Do not cut and patch work in a manner that would result in substantial visual evidence of cut and patchwork. Remove and repair or replace work judged by the Architect to be cut and patched in a visually unsatisfactory manner

1.3 RELATED WORK

- A. All Sections of Work requiring cutting and patching, including electrical requirements.

1.4 SUBMITTALS

- A. Procedural Proposal for Cutting and Patching - Where prior approval of cutting and patching is required, submit proposed procedures for this work well in advance of the time work will be performed and request approval to proceed. Include the following information, as applicable, in the submittal.
 - 1. Describe nature of the work and how it is to be performed, indicating why cutting and patching cannot be avoided. Describe anticipated results of the work in terms of changes to existing work, including structural, operational, and visual changes as well as other significant elements.
 - 2. List products to be used and firms including their qualifications that will perform the work. Also, provide cost proposals when applicable.
 - 3. Give dates when work is expected to be performed.
 - 4. List utilities that will be disturbed or otherwise be affected by work, including those that will be relocated and those that will be disconnected or out-of service temporarily. Indicate how long utility service will be disrupted.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General - Except as otherwise indicated or as directed by Architect, use materials for cutting and patching that are identical to materials being cut and patched. If identical materials are not available, or cannot be used, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials for cutting and patching that will result in equal or better performance characteristics.
 - 1. The use of trade name and supplier's name and address is to indicate a possible source of the material or product. Product of the same type from other sources shall not be excluded provided they possess like physical and functional characteristics, except where specified as no substitutions allowed or where a material or product is specified as the basis of specification and no other approved manufacturers are listed.
 - 2. Use materials, products, and devices to maintain integrity of fire rating of existing fire rated construction which comply with the requirements of authorities having jurisdiction.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Before starting work, examine the surfaces to be cut and patched and the conditions under which the work is to be performed. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding with the work.
 - 1. Before the start of cutting work, meet at the work site with all parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict between the various trades. Coordinate layout of the work and resolve potential conflicts before proceeding with the work.
 - 2. After uncovering work, examine conditions affecting installation of product or performance of work.
 - 3. Report unsatisfactory or questionable conditions to Architect in writing; do not proceed with work until Architect has provided further instructions.

3.2 PREPARATION

- A. Provide temporary support to prevent failure of the work to be cut.
- B. Protect other work during cutting and patching to prevent damage. Provide protection from adverse weather conditions of that part of the Project that may be exposed during cutting and patching operations.
- C. Take precautions not to cut existing pipe, conduit, ducts, or wires serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

- A. General - Employ only skilled workmen to perform the cutting and patching work. Except as otherwise indicated or as approved by Architect, proceed with cutting and patching at the earliest feasible time and complete the work without delay.
- B. Cut the work using methods that are least likely to damage work to be retained or adjoining work. Where possible, review proposed cutting and patching procedures with the original installer and comply with original installer's recommendations.
 - 1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut through concrete and masonry using a cutting machine such as a Carborundum saw or core drill to insure a neat hole. Cut holes

- and slots neatly to size required with minimum disturbance of adjacent work. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces. Temporarily cover openings when not in use.
2. Comply with requirements of other applicable sections where cutting and patching requires excavating and backfilling.
 3. By-pass utility services such as pipe and conduit, before cutting, where such utility services are shown or required to be removed, relocated, or abandoned. Cut-off conduit and pipe in walls or partitions to be removed. After by-passing and cutting, cap, valve, or plug and seal tight remaining portion of conduit and pipe to prevent entrance of moisture, vermin, or other foreign matter.
- C. Patching - Patch with seams which are durable and as invisible as possible. Comply with specified tolerance, if any, for the work.
1. Where feasible, inspect and test patched areas to demonstrate integrity of work.
 1. Restore exposed finishes of patched areas and where necessary extend finish restoration into retained adjoining work in a manner which will eliminate evidence of patching and refinishing.
 2. Where removal of walls or partitions extends one finished area into another finished area, patch and repair floor, wall, and ceiling surfaces in the new space to provide an even surface of uniform color and appearance. If necessary to achieve uniform color and appearance, remove existing floor and wall coverings or materials, and ceiling finish materials and replace with new materials.
 - a. Where patch occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coats.
 3. Patch, repair, or re-hang existing ceilings as necessary to provide an even plane surface of uniform appearance.
 4. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through non-fire-rated floors and walls, and through finished surfaces.
- D. Fire Rated Construction - Where cutting and patching is necessary in existing fire rated construction, use sealant and other fire resistive materials, products, and devices as required and acceptable by the authorities having jurisdiction to repair, patch, and otherwise restore original fire rating and integrity of construction.

3.4 CLEANING

- A. Thoroughly clean area and spaces where work is performed or used as access to work. Remove completely: paint, mortar, cement, oils, putty, sealant, and items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finishes are applied. Restore damaged pipe covering to its original undamaged condition.

END OF SECTION 01 73 29

SECTION 01 74 19 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.
- B. Related Sections include the following:
 - 1. Division 01 Section "Temporary Facilities and Controls" for environmental-protection measures during construction.
 - 2. Division 02 Section "Structure Demolition" for disposition of waste resulting from demolition of buildings, structures, and site improvements.
 - 3. Division 02 Section "Selective Structure Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements.
 - 4. Division 04 Section "Unit Masonry" for disposal requirements for masonry waste.
Division 04 Section "Unit Masonry" for disposal requirements for excess stone and stone waste.
 - 5. Division 31 Section "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 PERFORMANCE REQUIREMENTS

- A. Salvage/Recycle Requirements: Owner's goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible including the following materials:
 - 1. Demolition Waste:
 - a. Asphaltic concrete paving.
 - b. Concrete.
 - c. Concrete reinforcing steel.

- d. Brick.
- e. Concrete masonry units.
- f. Wood studs.
- g. Wood joists.
- h. Plywood and oriented strand board.
- i. Wood paneling.
- j. Wood trim.
- k. Structural and miscellaneous steel.
- l. Rough hardware.
- m. Roofing.
- n. Insulation.
- o. Doors and frames.
- p. Door hardware.
- q. Windows.
- r. Glazing.
- s. Metal studs.
- t. Gypsum board.
- u. Acoustical tile and panels.
- v. Carpet.
- w. Carpet pad.
- x. Demountable partitions.
- y. Equipment.
- z. Cabinets.
- aa. Plumbing fixtures.
- bb. Piping.
- cc. Supports and hangers.
- dd. Valves.
- ee. Sprinklers.
- ff. Mechanical equipment.
- gg. Refrigerants.
- hh. Electrical conduit.
- ii. Copper wiring.
- jj. Lighting fixtures.
- kk. Lamps.
- ll. Ballasts.
- mm. Electrical devices.
- nn. Switchgear and panelboards.
- oo. Transformers.
- 2. Construction Waste:
 - a. Site-clearing waste.
 - b. Masonry and CMU.
 - c. Lumber.
 - d. Wood sheet materials.
 - e. Wood trim.
 - f. Metals.
 - g. Roofing.
 - h. Insulation.
 - i. Carpet and pad.
 - j. Gypsum board.
 - k. Piping.
 - l. Electrical conduit.
- 3. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - a. Paper.
 - b. Cardboard.
 - c. Boxes.

- d. Plastic sheet and film.
- e. Polystyrene packaging.
- f. Wood crates.
- g. Plastic pails.

1.4 SUBMITTALS

- A. Waste Reduction Calculations: Before request for Substantial Completion, submit three copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- B. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- C. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- D. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- E. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.5 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 - 1. Comply with Division 01 Section “Temporary Facilities and Controls” for operation, termination, and removal requirements.
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
- C. Site Access and Temporary Controls: Conduct waste management operations to ensure

minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
2. Comply with Division 01 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in the Work:
1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until installation.
 4. Protect items from damage during transport and storage.
 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
- B. Salvaged Items for Sale and Donation: Not permitted on Project site.
- C. Salvaged Items for Owner's Use:
1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until delivery to Owner.
 4. Transport items to Owner's storage area designated by Owner.
 5. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 4. Store components off the ground and protect from the weather.
 5. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.

3.4 RECYCLING DEMOLITION WASTE

- A. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- B. Concrete: Remove reinforcement and other metals from concrete and sort with other

metals. Break up concrete and transport paving to recycling facility.

- C. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
- D. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
- E. Metals: Separate metals by type.
 - 1. Structural Steel: Stack members according to size, type of member, and length.
 - 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
- F. Asphalt Shingle Roofing: Separate organic and glass-fiber asphalt shingles and felts. Remove and dispose of nails, staples, and accessories.
- G. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- H. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.
- I. Carpet and Pad: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
 - 1. Store clean, dry carpet and pad in a closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
- J. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
- K. Plumbing Fixtures: Separate by type and size.
- L. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- M. Lighting Fixtures: Separate lamps by type and protect from breakage.
- N. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.
- O. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees at landfill facility.

- C. Wood Materials:
 - 1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.6 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 01 74 19

SECTION 01 77 00 - CLOSEOUT PROCEDURES

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 PRE-CLOSEOUT MEETING

- A. Pre-Closeout Meeting: Schedule and convene Pre-Closeout Meeting with Owner and Architect in accordance with Section 01 31 19, Project Meetings.

1.2 SUBSTANTIAL COMPLETION

- A. The items listed in Document CB, Supplementary Conditions, Paragraph 9.8 and the following items shall be completed before Substantial Completion will be granted:
 - 1. Contractor's Completion List (Punch List): Submit a thorough list of items to be completed or corrected, along with a written request for Substantial Completion and for review of the Work or portion of the Work. The Architect/Engineer's Project Representative, at their discretion, may attend and assist in the preparation of the Contractor's Punch List.
 - 2. Architect's Supplemental Punch List: The Architect/Engineer, along with the Owner at the Owner's discretion, will inspect the Work utilizing the Contractor's prepared Punch List, noting completed items and incomplete items, and will prepare a supplemental list of items that have been omitted or incomplete items that were not previously noted.
 - 3. Operations and Maintenance Manuals: Submit as described in paragraph 1.3.
 - 4. Final Cleaning: Provide final cleaning and adequate protection of installed construction as described in paragraph 1.6 and 1.7.
 - 5. Starting of systems: Start up equipment and systems as described in paragraph 1.8.
 - 6. Testing and balancing: Testing and balancing of systems must be performed and completed by Owner's forces, and the report submitted and accepted by Architect/Engineer and Owner, as described in the Contract Documents. Make adjustments to equipment as required to achieve acceptance.
 - 7. Demonstrations: If required by individual specification sections or by Owner, provide demonstrations and instructions for use of equipment as described in paragraph 1.9.
- B. Date of Substantial Completion: Complete or correct items identified on Punch List and confirm that all items have been corrected prior to Architects re-inspection. Architect/Engineer, along with the Owner, will re-inspect the corrected work to establish the Date of Substantial Completion. Incomplete items remaining will be appended to the Certificate of Substantial Completion (AIA G704). The Date of Substantial Completion represents day one (1) of the closeout period, and represents the date of commencement of the Contractors correctional period and all warranty periods as described and required by the Contract Documents, except as amended in the Certificate of Substantial Completion and elsewhere in the Contract Documents.
- C. Certificate of Substantial Completion: When the Work or designated portion thereof is substantially complete, Architect will prepare the Certificate of Substantial Completion to be executed by the Owner and Contractor. Items on the appended Punch List shall be completed or corrected within the time limits established in the Certificate.

1.3 OPERATIONS AND MAINTENANCE MANUAL

- A. As a requirement for Substantial Completion, the final Operation and Maintenance Manual shall be submitted to, and reviewed and accepted by the Architect prior to issuance of the Certificate.
- B. Format: Submit Operation and Maintenance Manual as annotated PDF electronic file.
- C. Submit preliminary Operations and Maintenance Manual to respective consultants (Civil, MEP, Structural, *etc.*) for review of conformance with contract requirements prior to submitting final to Architect. Allow time for proper review.
- D. Contents: Prepare indexed Table of Contents with each product or system description identified, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and Maintenance, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Equipment start-up instructions
 - e. Operating instructions.
 - f. Maintenance instructions for equipment and systems.
 - g. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Product data.
 - b. Air and water balance reports.
 - c. Photocopies of warranties, certificates and bonds. Submit originals with Closeout Documents as specified below.
- E. Submit to Architect.

