General Info

to disable Q & A notifications for this solicitation.

Digital ID required

Deadline

08/29/2023 11:00 AM CDT

Advertised

08/11/2023 02:19 PM CDT

Business Name

Arkansas Department of Transportation - Equipment and Procurement

Location(s)

4900 Highway 65 S, Pine Bluff, Arkansas, 71601



Number

M-24-007H

Description

Construction of Resident Engineer Office #23 District 2 Job 020785 Bid Express :: Solicitations :: M-24-007H

8/11/23, 2:19 PM

FOB: Pine Bluff, AR

Allows zero unit prices and labor

Yes

Allows negative unit prices and labor

Yes

Allows multiple bids per solicitation

No

Q & A

Deadline

Same as solicitation deadline.

Remarks

ATTACHMENT LIST

CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM.pdf (157 KB) Download, complete, and upload in the Required ...

Standard Bid Conditions Revised 2023.pdf (156 KB)

Certificate For Boycott and Illegal Immigrant Restrictions.pdf (174 KB)

Project Manual Job 020785 Articles.pdf (3.15 MB)

Specifications 01-10-00 thru 04-20-00.pdf (1.39 MB)

Specifications 05-12-00 thru 08-80-00.pdf (1.46 MB)

BID INVITATION

Bid Express :: Solicitations :: M-24-007H

8/11/23, 2:19 PM

Electronic Sealed bids for furnishing the commodities and/or services described below subject to the Standard Bid Conditions of this Bid Invitation will be publicly opened at the above-noted bid opening date and time at the ARDOT Equipment and Procurement Divison located at 11302 West Baseline Road, Little Rock, AR 72209. Bids must be submitted on this form, with attachments when appropriate, or bids will be rejected.

In compliance with this Bid Invitation and subject to all the Conditions thereof, the undersigned offers and agrees to furnish any and all items upon which prices are quoted, at the price set opposite each item.

Company Name:*	Name:*	
Address:*	Title:*	
Federal Tax ID or Social Security No:*	Phone:*	Fax:
E-mail:*		
01		
Signature:*		

Construction of an Resident engineer Office at the ARDOT District Two Headquarters located at 4900 Highway 65 South, Pine Bluff, AR 71601.

Job 020785

To meet the requirements of the Arkansas Department of Transportation Specifications attached to and made part of this bid.

For questions about Bidding requirements contact Danny Keene (501-569-2674) For questions about job specifications contact Cameron Parsons (501-569-4951)

A mandatory pre-bid meeting is scheduled for all potential bidders at the ARDOT District Two Headquarters located at 4900 Highway 65 South, Pine Bluff, AR 71601 at 9:00 A.M. On August 23, 2023

All bidders should complete and return the Eligible Bidder Certification (Attachment A) and Disclosure Form (see Page 2 of Standard Bid Conditions – Item 18) and Restriction of Boycott of Israel Certification issued with this bid. A current copy of the DFA Illegal Immigrant Contractor Disclosure Certification (see Page 1 of Standard Bid Conditions – Item 17) should also be submitted with bid.

Bid Bond in the amount of 5% of total bid price is required of all bidders at time of bid opening or bid will be rejected. Personal and company checks are not acceptable as Bid Bonds. See Condition 4 on page 1 of Standard Bid Conditions. Bid bonds that are not submitted electronically must be physically received by Equipment & Procurement located at 11302 West Baseline Road, Little Rock, AR 72209 prior to the designated time of the bid opening. Bid Invitation number should be clearly displayed on the sealed envelope or package. Performance Bond only (no checks of any kind allowed) in the amount of 100% will be required of successful bidder prior to providing goods/services. See Condition 4 on page 1 of Standard Bid Conditions.

Surety Bonds may be submitted electronically through the online bidding process. If submitting a Surety Bond that is not compatible with Surety 2000 and Tinubu, your company still may do so. Other Surety Companies will still be accepted but must be received in Equipment and Procurement before the time of bid opening at 11302 West Baseline Road, Little Rock, AR 72209 prior to the designated time of the bid opening. This includes Cashier's checks, Certified checks, or Money orders submitted as bid bonds must be physically received by Equipment & Procurement.

On site work will not commence until all requested materials have been acquired and accumulated for inspection by ARDOT.

All work must be completed within 120 calendar days of commencement of work.

Current Arkansas Contractor's License Number must be listed or bid will be rejected. (A.C.A. 17-25-101 et. seq.)

Bid Information and Specifications are available on-line by going to the ARDOT Web Site – www.ardot.gov and clicking on "Commodities and Services Bids/Contracts Information". Tabulations will also be available at this site after award of bid/contract. If you have any questions, call this office at 501-569-2667.

you have any questions, call this office at 501-569-2667.	
 Construction of an Resident Engineer Office at the ARDOT District Two Headquarters located at 4900 Highway 65 South, Pine Bluff, AR 71601 	
Lump Sum* \$	
Arkansas Contractors License*	
Notes	
Notes	
ATTACHMENT A - ELIGIBLE BIDDER CERTIFICATION	

The Bidder represents and warrants for itself, its employees and its subcontractors and certifies they:

 Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

department or agency;

2. Have not within a three-year period preceding thus Bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph two (2) of this Certification;

4. Have not within a one-year period preceding this application/Bid had one or more public transactions (Federal, State, or local) terminated for cause or default; and

The Bidder represents, warrants and acknowledges the understanding that resfrictions placed on the employment of labor or on the scale of pay for the work on a contract will be the requirements of the Fair Labor Standards Act (Federal Wage-Hour Law) of 1938, 28 USC §201 et seq., and other applicable labor laws.

The person executing this Certification further represents, warrants and affnns the truthfulness and accuracy of the contents of the statements submitted on or with this Certification and understands that the provisions of 31 USC §3801 et seg. are applicable thereto.

IDDER NAME (Company Name):*	
Y (Signature):*	
TLE:*	
BID BOND	
the amount of 5%	_

Choices...

Guarantee Method*

Paper Bid Bond,	Cashier's Check,	Certified Check,	Money Order,	or an Annual	Bond or	า File
-----------------	------------------	------------------	--------------	--------------	---------	--------

Confirmation*

Choices...

Electronic Bid Bond

Bond ID*

Surety Agency*

Choices...

Surety State*

Principal*

ENVELOPE REQUIRED DOCUMENT LIST

Name

Omission Terms

The information supplied in this component will be available to the owner-agency immediately after the bid deadline, but before the bid is opened.

Paper Bid Bond, Cashier's Check, Certified Check, Money Order, or an Annual Bond on File

Original, wet-ink documents are required at time of bid op...

I have opted to electronically verify my bid bond.

1 Required Document

REQUIRED DOCUMENT LIST

Name

Omission Terms

Contract and Grant Disclosure and Certification Form Failure to complete all of the following information may re...

Certificate for Boycott and Illegal Immigrant Restrictions

2 Required Documents

Name

Omission Terms

Failure to complete all of the following information may re...

2 Required Documents

ARDOT - STANDARD BID CONDITIONS

- 1. **GENERAL:** Any special terms and conditions included in the invitation for bid override these standard terms and conditions. The standard terms and conditions and any special terms and conditions become part of any contract entered into if any or all parts of the bid are accepted by the Arkansas Department of Transportation (ARDOT).
- 2. ACCEPTANCE AND REJECTION: ARDOT reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
- 3. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
- BID BONDS AND PERFORMANCE BONDS: If required, a Bid Bond in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. Personal and company checks are not acceptable as Bid Bonds. Surety Bonds may be submitted electronically through the online bidding process. Cashier's checks, Certified checks, or Money orders submitted as bid bonds must be physically received by Equipment & Procurement located at 11302 West Baseline Road, Little Rock, AR 72209 prior to the designated time of the bid opening. Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by ARDOT or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a Performance Bond in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. Personal and company checks are not acceptable as Performance Bonds. In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company that is authorized to do business in the State of Arkansas and that is listed on the current United States Department of the Treasury Listing of Approved Sureties. Surety bonds must be executed by a resident or nonresident agent who is licensed by the Arkansas State Insurance Commissioner to represent the surety company executing the bond, and the resident or non-resident agent shall file with the bond the power of attorney of the agent to act on behalf of the bonding company. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
- 5. **TAXES:** The ARDOT is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the ARDOT as an addition thereto, and should be added to the billing to the ARDOT. The ARDOT is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the ARDOT.
- 6. "ALL OR NONE" BIDS: Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
- 7. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
- 8. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
- 9. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
- 10. **FREIGHT**: All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.

- 11. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of ARDOT request, and free demonstrations within 30 days, unless ARDOT extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by ARDOT. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
- 12. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
- 13. BACKORDERS OR DELAY IN DELIVERY: Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the ARDOT, as soon as possible, of the reason for any delay and the expected delivery date. The ARDOT has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
- 14. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by ARDOT after delivery. Default in promised delivery or failure to meet specifications authorizes the ARDOT to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
- 15. **ETHICS:** "It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business." (Arkansas Code, Annotated, Section 19-11-708).
- 16. NOTICE OF NONDISCRIMINATION: The Arkansas State Highway Commission, through ARDOT, complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore, ARDOT does not discriminate on the basis of race, sex, color, age, national origin, religion (not applicable as a protected group under the Federal Motor Carrier Safety Administration Title VI Program), disability, Limited English Proficiency (LEP), or low-income status in the admission, access to and treatment in the ARDOT's programs and activities, as well as the ARDOT's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the ARDOT's nondiscrimination policies may be directed to Civil Rights Officer Joanna P. McFadden (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501)569-2298, (Voice/TTY 711), or the following email address: joanna.mcfadden@ardot.gov. Free language assistance for Limited English Proficient individuals is available upon request. This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.
- 17. **PROHIBITION OF EMPLOYMENT OF ILLEGAL IMMIGRANTS:** Pursuant to Arkansas Code Annotated 19-11-105, all bidders must certify prior to award of a contract that they **do not** employ or contract with any illegal immigrant(s) in its contract with the state. Bidders shall certify online at https://www.ark.org/dfa/immigrant/index.php.
- 18. **DISCLOSURE:** Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that order, **shall** be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or who violates any rule, regulation, or policy **shall** be subject to all legal remedies available to the agency.



ARKANSAS DEPARTMENT OF TRANSPORTATION

ARDOT.gov | IDriveArkansas.com | Lorie H. Tudor, P.E., Director

10324 Interstate 30 | P.O. Box 2261 | Little Rock, AR 72203-2261 Phone: 501.569.2000 | Voice/TTY 711 | Fax: 501.569.2400

CERTIFICATION FOR BOYCOTT AND ILLEGAL IMMIGRANT RESTRICTIONS

Pursuant to Arkansas law, a vendor must submit the below certifications prior to entering into a contract with a public entity for an amount as designated by the applicable laws.

1. **Israel Boycott Restriction:** For contracts valued at \$1,000 or greater.

A public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in a boycott of Israel. If at any time after signing this certification the contractor decides to engage in a boycott of Israel, the contractor must notify the contracting public entity in writing. See Arkansas Code Annotated § 25-1-503.

2. Illegal Immigrant Restriction: For contracts exceeding \$25,000.

No state agency may enter into or renew a public contract for services with a contractor who employs or contracts with an illegal immigrant. A contractor shall certify that it does not employ, or contract with, illegal immigrants. See Arkansas Code Annotated § 19-11-105.

3. Energy, Fossil Fuel, Firearms, and Ammunition Industries Boycott Restriction: For contracts valued at, or exceeding, \$75,000.

A public entity shall not enter into a contract with a company unless the contract includes a written certification that the person or company is not currently engaged in, and agrees for the duration of the contract not to engage in, a boycott of an Energy, Fossil Fuel, Firearms, or Ammunition Industry. If a company does boycott any of these industries, see Arkansas Code Annotated § 25-1-1102.