1.4 PROJECT CLOSEOUT

- A. Final Payment will not be authorized by the Architect until the Architect finds the Work acceptable under the Contract Documents, subject to the completion and acceptance of the following requirements and other applicable Contract requirements:
 - 1. Close-out Documents: Provide bound closeout documents as described in paragraph 1.5. Refer to Document CB, Supplementary Conditions, Paragraph 9.10 for additional information.
 - 2. Record Documents: Submit as described in paragraph 1.10.
 - 3. Extra materials: Provide extra stock, materials, and products as described in paragraph 1.11 when required by individual specification sections.
 - 4. Locks: Make final changeover of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of changeover in security provisions.
 - 5. Temporary Facilities: Discontinue and remove temporary facilities from the site, along with mockups, construction aids, and similar elements.
 - 6. Warranties, Certificates and Bonds: Execute and assemble transferable warranty documents, certificates, and bonds from subcontractors, suppliers, and manufacturers as described in paragraph 1.12.
 - 7. Final Inspection and Acceptance by Architect is achieved as described in paragraph 1.13.

1.5 CLOSEOUT DOCUMENTS

- A. Coordinate the following items with the requirements of Document CB, Supplementary Conditions of the Contract.
- B. Prepare a bookmarked, indexed, searchable, electronic PDF file containing the following documents:
 - 1. Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers. All General Contractor's vendors/suppliers and subcontractors that provided materials or performed any work related to this project must be listed on this form. Submit Final List of Subcontractors on Document AD.
 - 2. Closeout Documents and Affidavits, include the following:
 - a. AIA G707 - Consent of Surety to Final Payment;
 - b. AIA G706 - Contractor's Affidavit of Payment of Debts and Claims;
 - c. AIA G706A - Contractor's Affidavit of Release of Liens;
 - d. Subcontractor's Release of Lien: Include contractor's, subcontractor's and direct material and equipment supplier's separate final releases. Submit on attached Close-out Form "A" – Subcontractor's Affidavit of Release of Lien.
 - 3. Project documents and certificates, including the following:
 - a. Copy of Certificate of Substantial Completion (AIA G704);
 - b. Copy of All Permits;
 - c. Copy of Final Utility Bill or letter of transfer;
 - d. Copy of Certificate of Occupancy;
 - e. Hazardous Material Certificate: Submit on attached Close-out Form "C". Affidavits from Contractor, Subcontractors and General Contractor's vendors or suppliers stating that no hazardous materials/products have been used or installed in this project.
 - 4. Warranties, compile sequentially based on specification sections:
 - a. General Contractor's Warranty: Submit on company letterhead as described below. This Warranty shall state all sections of Work performed by General Contractor's own forces, and warranty period for each section of Work;
 - b. Subcontractor's Warranty: notarized, and submitted on attached Close-out Form "D". This Warranty shall state all sections of Work performed by the subcontractor and warranty period;
 - 5. Receipts:
 - a. Extra Stock: Provide original receipts for delivery of "Extra Stock" items as described below, (if applicable). Receipts must be signed by an authorized Owner's representative;
 - b. Keys: Provide original receipts for delivery of "Keys", (if applicable). Receipts must be signed by an authorized Owner's representative.
- C. In addition to the electronic files listed above, provide Owner with original paper copies of the following:
 - 1. Certificate of Occupancy.
 - 2. Manufacture's Special warranties.
- D. Provide Architect with one (1) separate electronic file for their records containing the following:
 - 1. Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers;
 - 2. All MSDS sheets for the project;
 - 3. All warranties from Contractor, subcontractors, direct suppliers, and manufacturers.

- E. Failure to complete and close-out project after substantial completion may result in liquidated damages being assessed to the Contractor. Refer to Conditions of the Contract for additional requirements and liquidated damages.

1.6 FINAL CLEANING

- A. Execute final cleaning prior to final project inspection and acceptance.
- B. Clean interior and exterior glass, and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces, mop hard floor surfaces.
- C. Remove smudges, marks, stains, fingerprints, soil, dirt, spots, dust, lint, and other foreign materials from finished and exposed surfaces
- D. Clean equipment and fixtures to sanitary condition with cleaning materials appropriate to surface and material being cleaned.
- E. Clean and replace filters of operating equipment as required by Contract Documents
- F. Clean debris from roofs, gutters, downspouts, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste and surplus materials, rubbish, and temporary construction facilities from site.

1.7 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections until Work is accepted by Architect and Owner.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.8 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect/Engineer and Owner 48 hours prior to start-up of each item.
- C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.
- E. Verify wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of Contractors' personnel, and installer in accordance with manufacturers' instructions.
- G. When specified in individual specification sections or required by manufacturer, require manufacturer to provide authorized representative to be present at site to inspect, check,

and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

- H. When specified in individual specification sections or required by Owner or Architect/Engineer, submit a written report in accordance with Section 01 33 00, Submittal Procedures, that equipment or system has been properly installed and is functioning correctly.

1.9 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel a minimum of 48 hours prior to date of Final Completion in accordance with Owner's requirements.
- B. Demonstrate Project equipment instructed by qualified manufacturer's representative who is knowledgeable about the Project and equipment.
- C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six (6) months.
- D. Utilize maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel to explain all aspects of operation and maintenance.
- E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment.
- F. Prepare and insert additional data in maintenance manuals when need for additional data becomes apparent during instruction.
- G. Review and verify proper start-up and operation of equipment prior to scheduling demonstrations with Owner.

1.10 PROJECT RECORD DOCUMENTS

- A. Submit Project Record Documents as described in Section 01 78 39 at Project Closeout. Final Payment will not be authorized by the Architect until final review and acceptance of Record Documents by Architect and Engineers is achieved in accordance with the Owner's requirements.
- B. At the Contractors request, and with associated fee, Architect may provide electronic versions of the BIM, construction drawings, and specification files for Contractor's use, subject to the terms and conditions of Architect's standard electronic document transfer agreement.
- C. Submit semifinal Record Documents to the respective consultants (Civil, Structural, MEP, etc.) for review. Consultants will mark-up corrections and return to Contractor for final revisions. Make final revisions prior to submitting to Architect.
 - 1. Format: Submit all Project Record Documents as a bookmarked, indexed, searchable, annotated electronic PDF file.

1.11 EXTRA STOCK, MATERIALS AND MAINTENANCE PRODUCTS

- A. Furnish extra stock, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to and store in location(s) as directed by Owner; obtain signed receipt(s) from Owner's authorized representative prior to final application for payment. Delivery of materials to or obtaining receipt from anyone other than Owner's authorized representative may constitute breach of this requirement and may require delivery of additional materials at no cost to the Owner if original materials are misplaced.
- C. Include signed receipts for delivery of extra stock and materials, including keys, with Closeout Documents.

1.12 WARRANTIES, CERTIFICATES AND BONDS

- A. Definitions:
 - 1. Standard Product Warranties: preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
 - 2. Special Warranties: written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide coverage of specific defects, or both.
- B. In accordance with the general warranty obligations under Paragraph 3.5 of the General Conditions as amended by the Supplementary Conditions, the General Contractor's warranty shall be for a period of one (1) year following the date of Substantial Completion, hereinafter called the one-year warranty period. The Contractor's one-year general warranty shall include all labor, material and delivery costs required to correct defective material and installation. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.
- C. The Contractor's one-year warranty shall run concurrently with the one (1) year period for correction of Work required under Paragraph 12.2 of the General Conditions.
- D. In addition to the Contractor's one-year warranty, Special Warranties as described in individual specifications sections, shall extend the warranty period for the period specified without limitation in respect to other obligations which the Contractor has under the Contract Documents.
- E. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve the suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.
- F. Warranty Requirements:
 - 1. When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
 - 2. When Work covered by a warranty has failed and been corrected by replacement or reconstruction, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
 - 3. Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
 - 4. Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
 - 5. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or designated portion of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.
- G. Compile copies of each required warranty properly executed by the Contractor and the subcontractor, supplier, or manufacturer. Verify documents are in proper form, contain full information, and are notarized. Co-execute warranties, certificates and bonds when required and include signed warrantees with Closeout Documents submitted to the Architect.

1.13 FINAL COMPLETION AND FINAL PAYMENT

- A. Final Notice and Inspection:
 - 1. When all items on the Punch List have been corrected, final cleaning has been completed, and installed work has been protected, submit written notice to the Architect that the Work is ready for final inspection and acceptance.
 - 2. Upon receipt of written notice that the Work is ready for final inspection and acceptance, the Architect and Engineer will make final inspection.
- B. Final Change Order: When the Project Closeout items described above are successfully completed and the Work is found acceptable to Architect/Engineer and Owner, a Final Change Order will be executed. This Change Order will include any Allowance adjustments as required by the Contract Documents.
- C. Final Application for Payment: When all of the above items are successfully complete, submit to the Architect a final Application for Payment and request for release of retainage.
- D. Release of Retainage: Release of retainage will not be authorized by the Architect until Contractor completes all requirements for close-out to the satisfaction of the Owner and Architect as described herein.

1.14 TERMINAL INSPECTION

- A. Immediately prior to expiration of the one (1) year period for correction of the Work, the Contractor shall make an inspection of the work in the company of the Architect and the Owner. The Architect and the Owner shall be given not less than ten (10) days notice prior to the anticipated date of terminal inspection.
- B. Where any portion of the work has proven to be defective and requires replacement, repair or adjustment, the Contractor shall immediately provide materials and labor necessary to remedy such defective work and shall execute such work without delay until completed to the satisfaction of the Architect and the Owner, even if the date of completion of the corrective work may extend beyond the expiration date of the correction period.
- C. The Contractor shall not be responsible for correction of work which has been damaged because of neglect or abuse by the Owner nor the replacement of parts necessitated by normal wear in use.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION 01 77 00

CLOSE-OUT FORM "A"

SUBCONTRACTOR'S AFFIDAVIT OF RELEASE OF LIEN

STATE OF _____

COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS:

_____, being first duly sworn, deposes and says:

1. That he / she is the _____ of _____, the subcontractor who supplied, installed, and /or erected the work described below, and that, he /she is duly authorized to make this Affidavit and Subcontractor Release:

Project: _____
Owner: _____ Architect: PBK
Work Performed: _____ Specification Section(s): _____

2. That all work required under the subject subcontractor of the subject construction project has been performed in accordance with the terms thereof, that all material men, sub-subcontractors, mechanics, and laborers have been paid and satisfied in full and that there are no outstanding claims of any character arising out of the performance of said subcontractor which have not been paid and satisfied in full.
3. That to the best of his / her knowledge and belief, there are no unsatisfied claims for damages resulting from injury or death to any employees, sub-subcontractors, or the public at large arising out of the performance of said subcontract, or any suits or claims for any other damages of any kind, nature, or description which might constitute a lien upon the property of the Owner.
4. That he / she has received full payment of all sums due him / her for materials furnished and services rendered by the undersigned in connection with the performance of said subcontract and has and does hereby release the Owner and the Architect and his consultants and the Contractor from any and all claims of any character arising out of or in any way connected with performance of said subcontract.

ATTEST (If Corporation)

Name of Subcontractor

Secretary

(By)

(Title)

JURAT

STATE OF §

COUNTY OF §

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

Notary Public, State of _____ My Commission Expires: _____

Seal:

CLOSE-OUT FORM "C"

SUBCONTRACTOR HAZARDOUS MATERIAL CERTIFICATE

THE STATE OF _____ PROJECT: _____

COUNTY OF _____ OWNER: _____

ARCHITECT: PBK

SPECIFICATION SECTION(S):

KNOW ALL MEN BY THESE PRESENTS:

_____, being first duly sworn, deposes and says that he / she
is the

_____ of _____, the subcontractor / supplier who
constructed or provided the section(s) of work referenced above, and that he / she is duly authorized to
certify to the best of his / her information, knowledge, and belief no asbestos, lead or PCB containing
products have been incorporated into the project.

ATTEST (If Corporation)

Name of Subcontractor / Supplier

Secretary

(By)

(Title)

JURAT

STATE OF §

COUNTY OF §

SUBSCRIBED AND SWORN TO before me this ____ day of _____, 20__

Notary Public, State of _____ My Commission Expires: _____

Seal:

CLOSE-OUT FORM "D"

SUBCONTRACTOR WARRANTY

STATE OF _____

COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS:

_____, being first duly sworn, deposes and says:

1. That he / she is the Subcontractor (or the _____ of _____ the subcontractor) who supplied, installed, and / or erected the work described below, and that, he / she is duly authorized to make this Subcontractor Warranty:

Project: _____
Owner: _____ Architect: PBK
Work Performed: _____ Specification Section(s): _____

2. The undersigned Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract are of good quality and new except where otherwise required or permitted by the Contract Documents, that the Work is free from defects not inherent in the quality required or permitted, and that the Work conforms with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Subcontractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Subcontractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.
3. In the event of failure of materials, products, or workmanship, during the specified warranty periods, the Subcontractor shall take appropriate measures to assure correction or replacement of the defective items, whether notified by the Contractor, Owner or Architect.
4. The Subcontractor warrants the work performed for a period of _____ months from the date of Substantial Completion, except as follows: _____

ATTEST (If Corporation)

Name of Subcontractor

Secretary (By) (Title)

JURAT

STATE OF §

COUNTY OF §

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

Notary Public, State of _____ My Commission Expires: _____

Seal:

SECTION 01 78 39 - PROJECT RECORD DOCUMENTS

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Architects/Engineers written responses to Minor Change directives, Change Proposal Requests, and other supplemental instructions.
 - 5. Change Orders and other modifications to the Contract.
 - 6. Reviewed Shop Drawings, Product Data, and Samples.
 - 7. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner. Architect will review documents for general conformance but will not be responsible for completeness or accuracy of the recorded information.
- C. Do not use record documents for construction purposes. Store record documents separate from documents used for construction. Protect record documents from deterioration and loss in a secure, weather-tight location in accordance with Section 01 50 00, Temporary Facilities.
- D. Record information concurrent with construction progress, not less than weekly. Provide access to record documents for Architect's reference during normal working hours.
- E. Give particular attention to information on concealed products and installations that would be difficult to identify or measure and record later.
- F. Mark record sets in red erasable colored pencil; use other colors to distinguish between changes for different categories of the Work at the same location.
 - 1. Mark important additional information which was either shown schematically or omitted from original Documents.
 - 2. Note construction change directive numbers, alternate numbers, Change Order numbers and similar identification.
 - 3. Where feasible, the individual or entity who obtained record data, whether the individuals or entity is the installer, subcontractor, or similar entity, is required to prepare the mark-up on record documents.
 - a. Accurately record information in an understandable drawing technique.
 - b. Record data as soon as possible after it has been obtained. In the case of concealed installations, record and check the mark-up prior to concealment.
 - 4. Sign or initial and date each mark-up.
- G. Upon completion of the Work, submit Project Record Documents to Architect for the Owner's records in accordance with Section 01 77 00, Closeout Procedures.
 - 1. Format: Submit all Project Record Documents as a bookmarked, indexed, searchable, annotated electronic PDF file.

1.2 RECORD DRAWINGS

- A. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Architect and Construction Manager. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
 - 1. Format: Bookmarked, searchable, annotated PDF electronic file with comment function enabled.
 - 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
 - 3. Refer instances of uncertainty to Architect through Construction Manager for resolution.
 - 4. Architect and/or Engineers will furnish Contractor one set of digital data files of the Contract Drawings containing all CPR's, Clarifications, Minor Changes, and Architectural Supplemental Information for use in recording information.

1.3 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. For each principal product, indicate whether record Product Data has been submitted in operation and maintenance manuals instead of submitted as record Product Data.
 - 5. Note related Change Orders, record Product Data, and record Drawings where applicable.
- B. Format: Submit record Specifications as bookmarked, searchable, annotated PDF electronic file.

1.4 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
 - 3. Note related Change Orders, record Specifications, and record Drawings where applicable.
- B. Format: Submit record Product Data as bookmarked, searchable, annotated PDF electronic file.
 - 1. Include record Product Data directory organized by Specification Section number and title, electronically linked to each item of record Product Data.

1.5 SHOP DRAWINGS

- A. Format: Submit record Shop Drawings as bookmarked, searchable, annotated PDF electronic file.
 - 1. Include record Shop Drawing directory organized by Specification Section number and title, electronically linked to each item of record Shop Drawing.

1.6 MISCELLANEOUS RECORD DOCUMENTS

- A. Refer to other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Immediately prior to Substantial Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Categories of requirements resulting in miscellaneous records, include, but are not limited to the following:
1. Ambient and substrate condition tests.
 2. Changes requested by Owner's consultants.
 3. Inspections and certifications by governing authorities.
 4. Inspection and testing by Owner's inspection agency.
 5. Fire resistance and flame spread test results.

1.7 CERTIFICATION

- A. By submittal of Project Record Documents, Contractor certifies, that to the best of his knowledge, informational and belief the documents are a true and complete representation of the actual construction of the Work of this Project.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

END OF SECTION 01 78 39

SECTION 02 41 19 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Demolition and removal of buildings and site elements.
 - 2. Abandoning in-place or removing below-grade construction.
 - 3. Disconnecting, capping or sealing, and abandoning in-place or removing site utilities.
 - 4. Salvaging items for reuse by Owner.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose offsite unless indicated as salvaged or reinstallation.
- B. Remove and Salvage: Detach items from existing construction with care to prevent damage, and deliver to Owner ready for storage. The Owner shall identify any items selected for salvage.
- C. Remove and Reinstall: Detach items from existing construction with care to prevent damage, clean and refurbish, prepare for reuse, store as necessary, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not scheduled for salvage or reuse, as is; do not remove.
- E. Deconstruct: To remove by disassembling or detaching an item from a surface, using methods and equipment to successfully prevent damage to the item and surfaces; and dispose of items unless indicated as salvaged or for reinstallation.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and the contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner. Salvage to prevent damage and promptly return to Owner.

1.5 SUBMITTALS

- A. Qualification Data: Submit copies of qualifications for refrigerant recovery technician.
- B. Engineering Survey: Submit engineering survey of condition of building.
- C. Proposed Protection Measures: Submit report, including Drawings, indicating proposed measures for protecting individuals and property, for environmental protection, dust control and noise control. Indicate proposed locations, types, and construction of barriers.

- D. Schedule of Selective Demolition Activities:
 - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on site operations are uninterrupted.
 - 2. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 3. Coordination for shutoff, capping, and continuation of utility services.
 - 4. Use of elevator and stairs.
 - 5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- E. Inventory: Submit a list of items for removal and salvage and deliver to Owner prior to start of demolition.
- F. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces that could be construed as damage caused by demolition operations. Submit prior to commencement of the work.
- G. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

1.6 QUALITY ASSURANCE

- A. Regulatory Requirements:
 - 1. Demolition Standards: Comply with ASSE A10.6 and NFPA 241.
 - 2. Comply with EPA regulations prior to commencement of the work. Comply with hauling and disposal regulations of authorities having jurisdiction.
 - 3. Comply with applicable federal, state, and local codes for demolition work, dust and noise control, safety of structure, and debris removal.
 - 4. Obtain required permits from authorities having jurisdiction.
- B. Refrigerant Recovery Technician Qualifications: Certified by an EPA approved certification program.
- C. Predemolition Conference: Conduct conference at the site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.
 - 2. Review structural load limitations of existing structure.
 - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
 - 5. Review areas where existing construction is to remain and requires protection.

1.7 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted. Provide minimum of 72 hours' notice to Owner of demolition activities that will affect Owner's operations including but not limited to:
 - 1. Interruption of power.
 - 2. Interruption of utility services.
 - 3. Excessive noise.

- B. Condition of Structure: Conditions existing at time of inspection will be maintained by Owner as far as practical. Owner assumes no responsibility for actual condition of items or structures to be demolished.
 - 1. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Hazardous Materials: It is not anticipated that hazardous materials will be encountered in the Work.
 - 1. Hazardous materials will be removed by Owner before start of the Work.
 - 2. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- D. Historic Areas: Demolition and hauling equipment and other materials shall be of sizes that clear surfaces within historic spaces, areas, rooms, and openings, including temporary protection, by at least 12 inches (300 mm).
- E. Storage or sale of removed items or materials on site is not permitted.
- F. Traffic: Conduct operations and debris removal to ensure minimum interference with roads, streets, drives, fire lanes, walks, accessible paths, and adjacent occupied or used facilities.
 - 1. Do not close, block, or obstruct streets, drives, walks, or occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around obstructed traffic ways.
- G. Explosives: Explosives are not permitted at the site.
- H. Flame Cutting: Do not use cutting torches for removal until flammable materials are removed. At concealed spaces, verify conditions prior to flame cutting operations. Maintain portable fire suppression devices during flame cutting operations.
- I. Environmental Controls: Use water sprinkling, temporary enclosures, or other acceptable methods to limit dust and dirt migration. Comply with governing regulations pertaining to environmental protection. Do not use water when it may create hazardous or objectionable conditions.
- J. Utility Services: Maintain existing utilities and protect against damage during demolition operations.
 - 1. Do not interrupt utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, acceptable to Owner and governing authorities.
- K. Protections: Provide temporary barriers to protect Owner's personnel and public from injury from work.
 - 1. Take protective measures to provide free and safe passage to occupied portions of building.
 - 2. Provide protection to ensure safe passage of the Owner's personnel and the public around demolition areas and to and from occupied portions of adjacent areas, buildings, and structures.
 - 3. Provide shoring, bracing, or support to prevent movement, settlement, or collapse of structure or element to be demolished and adjacent facilities or work to remain.
 - 4. Protect existing work which becomes exposed during demolition operations.
 - a. Protect existing improvements, appurtenances, and conditions to remain.
 - b. Protect adjacent floors with coverings.
 - c. Protect walls, openings, roofs, and adjacent exterior construction to remain and exposed to building demolition operations.

5. Construct temporary insulated dustproof partitions to separate areas from noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks. Refer to Drawings for location of partitions to be provided.
6. Provide temporary weather protection when exposing exterior conditions to prevent water leakage or damage to structure or interior areas of existing building.

L. Damages: Promptly repair damages caused to adjacent facilities by demolition work.

1.8 COORDINATION

- A. Arrange selective demolition schedule to avoid interference with Owner's and the school's operations.

1.9 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor prior to proceeding. Existing warranties to be provided by Owner prior to the start of construction.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying existing system has been inspected and warranty remains in effect. Submit supporting documentation at closeout.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Repair Materials: Use repair materials identical to existing materials.
1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
 2. Use materials whose installed performance equals or surpasses that of existing materials.
- B. Comply with material and installation requirements specified in individual Specification Sections.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that affected utilities have been disconnected and capped before commencing selective demolition operations.
- B. Review Project Record Documents of existing construction or existing condition and hazardous material information provided by Owner. Owner does not warrant existing conditions are same as those indicated in Project Record Documents.
- C. Steel Tendons: Locate tensioned steel tendons and include recommendations for detensioning.
- D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.
- E. Survey of Existing Conditions: Record existing conditions with measured drawings or preconstruction photographs or video and templates.
1. Comply with requirements specified in Section 01 32 33.

2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
3. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final work, make permanent record of measurements, materials, and construction details required to make exact reproduction.
4. For any electrical or low-voltage work to be performed in the project (including fire alarm, PA, intercom, or data), test entire system for operation prior to initiation of work. Notify Owner of any non-working components. Test entire system at the end of construction to ensure all systems operate properly.

3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities. Comply with requirements for access and protection.
- C. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling.
- D. Furnishings and Equipment: Cover and protect furniture, equipment, and fixtures from spoilage or damage as necessary.
- E. Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.
 1. Construct dustproof partitions of not less than nominal 4 inch (100mm) studs, 5/8 inch (16mm) gypsum wallboard with joints taped on occupied side, and 1/2 inch (13mm) fire retardant plywood on the demolition side.
 2. Insulate partition to provide noise protection to occupied areas.
 3. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 4. Protect air handling equipment.
 5. Weatherstrip openings to prevent the spread of dust.