By signing this form, the contractor agrees and certifies that it does not, and shall not for the remaining aggregate term of the contract, participate in the activities checked below:

☐ Do not boycott Israel.	
☐ Do not employ illegal immigr	ants.
☐ Do not boycott Energy, Foss	il Fuel, Firearms, or Ammunition Industries.
Contract Number & Description	
Name of Public Entity	Arkansas Department of Transportation
Name of Vendor/Contractor	
AASIS Vendor Number	N/A
N	
Contractor Signature	Date

CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

ailure to complete all of th	e following informat	ion may result in a delay in obtaining	a contract, lease, p	Failure to complete all of the following information may result in a delay in obtaining a contract, lease, purchase agreement, or grant award with any Arkansas State Agency.	
SUBCONTRACTOR:	SUBCONTRACTOR NAME:	E .			
		IS THIS FOR:			
TAXPAYER ID NAME:	E .	□Goods? □	☐ Services?	☐ Both?	
YOUR LAST NAME:		FIRST NAME:		MLL	н
ADDRESS:	né		W .	342 F18	
CITY:		STATE:	ZIP CODE:	DDE: COUNTY:	
AS A CONDITION O	F OBTAINING,	EXTENDING, AMENDING,	OR RENEWIN	AS A CONDITION OF OBTAINING, EXTENDING, AMENDING, OR RENEWING A CONTRACT, LEASE, PURCHASE AGREEMENT, OR GRANT AWARD	OR GRANT AWARD
WITH ANY ARKANS	AS STATE AGE	WITH ANY ARKANSAS STATE AGENCY, THE FOLLOWING INFORMATION MUST BE DISCLOSED:	ORMATION I	MUST BE DISCLOSED:	
			FOR INDI	FOR INDIVIDUALS*	
Indicate below if: you, your spouse or the Commission Member, or State Employee:	ır spouse or the bro State Employee:	other, sister, parent, or child of you o	or your spouse is	Indicate below if: you, your spouse or the brother, sister, parent, or child of you or your spouse is a current or former: member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee:	nal Officer, State Board or
Position Hold	Mark (✓)	Name of Position of Job Held	For How Long?	What is the person(s) name and how are they related to you? (i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.)	elated to you? , child, etc.)
	Current Former	er (senator, representative, name of board/ commission, data entry, etc.)	From To MM/YY		Relation
General Assembly			\dashv		
Constitutional Officer					
State Board or Commission Member		(42)			
State Employee					-5
□ None of the above applies	pplies				v
	-	FOR	AN ENTI	FOR AN ENTITY (BUSINESS)*	٧
ndicate below If any of th Constitutional Officer, Sta	e following persons te Board or Commi	Indicate below If any of the following persons, current or former, hold any position of control or hold any ownership interest. Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child	on of control or h	Indicate below If any of the following persons, current or former, hold any position of control or hold any ownership interest of 10% or greater in the entity: member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, sister, parent, or child of a member of the General Assembly, Constitution of the Con	of the General Assembly, Institutional Officer, State Bo
Position Held	Mark (ヾ)	Name of Position of Job Held	For How Long?	What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?	ership interest and/or
	Current Former	(senator, representative, name of board/ commission, data entry, etc.)	From To MM/YY	Person's Name(s)	Ownership Position of Interest (%) Control
General Assembly		\vdash	\dashv		
Constitutional Officer					
State Board or Commission Member					
State Employee					
☐ None of the above applies	pplies				

Contract and Grant Disclosure and Certification Form

who violates any rule, regulation, or policy shall be subject to all legal remedies available to the agency. Order, shall be a material breach of the terms of this contract. Any contractor, whether an individual or entity, who fails to make the required disclosure or Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that

As an additional condition of obtaining, extending, amending, or renewing a contract with a state agency I agree as follows:

- Prior to entering into any agreement with any subcontractor, prior or subsequent to the contract date, I will require the subcontractor to complete a my contract with the state agency. whereby I assign or otherwise delegate to the person or entity, for consideration, all, or any part, of the performance required of me under the terms of CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM. Subcontractor shall mean any person or entity with whom I enter an agreement
- I will include the following language as a part of any agreement with a subcontractor:

that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor. Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to

ω the subcontract to the state agency. of the CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM completed by the subcontractor and a statement containing the dollar amount of No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy

Signature	Title		Date
	a		152
Vendor Contact Person	Title		Phone No.
		41	
Agency Use Only	-		
		Contact	Contract or
Number Name Contact Person		Phone No.	Grant No.

ARKANSAS DEPARTMENT OF TRANSPORTATION JOB NO. 020785 DISTRICT 2 R.E. OFFICE 23 (PINE BLUFF) (S) BUILDING PACKAGE PROJECT MANUAL

July 12, 2023

JOB NO. 020785
DISTRICT 2 R.E. OFFICE 23
(PINE BLUFF) (S)
BUILDING PACKAGE

ARKANSAS DEPARTMENT OF TRANSPORTATION

10324 Interstate 30 P.O. Box 2261 Little Rock, Arkansas 72203

ARKANSAS DEPARTMENT OF TRANSPORTATION JOB NO. 020785 DISTRICT 2 R.E. OFFICE 23 (PINE BLUFF) (S) BUILDING PACKAGE PROJECT MANUAL

DIVISION 00 - 00 70 00	- PROCUREMENT AND CONTRACTING REQUIREMENTS GENERAL REQUIREMENTS
01 10 00 01 20 00 01 25 00 01 26 00 01 30 00 01 40 00 01 50 00 01 60 00	GENERAL REQUIREMENTS SUMMARY PRICE AND PAYMENT PROCEDURES SUBSTITUTION PROCEDURES CONTRACT MODIFICATION PROCEDURES ADMINISTRATIVE REQUIREMENTS QUALITY REQUIREMENTS TEMPORARY FACILITIES AND CONTROLS PRODUCT REQUIREMENTS EXECUTION AND CLOSEOUT REQUIREMENTS
	- UNIT MASONRY UNIT MASONRY
	METALS STRUCTURAL STEEL FRAMING METAL FABRICATIONS
06 10 00 06 16 00	WOOD, PLASTICS, AND COMPOSITES ROUGH CARPENTRY SHEATHING SHOP-FABRICATED WOOD TRUSSES
DIVISION 07 - 07 41 13 07 42 31 07 62 00 07 71 00 07 72 53 07 92 00	METAL WALL PANELS SHEET METAL FLASHING AND TRIM ROOF SPECIALTIES SNOW GUARDS
08 41 13 08 51 13	OPENINGS HOLLOW METAL DOORS AND FRAMES ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS ALUMINUM WINDOWS GLAZING

JOB 110816

GENERAL CONDITIONS

ARTICLE 1

1.1.1 The Construction Contract shall not be construed to create any contractual relationship of any kind between the Architect/Engineer and the Contractor. Nothing contained in the Construction Contract shall create any contractual relationship between the Owner or the Architect/Engineer and any Subcontractor or Sub- subcontractor, as those terms are defined herein.

1.1.2 **THE WORK**

The "Work" or "Construction Work" comprises the completed construction required by the Construction Contract and any and all documents incorporated therein (the "Contract Documents") and includes all labor necessary to produce such construction, and all materials and equipment incorporated or to be incorporated in such construction.

1.1.3 THE PROJECT

The "Project" is the total construction of which the Work performed under the Contract Documents may be the whole or part.

1.2 EXECUTION, CORRELATION, AND INTENT

- 1.2.2 By executing the Construction Contract, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Construction Contract.
- 1.2.3 The intent of the Construction Contract is to include all items necessary for the proper execution and completion of the Work. Work not covered in the Construction Contract shall be required if it is consistent therewith and is reasonably inferable therefrom as being necessary to produce the intended results. Words and abbreviations which have well-known technical or trade meanings are used in the Construction Contract in accordance with such recognized meanings.
- 1.2.4 The interrelation of the Specifications, the Drawings and the schedules, excluding the progress schedule, is as follows: the Specifications determine the nature and setting of the materials; the Drawings establish the quantities, dimensions and details of the materials and Work; and the schedules give the locations. Should the drawings disagree with another requirement, or with one another, or with the Specifications, the better quality or greater quantity of work or materials shall be performed or furnished. Figures given on the Drawings govern small scale drawings.
- 1.2.5 The organization of the Specifications into divisions, sections and articles, and the arrangement of the 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.

JOB 110816

1.2.6 Where any section of General Conditions is modified or deleted, or any paragraph, subparagraph or clause thereof is modified or deleted, unaltered provisions of that section, paragraph, subparagraph or clause remain in full force and effect.

1.3 OWNERSHIP AND USE OF DOCUMENTS

- 1.3.1 The Drawings, the Specifications, and copies thereof furnished by the Architect/Engineer are and shall remain the property of the Owner. They are to be used by the Architect/Engineer and the Contractor only with respect to the Project and not to be used on any other project. With the exception of one contract set for each party to the Construction Contract, such documents are to be returned or suitably accounted for to the Owner on request at the completion of the Work. Submission 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/Engineer's common law copyright or other reserved rights or the rights of the Owner.
- 1.3.2 The Contractor will be furnished five (5) sets of the Drawings and Specifications free of charge. Additional complete sets of the Drawings and Specifications, if requested, will be furnished at reproduction cost.

ARTICLE 2

ARCHITECT/ENGINEER

2.1 **DEFINITION**

The Architect/Engineer (or "A/E") is a person registered as an architect, or a person defined as an engineer. The term Architect/Engineer, as used in these General Conditions, shall include Architects, Engineers, or person having both skills. The term is used for ease of reference and does not imply skills which may not apply to the professional utilized in this Project. The definition of Architect/Engineer shall also include those consultants registered as a landscape architect, registered as a professional engineer, and other firms employed to provide professional architectural or engineering services and having overall responsibility for the design of a project or a significant portion thereof. The Architect/Engineer is referred to throughout the Contract Documents as if singular in number and masculine in gender.

2.2 ADMINISTRATION OF THE CONTRACT

- 2.2.1 The Architect/Engineer's administration of the Construction Phase shall commence with the award of the Construction Contract, and shall terminate upon receipt of all closeout documentation and deliverables and certification of final payment of the Construction Contract by ARDOT. The contracting plan will be based on a single general contractor (the "Contractor").
- 2.2.2 The Architect/Engineer will administer the Construction Contract as hereinafter described. The Architect/Engineer will be the Owner's representative during the Project on matters related to the intent and interpretation of the Construction Contract Documents. The Architect/Engineer will advise and consult with the Owner. The Architect/Engineer will have authority to act on behalf of the Owner only to the extent provided in the Construction Contract.

JOB 110816

- 2.2.3 The Architect/Engineer shall pay all fees associated with the Plan Review and site development permit to ensure that the Building Permit, as defined herein, is ready for Contractor at the beginning of the Project.
- 2.2.4 The Architect/Engineer will visit the site at intervals appropriate to the stage of construction to familiarize himself with the progress and quality of the Work and to determine if the Work is proceeding in accordance with the Contract Documents. However, the Architect/Engineer will not be required to make continuous on-site inspections to check the quality or quantity of the Work. On the basis of his on-site observations as an architect/engineer, he will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work.
- 2.2.5 The Architect/Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work. The Architect/Engineer will not be responsible for or have control or charge over the acts or omissions of the Contractor, Subcontractors, or any of their agents or employees, or any other person performing any of the Work or failure of any of the aforementioned to carry out the Construction Work in accordance with the Construction Contract Documents.
- 2.2.6 The Architect/Engineer shall at all times have access to the Work wherever it is in preparation or progress. The Contractor shall provide facilities for such access so the Architect/Engineer may perform his functions under the Construction Contract.
- 2.2.7 Based on the Architect/Engineer's observations and an evaluation of the Contractor's Applications for Payment, as defined herein, the Architect/Engineer may, upon the Owner's request, advise the Owner on the amounts owing to the Contractor.
- 2.2.8 The Architect/Engineer shall render interpretations necessary for the proper execution or progress of the Construction Work with reasonable promptness upon receipt of a written request from the Owner or the Contractor. He shall render written decisions, within a reasonable time but no greater than ten (10) calendar days after receipt of Requests for Information (RFI's), and no more than fifteen (15) calendar days after receipt of all claims, disputes, and other matters in question between the Owner and the Contractor relating to the execution or progress of the Construction Work or the interpretation of the Construction Contract Documents. Architect/Engineer shall notify the Owner immediately if more time is required for reasonable cause. The Owner shall review the cause for the extension, and if it is justified, issue a time extension. Interpretations and decisions of the Architect/Engineer shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in written and/or graphic form. In his capacity as interpreter, he will endeavor to secure faithful performance by the Contractor.
- 2.2.9 The Architect/Engineer shall have the authority, with the concurrence of the ARDOT, to reject Work that does not conform to the Construction Contract Documents. When, in the Architect/Engineer's reasonable opinion, it is necessary or advisable in order to implement the intent of the Construction Contract Documents, the Architect/Engineer shall, with the Owner's prior approval, have authority to require special

JOB 110816

- inspection or testing of the Construction Work in accordance with the provisions of the Construction Contract Documents, whether or not such Construction Work be then fabricated, installed or completed.
- 2.2.10 However, neither the Architect/Engineer's nor the Owner 's authority to act under this subparagraph 2.2.10, nor any decision made by them in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Architect/Engineer or the Owner to the Contractor, any Subcontractor, any of their agents or employees, or any other person performing any of the Work.
- 2.2.11 The Architect/Engineer and the Owner will review and approve or take other appropriate action upon Contractor's submittals, such as Shop Drawings, Product Data and Samples, as defined in Section 01300, but only for conformance with the design concept of the Work and with the information given in the Construction Contract. Such action shall be taken in accordance with the Submittal Schedule outlined in Section 01300. The Architect/Engineer shall notify the owner immediately of any potential delays in meeting the response time. The Architect/Engineer's approval of a specific item shall not indicate approval of any assembly of which the item is a component. Approval of a specific item by either the Architect/Engineer or the Owner shall not indicate approval of an assembly of which the item is a component. The Owner has the option to delegate review of any submittal to the Architect/Engineer as sole reviewer. Generally, all color selections must have Owner approval.
- 2.2.12 The Architect/Engineer shall prepare Change Orders, as defined herein, in accordance with Article 12, and will have authority to order minor changes in the Work provided such changes do not require an adjustment of the Contract Sum or the Substantial Completion Date.
- 2.2.13 In accordance with paragraph 9.8, upon receipt from the Contractor of a request for a Substantial Completion inspection with a list of items to be completed or corrected, the Architect/Engineer and Owner will perform an inspection. As a result of this inspection, the Architect/Engineer will prepare a punch list of the items needing correction. Upon determination by the Owner that the Construction Work has been substantially completed, the Architect/Engineer will issue a Certificate of Substantial Completion.
- 2.2.14 After the Contractor completes the required corrections, and notifies the Architect/Engineer, then the Owner will accompany the Architect/Engineer and the Contractor on the final inspection to ensure that the Construction Work has been completed in accordance with the Contract Documents and to the satisfaction of the Owner and the Architect/Engineer. Architect/Engineer will notify the Owner in writing that the Construction Work has been performed according to the Construction Contract Documents.
- 2.2.15 In accordance with paragraph 9.9, the Architect/Engineer shall receive from the Contractor and inspect all warranties, guarantees, bonds, O&M manuals and similar required material to make sure that all such materials are received and satisfy the requirements of the Construction Contract Documents. The Architect/Engineer will send to the Owner for review these close-out documents, and will issue a final Certificate for Payment upon compliance with the requirements of paragraph 9.9.
- 2.2.16 The extent of the duties, responsibilities and limitations of authority of the Architect/Engineer during the construction shall not be modified or extended without the prior written consent of the Owner and the Architect/Engineer.

JOB 110816

- 2.2.17 The Architect/Engineer shall report observation of any suspected hazardous materials. The Owner will be responsible for any necessary hazardous materials abatement work.
- 2.2.18 In case of the termination of the employment of the Architect/Engineer, the Owner shall appoint an architect/engineer, against whom the Contractor makes no reasonable objection, whose status under the Construction Contract shall be that of the former Architect/Engineer.

ARTICLE 3

THE OWNER

3.1 **DEFINITION**

The Owner is Arkansas Department of Transportation (ARDOT) and shall be referred to as if singular in number and masculine in gender. The term Owner means the Arkansas Department of Transportation building Committee, the State Facilities Management Engineer (SFME) of the ARDOT Facilities Management Section (the "Section Head"), or authorized representatives of the Section Head.

3.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- 3.2.1 Unless otherwise provided in the Contract Documents, the Owner will furnish all surveys describing the physical characteristics, legal limitations, and utility locations for the site of the Project, and a legal description of the site.
- 3.2.2 Except as provided in subparagraph 4.7.1, or unless otherwise provided in the Contract Documents, the Owner shall secure and pay for necessary rights of way and easements required for the construction, use or occupancy of permanent structures or for permanent changes in existing facilities.
- 3.2.3 Information or services under the Owner's control shall be furnished by the Owner with reasonable promptness to avoid delay in the orderly progress of the Work.
- 3.2.4 The Owner shall forward all instructions to the Contractor in writing. Any verbal directions given by the Owner shall be consistent with the Architect/Engineer's interpretations of the Construction Contract and confirmed in writing. No communication or direction from the Owner shall be interpreted as a change to the Construction Contract unless provided in writing and processed as a Change Order in accordance with Article 12, Changes in Work.
- 3.2.5 The Owner shall approve and monitor the Construction Schedule.
- 3.2.6 The Owner shall observe the construction work for quality assurance, notify the Contractor in writing of defective work, and maintain a log of such deficiencies. This activity does not relieve the Architect/Engineer of his responsibility for construction observations as noted in subparagraph 2.2.3. The Owner's right to accept defective work is described in subparagraph 13.3.

JOB 110816

- 3.2.7 The Owner shall maintain a log of outstanding issues until they are closed.
- 3.2.8 The foregoing are in addition to other duties and responsibilities of the Owner enumerated in articles 6, 9, and 11.

3.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct defective work as required by paragraph 13.2 or persistently fails to carry out the Work in accordance with the Construction Contract, the Owner may, in writing, order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. However, this right of the Owner to stop the Work shall not give rise to any 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 subparagraph 6.1.3.

3.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Construction Contract and fails within ten (10) days 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, after ten (10) days following receipt by the Contractor of any additional written notice and without prejudice to any other remedy he may have, make good such deficiencies. In such case an appropriate Change Order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies, including compensation, if any, for the Architect/Engineer's additional services made necessary by such default, negligence, or failure. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner within thirty (30) days after receipt of written demand therefor.

ARTICLE 4

CONTRACTOR

4.1 **DEFINITION**

The Contractor is the person or entity identified as such in the Construction Contract and shall be referred to as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

4.2 REVIEW OF CONTRACT DOCUMENTS

4.2.1 The Contractor shall exercise due diligence in carefully studying the Contract Documents and shall report to the Architect/Engineer and the Owner, in a timely manner, any error, inconsistency or omission he may discover. The report should be in the form of an RFI, as described in Division 1. For purposes of this paragraph 4.2, the RFI shall be considered "timely" if it is provided as soon as practicable but in no event later than 10 days after the Contractor's discovery of the error, inconsistency or omission. Should the Contractor fail to timely report such errors, inconsistencies, or omissions in the Contract Documents, and

JOB 110816

such delay results in additional costs incurred by the Owner and/or in schedule delays, the Contractor will not be entitled to a Contract Time extension or an increase in the Contract Sum for additional work, incidental damages, or Project delays unless the Contractor demonstrates to the Owner's satisfaction that such additional costs and/or Project delays would have resulted even if the RFI had been timely issued. The Contractor shall perform no portion of the Work at any time without the necessary part of the Construction Contract or, where required, approved Shop Drawings, Product Data, or Samples for such portion of the Work.

4.2.2 If the Contractor observes that any of the Contract Documents are at variance with applicable laws, statutes, building codes, or regulations in any respect, he shall promptly notify the Architect/Engineer and the Owner in writing. Any necessary changes shall be accomplished by appropriate modification, as described in the Construction Contract.

4.3 SUPERVISION AND CONSTRUCTION PROCEDURES

- 4.3.1 The Contractor shall supervise and direct the Work, using his best skill and attention. He shall be solely responsible for all construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work.
- 4.3.2 The Contractor shall be responsible to the Owner for the acts and omissions of his employees, Subcontractors and their agents and employees, and other persons performing any of the Work under a contract with the Contractor.
- 4.3.3 The Contractor shall not be relieved from his obligations to perform the Work either by the activities or duties of the Architect/Engineer in his administration of the Construction Contract, or by inspections, tests, or approvals required or performed under Article 7 by persons other than the Contractor.
- 4.3.4 In the execution of the Construction Contract, the Contractor must comply with all applicable state and federal laws, including but not limited to laws concerned with labor, equal employment opportunity, safety and minimum wages. The Contractor shall make himself familiar with and at all times shall observe and comply with all federal, state and local laws, ordinances and regulations which in any manner affect the conduct of the Work, and shall indemnify, save and hold harmless the Owner and its official representatives against any claim arising from violation of any such law, ordinance or regulation by himself or by his subcontractor or his employees.

4.4 LABOR AND MATERIALS

- 4.4.1 Unless otherwise provided in the Construction Contract, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.
- 4.4.2 The Contractor shall at all times observe and conduct himself with strict discipline and shall enforce such strict discipline and good order among his employees. The Contractor shall not employ to perform the Work any unfit person or anyone not skilled in the task assigned to him. The Contractor and all workers

JOB 110816

employed by him shall have such skill and experience as will enable them to properly perform the duties assigned them. If, in the opinion of the Owner, the Contractor, or any person employed by the Contractor or a Subcontractor, does not perform the Work in a proper and skillful manner, or is disrespectful, intemperate, disorderly, or otherwise objectionable, such person shall at the written request of the Owner be forthwith removed from the Project. If the person so removed is employed by the Contractor or a Subcontractor, such person shall be discharged and shall not be employed again on any portion of the Work without the written consent of the Owner. If the person so removed is the Contractor himself, the Owner may treat the incident giving rise to such removal as a breach of contract and may enforce any and all remedies for default provided herein. The Contractor shall furnish such suitable machinery, equipment, and construction forces as may be necessary, in the opinion of the Owner, for the proper prosecution of the Work. Failure to do so may cause the Owner to withhold all payments which have or may become due or the Owner may suspend the Work until his requests are complied with.

4.4.3 Delivery of all products under this Construction Contract shall be made Free on Board to final destination. The title and risk of loss of the goods shall not pass to the Owner until acceptance takes place at the F.O.B.

444 STORAGE OF MATERIALS

- 4.4.4.1 Contractor shall store materials to preserve their quality and fitness for the Work. When considered necessary by the Architect/Engineer, they shall be placed on wooden platforms or other hard, clean surfaces and not on the ground. They shall be placed under cover when so directed. Stored materials shall be located so as to facilitate prompt inspection.
- 4.4.4.2 When approved by the Architect/Engineer, selected materials or products may be pretested and approved for use, provided they are stored in an area meeting the requirements set forth by the Architect/Engineer.

4.5 WARRANTY

The Contractor represents and warrants to the Owner and the Architect/Engineer that all materials and equipment furnished under this Construction Contract will be new unless otherwise specified, and that the Work will be of good quality, free from faults and defects, and in conformance with the Construction Contract. Any portion of the Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. The Contractor further represents and warrants to the Owner that all items delivered and all services rendered will conform to the Construction Contract Documents, and will be of merchantable quality, good workmanship, and free from defects. The Contractor further agrees to provide copies of applicable warranties or guaranties to the Purchasing Agent. Copies will be provided within ten (10) days after the Certificate of Substantial Completion is issued. Return of merchandise under warranty shall be at the Contractor's expense.

JOB 110816

4.6 **TAXES**

The Contractor shall comply with the provisions set forth in the Supplemental Conditions regarding all sales, consumer, use, and other similar taxes for the Work or portions thereof.

4.7 PERMITS, FEES, AND NOTICES

- 4.7.1 The Contractor shall cooperate with applicable city or other governmental officials at all times where their jurisdiction prevails. The Contractor shall secure and pay for the building permit (as applicable) and for all permits, permanent utilities and governmental fees, licenses, and inspections necessary for the proper execution and completion of the Work which are legally required at the time the Bids are received. Costs of temporary and permanent utilities for which the Contractor is responsible include, but are not limited to, tap fees, net capital recovery fees, meter fees, connection fees, inspection fees, extending services from point of connection to the building(s), and utility service costs during construction. Refer to Sections 012100 Allowances and 015000 Temporary Facilities and Controls for additional information and clarification.
- 4.7.2 The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work. The parties acknowledge that some of the ordinances, rules, regulations or orders of some public authorities may not be enforceable against a ARDOT project.
- 4.7.3 If the observes that any of the Contract Documents are at variance with applicable laws, statutes, building codes, and regulations in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be accomplished by appropriate modification, as described in the Construction Contract.
- 4.7.4 If the Contractor performs any Work when he knows or should know it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect/Engineer and the Owner, he shall assume full responsibility therefor and shall bear all costs attributable thereto.