3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
2. Arrange to shut off utilities with utility companies.
3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
4. Disconnect, demolish, and remove fire suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
 - f. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug remaining ducts with same or compatible ductwork material.
 - g. Ducts to Be Abandoned in Place: Cap or plug ducts with same or compatible ductwork material and leave in place.

3.4 POLLUTION CONTROLS

- A. Dust Control: Use water mist, temporary enclosures, and suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations including, but not limited to SCAQMD Rule 403 (Fugitive Test).
 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
 2. Wet mop floors to eliminate trackable dirt and wipe down walls and doors of demolition enclosure. Vacuum carpeted areas.

3.5 PROTECTION

- A. Temporary Protection: Provide temporary barricades and protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
 - a. Erect temporary pathways and means of egress necessary for ongoing operations compliant with Code and accessibility regulations.
 - b. Provide temporary barricades and protection required to prevent injury and damage to adjacent buildings and facilities to remain.
 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
 - a. Protect existing work which becomes exposed during demolition operations.
 - b. Protect adjacent entrances from damage due to demolition activities.
 - c. Protect existing improvements, appurtenances, and conditions to remain.
 - d. Protect floors with covering.
 - e. Protect walls, openings, roofs, and adjacent exterior construction to remain and exposed to building demolition operations.

4. Cover and protect furniture, furnishings, and equipment that have not been removed.
 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 01 50 00.
 - a. Construct temporary insulated dustproof partitions to separate areas from noisy or extensive dirt or dust operations are performed. Equip partitions with dustproof doors and security locks.
 - b. Construct dustproof partitions of not less than nominal 4 inch (100mm) studs, 5/8 inch (16mm) gypsum wallboard with joints taped on occupied side, and 1/2 inch (13mm) fire retardant plywood on the demolition side.
 - c. Insulate partition to provide noise protection to occupied areas.
 - d. Seal joints and perimeter. Equip partitions with dustproof doors and security locks.
 - e. Protect air handling equipment.
 - f. Weatherstrip openings.
 6. Damage: Promptly repair damages to adjacent components cause by demolition activities.
- B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of selective demolition.
- C. Remove temporary barricades and protections where hazards no longer exist.

3.6 SELECTIVE DEMOLITION

- A. Demolish and remove existing construction to the extent necessary for new work. Use methods required to complete the work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame cutting operations. Maintain portable fire suppression devices during flame cutting operations.
 5. Maintain fire watch during and for at least 24 hours after flame cutting operations.
 6. Maintain adequate ventilation when using cutting torches.
 7. Remove decayed, vermin infested, and dangerous or unsuitable materials and promptly dispose of offsite.
 8. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
 9. Locate selective demolition equipment and remove debris and materials to avoid imposing excessive loads on supporting walls, floors, or framing.
 10. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris removal operations to ensure minimum interference with roads, streets, walks, walkways, and adjacent occupied and used facilities.

- C. Removed and Salvaged Items: Remove items indicated for salvage. Clean and pack or crate items after cleaning. Identify contents of containers. Store items in secure area until delivery to Owner.
 - 1. Transport items to Owner's storage area designated by Owner. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items: Clean and repair items to functional condition adequate for intended reuse.
 - 1. Pack or crate items after cleaning and repairing. Identify contents of containers.
 - 2. Protect items from damage during transport and storage.
 - 3. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Owner, items may be removed to a suitable, protected storage location during selective demolition, cleaned, and reinstalled in original locations after selective demolition operations are complete.
- F. Patching and Repair: Repair damage to adjacent construction caused by selective demolition operations promptly.

3.7 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Using power driven saw, cut concrete to a depth of at least 3/4 inch (19 mm) at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.
- B. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at regular intervals using power-driven saw, and then remove concrete between saw cuts.
- C. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power driven saw, and then remove masonry between saw cuts.
- D. Concrete Slabs on Grade: Saw cut perimeter of area to be demolished, and then break up and remove.
- E. Interior Slab on Grade: Use best practice removal methods to prevent cracking or structurally disturbing adjacent slabs or partitions. Use power saw where possible.
- F. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in *RFCI Recommended Work Practices for the Removal of Resilient Floor Coverings*. Do not use methods requiring solvent-based adhesive strippers.
- G. Below Grade Voids: Completely fill below grade areas and voids resulting from demolition work. Provide fill consisting of approved earth, gravel, or sand, free of trash and debris, stones over 6 (150mm) inches in diameter, roots, or other organic matter.
- H. Partitions: Completely remove indicated interior partitions and interior finishes indicated. Leave adjacent work scheduled to remain sound and ready for patching or for new finishes.
- I. Doors and Frames: Remove doors, frames, and hardware where indicated. Remove from site.

1. Remove doors, frames, and hardware where indicated. Clean, store, and protect for reinstallation or return hardware to Owner as directed.
- J. Cut existing masonry walls for new doors, windows, or openings indicated. Leave openings ready to receive new work or patching.
- K. Windows: Remove existing windows where indicated. Remove associated anchors, shims, blocking, operating devices, sealant, and trim. Cut back interior finishes required for plumb surface for patching. Leave openings ready for installation of new materials and finishes.
- L. Mechanical, Electrical, and Structural Elements: If unanticipated mechanical, electrical, or structural elements conflicting with intended function or design are encountered, investigate and measure both nature and extent of the conflict.
 1. Submit written report to Architect in accurate detail. Pending receipt of directive, rearrange selective demolition schedule as necessary to continue overall job progress without undue delay.
 2. HVAC Equipment: Remove air conditioning equipment without releasing refrigerants.

3.8 REMOVAL OF STRUCTURAL ELEMENTS

- A. Foundation: Demolish foundation walls to a minimum depth of 12 inches (300mm) below existing ground surface. Demolish and remove below grade wood or metal construction. Break up below grade concrete slabs.
- B. Pneumatic Operated Hammers: When possible, reduce use of pneumatic operated hammers. When necessary to use pneumatic tools, locate compressors as remote from occupied areas as possible.
 1. To break large pieces of concrete, isolate concrete from floor slabs and building structure to prevent structure borne vibration.
- C. Saw Cutting: Locate compressors as remote as possible from occupied areas of facility.
 1. Use diamond tipped saw blades and related equipment.
 2. Saw cut portions of walls and slabs. Angle saw blade at floors and corners to cut as closely as possible to desired location.
 3. Control runoff water used with saw to prevent damage to existing materials.

3.9 ROOF REMOVAL

- A. Roof Assembly: Remove existing roofing to the extent that can be covered in one day by new roofing. Maintain building interior in watertight and weathertight condition.
 1. Remove existing roof membrane, flashings, copings, and roof accessories.
 2. Remove existing roofing system down to substrate.
- B. At new column extensions, cut through roofing as required for welding of new extension. Provide temporary watertight enclosure over stubs and temporarily flash to existing roof to make completely watertight.
- C. At existing parapets, remove portions of roofing, flashing, stone, and masonry necessary to weld new steel and set form work. Provide temporary watertight enclosures over areas of open roof and temporarily flash to make watertight.
- D. As column forms are placed, temporarily flash columns to existing roofing and cover with watertight tarpaulins before and after pouring. After column forms have been removed, temporarily flash new concrete structure into existing roofing immediately to maintain watertight roof.

- E. When removing roofing to place supports for shoring of form work to transfer loads to existing columns or approved structure or to support scaffolding, work platforms, or similar loads, temporarily flash supports to make roof watertight.
- F. Remove excess residue. Thoroughly clean and remove asphalt, dust, loose materials and leave ready for new work.

3.10 PATCHING AND REPAIRS

- A. Promptly repair damage to adjacent construction caused by selective demolition operations.
- B. Patching: Comply with Section 01 73 29.
- C. Repairs: When necessary to repair existing surfaces, patch to produce surfaces suitable for new materials.
 - 1. Fill holes and depressions in existing masonry walls to remain with masonry patching material applied according to manufacturer's written recommendations.
- D. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining construction in a manner that eliminates evidence of patching and refinishing.
- E. Floors and Walls: Where walls or partitions are demolished, extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - 1. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.
 - 2. Where patching occurs in a painted surface, apply primer and intermediate paint coats over patch and apply final paint coat over entire unbroken surface containing patch. Provide additional coats until patch blends with adjacent surfaces.
 - 3. Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.
- F. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.11 DISPOSAL OF DEMOLISHED MATERIALS

- A. Legally remove demolition waste materials from site and dispose in an EPA approved construction and demolition waste landfill acceptable to authorities having jurisdiction recycle or reuse components.
 - 1. Do not allow demolished materials to accumulate on site.
 - 2. Remove and transport debris to prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or devices that convey debris to grade level in a controlled descent.
 - 4. Comply with requirements specified in Section 01 74 00.
- B. Burning: Do not burn demolished materials.

3.12 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

SECTION 07 92 00 - JOINT SEALANTS

CONDITIONS OF THE CONTRACT AND DIVISION 1, as applicable, apply to this Section.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Exterior sealants and sealants for moving joints, except for joints in those systems listed under Related Work.
- B. Interior sealants and caulking.

1.2 RELATED WORK

- A. Section 32 13 13 - Concrete Paving: site concrete paving expansion joint sealant

1.3 REFERENCES

- A. ASTM International (ASTM)
 - 1. C717, Standard Terminology of Building seals and Sealants
 - 2. C793, Standard Test Method for Effects of Accelerated Weathering on Elastomeric Joint Sealants
 - 3. C794, Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
 - 4. C834, Standard Specification for Latex Sealants
 - 5. C920, Standard Specification for Elastomeric Joint Sealants
 - 6. C1193, Standard Guide for Use of Joint Sealants
- B. Sealant, Waterproofing and Restoration Institute (SWRI)
 - 1. The Processional's Guide

1.4 SUBMITTALS

- A. Product Data:
 - 1. Manufacturer's specifications and other data needed to prove compliance with specified requirements.
 - 2. Manufacturer's installation instructions
- B. Sample: On site sample for Architect's approval of colors.
- C. Certification: Manufacturer's affidavit that materials used in Project contain no asbestos.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: experienced in building sealant installation whose work has resulted in sealant installations with a record of successful performance.
- B. Source Limitations: unless specifically indicated, obtain each type of building sealant through one source from a single manufacturer.
- C. Pre-construction Field Adhesive Testing: Prior to installation of building sealants, field test their adhesion to joint substrates in accordance with manufacturer's instructions. Perform test in locations indicated by Architect. Perform test for each type of building sealant and each substrate as required by Architect. If required by Architect, arrange for

tests to be performed with sealant manufacturer's representative present. Follow-up review by Architect and manufacturer may be required to observe sealant performance over time and may result in re-application of sealant or replacement.

- D. Cleaning: Facade sealants that have collected dirt at the time of Substantial Completion shall be cleaned over the entire facade prior to acceptance by the Owner. 11 months after final completion of the building, if the sealant joints show dirt, they shall again be cleaned over the entire façade.

1.6 PROJECT CONDITIONS

- A. Environmental Conditions: Do not proceed with installation of sealants when joint substrates are wet or when ambient temperature conditions are above limits permitted by sealant manufacturers or are below 40 degree F.
- B. Joint Width Conditions: Do not proceed with installation of joint sealants where joint widths are less than those allowed by sealant manufacturer for applications indicated.
- C. Joint-Substrate Conditions: Do not proceed with installation of sealants until contaminates which may interfere with adhesion are removed from substrates.

1.7 PRE-INSTALLATION CONFERENCE

- A. Refer to Section 01 31 13 – Project Coordination.
- B. In addition, refer to information above concerning Field Adhesive Testing.