4.8 ALLOWANCES

- 4.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Construction Contract Documents. Items covered by these allowances shall be supplied for such amounts and by such persons as the Owner may direct, but the Contractor will not be required to employ persons against whom he makes a reasonable objection.
- 4.8.2 Unless otherwise provided in the Construction Contract:
 - A. these allowances shall cover the cost to the Contractor, less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and all applicable taxes;
 - B. the Contractor's costs for unloading and handling on the site, labor, installation costs, overhead, profit, and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance; and

JOB 110816

whenever the costs are more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order, as defined in the Construction Contract, the amount of which will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit, and other expenses.

4.9 SUPERINTENDENT

The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during the progress of the Work. The superintendent shall be satisfactory to the Owner and shall not be changed without written approval of the Owner. The superintendent shall represent the Contractor and all communications given to or by the superintendent shall be as binding as if given to or by the Contractor. Important communications shall be confirmed in writing.

4.10 CONTRACTOR'S CONSTRUCTION SCHEDULE

The Contractor, in accordance with Section 013200, shall prepare and submit for the Owner's approval and Architect/Engineer's information a fully developed Contractor's construction schedule for the Work (the "Construction Schedule"). The Construction Schedule shall relate to the entire Project as the Contract Documents require, and shall provide for expeditious and practicable execution of the Work. The Construction Schedule shall be in a format approved by the Owner and shall show the critical path through the project. The Construction Schedule shall directly relate to the Schedule of Values in a line-by-line manner. The Contractor shall adhere to the Construction Schedule. Should the Contractor depart more than seven (7) days from this schedule for the projected Substantial Completion Date, then Contractor shall deliver a plan to the Owner as to how Contractor shall reform his practices to return to the original Construction Schedule; or should the Owner allow, deliver a new Construction Schedule.

4.11 DOCUMENTS AND SAMPLES

The Contractor shall maintain at the site for the Owner one record copy of the Specifications and any amendments related thereto or to other parts of the Construction Contract, in good order and marked currently to record all changes made during construction, and approved Shop Drawings, Product Data, and Samples. These shall be available to the Architect/Engineer and the Owner and shall be delivered to the Architect/ Engineer for the Owner upon completion of the Work.

4.12 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- 4.12.1 "Shop Drawings" shall mean drawings, diagrams, schedules, and other data specifically prepared for the Work by the Contractor or any Subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.
- 4.12.2 "Product Data" shall mean illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

JOB 110816

- 4.12.3 "Samples" shall mean physical examples which illustrate materials, equipment or workmanship, and establish standards by which the Work will be judged.
- 4.12.4 The Contractor shall review, approve and submit, in accordance with Section 01300, so as to cause no delay in the Work or in the Work of the Owner or any separate contractor, all Shop Drawings, Product Data, and Samples required by the Construction Contract.
- 4.12.5 By approving and submitting Shop Drawings, Product Data, and Samples, the Contractor represents that he has determined and verified all materials, field measurements, and field construction criteria related thereto, or will do so, and that he has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Construction Contract.
- 4.12.6 The Contractor shall not be relieved of responsibility for any deviation from the requirements of the Construction Contract by the Architect/Engineer's or the Owner's approval of Shop Drawings, Product Data, or Samples under subparagraph 2.2.10 unless the Contractor has specifically informed the Owner in writing of such deviation at the time of submission and the Owner has given written approval to the specific deviation. The Contractor shall not be relieved from responsibility for errors or omissions in the Shop Drawings, Product Data, or Samples by the Architect/Engineer's or the Owner's approval thereof.
- 4.12.7 No portion of the Work requiring submission of a Shop Drawing, Product Data, or Sample shall be commenced until the submittal has been approved by the Architect/Engineer and the Owner as provided in subparagraph 2.2.10. All such portions of the Work shall be in accordance with approved submittals.

4.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, and the Construction Contract and shall not unreasonably encumber the site with any materials or equipment. If the Owner contemplates more than one contractor being on the Owner's property, then the Contractor shall respect the sites designated for work by other contractors.

4.14 CUTTING AND PATCHING OF WORK

- 4.14.1 The Contractor shall be responsible for all cutting, fitting, or patching that may be required to complete the Work or to make its several parts fit together properly, in accordance with Section 017300.
- 4.14.2 The Contractor shall not damage or endanger any portion of the Work or the work of the Owner or the work of any contractors by cutting, patching or otherwise altering any work, or by excavation. The Contractor shall not cut or otherwise alter the work of the Owner or any other contractor except with the written consent of the Owner and of such other contractor. The Contractor shall not unreasonably withhold from the Owner or any other contractor his consent to cutting or otherwise altering the Work.

JOB 110816

4.15 **CLEANING UP**

- 4.15.1 The Contractor at all times shall keep the worksite free from accumulation of waste materials or rubbish caused by his operations. At the completion of the Work he shall remove all his waste materials and rubbish from and about the Project as well as all his tools, construction equipment, machinery, and surplus materials.
- 4.15.2 If the Contractor fails to clean up at the completion of the Work, the Owner may do so as provided in paragraph 3.4 and the cost thereof shall be charged to the Contractor.

4.16 **COMMUNICATIONS**

The Contractor shall forward all communications to the Owner with information copy to the Architect/Engineer. Requests for technical information may be forwarded directly to the Architect/Engineer with information copy to the Owner. The Contractor shall advise the Architect/Engineer and the Owner of coordination needs with other contractors on the Owner's property.

4.17 ROYALTIES AND PATENTS

The Contractor shall pay all royalties and license fees. He shall defend all suits or claims for infringement of any patent, copyright, trade secret or other proprietary or intellectual property rights of any third party. He shall save and hold harmless the Owner from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular design, or process or the product of a particular manufacturer or manufacturer is specified. But if the Contractor has reason to believe that the design, process, or product specified is an infringement of a patent or other proprietary or intellectual property right of any third party, he shall be responsible for such loss unless he promptly gives such information to the Owner in writing. The Contractor warrants that all applicable patents, copyrights or other proprietary or intellectual property rights of any third party which may exist on items that will be supplied under the contract have been adhered to and further warrants that the Owner shall not be liable for any infringement of those rights. Warranties granted the Owner shall apply for the duration of this Construction Contract or for the life of equipment or supplies purchased, whichever is longer. The Owner must not extend use of the granted exclusive rights to any party other than the Owner's employees or those persons with whom the Owner has established a relationship aimed at furthering the public interest, and then only for official public uses. The Owner will not knowingly or intentionally violate any applicable patent, license, copyright or other proprietary or intellectual property right of any third party. The Contractor must indemnify the Owner, its officers, agents, and employees against all claims, suits, and liability of every kind, including all expenses of litigation, court costs, and attorney's fees arising in connection with any alleged or actual infringement of existing patents, licenses, copyrights, or other proprietary or intellectual property right of any third party applicable to items sold.

4.18 INDEMNIFICATION

4.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and its officials, agents and employees from and against all claims, damages, losses, causes of action, suits, judgements, expenses, and liability of any kind including but not limited to attorneys' fees, arising out of or

JOB 110816

resulting from the performance of the Work, or provision of goods by Contractor under this Contract, provided that any such claim, damage, loss, cause of action, suit, judgement or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, regardless of whether or not the injury, death, damage claim, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation or indemnity which would otherwise exist as to any party or person described in this paragraph.

4.18.2 In any and all claims against the Owner or any of their agents or employees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this paragraph 4.18 shall not be limited in any way by any limitation in the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workers' or workmen's compensation acts, disability benefits acts, or other employee benefit acts.

4.19 RESPONSIBILITY FOR DAMAGE CLAIMS

- 4.19.1 In addition, the Contractor agrees to indemnify, save, and hold harmless the Owner, its agents and employees from all suits, attorneys' fees, action or claims and from all liability and damages for any and all injuries, death or damages sustained by any person or property in consequence of any negligence, error or omission in the performance of the Construction Contract by the Contractor He shall further so indemnify and be responsible for any and all injuries, death or damages sustained by any person or liability or damages to property of any character occurring or resulting from any act, omission, neglect or misconduct on his part in the manner or method of executing the Work; or from failure to properly execute the Work; or from defective Work or materials.
- 4.19.2 The Contractor shall not be released from these responsibilities until all claims have been settled and suitable evidence to that effect furnished to the ARDOT Building Committee.
- 4.19.3 The Contractor's attention is directed to the fact that pipelines and other underground installations as may be shown on the plans have been taken from the best available information. The Owner makes no representations that information provided on underground installations is complete or accurate. There may be other pipelines or installations. The Contractor shall save and hold harmless the Owner from any and all suits or claims resulting from damage by his operations to any pipeline or underground installation.

4.20 PERSONAL LIABILITY

In carrying out the provisions of the Construction Contract or in exercising any power or authority granted thereunder, there shall be no personal liability upon agents of the Owner, the Architect/Engineer, or their authorized assistants, as they are agents and representatives of the Owner.

JOB 110816

4.21 WAGE RATES

- 4.21.1 The Contractor is required to pay not less than the wage scale of the various classes of labor for State of Arkansas. The wage rates are minimum rates only, and the Contractor is encouraged to pay all laborers, workmen, and mechanics employed on this job fair compensation. However, the Owner will not consider any claims for additional compensation made by the Contractor because of payment by the Contractor of any wage rates in excess of the applicable minimum rate contained in the Prevailing Wage Schedule.
- 4.21.2 The Contractor and each Subcontractor shall keep, or cause to be kept, an accurate record showing the names and occupations of all laborers, workmen and mechanics paid less than the said stipulated minimum rates for any work done under the Construction Contract, by him, or by any subcontractor under him. The Contractor and each Subcontractor shall keep, or cause to be kept, accurate records showing the names and occupations of all laborers, workmen and mechanics employed in connection with the Work, and showing also the actual per diem wages paid to such workers, which record shall be open at all reasonable hours for the inspection by the Owner.

4.22 CLAIMS FOR DAMAGES

Should the Contractor suffer injury or damage to person or property because of any act or omission of the Owner or of any of his employees, agents, or others for whose acts he is legally liable, the claim shall be made in writing to the Owner within five (5) calendar days after the first observance of such injury or damage.

4.23 INDEPENDENT CONTRACTOR

The Parties expressly acknowledge and agree that Contractor is an independent contractor, operating solely in that capacity, and assumes all of the rights, obligations and liabilities applicable to him as an independent contractor. No employee of Contractor shall be considered an employee of ARDOT, or gain any rights against ARDOT pursuant to the ARDOT's personnel policies. Both parties expressly acknowledge and agree that none of Contractor's employees have a contractual relationship with ARDOT.

4.24 MAINTENANCE OF AND RIGHT OF ACCESS TO RECORDS

- 4.24.1 The Contractor agrees to maintain appropriate accounting records of costs, expenses, and payrolls of employees working on the Project, for a period of five years after final payment for completed services and all other pending matters concerning this Contract have been closed.
- 4.24.2 The Contractor further agrees that the Owner or its duly authorized representatives shall have access to any and all books, documents, papers, reports and records of the Contractor, which the Owner deems are directly pertinent to the services to be performed under this Contract for the purposes of making audits, examinations, excerpts, and transcriptions, and to ascertain compliance with federal and state employment discrimination laws. Contractor shall provide all information and reports required by Title VI of the 1964 Civil Rights Act (42 USC Section 2000d, et. seq.) and any regulations or directives issued

JOB 110816

pursuant to them. Contractor shall permit access to its books, records, accounts, other sources of information and its facilities as ARDOT may determine to be pertinent to ascertain compliance with these regulations, orders, and instructions. Where any information required of Contractor is in the exclusive possession of another who fails or refuses to furnish this information, Contractor shall so certify to the ARDOT, as appropriate, and shall state what efforts it has made to obtain the information.

4.25 **ASSIGNABILITY**

- 4.25.1 Written Approval. Neither party may assign any of the rights or duties created by this Contract without the prior written approval of the other party. It is acknowledged by Contractor that no officer, agent, employee or representative of ARDOT has any authority to assign any part of this Contract unless expressly granted that authority by the Owner.
- 4.25.2 Binding Contract. This Contract shall be binding upon the successors, assigns, administrators, and legal representatives of the parties to this Contract.