1.8 WARRANTY

- A. Warrant the work specified herein for two (2) years against becoming unserviceable or causing an objectionable appearance resulting from either defective or nonconforming materials and workmanship.
- B. Defects shall include, but not be limited to:
 - 1. Leaking
 - 2. Cracking, splitting or releasing from substrate
 - 3. Deterioration or color change

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. Specifications are based on the products or materials of the named manufacturer, otherwise selection may be made from any manufacturer listed below whose products meet or exceed the specifications. Other manufacturers must have a minimum of five (5) years experience manufacturing the products meeting or exceeding the specifications and comply with Division 1 requirements regarding substitutions to be considered.
 - 1. Typical Sealants:
 - a. Bostik
 - b. Pecora, Inc.
 - c. Sonneborn
 - d. Sika
 - e. Tremco Incorporated
 - 2. Silicone Sealants at Appliances:
 - a. Pecora, Inc.

- b. General Electric Co.
- c. Dow Corning

2.2 MATERIALS

- A. Sealant for Working Joints and Exposed Vertical Exterior Locations:
 - 1. Type: Polyurethane, conforming to ASTM C920, Type M, Grade NS, Class 25; multi-component, non-sagging.
 - 2. Applications: Use for:
 - a. Joints between concrete and other materials.
 - b. Other exterior non-traffic-bearing joints for which no other type of sealant is indicated.
- B. Sealant for Exposed Exterior Traffic-bearing Locations:
 - 1. As specified in section 32 13 13, Concrete Paving
- C. Primers, Cleaners, Top Coats: Use only materials listed as suitable in resistance to staining, compatibility and durability before proceeding.
- D. Expanded Polyethylene Joint Filler: Provide flexible, compressible, closed-cell, polyethylene of not less than 10 psi compression deflection (25 percent); except provide higher compression deflection strength as may be necessary to withstand installation forces and provide proper support for sealants, surface water absorption of not more than 0.1 pounds per square foot, as manufactured by Sonneborn, or pre-approved equal.
- E. Sealant Backer Rod: Provide compressible rod stock of polyethylene foam, polyurethane foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable, non-absorptive material as recommended by sealant manufacturer for back-up of and compatibility with sealant. Where used with hot-applied sealant, provide heat-resistant type, which will not be deteriorated by sealant application temperature as indicated.
- F. Bond Breaker Tape: Provide polyethylene tape or other plastic tape as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant. Provide self-adhesive tape where applicable.

PART 3 - EXECUTION

3.1 APPLICATION

- A. Temperatures: Do not install sealants when air temperature is under 40 degrees F. Sealants may be warmed to ease installation when recommended by the manufacturer.
- B. Tooling: Tool exposed joints to a slightly concave surface using slicking materials recommended by the manufacturer. The tooling procedure shall press sealant against the sides of the groove. No materials shall be left "feathered" out or smeared on the abutting materials. If necessary, protect adjacent surfaces with tape. Completed joints shall have a uniform professional appearance. Use an anti-tack compound on sealant that does not set up fast enough to avoid dust collection.
- C. Sealant Back-Up: Provide back-up filler where groove depth is too great to fill with sealant. Review joint design with Architect.

- D. Compressive Filler: Seal vertical expansion joints with fillers. Provide compressible filler twice the width of the joint and with a depth of 1-1/2 times the compressed width. Lap ends 2 inch minimum.
- E. Seal ends together in such a manner to allow natural drainage. Install filler by compressing material and sliding into joint. Align filler on one face of the joint before it expands to the full joint width.

END OF SECTION 07 92 00

SECTION 31 1000

SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Protecting existing trees and grass to remain.
 - 2. Removing existing trees, shrubs, groundcovers, plants, and grass.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above- and below-grade site improvements.
 - 6. Disconnecting, capping or sealing, and abandoning site utilities in place.
 - 7. Temporary erosion and sedimentation control measures.
- B. Related Sections include the following:
 - 1. Division 01 Section "Sustainable Design Requirements" for additional LEED requirements.
 - 2. Division 01 Section "Temporary Tree and Plant Protection" for protecting trees remaining on-site that are affected by site operations.
 - 3. Division 02 Section "Structure Demolition" for demolition of buildings, structures, and site improvements.
 - 4. Division 31 Section "Earth Moving" for soil materials, excavating, backfilling, and site grading.
 - 5. Division 23 Section "Turf, Grasses and Plants" for finish grading including preparing and placing planting soil mixes and testing of topsoil material.

1.3 DEFINITIONS

- A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other nonsoil materials.
- B. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction, and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.4 MATERIAL OWNERSHIP

- A. Except for stripped topsoil or other materials indicated to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings, according to Division 01 Section "Project Record Documents," identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.7 PROJECT CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by Engineer.
- C. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Division 31 Section "Earth Moving."
 - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to sediment and erosion control Drawings.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 TREE PROTECTION

- A. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.
 1. Do not store construction materials, debris, or excavated material within fenced area.
 2. Do not permit vehicles, equipment, or foot traffic within fenced area.
 3. Maintain fenced area free of weeds and trash.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where excavation for new construction is required within tree protection zones, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
 1. Cover exposed roots with burlap and water regularly.
 2. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.
 4. Backfill with soil as soon as possible.
- D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Landscape Architect.
 1. Employ an arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.

3.4 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 1. Owner will arrange to shut off indicated utilities when requested by Contractor.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Engineer's written permission.
- C. Excavate for and remove underground utilities indicated to be removed.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Grind stumps and remove roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
 - 4. Use only hand methods for grubbing within tree protection zone.
 - 5. Chip removed tree branches and stockpile in areas approved by Landscape Architect.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and nonsoil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Limit height of topsoil stockpiles to 72 inches (1800 mm).
 - 2. Do not stockpile topsoil within tree protection zones.
 - 3. Stockpile surplus topsoil to allow for respreding deeper topsoil.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.8 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
 - 1. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

END OF SECTION

SECTION 31 2000

EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Preparing subgrades for slabs-on-grade, walks, pavements, lawns and grasses, and exterior plants.
 2. Excavating and backfilling for buildings and structures.
 3. Drainage course for slabs-on-grade.
 4. Subsurface drainage backfill for walls and trenches.
 5. Excavating and backfilling for utility trenches.
 6. Excavating and backfilling trenches for buried mechanical and electrical utilities and pits for buried utility structures.
- B. Related Sections include the following:
1. Division 01 Section "Temporary Tree and Plant Protection" for protecting and trimming trees to remain.
 2. Division 03 Section "Cast-in-Place Concrete" for granular course if placed over vapor retarder and beneath the slab-on-grade.
 3. Divisions 21, 22, 23, 26, 27, and 28 Sections for installing underground mechanical and electrical utilities and buried mechanical and electrical structures.
 4. Division 31 Section "Site Clearing" for temporary erosion and sedimentation control measures, site stripping, grubbing, stripping and stockpiling topsoil, and removal of above- and below-grade improvements and utilities.
 5. Division 31 Section "Dewatering" for lowering and disposing of ground water during construction.
 6. Division 31 Section "Drilled Concrete Piers and Shafts" for excavation of shafts and disposal of surplus excavated material.
 7. Division 32 Section "Turf and Grasses" for finish grading, including preparing and placing topsoil and planting soil for lawns.
 8. Division 32 Section "Plants" for planting bed establishment and tree and shrub pit excavation and planting.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Bedding Course: Course placed over the excavated subgrade in a trench before laying pipe.
- C. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

- D. Drainage Course: Course supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Engineer. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Bulk Excavation: Excavation more than 10 feet (3 m) in width and more than 30 feet (9 m) in length.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, shall be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.
- G. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. (0.57 cu. m) or more in volume that exceed a standard penetration resistance of 100 blows/2 inches (97 blows/50 mm) when tested by an independent geotechnical testing agency, according to ASTM D 1586.
- H. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- I. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.
- J. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Each type of plastic warning tape.
 - 2. Geotextile.
 - 3. Controlled low-strength material, including design mixture.
- B. Samples: 12-by-12-inch (300-by-300-mm) Sample of subdrainage and separation geotextile.
- C. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
 - 1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.
 - 2. Laboratory compaction curve according to ASTM D 698 for each on-site and borrow soil material proposed for fill and backfill.
- D. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces that might be misconstrued as damage caused by earthwork operations. Submit before earthwork begins.

1.5 QUALITY ASSURANCE

- A. Pre-excavation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 PROJECT CONDITIONS

- A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.
 - 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
 - 3. Contact utility-locator service for area where Project is located before excavating.
- B. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM AASHTO M 145 Soil Classification Groups A-1, A-2-4, A-2-5, and A-3, or a combination of these groups; free of rock or gravel larger than 3 inches (75 mm) in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487 A-2-6, A-2-7, A-4, A-5, A-6, and A-7 according to AASHTO M 145, or a combination of these groups.
 - 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 95 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- E. Engineered Fill: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch (37.5-mm) sieve and not more than 12 percent passing a No. 200 (0.075-mm) sieve.
- F. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch (25-mm) sieve and not more than 8 percent passing a No. 200 (0.075-mm) sieve.
- G. Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch (37.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.
- H. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve.
- I. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.
- J. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
 2. Grab Tensile Strength: 157 lbf (700 N); ASTM D 4632.
 3. Sewn Seam Strength: 142 lbf (630 N); ASTM D 4632.
 4. Tear Strength: 56 lbf (250 N); ASTM D 4533.
 5. Puncture Strength: 56 lbf (250 N); ASTM D 4833.
 6. Apparent Opening Size: No. 40 (0.425-mm) sieve, maximum; ASTM D 4751.
 7. Permittivity: 0.5 per second, minimum; ASTM D 4491.
 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.
- B. Separation Geotextile: Woven geotextile fabric, manufactured for separation applications, made from polyolefins or polyesters; with elongation less than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
 2. Grab Tensile Strength: 247 lbf (1100 N); ASTM D 4632.
 3. Sewn Seam Strength: 222 lbf (990 N); ASTM D 4632.
 4. Tear Strength: 90 lbf (400 N); ASTM D 4533.
 5. Puncture Strength: 90 lbf (400 N); ASTM D 4833.
 6. Apparent Opening Size: No. 60 (0.250-mm) sieve, maximum; ASTM D 4751.
 7. Permittivity: 0.02 per second, minimum; ASTM D 4491.
 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.

2.3 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches (150 mm) wide and 4 mils (0.1 mm) thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches (750 mm) deep; colored as follows:
1. Red: Electric.
 2. Yellow: Gas, oil, steam, and dangerous materials.
 3. Orange: Telephone and other communications.
 4. Blue: Water systems.
 5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface is specified in Division 31 Section "Site Clearing."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Division 31 Section "Site Clearing," during earthwork operations.

- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.

3.2 DEWATERING

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. Install a dewatering system, specified in Division 31 Section "Dewatering," to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
 - 1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 - 2. Remove rock to lines and grades indicated to permit installation of permanent construction without exceeding the following dimensions:
 - a. 24 inches (600 mm) outside of concrete forms other than at footings.
 - b. 12 inches (300 mm) outside of concrete forms at footings.
 - c. 6 inches (150 mm) outside of minimum required dimensions of concrete cast against grade.
 - d. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 - e. 6 inches (150 mm) beneath bottom of concrete slabs on grade.
 - f. 6 inches (150 mm) beneath pipe in trenches, and the greater of 24 inches (600 mm) wider than pipe or 42 inches (1065 mm) wide.

3.5 EXCAVATION FOR STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch (25 mm). If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
 - 1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.
 - 2. Excavation for Underground Tanks, Basins, and Mechanical or Electrical Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch (25 mm). Do not disturb bottom of excavations intended as bearing surfaces.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

3.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
 - 1. Clearance: 12 inches (300 mm) each side of pipe or conduit As indicated.
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
 - 1. For pipes and conduit less than 6 inches (150 mm) in nominal diameter and flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
 - 2. For pipes and conduit 6 inches (150 mm) or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe circumference. Fill depressions with tamped sand backfill.
 - 3. Excavate trenches 6 inches (150 mm) deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.8 SUBGRADE INSPECTION

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below the building slabs and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph (5 km/h).
 - 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes).
 - 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

3.9 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill, with 28-day compressive strength of 2500 psi (17.2 MPa), may be used when approved by Engineer.
 - 1. Fill unauthorized excavations under other construction or utility pipe as directed by Engineer.