4.26 CIVIL RIGHTS AND EQUAL OPPORTUNITY IN EMPLOYMENT

- 4.26.1 The Contractor agrees, during the performance of the services under this Contract, that the Contractor shall provide all services and activities required in a manner that complies with the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, Public Law 93-1122, Section 504, the provisions of the Americans with Disabilities Act of 1990, Public Law 101-336 [S.933], and all other federal and state laws, rules, regulations, and orders pertaining to equal opportunity in employment, as if the Contractor were an entity bound to comply with these laws. The Contractor shall not discriminate against any employee or applicant for employment based on race, religion, color, sex, national origin, age or handicapped condition. In accordance with Title VI of the Civil Rights Act of 1964:
- 4.26.2 Compliance with Regulations: Contractor shall comply with the requirements relative to nondiscrimination in Federally-Assisted programs, including but not limited to Title VI of the 1964 Civil Rights Act (42 USC Section 2000d, et. seq.), and 49 CFR Part 21, both as explained in Federal Transit Administration (FTA) Circular 4702.1A, as they may be amended ("the Regulations") which are herein incorporated by reference and made a part of this Contract.
- 4.26.3 Nondiscrimination: Regarding the work performed by Contractor under this Contract, it shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. Seller shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices.
- 4.26.4 Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

JOB 110816

4.26.5 Sanctions for Noncompliance: If Contractor does not comply with the nondiscrimination provisions of this Contract, ARDOT shall impose the sanctions that it determines are appropriate, including, but not limited to, withholding of payments to Contractor under the Contract until Contractor complies, or until cancellation, termination or suspension of the Contract, in whole or in part.

ARTICLE 5

SUBCONTRACTORS

5.1 **DEFINITION**

- 5.1.1 A "Subcontractor" means a person or entity who has a direct contract with the Contractor to perform any of the Work. The term Subcontractor is referred to as if singular in number and masculine in gender and means a Subcontractor or his authorized representative. The term Subcontractor does not include any separate contractor or his subcontractors.
- 5.1.2 A "Sub-subcontractor" means a person or entity who has a direct or indirect contract with a Subcontractor or another Sub-subcontractor to perform any of the Work. The term Sub-subcontractor is referred to as if singular in number and masculine in gender and means a Sub-subcontractor or an authorized representative thereof.

5.2 AWARD OF SUBCONTRACT AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

- 5.2.1 Unless otherwise required by the Construction Contract, the Contractor, as soon as practicable after the award of the Construction Contract, shall furnish to the Owner and the Architect/Engineer in writing the names of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for all portions of the Work. The Owner will promptly reply to the Contractor in writing stating whether or not the Owner or the Architect/Engineer, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or the Architect/Engineer to reply within ten (10) days after receipt of the names shall constitute notice of no reasonable objection.
- 5.2.2 The Contractor shall not contract with any such proposed person or entity to whom the Owner or the Architect/Engineer has made reasonable objection under the provisions of subparagraph 5.2.1. The Contractor shall not be required to contract with anyone to whom he has a reasonable objection.
- 5.2.3 If the Owner or the Architect/Engineer has reasonable objection to any such proposed person or entity, the Contractor shall submit a substitute to whom the Owner or the Architect/Engineer has no reasonable objection. The Contract Sum shall be increased or decreased by the difference in cost occasioned by such substitution and an appropriate amendment shall be issued. However, no increase in the Contract Sum shall be allowed for such substitution if the substitution occurs before award of the Construction Contract or if the Contractor has not acted promptly and responsively in submitting names as required by subparagraph 5.2.1.

JOB 110816

5.2.4 The Contractor shall request approval from the Owner or Architect/Engineer for any substitution for any Subcontractor, person, or entity previously selected and shall not commence with substitution unless the Owner or Architect/Engineer does not make a timely and reasonable objection to such substitution.

5.3 SUBCONTRACTUAL RELATIONS

By an 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 the terms of the Construction Contract, and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by the Construction Contract, assumes toward the Owner and the Architect/Engineer. The agreement shall preserve and protect the rights of the Owner and the Architect/Engineer under the Construction Contract with respect to the Work to be performed by the Subcontractor so that the subcontracting thereof will not prejudice the Owner's nor the Architect/Engineer's rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the Contractor-Subcontractor agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Construction Contract, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with his Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract, a copy of the Construction Contract to which the Subcontractor will be bound by this paragraph 5.3, and identify to the Subcontractor any terms and conditions of the proposed subcontract which may be at variance with the Construction Contract. Each Subcontractor shall similarly make copies of such documents available to his Sub-subcontractors.

ARTICLE 6

WORK BY THE OWNER OR BY SEPARATE CONTRACTORS

6.1 THE OWNER'S RIGHT TO PERFORM WORK AND TO AWARD SEPARATE CONTRACTS

- 6.1.1 The Owner reserves the right to perform work related to the Project with his own forces, and award separate contracts in connection with other portions of the Project.
- 6.1.2 When separate contracts are awarded for different portions of the Project or other work on the site, the term Contractor in the Construction Contract in each case shall mean the Contractor who executes such separate Agreement for Construction Services.
- 6.1.3 The Contractor shall coordinate the Work with other contractors and with the Owner and the Owner's labor crews.

6.2 MUTUAL RESPONSIBILITY

6.2.1 The Contractor shall afford the Owner and other contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall connect and coordinate his Work with theirs as required by the Construction Contract.

JOB 110816

- 6.2.2 If any part of the Work depends for proper execution or results upon the work of the Owner or any other contractor, the Contractor shall, prior to proceeding with the Work, promptly report to the Architect/Engineer any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acceptance of the Owner's or separate contractors' work as fit and proper to receive his Work.
- 6.2.3 Contractor may share responsibility for defective work not reported, yet known by Contractor to be deficient.
- 6.2.4 Should the Contractor wrongfully cause damage to the Work or property of the Owner, or to other work on the site, the Contractor shall promptly remedy such damage as provided in subparagraph 10.2.5.
- 6.2.5 Should the Contractor wrongfully cause damage to the Work or property of any other contractor, the Contractor shall upon due notice promptly attempt to settle with such other contractor by agreement, or otherwise to resolve the dispute. If such separate contractor sues or initiates a proceeding against the Owner on account of any damage alleged to have been caused by the Contractor, the Owner shall notify the Contractor who shall defend such proceedings at the Contractor's expense. If any judgment or award against the Owner arises therefrom the Contractor shall pay or satisfy it and shall reimburse the Owner for all attorneys' fees and court or other costs which the Owner has incurred. The Owner shall have the right to select counsel for any such defense.

6.3 THE OWNER'S RIGHT TO CLEAN UP

If a dispute arises between the Contractor and other contractors as to their responsibility for cleaning up as required by paragraph 4.15, the Owner may clean up and charge the cost thereof to the contractors the Owner determines responsible therefor.

ARTICLE 7

TESTING

- 7.1 If the Construction Contract, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any portion of the Work to be inspected, tested, or approved, the Contractor shall give the Owner and Architect/Engineer timely notice of its readiness so the Owner and Architect/Engineer may observe such inspection, testing, or approval. The Contractor shall bear all costs of such inspections, tests, or approvals required by public authorities. Unless otherwise provided, the Owner shall bear all costs of other inspections, tests, or approvals.
- 7.2 If the Architect/Engineer determines that any portion of the Work requires special inspection, testing, or approval which paragraph 7.1 does not include, he will, upon written authorization from the Owner, instruct the Contractor to order such special inspection, testing or approval, and the Contractor shall give notice as provided in paragraph 7.1. The Owner shall bear the costs of such tests, and an appropriate amendment shall be issued.

JOB 110816

- 7.3 If any special inspection or testing reveals a failure of the Work to comply with the requirements of the Construction Contract, the Contractor shall bear all costs thereof and of any subsequent testing, including compensation for the Architect/Engineer's additional services made necessary by such failure.
- 7.4 Required certificates of inspection, testing or approval shall be requested by the Contractor and promptly delivered by him to the Architect/Engineer. After reviewing the certificates of inspection, the Architect/Engineer will forward the certificates to the Owner with approvals or recommendations as appropriate.
- 7.5 If the Architect/Engineer is to observe the inspections, tests, or approval required by the Construction Contract, he will do so promptly and, where practicable, at the source of supply.
- The Architect/Engineer may require materials to be inspected, tested and approved before being incorporated in the Work. Any of the Work in which such materials are used without prior required test and approval or written permission of the Architect/Engineer may be ordered removed and replaced at the Contractor's expense. The selection of the method of testing shall be designated by the Owner. When requested, the Contractor shall furnish a complete written statement of the origin, composition, and/or manufacture of any or all materials that are to be used in the Work. The Owner may contract with an independent testing laboratory to perform field testing. Where the Contractor notifies the Owner of scheduled Work requiring sampling and testing and the Contractor cancels the Work for any reason whatsoever after the laboratory personnel have departed their office for the project site, the testing laboratory shall bill the Owner for their time and travel expenses and the Owner shall deduct said charges from amounts due the Contractor.

7.7 PLANT INSPECTION

If the volume of the Work, Progress Schedule, and other considerations warrant, the Architect/Engineer may undertake the inspection of materials at the source. It is understood, however, that no obligation is assumed to inspect materials in that manner.

Plant inspection will be undertaken only upon condition that:

- (a) The cooperation and assistance of the Contractor and the producer with whom he has contracted for materials is assured.
- (b) The representative of the Architect/Engineer shall have full entry at all times to such parts of the plant as may concern the manufacture or production of the materials ordered.
- (c) Where inspection requirements are such that it is necessary to use scales, measures and/or other equipment which may be required by the Architect/Engineer for the control of production and use of materials, the Contractor shall be responsible for furnishing and calibrating such equipment.
- (d) In those cases where inspection of any item is requested for periods other than daylight hours, it shall be provided under the following conditions:

JOB 110816

- (1) Continuous production of materials for the Owner's use is necessary due to the production volume being handled by the plant.
- (2) The lighting provided by the plant is approved by the Architect/Engineer to be adequate to allow satisfactory inspection of the material being produced.
- (e) Materials produced under the Owner's inspections will be for the Owner's use only unless released in writing by the Architect/Engineer.

7.8 PRETESTED MATERIALS

Subject to conditions established in a written agreement between a supplier and the Architect/Engineer, pretested and approved materials may be incorporated into the Work.

7.9 SOURCES OF SUPPLY AND QUALITY OF MATERIALS

- The Architect/Engineer shall approve the source of supply of each of the materials before delivery is 7.9.1 started. At his option, the Architect/Engineer may sample and test materials to determine compliance with the Construction Contract Documents before delivery is started. If it is found after testing that sources of supply previously approved do not produce uniform and satisfactory products, or if the product from any source proves unacceptable at any time, the Contractor shall furnish materials from other approved sources. Only materials conforming to the requirements of the Construction Contract Documents and approved by the Architect/Engineer shall be used in the Work. All materials being used are subject to inspection or test at any time during their preparation or use. Any material which has been tested and accepted at the source of supply may be subjected to a check test after delivery and all materials which, when retested, do not meet the requirements of the Specifications, will be rejected. No material which after approval has in any way become unfit for use shall be used in the Work. If, for any reason, the Contractor selects a material which is approved for use by the Architect/Engineer by sampling and testing or other means, and then decides to change to a different material requiring additional sampling and testing for approval, the expense for such sampling and testing may be deducted from any monies due or to become due to the Contractor.
- 7.9.2 Where reference is made to the test procedures, ASTM, AASHTO or bulletins for the quality of materials or sampling and testing, the latest standard, tentative standard or bulletin issued prior to the date of the Bid shall govern.
- 7.9.3 If it is the normal trade practice for manufacturers to provide warranties or guaranties for the materials and equipment provided herein, the Contractor shall turn over and/or pass through the guarantees and warranties over to the Architect/Engineer. The scope and extent of such warranties or guarantees will not be a factor in selecting the successful Bidder.

JOB 110816

ARTICLE 8

TIME

8.1 **DEFINITIONS**

- 8.1.1 Unless otherwise provided, the "Contract Time" is the period of time allotted in the Contract Documents for Substantial Completion of the Work as defined in subparagraph 8.1.3, including authorized adjustments thereof.
- 8.1.2 The "Date of Commencement" of the Work is the date established in the Notice to Proceed. If there is no Notice to Proceed, it shall be the date of the Construction Contract or such other date as may be established therein.
- 8.1.3 The date of "Substantial Completion" of the Work or designated portion thereof is the date approved by the Owner and certified by the Architect/Engineer when construction is sufficiently complete, in accordance with the Contract Documents, so the Owner can occupy or utilize the Work or designated portion thereof for the use for which it is intended. A Certificate of Occupancy or Temporary Certificate of Occupancy, issued by the governing authority, is required for Substantial Completion unless waived by the Owner.
- 8.1.4 The word "day" as used in the Contract Documents shall mean a calendar day.

8.2 PROGRESS AND COMPLETION

- 8.2.1 Time is of the essence in the performance of the Construction Contract.
- 8.2.2 The Contractor shall begin the Work on the Date of Commencement. The Contractor shall carry the Work forward expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

8.3 **DELAYS AND EXTENSIONS OF TIME**

- When a delay defined herein as excusable prevents the Contractor from completing the work within the Contract Time, the Contractor shall be entitled to an extension of time, and in certain instances to compensation for the direct cost of delay, as set forth in 8.3.1.3. The Contract Time shall be extended by the number of calendar days lost by reason of excusable delay, as measured by the Contractor's Construction Schedule (or current update). All extensions of time shall be given in calendar days. In no event will an extension of time be granted for delays that merely extend the duration of non-critical activities, or which consume only float without delaying the Project completion date.
- 8.3.1.1 Time Extensions for weather days shall be granted in accordance with Section 018000.

JOB 110816

- 8.3.1.2 Non-Weather Excusable Noncompensable Delay. The Contractor shall be entitled only to an extension of time for unforeseen delays not within the control of or arising from the fault of either the Contractor or the Owner caused by the following:
 - Strikes and labor disputes that cause unusual delay to the Work onsite or to the delivery of a. materials or equipment to be incorporated into the Work;
 - Physical damage to the work caused by circumstances beyond the control of the Contractor; b.
 - War, acts or threats of terrorism, civil unrest, or insurrection; C.
 - Other unforeseeable causes beyond the control of either the Contractor or the Owner. d.
- 8.3.1.3 Excusable Compensable Delay. The Contractor shall be entitled to an equitable adjustment of cost as well as a time extension for delays caused by the following:
 - Failure of the Owner or the Architect/Engineer to take timely actions as required under the a. Contract Documents, or to provide information required by the Contract Documents and necessary for the Contractor to proceed with the Work in a timely manner;
 - Detrimental or obstructive actions of separate contractors employed by the Owner; b.
 - Failure of the Owner to provide access to the Work site as provided in this Construction Contract; C.
 - Failure of the Owner to provide materials which are to be furnished by the Owner, as required d. under the Contract Documents, consistent with the Construction Schedule;
 - Errors or omissions in design which the Architect/Engineer corrects by means of Change Order(s); e.
 - Unanticipated physical conditions at the Site which the Architect/Engineer corrects by means of f. Change Order(s);
 - Owner requested Change Orders; g.
 - Suspensions for cause under 8.3.1.4 which are determined not to have been within the control of h. the Contractor; or
 - Suspensions for convenience under 8.3.1.5 which prevents the Contractor from completing the i. Work within the Contract Time, except for required suspensions described as Unavailable Work Period.

The Contractor's compensation in the event of such delays, items 8.3.1.3.a - i above, shall be the cost of extended general conditions for the period of delay. Extended general conditions costs incurred solely as a result of the delay shall be determined pursuant to Article 12.

8.3.1.4 Suspension of Work for Cause. The Owner may, at any time without prior notice, suspend all or any part of the Work, if, in the Owner's sole discretion, it is considered reasonably necessary to do so to prevent or correct any condition of the Work, which constitutes an immediate safety hazard, or which may reasonably be expected to impair the integrity, usefulness or longevity of the Work when completed. The Owner shall give the Contractor a written notice of suspension for cause, setting forth the reason for the suspension and identifying the Work to be suspended. Upon receipt of such notice, the Contractor shall immediately stop the Work so identified. As soon as practicable following the issuance of such a notice, the Owner, with the assistance of the Architect/Engineer, shall initiate and complete an investigation of the circumstances giving rise to the suspension, and shall issue a written determination of their cause. The Contractor will not be entitled to an extension of time or compensation for delay resulting from a suspension if the Owner's investigation determines that the cause was within the control of the

JOB 110816

Contractor. If the cause is determined not to have been within the control of the Contractor, and the suspension prevents the Contractor from completing the Work within the Contract Time, the suspension is an Excusable Compensable Delay. Suspensions of work under this provision shall be no longer than is reasonably necessary to identify and remedy the conditions giving rise to the suspension.

- 8.3.1.5 Suspension of Work for Owner's Convenience. Upon seven (7) Construction days' prior written notice to the Contractor, the Owner may at any time without breach of the Construction Contract suspend all or any portion of the Work for a period of up to thirty (30) days for its own convenience. The Owner shall give the Contractor a written notice of suspension for convenience, which shall set forth the number of days for which the Work, or any portion of it, will be suspended, and the date on which the suspension of Work shall cease. When such a suspension prevents the Contractor from completing the Work within the Contract Time, it is Excusable Compensable Delay. A notice of suspension for convenience may be modified by the Owner at any time on seven (7) calendar days' prior written notice to the Contractor. If the Owner suspends the Work for its convenience for more than sixty (60) consecutive calendar days, the Contractor may elect to terminate the Construction Contract pursuant to the provisions of Article 14.
- 8.3.1.6 Concurrent Delay. When the completion of the Work is simultaneously delayed by more than one of the categories described under 8.3.1, the Contractor will be entitled to a time extension only for the period of concurrent delay determined to be excusable and will be entitled to compensation only for the period of concurrent delay determined to be excusable and compensable.
- 8.3.1.7 Except as expressly provided under 8.3.1, the Contractor shall not be entitled to an extension of the Contract Time, and shall bear all responsibility for financial risks which may accrue from various causes of delay in the construction progress.
- 8.3.2 Any request for extension of time shall be made in writing to the Owner not more than five (5) business days after the commencement of the delay; otherwise, it shall be waived. Such request shall state the nature of the delay, activities potentially affected, and shall be accompanied by sufficient written evidence to document the delay. In the case of a continuing delay only one (1) request is necessary. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the Work. A conference shall be held between the Contractor and Owner within five (5) business days of the commencement of the delay to establish a proposed new Construction Schedule for the Work.
- 8.3.2.1 Contents of Time Extension Requests. Each time extension request shall be accompanied by a quantitative demonstration of the impact of the delay on Project completion time, based on the current Construction Schedule. Time extension requests shall include a reasonably detailed narrative setting forth (1) the nature of the delay and its cause, (2) the basis of the Contractor's proposed entitlement to a time extension, (3) documentation of the actual impacts of the delay, and any concurrent delays, (4) description and documentation of steps taken by the Contractor to mitigate the effect of the delay, including, when appropriate, the modification of the Construction Schedule, and (5) such other information that the Contractor considers necessary to justify its request for an extension of time. No time extensions shall be granted for delays that do not affect the Project completion time.
- 8.3.2.2 Owner's Response. The Owner shall respond to the time extension request by providing to the Contractor written notice of the number of days granted, and giving its reason if this number differs from the number

JOB 110816

of days requested by the Contractor. A Change Order reflecting the extension of time shall be executed by the parties in accordance with Article 12 and the extension of time is effective on the date the Change Order is approved.

8.3.3 All changes to the Contract Time or Contract Sum made as a result of such requests shall be by Change Order, as provided under Article 12.

8.4 FAILURE TO COMPLETE WORK ON TIME

- 8.4.1 The Contract Time for the completion of the Work is an essential element of the Construction Contract. The Contractor's failure to complete the Work within such time will cause damage to the Owner.
- 8.4.2 Should the Contractor fail to complete the Work within the Contract Time, including all officially approved extensions thereto, the Owner shall collect from the Contractor or deduct from any funds owed him the amount named as liquidated damages in the Contract Documents. It is agreed that the Owner's actual damages would be extremely difficult, impractical, or impossible to calculate and, therefore, the amount of liquidated damages, as set forth in the Agreement for Construction Services, is agreed to be a reasonable estimate of the Owner's actual damages and will be retained as liquidated damages and not as a penalty.
- 8.4.3 After the Substantial Completion inspection by the Owner, the Contractor will be allowed thirty (30) days within which to correct all deficiencies listed in the inspection Punch List, unless extended by mutual agreement. Failure of the Contractor to complete such corrections within the stipulated time will be reported to the Contractor's surety for correction. In the event there is no surety, the Owner may initiate action to complete corrective work out of the remaining Construction Contract funds in accordance with paragraph 3.4 and 14.1.

8.5 FORCE MAJEURE

If the performance by either party of any of its obligations under this Contract is interrupted or delayed due to an act of God or the common enemy or as the result of war, riot, civil commotion, sovereign conduct, or the act or conduct of any person or persons not a party to this Contract, then it shall be excused from performance for such period of time as is reasonably necessary to remedy the effects thereof.

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

9.1.1 The Contract Sum is defined and described in the Agreement for Construction Services and, including authorized adjustments thereto, is the total amount payable by Owner to the Contractor for the performance of the Work under the Contract Documents.

JOB 110816

9.2 SCHEDULE OF VALUES

9.2.1 Before the first Application for Payment, as defined herein, the Contractor shall submit to the Architect/Engineer a schedule of values allocated to the various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the Owner or the Architect/Engineer may require. This schedule, unless objected to by the Owner or the Architect/Engineer, shall be used only as a basis for the Contractor's Applications for Payment.

9.3 APPLICATIONS FOR PAYMENT

- 9.3.1 At least ten (10) days before the date for each progress payment established in the Construction Contract, the Contractor shall submit to Owner an itemized "Application for Payment", dated and substantiated, as the Owner may require, the Contractor's right to payment and reflecting retainage as provided elsewhere in the Contract Documents.
- 9.3.2 Payments may be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site. If approved in advance by the Owner, payments may similarly be made for materials or equipment suitably stored at some other location agreed upon in writing. 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 and transportation to the site for those materials and equipment stored off the site.
- 9.3.3 The Contractor warrants that title to all Work, materials, and equipment covered by an Application for Payment will pass to the Owner either by incorporation in the construction or upon the receipt of payment by the Contractor, whichever occurs first, free and clear of all liens, claims, security interests, or encumbrances, hereinafter referred to in this Article 9 as "liens"; and that no Work, materials, or equipment covered by an Application for Payment will have been acquired in the Contractor's behalf, or by any other person performing Work at the site or furnishing materials and equipment for the Project. Rather, the purchase shall be in the Owner's behalf.

9.4 CERTIFICATES FOR PAYMENT

- 9.4.1 Owner will, within ten (10) days after the receipt of the Contractor's Application for Payment, either certify his approval and forward the Application for Payment, with a copy to the Contractor, for such amount as the Owner determines is properly due, or notify the Contractor in writing his reasons for withholding a Certificate for Payment as provided in subparagraph 9.6.1.
- 9.4.2 The issuance of a Certificate for Payment will constitute a representation by Owner, based on his observations at the site as provided in subparagraph 2.2.3 and the data comprising the Application for Payment, that the Work has progressed to the point indicated, that the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. This certification is subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Contract Documents, to minor deviations from the Contract Documents correctable prior to

JOB 110816

completion of the Work, and to any specific qualifications stated in the Certificate for Payment. However, by issuing a Certificate for Payment, Owner shall not thereby be deemed to represent that he had made continuous on-site inspections to check the quality or quantity of the Work or that he has made any examination to ascertain how or for what purpose the Contractor has used the monies previously paid on account of the Contract Sum.