3.10 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.11 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring and bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.12 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under footings and within 18 inches (450 mm) of bottom of footings with satisfactory soil; fill with concrete to elevation of bottom of footings. Concrete is specified in Division 03 Section "Cast-in-Place Concrete."
- D. Provide 4-inch- (100-mm-) thick, concrete-base slab support for piping or conduit less than 30 inches (750 mm) below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches (100 mm) of concrete before backfilling or placing roadway subbase.
- E. Place and compact initial backfill of satisfactory soil, free of particles larger than 1 inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the utility pipe or conduit.
 - 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- F. Backfill voids with satisfactory soil while installing and removing shoring and bracing.

- G. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- H. Install warning tape directly above utilities, 12 inches (300 mm) below finished grade, except 6 inches (150 mm) below subgrade under pavements and slabs.

3.13 SOIL FILL

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
 - 1. Under grass and planted areas, use satisfactory soil material.
 - 2. Under walks and pavements, use satisfactory soil material.
 - 3. Under steps and ramps, use engineered fill.
 - 4. Under building slabs, use engineered fill.
 - 5. Under footings and foundations, use engineered fill.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.14 SOIL MOISTURE CONTROL

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
 - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 - 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

3.15 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than 8 inches (200 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698 :
 - 1. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 95 percent.
 - 2. Under walkways, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 92 percent.
 - 3. Under lawn or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 85 percent.
 - 4. For utility trenches, compact each layer of initial and final backfill soil material at 85 percent.

3.16 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.

2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 1. Lawn or Unpaved Areas: Plus or minus 1 inch (25 mm).
 2. Walks: Plus or minus 1 inch (25 mm).
 3. Pavements: Plus or minus 1/2 inch (13 mm).
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2 inch (13 mm) when tested with a 10-foot (3-m) straightedge.

3.17 SUBSURFACE DRAINAGE

- A. Subdrainage Pipe: Specified in Division 33 Section "Subdrainage."
- B. Subsurface Drain: Place subsurface drainage geotextile around perimeter of subdrainage trench. Place a 6-inch (150-mm) course of filter material on subsurface drainage geotextile to support subdrainage pipe. Encase subdrainage pipe in a minimum of 12 inches (300 mm) of filter material, placed in compacted layers 6 inches (150 mm) thick, and wrap in subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).
 1. Compact each filter material layer to 85 percent of maximum dry unit weight according to ASTM D 698.
- C. Drainage Backfill: Place and compact filter material over subsurface drain, in width indicated, to within 12 inches (300 mm) of final subgrade, in compacted layers 6 inches (150 mm) thick. Overlay drainage backfill with 1 layer of subsurface drainage geotextile, overlapping sides and ends at least 6 inches (150 mm).
 1. Compact each filter material layer to 85 percent of maximum dry unit weight according to ASTM D 698.
 2. Place and compact impervious fill over drainage backfill in 6-inch- (150-mm-) thick compacted layers to final subgrade.

3.18 BASE COURSES

- A. Place base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place base course under pavements and walks as follows:
 1. Install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
 2. Shape base course to required crown elevations and cross-slope grades.
 3. Place base course 6 inches (150 mm) or less in compacted thickness in a single layer.
 4. Place base course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
 5. Compact base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.19 DRAINAGE COURSE

- A. Place drainage course on subgrades free of mud, frost, snow, or ice.

- B. On prepared subgrade, place and compact drainage course under cast-in-place concrete slabs-on-grade as follows:
 - 1. Install subdrainage geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
 - 2. Place drainage course 6 inches (150 mm) or less in compacted thickness in a single layer.
 - 3. Place drainage course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
 - 4. Compact each layer of drainage course to required cross sections and thicknesses to not less than 95 percent of maximum dry unit weight according to ASTM D 698.

3.20 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent geotechnical engineering testing agency to perform field quality-control testing.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, at least one test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by Engineer.
- D. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 - 1. Paved and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least 1 test for every 2000 sq. ft. (186 sq. m) or less of paved area or building slab, but in no case fewer than 3 tests.
 - 2. Foundation Wall Backfill: At each compacted backfill layer, at least 1 test for each 100 feet (30 m) or less of wall length, but no fewer than 2 tests.
 - 3. Trench Backfill: At each compacted initial and final backfill layer, at least 1 test for each 150 feet (46 m) or less of trench length, but no fewer than 2 tests.
- E. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.

3.21 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.22 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Engineer.
 - 1. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 PROJECT CONDITIONS

- A. The Contractor will be responsible to maintain and control the grading around the building so that the grade is pitched to prevent water from entering the building and/or accumulating in the graded areas.
- B. Utilities and other remaining obstacles shall be properly identified prior to commencement of the final grading.

1.3 QUALITY ASSURANCE

- A. Testing Laboratory Services - Test results shall meet or exceed the standards.

1.4 REFERENCES

- A. ASTM International (ASTM)
 - 1. D6988, Standard Guide for Determination of Thickness of Plastic Film Test Specimens.
 - 2. D6938, Standard Test Methods for In-Place and Water Content of Soil and Soil-Aggregate by Nuclear Methods.
 - 3. D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil using Modified Effort (56,000 ft-lbf/ft³(2,700 kN-m/m³)).

1.5 SCOPE OF WORK

- A. Rock, stone and debris removal as specified herein.
- B. Final Grading after rough grading is complete.

1.6 RELATED WORK IN OTHER SECTIONS

- A. Section 31 00 00, Earthwork.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Earth Fill: usually previously stripped existing Silty or Sandy Clay Fill.
- B. Previously stripped existing, or new imported topsoil:
 - 1. Material shall be free of debris, stumps, roots and stones larger than 3/4" diameter.
 - 2. Samples of topsoils shall be submitted to the Architect for approval prior to installation.
 - 3. Topsoil must be suitable for rapid grass growth with no clay.
- C. Other Fill Material, if specified.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Disc the existing subgrade to a depth of six (6) inches using a landscape scarifier.
- B. Remove all roots, rocks, stumps, trash and all construction debris prior to initial finish grading.
- C. Initial Finish Grading and Placement of Earth Fill:
 - 1. After foreign materials have been removed, provide and place previously stripped earth fill in the amounts required to bring the rough grade to within 2 inches of finish grade.
 - 2. Place in lifts not to exceed 12 inches after compaction and shall be compacted to a dry density of at least 90 percent of Standard Proctor Density as determined by ASTM D698 test procedure.
 - 3. Assure bonding of layers of fill material in compliance with the specifications.
- D. Topsoil Placement:
 - 1. After initial finish grading has been completed and approved, spread 2 inches of topsoil over graded areas.
 - 2. Topsoil previously stripped and stockpiled may be used
 - 3. Contractor shall furnish all additional topsoil that may be required to provide finish elevations.
 - 4. Final and fine grading shall be done using a tractor pulled landscape rake and hand raking removing all debris immediately prior to landscaping.
 - 5. The final graded ground surface shall be relatively smooth, free of organic material and in suitable condition to commence landscaping work.

3.2 FIELD QUALITY CONTROL

- A. Inspection:
 - 1. The Contractor, prior to placing any topsoil, shall contact the Architect when the rough grading is complete and all foreign materials have been removed to review these areas for compliance with the contract requirements.
 - 2. Prior to placement of any topsoil, the Architect will review with the Contractor the areas designated complete and ready for final grading.
 - 3. The topsoil installation shall proceed immediately when the designated areas have been reviewed and determined acceptable.
 - 4. The Contractor shall contact the Architect to review the areas when the topsoil has been placed, debris removed, and all final grading has been completed. This review shall occur prior to any sodding, seeding, hydromulching, and/or other landscaping operations proceeding within these designated areas.
 - 5. Any construction materials, discovered or uncovered during and/or after the landscaping operations, shall be the responsibility of the Contractor to remove the construction material and replace each area to its finished condition.

3.3 MAINTENANCE

- A. The General Contractor is responsible for the watering, initial growth of grass, and the mowing of the sodded, seeded and/or hydromulched areas that are part of the contractual requirements.
- B. When each landscaping area has been reviewed and it has been determined the sodding, seeding, and/or hydromulching has reached a standing growth, the Owners will review these areas for the purpose of accepting and assuming the maintenance responsibilities of the completed landscaped areas.

ENGINEERING AND SITE DRAINAGE REMEDIES
CROCKETT EARLY CHILDHOOD CENTER
ENNIS INDEPENDENT SCHOOL DISTRICT

PBK
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END OF SECTION 31 22 00

SECTION 31 50 00 - EXCAVATION SUPPORT AND PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes temporary excavation support and protection systems.
- B. Related Sections:
 - 1. Section 013200 "Construction Progress Documentation" for recording preexisting conditions and excavation support and protection system progress.
 - 2. Section 015000 "Temporary Facilities and Controls" for temporary utilities and support facilities.

1.3 PERFORMANCE REQUIREMENTS

- A. Design, furnish, install, monitor, and maintain excavation support and protection system capable of supporting excavation sidewalls and of resisting soil and hydrostatic pressure and superimposed and construction loads.
 - 1. Delegated Design: Design excavation support and protection system, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
 - 2. Prevent surface water from entering excavations by grading, dikes, or other means.
 - 3. Install excavation support and protection systems without damaging existing buildings, structures, and site improvements adjacent to excavation.
 - 4. Monitor vibrations, settlements, and movements.

1.4 SUBMITTALS

- A. Shop Drawings: For excavation support and protection system.
- B. Delegated-Design Submittal: For excavation support and protection system indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Other Informational Submittals:
 - 1. Photographs or Videotape: Show existing conditions of adjacent construction and site improvements that might be misconstrued as damage caused by the absence of, the installation of, or the performance of excavation support and protection systems. Submit before Work begins.
 - 2. Record Drawings: Identifying and locating capped utilities and other subsurface structural, electrical, or mechanical conditions.
 - a. Note locations and capping depth of wells and well points.

1.5 PROJECT CONDITIONS

- A. Interruption of Existing Utilities: Do not interrupt any utility serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility according to requirements indicated:
 - 1. Notify all impacted parties including Owner no fewer than five (5) days in advance of proposed interruption of utility.
 - 2. Do not proceed with interruption of utility without Owner's written permission.
- B. Survey Work: Engage a qualified land surveyor or professional engineer to survey adjacent existing buildings, structures, and site improvements; establish exact elevations at fixed points to act as benchmarks. Identify benchmarks and record existing elevations.
 - 1. During installation of excavation support and protection systems, regularly resurvey benchmarks, maintaining an accurate log of surveyed elevations and positions for comparison with original elevations and positions. Promptly notify Architect if changes in elevations or positions occur or if cracks, sags, or other damage is evident in adjacent construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Delete this article if Contractor selects temporary excavation support and protection. Revise materials if prescribing excavation support and protection system requirements.
- B. General: Provide materials that are either new or in serviceable condition.
- C. Structural Steel: ASTM A 36/A 36M, ASTM A 690/A 690M, or ASTM A 992/A 992M.
- D. Wood Lagging: Lumber, mixed hardwood, nominal rough thickness of size and strength required for application.
- E. Cast-in-Place Concrete: ACI 301, of compressive strength required for application.
- F. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards that could develop during excavation support and protection system operations.
 - 1. Shore, support, and protect utilities encountered.
- B. Install excavation support and protection systems to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate

routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

- C. Locate excavation support and protection systems clear of permanent construction so that forming and finishing of concrete surfaces are not impeded.
- D. Monitor excavation support and protection systems daily during excavation progress and for as long as excavation remains open. Promptly correct bulges, breakage, or other evidence of movement to ensure that excavation support and protection systems remain stable.
- E. Promptly repair damages to adjacent facilities caused by installing excavation support and protection systems.

3.2 REMOVAL AND REPAIRS

- A. Remove excavation support and protection systems when construction has progressed sufficiently to support excavation and bear soil and hydrostatic pressures. Remove in stages to avoid disturbing underlying soils or damaging structures, pavements, facilities, and utilities.
 - 1. Remove excavation support and protection systems to a minimum depth of 48 inches (1200 mm) below overlaying construction and abandon remainder.
 - 2. Fill voids immediately with approved backfill compacted to density specified or required.
 - 3. Repair or replace, as approved by Architect, adjacent work damaged or displaced by removing excavation support and protection systems.
- B. Leave excavation support and protection systems permanently in place.

END OF SECTION 31 50 00

SECTION 33 4100

STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes gravity-flow, nonpressure storm drainage outside the building, with the following components:
 - 1. Backwater valves.
 - 2. Cleanouts.
 - 3. Drains.
 - 4. Corrosion-protection piping encasement.
 - 5. Precast concrete Cast-in-place concrete manholes.

1.3 DEFINITIONS

- A. PE: Polyethylene plastic.
- B. PVC: Polyvinyl chloride plastic.

1.4 PERFORMANCE REQUIREMENTS

- A. Gravity-Flow, Nonpressure, Drainage-Piping Pressure Rating: 10-foot head of water (30 kPa). Pipe joints shall be at least silttight, unless otherwise indicated.

1.5 SUBMITTALS

- A. Product Data: For the following:
 - 1. Backwater valves.
 - 2. Drains.
- B. Shop Drawings: For the following:
 - 1. Manholes: Include plans, elevations, sections, details, and frames and covers. Include design calculations, and concrete design-mix report for cast-in-place manholes.
 - 2. Catch Basins and Stormwater Inlets. Include plans, elevations, sections, details, and frames, covers, and grates.
 - 3. Stormwater Detention Structures: Include plans, elevations, sections, details, frames and covers, design calculations, and concrete design-mix report.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not store plastic manholes, pipe, and fittings in direct sunlight.
- B. Protect pipe, pipe fittings, and seals from dirt and damage.
- C. Handle manholes according to manufacturer's written rigging instructions.
- D. Handle catch basins and stormwater inlets according to manufacturer's written rigging instructions.

1.7 PROJECT CONDITIONS

- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
 - 1. Notify Owner no fewer than two days in advance of proposed interruption of service.
 - 2. Do not proceed with interruption of service without Owner's written permission.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 PIPING MATERIALS

- A. Refer to Part 3 "Piping Applications" Article for applications of pipe, fitting, and joining materials.

2.3 PE PIPE AND FITTINGS

- A. Corrugated PE Drainage Pipe and Fittings NPS 10 (DN 250) and Smaller: AASHTO M 252M, Type S, with smooth waterway for coupling joints.
 - 1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with tube and fittings.
 - 2. Corrugated PE Pipe and Fittings NPS 12 to NPS 48 (DN 250 to DN 1200): AASHTO M 294M, Type S, with smooth waterway for coupling joints.
 - 3. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.
- B. Corrugated PE Pipe and Fittings NPS 56 and NPS 60 (DN 1400 and DN 1524): AASHTO MP7, Type S, with smooth waterway for coupling joints.

1. Silttight Couplings: PE sleeve with ASTM D 1056, Type 2, Class A, Grade 2 gasket material that mates with pipe and fittings.

2.4 PVC PIPE AND FITTINGS

- A. PVC Sewer Pipe and Fittings, NPS 15 (DN 375) and Smaller: ASTM D 3034, SDR 35, with bell-and-spigot ends for gasketed joints with ASTM F 477, elastomeric seals.

2.5 CONCRETE PIPE AND FITTINGS

- A. Reinforced-Concrete Sewer Pipe and Fittings: ASTM C 76 (ASTM C 76M), with bell-and-spigot or groove and tongue ends and gasketed joints with ASTM C 443 (ASTM C 443M), rubber gaskets sealant joints with ASTM C 990 (ASTM C 990M), bitumen or butyl-rubber sealant.
 1. Class III, Wall A, B, C.
 2. Class IV, Wall A, B, C.
 3. Class V, Wall B, C.

2.6 NONPRESSURE-TYPE PIPE COUPLINGS

- A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground nonpressure piping. Include ends of same sizes as piping to be joined, and corrosion-resistant-metal tension band and tightening mechanism on each end.
- B. Sleeve Materials:
 1. For Concrete Pipes: ASTM C 443 (ASTM C 443M), rubber.
 2. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
 3. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.

2.7 BACKWATER VALVES

- A. Gray-Iron Backwater Valves: ASME A112.14.1, gray-iron body and bolted cover, with bronze seat.
 1. Available Manufacturers:
 - a. Josam Company.
 - b. Smith, Jay R. Mfg. Co.
 - c. Wade Div.; Tyler Pipe.
 - d. Watts Industries, Inc.
 - e. Watts Industries, Inc.; Enpoco, Inc. Div.
 - f. Zurn Industries, Inc.; Zurn Specification Drainage Operation.
 2. Horizontal Type: With swing check valve and hub-and-spigot ends.
 3. Combination Horizontal and Manual Gate-Valve Type: With swing check valve, integral gate valve, and hub-and-spigot ends.
 4. Terminal Type: With bronze seat, swing check valve, and hub inlet.
- B. PVC Backwater Valves: Horizontal type; with PVC body, PVC removable cover, and PVC swing check valve.
 1. Available Manufacturers:

- a. Canplas Inc.
- b. IPS Corporation.
- c. NDS Inc.
- d. Plastic Oddities, Inc.
- e. Sioux Chief Manufacturing Company, Inc.
- f. Zurn Industries, Inc.; Zurn Light Commercial Specialty Plumbing Products.

2.8 CLEANOUTS

- A. Gray-Iron Cleanouts: ASME A112.36.2M, round, gray-iron housing with clamping device and round, secured, scoriated, gray-iron cover. Include gray-iron ferrule with inside calk or spigot connection and countersunk, tapered-thread, brass closure plug.

1. Available Manufacturers:

- a. Josam Company.
- b. MIFAB Manufacturing, Inc.
- c. Smith, Jay R. Mfg. Co.
- d. Wade Div.; Tyler Pipe.
- e. Watts Industries, Inc.
- f. Watts Industries, Inc.; Enpoco, Inc. Div.
- g. Zurn Industries, Inc.; Zurn Specification Drainage Operation.

2. Top-Loading Classification(s): Light, Medium, Heavy, and Extra-heavy duty.

3. Sewer Pipe Fitting and Riser to Cleanout: ASTM A 74, Service class, cast-iron soil pipe and fittings.

- B. PVC Cleanouts: PVC body with PVC threaded plug. Include PVC sewer pipe fitting and riser to cleanout of same material as sewer piping.

1. Available Manufacturers:

- a. Canplas Inc.
- b. IPS Corporation.
- c. NDS Inc.
- d. Plastic Oddities, Inc.
- e. Sioux Chief Manufacturing Company, Inc.
- f. Zurn Industries, Inc.; Zurn Light Commercial Specialty Plumbing Products.

2.9 DRAINS

- A. Gray-Iron Area Drains: ASME A112.21.1M, round body with anchor flange and round secured grate. Include bottom outlet with inside calk or spigot connection, of sizes indicated.

1. Available Manufacturers:

- a. Josam Company.
- b. MIFAB Manufacturing, Inc.
- c. Smith, Jay R. Mfg. Co.
- d. Wade Div.; Tyler Pipe.
- e. Watts Industries, Inc.
- f. Watts Industries, Inc.; Enpoco, Inc. Div.
- g. Zurn Industries, Inc.; Zurn Specification Drainage Operation.

2. Top-Loading Classification(s): Medium and heavy duty.

- B. Gray-Iron Trench Drains: ASME A112.21.1M, 6-inch- (150-mm-) wide top surface, rectangular body with anchor flange or other anchoring device, and rectangular secured grate. Include units of total length indicated and number of bottom outlets with inside calk or spigot connections, of sizes indicated.

1. Available Manufacturers:
 - a. Josam Company.
 - b. Smith, Jay R. Mfg. Co.
 - c. Wade Div.; Tyler Pipe.
 - d. Watts Industries, Inc.
 - e. Watts Industries, Inc.; Enpoco, Inc. Div.
 - f. Zurn Industries, Inc.; Zurn Specification Drainage Operation.
2. Top-Loading Classification(s): Medium, heavy, and extra-heavy duty.

2.10 MANHOLES

- A. Standard Precast Concrete Manholes: ASTM C 478 (ASTM C 478M), precast, reinforced concrete, of depth indicated, with provision for sealant joints.

1. Diameter: 48 inches (1200 mm) minimum, unless otherwise indicated.
 2. Ballast: Increase thickness of precast concrete sections or add concrete to base section, as required to prevent flotation.
 3. Base Section: 6-inch (150-mm) minimum thickness for floor slab and 4-inch (102-mm) minimum thickness for walls and base riser section, and having separate base slab or base section with integral floor.
 4. Riser Sections: 4-inch (102-mm) minimum thickness, and lengths to provide depth indicated.
 5. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated. Top of cone of size that matches grade rings.
 6. Joint Sealant: ASTM C 990 (ASTM C 990M), bitumen or butyl rubber.
 7. Steps: None
 8. Grade Rings: Reinforced-concrete rings, 6- to 9-inch (150- to 225-mm) total thickness, to match diameter of manhole frame and cover.
 9. Manhole Frames and Covers: Ferrous; 24-inch (610-mm) ID by 7- to 9-inch (175- to 225-mm) riser with 4-inch- (102-mm-) minimum width flange and 26-inch- (660-mm-) diameter cover. Include indented top design with lettering cast into cover, using wording equivalent to "STORM SEWER."
- a. Material: ASTM A 48, Class 35 gray iron, unless otherwise indicated.

- B. Cast-in-Place Concrete Manholes: Construct of reinforced-concrete bottom, walls, and top; designed according to ASTM C 890 for A-16 (ASSHTO HS20-44), heavy-traffic, structural loading; of depth, shape, dimensions, and appurtenances indicated.

1. Ballast: Increase thickness of concrete, as required to prevent flotation.
 2. Steps: None
 3. Grade Rings: Reinforced-concrete rings, 6- to 9-inch (150- to 225-mm) total thickness, to match diameter of manhole frame and cover.
 4. Manhole Frames and Covers: Ferrous; 24-inch (610-mm) ID by 7- to 9-inch (175- to 225-mm) riser with 4-inch- (102-mm-) minimum width flange and 26-inch- (660-mm-) diameter cover. Include indented top design with lettering cast into cover, using wording equivalent to "STORM SEWER."
- a. Material: ASTM A 48, Class 35 gray iron, unless otherwise indicated.

2.11 CONCRETE

- A. General: Cast-in-place concrete according to ACI 318/318R, ACI 350R, and the following:

1. Cement: ASTM C 150, Type II.
 2. Fine Aggregate: ASTM C 33, sand.
 3. Coarse Aggregate: ASTM C 33, crushed gravel.
 4. Water: Potable.
- B. Portland Cement Design Mix: 4000 psi (27.6 MPa) minimum, with 0.45 maximum water-cementitious materials ratio.
1. Reinforcement Fabric: ASTM A 185, steel, welded wire fabric, plain.
 2. Reinforcement Bars: ASTM A 615/A 615M, Grade 60 (420 MPa), deformed steel.
- C. Ballast and Pipe Supports: Portland cement design mix, 3000 psi (20.7 MPa) minimum, with 0.58 maximum water-cementitious materials ratio.
1. Reinforcement Fabric: ASTM A 185, steel, welded wire fabric, plain.
 2. Reinforcement Bars: ASTM A 615/A 615M, Grade 60 (420 MPa), deformed steel.

2.12 CATCH BASINS

- A. Standard Precast Concrete Catch Basins: ASTM C 478 (ASTM C 478M), precast, reinforced concrete, of depth indicated, with provision for sealant joints.
1. Base Section: 6-inch (150-mm) minimum thickness for floor slab and 4-inch (102-mm) minimum thickness for walls and base riser section, and having separate base slab or base section with integral floor.
 2. Riser Sections: 4-inch (102-mm) minimum thickness, 48-inch (1220-mm) diameter, and lengths to provide depth indicated.
 3. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated. Top of cone of size that matches grade rings.
 4. Joint Sealant: ASTM C 990 (ASTM C 990M), bitumen or butyl rubber.
 5. Grade Rings: Include 2 or 3 reinforced-concrete rings, of 6- to 9-inch (150- to 229-mm) total thickness, that match 24-inch- (610-mm-) diameter frame and grate.
 6. Steps: None
 7. Pipe Connectors: ASTM C 923 (ASTM C 923M), resilient, of size required, for each pipe connecting to base section.
- B. Cast-in-Place Concrete, Catch Basins: Construct of reinforced concrete; designed according to ASTM C 890 for structural loading; of depth, shape, dimensions, and appurtenances indicated.
1. Bottom, Walls, and Top: Reinforced concrete.
 2. Channels and Benches: Concrete.
 3. Steps: None
- C. Frames and Grates: ASTM A 536, Grade 60-40-18, ductile iron designed for A-16, structural loading. Include flat grate with small square or short-slotted drainage openings.
1. Size: 24 by 24 inches (610 by 610 mm) minimum, unless otherwise indicated.
 2. Grate Free Area: Approximately 50 percent, unless otherwise indicated.