9.5 **PROGRESS PAYMENTS**

- 9.5.1 After the Owner has received the Application for Payment, the Owner shall make payment within thirty (30) days or shall notify the Contractor in writing of any objections to payment which the Owner has within twenty-seven (27) days (the "Progress Payment(s)"). Objections to payment shall be for any incurred breach of the Contract Documents by the Contractor, including, but not limited to, the specific grounds for withholding payment set forth in subparagraph 9.6.1. The Owner shall retain not less than five percent (5%) of each payment until final completion and acceptance of all Work covered by the Construction Contract unless the retainage amount is reduced following Substantial Completion subject to paragraph 9.8.2.
- 9.5.2 The Contractor shall promptly pay each Subcontractor, upon receipt of payment from the Owner, out of the amount paid to the Contractor on account of such Subcontractor's work, the amount of which said Subcontractor is entitled, reflecting the percentage actually retained, from payments to the Contractor on account of such Subcontractor's work. The Contractor shall, by an appropriate agreement with each Subcontractor, require each Subcontractor to make payments to his Sub-subcontractors in similar manner. All payments to Subcontractors and Sub-subcontractors shall be made within ten (10) days of receipt of payment for work claimed in an Application for Payment that Subcontractor or Subsubcontractor performed. Such Application for Payments shall designate the dollar amount of work which Subcontractor or Sub-subcontractor provided.
- 9.5.3 The Owner may, on request and at his discretion, furnish to any Subcontractor, if practicable, information regarding the percentage of completion or the amounts applied for by the Contractor and the action taken thereon by the Architect/Engineer and the Owner on account of work done by such Subcontractor.
- 9.5.4 Neither the Owner nor the Architect/Engineer shall have any obligations to pay or to see to the payment of any monies to any Subcontractor except as may otherwise be required by law.
- 9.5.5 No Certificate for Payment, nor any Progress Payment, nor any partial or entire use or occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

9.6 PAYMENTS WITHHELD

9.6.1 The Owner may decline to certify payment and may withhold his Certificate for Payment in whole or in part, to the extent reasonably necessary, if in his opinion he is unable to make representations to the Owner as provided in subparagraph 9.4.2. In such situations, The Owner will notify the Contractor as provided in subparagraph 9.4.1. If the Contractor and the Owner cannot agree on a revised amount, The

JOB 110816

Owner will promptly issue a Certificate for Payment for the amount for which he is able to make such representations to the Owner. The Owner may also decline to certify payment or, because of subsequently discovered evidence or subsequent observations, he may nullify the whole or any part of any Certificate for Payment previously issued, to such extent as may be necessary in his opinion to protect the Owner from loss because of:

- 1. defective Work not remedied;
- 2. third party claims filed or reasonable evidence indicating probable filing of such claims;
- 3. failure of the Contractor to make payments properly to Subcontractors or for labor, materials, or equipment;
- 4. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum:
- damage to the Owner or another Contractor;
- reasonable evidence that the Work will not be completed within the Contract Time;
- 7. failure to carry out the Work in accordance with the Contract Documents; or
- 8. failure of the Contractor to correct any serious violation (as determined the ARDOT Project Safety Manager) of OSHA standards or non-compliance with Article 10 Protection of Persons and Property.
- 9.6.2 When the above grounds in subparagraph 9.6.1 are removed, payment shall be made for amounts withheld because of them.

9.7 FAILURE OF PAYMENT

9.7.1 If the Owner does not issue a Certificate for Payment, through no fault of the Contractor, within thirty (30) days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within sixty (60) days of receipt of the Application for Payment, then the Contractor may, upon ten (10) additional days' written notice to the Owner, commencing upon Owner's receipt of such notice, stop the Work until payment of the amount owing has been received.

The Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay, and start-up, which shall all be effected by appropriate Change Order in accordance with paragraph 12.3.

9.8 SUBSTANTIAL COMPLETION

9.8.1 When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the Owner, is substantially complete as defined in subparagraph 8.1.3, the Contractor shall prepare for

JOB 110816

submission to the Owner and the Architect/Engineer a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. When the Owner and the Architect/Engineer, on the basis of an inspection, determine that the Work or designated portion thereof is substantially complete, the Architect/Engineer will then prepare a "Certificate of Substantial Completion" which shall show the date of Substantial Completion established by the Owner, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and the time within which the Contractor shall complete the items listed therein. 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. The Certificate of Substantial Completion shall be submitted to the Contractor and Owner for their written acceptance of the responsibilities assigned to them in such Certificate of Substantial Completion.

9.8.2 Upon Substantial Completion of the Work or designated portion thereof and upon application by the Contractor and certification by the Architect/Engineer, the Owner shall make payment, reflecting adjustment in retainage, if any, for such Work or portion thereof, as provided in the Contract Documents or shall notify the Contractor in writing of any objections to payment within the time provided in the Contract Documents for payment. Objections to payment shall be for any uncured breach of the Contract Document by the Contractor, including, but not limited to, the specific grounds for withholding payment set forth in paragraph 9.6.1.

9.9 FINAL COMPLETION AND FINAL PAYMENT

- 9.9.1 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect/Engineer will promptly make such inspection and, when he finds the Work acceptable under the Contract Documents and the Construction Contract fully performed, he will promptly issue a final Certificate for Payment stating that on the basis of his observations, and inspections the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor, and noted in said final Certificate for Payment is due and payable. The Architect/Engineer's final Certificate for Payment will constitute a further representation that the conditions precedent to the Contractors being entitled to final payment as set forth in subparagraph 9.9.2 have been fulfilled.
- 9.9.2 Neither the final payment nor the remaining retained percentage shall become due until the Contractor submits to the Architect/Engineer (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or his property might in any way be responsible, have been paid or otherwise satisfied, (2) consent of surety, if any, to final payment, and (3) if required by the Owner, another date establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Construction Contract, to the extent and in such form as may be designated by the Owner. If any Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify Owner against any such lien. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

JOB 110816

- 9.9.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by the issuance of Change Orders affecting final completion, and the Architect/Engineer so confirms, the Owner shall, upon application by the Contractor and certification by the Architect/Engineer, and without terminating the Construction Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than the retainage stipulated in the Contract Documents, and if bonds have been furnished as provided in paragraph 9.9.2, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect/Engineer prior to certification of such payment. Such payment shall be made under the terms and conditions governing final payment.
- 9.9.4 The acceptance of final payment shall constitute a waiver of all claims by the Contractor.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY REGULATIONS

- 10.1.1 It shall be the duty and responsibility of the Contractor to be familiar with and comply with all requirements of Public Law 91-596, 29 U.S.C. Secs. 651 et seq., the Occupational Safety and Health Act of 1970. (OSHA) and all amendments thereto, and to strictly enforce and comply with all of the provisions of the Act.
- 10.1.2 The Contractor shall have a copy of the current applicable OSHA safety and health regulations on site.
- 10.1.3 Contractor shall be responsible for any fines, penalties or charges by any regulatory body by reason of any violation of safety or health regulations by the Contractor or Sub-contractor.

10.2 SAFETY OF PERSONS AND PROPERTY

The Provisions of this paragraph 10.2 and of paragraphs 10.3, 10.4, 10.5, 10.6, 10.7, and 10.8 shall be referred to collectively as the "Safety Program".

- 10.2.1 The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury, or loss to:
 - all employees on the Work and all other persons who may be affected thereby;
 - all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody, or control of the Contractor or any of his Subcontractors or Sub- subcontractors; and

JOB 110816

- other property at the site or adjacent thereto, including 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 give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority or authority having jurisdiction bearing on the safety of persons or property for their protection from damage, injury, or loss.
- 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent utilities.
- 10.2.4 When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.
- 10.2.5 The Contractor shall promptly remedy all damage or loss to any property referred to in paragraph 6.2.4 and clauses 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, any Subcontractor, any Sub- subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable and for which the Contractor is responsible under clauses 10.2.1.2 and 10.2.1.3, except damage or loss attributable to the acts or omissions of the Owner 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 his obligations under paragraph 4.18.
- 10.2.6 The Contractor shall designate a responsible member of his 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.
- 10.2.7 The Contractor shall not load or permit any part of the Work to be loaded so as to endanger the safety of the Contractor or the work.

10.3 EMERGENCIES

10.3.1 In any emergency affecting the safety of persons or property, the Contractor shall act, at his discretion, to prevent threatened damage, injury, or loss. Any additional compensation or extension of time claimed by the Contractor on account of emergency work shall be determined as provided in Article 12 Changes in Work.

10.4 CONTRACTOR DUTIES FOR SAFETY PROGRAM

10.4.1 The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. This requirement applies continuously and is not limited to normal working hours.

JOB 110816

10.4.2 Temporary items such as, but not limited to; scaffolding, staging, lifting, and hoisting devices, barricades, and safety and construction procedures necessary for completion of the Project shall be the responsibility of the Contractor and his sub-contractors and shall comply with all applicable codes and regulations. It shall not be the responsibility of the Owner, Facilities Management Project Manager, as defined herein, or their representatives to determine if the Contractor, a sub-contractor or their representatives are in compliance with the aforementioned regulations.

10.5 **SAFETY PLANNING**

- 10.5.1 The effectiveness of the Safety Program depends upon the active participation and sincere cooperation of all Contractors' employees and the coordination of their efforts in carrying out the following basic responsibilities. It shall be the responsibility of all Contractors to:
 - 1. Properly plan all work to eliminate personal injury, property damage, and the loss of productive efforts.
 - 2. Establish and maintain a system for early detection and correction of unsafe practices and conditions.
 - 3. Provide adequate protection for adjacent public and private properties and to ensure the safety of the public at all times.
 - 4. Establish and conduct safety education programs designed to gain, stimulate and maintain the interest and active participation of all employees through:
 - A. Safety meetings and communication.
 - B. Investigation of accidents/incidents that have caused or could cause injuries and damage to determine the cause and the taking of necessary corrective actions.
 - C. Use of proper work procedures, personal protective equipment and mechanical guards.
 - D. Safety instruction for individual employees and safety training programs.
 - E. Maintenance of records of accidents, incidents and losses and development of injury/losses experience summaries.
 - 5. Ensure that all employees of Contractor, as well as all employees of subcontractors of any tier, who perform any portion of the Work have completed the 10-hour minimum OSHA construction safety-training course prior to commencement of the Work. Contractor shall submit a copy of all training certificates to the Project Safety Manager prior to commencement of the Work.

10.6 ADMINISTRATION AND ORGANIZATION

JOB 110816

- 10.6.1 The Owner will designate an Owner's representative to act as the "Project Safety Manager". The Project Safety Manager will:
 - Interpret regulations and Construction Contract requirements as they apply to the safety and health of persons on the Work site.
 - 2. Perform regular inspections of the Work areas to monitor and enforce Contractor compliance with the Safety Program.
 - Stop any unsafe work practices in progress.
 - Report all accidents immediately to Owner and the Owner Risk Manager.
 - Identify hazards and their mitigation.
 - 6. Attend all meetings that can impact safety.
 - 7. Be a resource for safety and health to all entities involved in the construction Project.
- 10.6.2 All Contractors and Sub-contractors working on the Project shall designate an experienced and competent onsite "Safety Representative".
 - The name of the onsite Safety Representative will be provided to the Owner and the Project Safety Manager prior to the Contractor or Sub-contractor starting Work at the job site.
 - 2. The Safety Representative shall have successfully completed the 10-hour minimum OSHA construction safety- training course prior to commencement of the Work.
 - 3. The Contractor shall submit a copy of its training certificates, issued by the training organization, as evidence of completion of the aforementioned safety training courses to the Owner and the Project Safety Manager prior to commencement of the Work.
 - 4. The Safety Representative shall be responsible for implementing the Safety Program, ensuring that job site safety requirements and procedures are being accomplished, conducting safety inspections of Work being performed, conducting weekly safety meetings with craft employees and submitting reports as identified in the Contract Documents.
 - 5. The Safety Representative shall have the authority to correct unsafe acts or conditions.
 - 6. The Safety Representative shall be responsible for a continuing survey of its operations, to ensure that the probable causes of injury of accident are controlled and that operating equipment, tools and facilities are used, inspected and maintained as required by applicable safety and health regulations.

JOB 110816

7. The Safety Representative shall make frequent and regular inspections of the job site. Unsafe acts and/or conditions noted during inspections shall be corrected immediately.

10.6.3 Contractor Construction Safety Responsibilities

- 1. All Contractors, Subcontractors and Sub-subcontractors working on this Project shall comply with this Safety Program and shall be responsible for its implementation and for providing the means and methods required for compliance.
- 2. The Contractor shall furnish all information concerning safety of his operation on the Project as may be reasonably required by Owner or the Project Safety Manager.
- 3. The Contractor shall develop, present, ensure attendance and successful completion of each Contractor and Sub- contractor worker in a Site Specific Safety Orientation prior to their deployment on the jobsite and start of Work. The training will include topics specific to the scope of Work including:

Procedures for emergency evacuation
Hazardous material used on the job site.
Proper work attire
Personal protective equipment
Reporting injuries and accidents
Stopping/restarting work in an imminently hazardous situation

- 4. The Contractor shall instruct each employee on the job site in the recognition and avoidance of unsafe acts and/or conditions applicable to the Work environment to control or eliminate injury or illness. The Contractor shall enforce the Project and statutory safety rules with its employees.
- 5. The Contractor is responsible for notifying Owner of any hazardous chemicals or substances that are brought or caused to have been brought on the job site. The Contractor is responsible for the legal storage, use and disposal of waste of any hazardous chemicals or substances.
- 6. The Contractor shall provide Owner with a copy of Contractor's "Hazard Communication Program" and the "Material Safety Data Sheet(s)" (MSDS) for the chemical(s) or substance(s) intended for use on the site. A bookcase, centrally located, will be dedicated for this information. The Contractor is responsible for keeping this information current.
- 7. The Contractor and any subcontractors so notified shall make all reasonable efforts to correct unsafe conditions or acts. Satisfactory corrective action shall be taken within the specified abatement time. If the Sub-contractor refuses to correct unsafe or unhealthy conditions or acts, or eliminate fire hazards, Facilities Management project Manager may take steps in accordance with the Construction Contract.
- 8. The Contractor shall require each of his Subcontractors (all tiers), vendors and suppliers to abide by the Project safety and health requirements.