2.13 STORMWATER INLETS

- A. Curb Inlets: Vertical curb opening, of materials and dimensions indicated.

2.14 PIPE OUTLETS

- A. Head Walls: Cast-in-place reinforced concrete, with apron and tapered sides.
- B. Riprap Basins: Broken, irregular size and shape, graded stone according to NSSGA's "Quarried Stone for Erosion and Sediment Control."
 - 1. Average Size: screen opening 3 inches (76 mm) to 5 inches (127 mm).

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Division 31 Section "Earth Moving."

3.2 PIPING APPLICATIONS

- A. Gravity-Flow, Nonpressure Sewer Piping: Use any of the following pipe materials for each size range:
 - 1. NPS 3 (DN 80): Corrugated PE drainage pipe and fittings, silttight couplings, and coupled joints.
 - 2. NPS 3 (DN 80): PVC water-service pipe; PVC Schedule 40, water-service-pipe fittings; and solvent-cemented joints.
 - 3. NPS 4 and NPS 6 (DN 100 and DN 150): Corrugated PE drainage pipe and fittings, silttight couplings, and coupled joints.
 - 4. NPS 4 and NPS 6 (DN 100 and DN 150): PVC sewer pipe and fittings, gaskets, and gasketed joints.
 - 5. NPS 8 to NPS 12 (DN 200 to DN 300): Corrugated PE drainage pipe and fittings in NPS 8 and NPS 10 (DN 200 and DN 250) and corrugated PE pipe and fittings in NPS 12 (DN 300), silttight couplings, and coupled joints.
 - 6. NPS 8 to NPS 12 (DN 200 to DN 300): PVC sewer pipe and fittings, gaskets, and gasketed joints.
 - 7. NPS 15 (DN 375): Corrugated PE pipe and fittings, silttight couplings, and coupled joints.
 - 8. NPS 15 (DN 375): PVC sewer pipe and fittings, gaskets, and gasketed joints.
 - 9. NPS 15 (DN 375): Reinforced-concrete sewer pipe and fittings, gaskets, and gasketed joints.
 - 10. NPS 18 to NPS 36 (DN 450 to DN 900): Corrugated PE pipe and fittings, silttight couplings, and coupled joints.
 - 11. NPS 18 to NPS 36 (DN 450 to DN 900): Reinforced-concrete sewer pipe and fittings, gaskets, and gasketed joints.
 - 12. NPS 42 to NPS 60 (DN 1050 to DN 1500): Corrugated PE pipe and fittings, silttight couplings, and coupled joints.
 - 13. NPS 42 to NPS 60 (DN 1050 to DN 1500): Reinforced-concrete sewer pipe and fittings, gaskets, and gasketed joints.
 - 14. NPS 66 to NPS 144 (DN 1650 to DN 3600): Reinforced-concrete sewer pipe and fittings, gaskets, and gasketed joints.

3.3 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout take design considerations into account. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.

- C. Install manholes for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. Tunneling: Install pipe under streets or other obstructions that cannot be disturbed by tunneling, jacking, or a combination of both.
- F. Install gravity-flow, nonpressure drainage piping according to the following:
 - 1. Install piping pitched down in direction of flow, at minimum slope of 1 percent, unless otherwise indicated.
 - 2. Install piping NPS 6 (DN 150) and larger with restrained joints at tee fittings and at changes in direction. Use corrosion-resistant rods, pipe or fitting manufacturer's proprietary restraint system, or cast-in-place concrete supports or anchors.
 - 3. Install piping with 36-inch (915-mm) minimum cover.
 - 4. Install PE corrugated sewer piping according to CPPA's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings."
 - 5. Install PVC sewer piping according to ASTM D 2321 and ASTM F 1668.
 - 6. Install reinforced-concrete sewer piping according to ASTM C 1479 and ACPA's "Concrete Pipe Installation Manual."

3.4 PIPE JOINT CONSTRUCTION

- A. Basic pipe joint construction is specified in Division 33 Section "Common Work Results for Utilities." Where specific joint construction is not indicated, follow piping manufacturer's written instructions.
- B. Join gravity-flow, nonpressure drainage piping according to the following:
 - 1. Join corrugated PE piping according to CPPA 100 and the following:
 - a. Use silttight couplings for Type 2, silttight joints.
 - 2. Join PVC sewer piping according to ASTM D 2321 and ASTM D 3034 for elastomeric-seal joints or ASTM D 3034 for elastomeric gasket joints.
 - 3. Join reinforced-concrete sewer piping according to ACPA's "Concrete Pipe Installation Manual" for rubber-gasket joints.
 - 4. Join dissimilar pipe materials with nonpressure-type flexible or rigid couplings.

3.5 BACKWATER VALVE INSTALLATION

- A. Install horizontal-type backwater valves in piping where indicated.
- B. Install combination horizontal and manual gate valve type in piping and in manholes where indicated.
- C. Install terminal-type backwater valves on end of piping and in manholes where indicated.

3.6 CLEANOUT INSTALLATION

- A. Install cleanouts and riser extension from sewer pipe to cleanout at grade. Use cast-iron soil pipe fittings in sewer pipes at branches for cleanouts and cast-iron soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.
 - 1. Use light-duty, top-loading classification cleanouts in earth or unpaved foot-traffic areas.
 - 2. Use medium-duty, top-loading classification cleanouts in paved foot-traffic areas.

3. Use heavy-duty, top-loading classification cleanouts in vehicle-traffic service areas.
 4. Use extra-heavy-duty, top-loading classification cleanouts in roads areas.
- B. Set cleanout frames and covers in earth in cast-in-place concrete block, 18 by 18 by 12 inches (450 by 300 mm) deep. Set with tops 1 inch (25 mm) above surrounding earth grade.
- C. Set cleanout frames and covers in concrete pavement with tops flush with pavement surface.

3.7 DRAIN INSTALLATION

- A. Install type of drains in locations indicated.
1. Use light-duty, top-loading classification drains in earth or unpaved foot-traffic areas.
 2. Use medium-duty, top-loading classification drains in paved foot-traffic areas.
 3. Use heavy-duty, top-loading classification drains in vehicle-traffic service areas.
 4. Use extra-heavy-duty, top-loading classification drains in roads areas.
- B. Embed drains in 4-inch (102-mm) minimum depth of concrete around bottom and sides.
- C. Fasten grates to drains if indicated.
- D. Set drain frames and covers with tops flush with pavement surface.
- E. Assemble trench sections with flanged joints.
- F. Embed trench sections in 4-inch (102-mm) minimum concrete around bottom and sides.

3.8 MANHOLE INSTALLATION

- A. General: Install manholes, complete with appurtenances and accessories indicated.
- B. Install precast concrete manhole sections according to ASTM C 891.
- C. Construct cast-in-place manholes as indicated.
- D. Set tops of frames and covers flush with finished surface of manholes that occur in pavements. Set tops 3 inches (76 mm) above finished surface elsewhere, unless otherwise indicated.

3.9 CATCH BASIN INSTALLATION

- A. Construct catch basins to sizes and shapes indicated.
- B. Set frames and grates to elevations indicated.

3.10 STORMWATER INLET AND OUTLET INSTALLATION

- A. Construct inlet head walls, aprons, and sides of reinforced concrete, as indicated.
- B. Construct riprap of broken stone, as indicated.
- C. Install outlets that spill onto grade, anchored with concrete, where indicated.
- D. Install outlets that spill onto grade, with flared end sections that match pipe, where indicated.

- E. Construct energy dissipaters at outlets, as indicated.

3.11 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318/318R.

3.12 CONNECTIONS

- A. Connect nonpressure, gravity-flow drainage piping in building's storm building drains specified in Division 22 Section "Facility Storm Drainage Piping."
- B. Connect force-main pressure piping to building's storm drainage force mains specified in Division 22 Section "Facility Storm Drainage Piping." Terminate piping where indicated.
 - 1. Use commercially manufactured wye fittings for piping branch connections. Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye fitting, plus 6-inch (150-mm) overlap, with not less than 6 inches (150 mm) of concrete with 28-day compressive strength of 3000 psi (20.7 MPa).
 - 2. Make branch connections from side into existing piping, NPS 4 to NPS 20 (DN 100 to DN 500). Remove section of existing pipe; install wye fitting into existing piping; and encase entire wye with not less than 6 inches (150 mm) of concrete with 28-day compressive strength of 3000 psi (20.7 MPa).
 - 3. Make branch connections from side into existing piping, NPS 21 (DN 525) or larger, or to underground manholes and structures by cutting opening into existing unit large enough to allow 3 inches (76 mm) of concrete to be packed around entering connection. Cut end of connection pipe passing through pipe or structure wall to conform to shape of and be flush with inside wall, unless otherwise indicated. On outside of pipe, manhole, or structure wall, encase entering connection in 6 inches (150 mm) of concrete for minimum length of 12 inches (300 mm) to provide additional support of collar from connection to undisturbed ground.
 - a. Use concrete that will attain a minimum 28-day compressive strength of 3000 psi (20.7 MPa), unless otherwise indicated.
 - b. Use epoxy-bonding compound as interface between new and existing concrete and piping materials.
 - 4. Protect existing piping, manholes, and structures to prevent concrete or debris from entering while making tap connections. Remove debris or other extraneous material that may accumulate.
- C. Connect to sediment interceptors specified in Division 22 Section "Sanitary Waste Interceptors."

3.13 CLOSING ABANDONED STORM DRAINAGE SYSTEMS

- A. Abandoned Piping: Close open ends of abandoned underground piping indicated to remain in place. Include closures strong enough to withstand hydrostatic and earth pressures that may result after ends of abandoned piping have been closed. Use either procedure below:
 - 1. Close open ends of piping with at least 8-inch- (203-mm-) thick, brick masonry bulkheads.
 - 2. Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods suitable for size and type of material being closed. Do not use wood plugs.
- B. Abandoned Manholes and Structures: Excavate around manholes and structures as required and use one procedure below:
 - 1. Remove manhole or structure and close open ends of remaining piping.

2. Remove top of manhole or structure down to at least 36 inches (915 mm) below final grade. Fill to within 12 inches (300 mm) of top with stone, rubble, gravel, or compacted dirt. Fill to top with concrete.

C. Backfill to grade according to Division 31 Section "Earth Moving."

3.14 IDENTIFICATION

A. Materials and their installation are specified in Division 31 Section "Earth Moving." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.

1. Use detectable warning tape over ferrous piping.
2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

3.15 FIELD QUALITY CONTROL

A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches (610 mm) of backfill is in place, and again at completion of Project.

1. Submit separate reports for each system inspection.
2. Defects requiring correction include the following:
 - a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
 - c. Crushed, broken, cracked, or otherwise damaged piping.
 - d. Infiltration: Water leakage into piping.
 - e. Exfiltration: Water leakage from or around piping.
3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
4. Reinspect and repeat procedure until results are satisfactory.

B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.

1. Do not enclose, cover, or put into service before inspection and approval.
2. Test completed piping systems according to authorities having jurisdiction.
3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
4. Submit separate report for each test.
5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
 - a. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.
 - b. Option: Test plastic piping according to ASTM F 1417.
 - c. Option: Test concrete piping according to ASTM C 924 (ASTM C 924M).

C. Leaks and loss in test pressure constitute defects that must be repaired.

D. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.

3.16 CLEANING

A. Clean interior of piping of dirt and superfluous materials. Flush with potable water.

END OF SECTION