JOB 110816

- 9. The Contractor shall not load or permit any part of the Work to be loaded so as to endanger the safety of the Contractor or the Work.
- 10. The Contractor shall provide to Owner and Project Safety Manager an emergency on-call phone number, suitable to contact the Contractor's representative 24 hours a day, seven days a week, during the duration of the Construction Contract and Work.
- 11. Tool Box Training The Contractor and Subcontractors will hold weekly safety training in their work area with their entire crew.

10.7 STOPPING AND RESTARTING WORK

- 10.7.1 The Owner shall have the right to stop Work whenever safety violations are observed which could imminently jeopardize the well being of personnel and equipment. The expense of any such Work stoppage and resultant standby time shall be charged to the Contractor and deducted from the next Application for Payment.
- 10.7.2 Work that has been stopped for safety reasons can only be restarted when the full corrective action have been implemented and the hazardous conditions or actions no longer exist. The decision to restart the Work will be made with the concurrence of Owner, the Project Safety Manager, the Contractor and his affected Sub- contractor(s) and will be documented in writing.

10.8 SPECIFIC SAFETY REQUIREMENTS

10.8.1 Fall Protection

- 1. At no time shall any employee be exposed to the potential of a fall of six (6) feet or more without using required fall protection. Each employee on a walking/working surface six (6) feet or more above lower levels shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.
- 2. The Contractor shall prepare a "Fall Protection Program", which means a detailed written description of how the Contractor and his Subcontractors will comply with the six (6) foot fall protection requirements for the protection of all employees throughout all phases of the Work. The Fall Protection Program shall be submitted to the Project Safety Manager for review and acceptance prior to the commencement of Work. The Fall Protection Program shall be maintained on site and be available upon request.

10.8.2 Drug and Alcohol Testing

1. Employee impairment is prohibited - No employee will use unlawful drugs or report for work or will work impaired by any substance, lawful or unlawful.

JOB 110816

- 2. All Contractor and Sub-contractor employees are required to report to work in proper condition to perform their assigned duties.
 - As a necessary part of the overall commitment to maintaining a safe and productive Work environment, the possession, use, manufacture, distribution, dispensation, or presence of any controlled substance or alcohol will be prohibited on all ARDOT construction sites.
- All employees of the Contractor and any Subcontractors will be required to be tested for substance abuse. Results of all post-accident and reasonable suspicion tests will be provided to Owner and the Project Safety Manager.
- Post-accident test.
- A. Contractor and Sub-contractor employees involved in accidents or incidents will be required to be tested for substance abuse.
- B. The costs for this testing will be the responsibility of the Contractor, Subcontractor, or as set forth in their contracts with ARDOT.
- C. Specimen collection for drug testing and the alcohol test will be completed within four (4) hours of the accident.
- D. Employees who produce a confirmed positive test will be permanently prohibited from working on any ARDOT construction site permanently.
- Reasonable suspicion test.
- A. Where reasonable suspicion exists that an employee of the Contractor or any Subcontractor exhibits signs of substance abuse as detected by trained and knowledgeable supervision, the employee will be required to be tested for substance abuse.
- B. The costs for this testing will be the responsibility of the Contractor, Subcontractor, or as set forth in their contracts with the Owner.
- C. Specimen collection for drug testing and alcohol testing will be completed within four (4) hours of the accident.
- D. Employees who produce a confirmed positive test will be permanently prohibited from working on any ARDOT construction site permanently.
- 6. Reporting Testing Results
 - Confidentiality All test results will be treated as medically confidential.

JOB 110816

- B. All test results will be maintained in a secure file maintained by Owner or the Project Safety Manager.
- C. Acceptable documentation in lieu of actual test results, shall include a memorandum on the employer's letterhead stating:

The employee's full name,

The employee's social security number,

The drug test date,

An indication that drug results were negative, and

The name of laboratory in which the tests were performed.

10.8.3 Fire Protection

- 1. The Contractor is responsible for the development of the following programs and procedures:
 - A. A fire protection and prevention program,
 - B. A flame/spark/hot work permit procedure, and
 - C. A flammable/combustible liquid storage/dispensing procedure

These programs and procedures are to conform to OSHA and NFPA standards and must be submitted to the Project Safety Manager for review and acceptance prior to the commencement of Work.

- The Contractor shall be responsible for fire protection in his work and operational areas, including offices, tool rooms, and storage area 24 hours per day, seven days per week through the duration of the Construction Contract. Approved fire fighting equipment, in adequate quantities must be provided and maintained by the Contractor and the Contractors employees must be trained in the usage of such equipment.
- 3. Fire protection equipment will be made available during all phases of construction.
- 10.8.4 All lifting and rigging procedures will be submitted to the Project Safety Manager for review and acceptance prior to lifting and erecting materials and/or equipment.
- 10.8.5 The Contractor shall immediately report all accidents and incidents relating to construction activity to the Owner and the Project Safety Manager. The primary responsibility for the accident/incident investigation lies with the Contractor. However, each Contractor is expected to cooperate to the fullest extent in the Owner's investigation of all accidents and incidents.

10.8.6 Personnel Clothing

1. Shirts shall be worn at all times. Sleeveless shirts and tank tops are not permitted.

JOB 110816

- Long pants are required.
- 3. Hard leather work shoes/boots are required. Tennis type shoes, sandals, docksiders, hush puppies, steel-toed sneakers or bare feet are prohibited. Additional foot protection shall be worn for certain operations such as, operating tamping equipment or jackhammers and where employees handle or carry heavy tools, objects, etc. Contractors are urged to recommend safety shoes to be worn by all employees.

10.8.7 Personnel Protective Equipment

- 1. Contractor is responsible for determining, training in use, providing and requiring the use of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions. There will be specific job site requirements established by Owner and the Project Safety Manager. All records shall be maintained at a location accessible to Facilities Management Project Manager and the Project Safety Manager.
- 2. Approved hard hats meeting specifications contained in American National Standards Institute (ANTI), Z16.89.1- 1916.81 and/or Z16.89.2-1971 are required in the construction area at all times. Contractor's personnel must wear hard hats clearly marked with employee name, and company logo.
- 3. Safety glasses with attached side shields meeting ANTI Z87.1-1989 are required in construction areas at all times.
- 10.8.8 As required by OSHA, the Contractor shall designate all "Competent Persons" in writing to the Owner and Project Safety Manager prior to such any work requiring their participation. Their qualifications for such designation as a Competent Person will be submitted with their designation. Competent persons are required for areas that shall include but may not be limited to:
 - 1. Scaffolding
 - Excavation and Trenching
 - 3. Fall Protection
 - 4. Rigging Equipment
 - 5. Cranes and Hoists
 - 6. Aerial Lift Procedures
 - 7. Sling and Wire Rope Inspection
 - 8. Demolition
 - 9. Fire Protection
 - 10. Ionizing Radiation
 - 11. Assured Grounding Conductor Program

10.8.9 First Aid

1. The Contractor shall have at least one onsite employee trained in first aid at all times, and that employee shall be able to administer first aid when needed.

JOB 110816

- 2. The Contractor shall ensure that first aid supplies approved by the Contractor's consulting physician shall be easily accessible onsite when required.
- 10.8.10 The Contractor is responsible for maintaining a copy of "Contractor's Hazard Communication Program" and "Material Safety Data Sheet(s)" on site for the Contractor's own reference and employee training.
- 10.8.11 The use of explosives is strictly prohibited unless authorized in writing by the Owner and any other governing entities having jurisdiction in the locality of the Project. When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel.

10.8.12 Critical Lifts

- 1. Critical lifts are determined by any one of the following conditions:
 - A. Individual loads weighing 30 tons or more
 - B. Lifts requiring more than one crane to handle a common load
 - C. Load exceeds eighty-five percent (85%) of the crane capability as shown on the applicable crane manufacturer's load charts for the configuration to be used.
 - D. Items specially classified due to physical dimensions, susceptibility to internal damage and schedule impact.
 - E. Parts, components, assemblies, or lifting operations designated as such because the effect of dropping, upset, or collision of items could:
 - 1. Cause significant delay
 - 2. Cause undetectable damage resulting in future operational or safety problems
 - 3. Result in significant release of radioactivity or other undesirable condition
 - 4. Present a potentially unacceptable risk of personal injury or property damage.
- 2. Critical lifts require a written rigging plan for handling operations, approved by the Contractor's superintendent, Contractor's Safety Representative, the Facilities Management Project Manager and the Project Safety Manager prior to lift.

10.8.13 Environmental

JOB 110816

- 1. The Contractor shall notify the Owner of any hazardous waste it will generate during performance of the Work. The Contractor has the direct responsibility for maintaining proper storage of these wastes while on site and will verify to the Owner in writing that the wastes have been disposed of in a legal manner.
- The Contractor shall keep the site, free from accumulation of water, no matter what source or cause. The Contractor shall dispose of water in such manner as will not endanger public health or cause damage or expense to Owner's or adjacent property The Contractor shall comply with requirements of any public agencies having jurisdiction. If sewers and streets are allowed to be used for drainage or disposal of water during construction, the Contractor shall maintain and leave these satisfactorily clean upon completion of Work.
- 3. Contractor shall not pour, bury, burn, nor in any way dispose of a chemical on the job site without the permission of the Owner.
- 4. Contractor shall, at its expense, provide suitable facilities to prevent the introduction of any substances or materials into any stream, lake or other body of water which may pollute the water or constitute substances or materials deleterious to fish and wildlife.
- 5. Contractor shall perform the Work as not to discharge into the atmosphere from any source whatever, smoke, dust, or other air contaminants in violation of the laws, rules and regulations of the governmental entities having jurisdiction.

ARTICLE 11

INSURANCE

11.1 CONTRACTOR'S/SUB-CONTRACTOR'S LIABILITY INSURANCE

- 11.1.1 The Contractor shall purchase and maintain liability insurance, and shall likewise ensure that all of his Subcontractors and their Sub-subcontractors purchase and maintain such insurance, as will protect them from claims set forth below which may arise out of or result from the Contractor's operations under the Construction Contract, whether such operations are carried out by the Contractor, by any Subcontractor or by anyone directly or indirectly employed by any of the, or by anyone for whose acts any of them may be liable:
 - 1. Claims under workers' compensation laws, disability benefits, and other similar employee benefit acts:
 - Claims for damages because of bodily injury, occupational sickness or disease, or death of an employee;
 - 3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than an employee;

JOB 110816

- 4. Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment or failure to offer employment, of such person by the Contractor, or (2) by any other person;
- 5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom; and
- 6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.
- 11.1.2 The insurance required by subparagraph 11.1.1 shall include contractual liability insurance applicable to the Contractor's obligations under paragraph 4.18.

11.2 OWNER'S LIABILITY INSURANCE

11.2.1 The Contractor shall purchase and maintain an Owner's Protective Liability policy as will protect the Owner and his employees, agents, officers, elected officials, and consultants against claims which may arise from operations of the Contractor, his subcontractors, and their sub-contractors and/or premises which are the subject of the Construction Contract unless equivalent coverage is provided by Contractor's Commercial or Comprehensive General Liability policy.

11.3 PROPERTY INSURANCE

- 11.3.1 The Owner may purchase and maintain property insurance upon the entire Work at the site to the full insurable value thereof. This insurance shall include the interests of the Owner, the Contractor, Subcontractors, and Sub- subcontractors of the Work and shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism, and malicious mischief.
- 11.3.2 The Owner may purchase and maintain such boiler and machinery insurance as may be required by the Contract Documents or by law. This insurance shall include the interest of the Owner, the Contractor, Subcontractors, and Sub-subcontractors of the Work.
- 11.3.3 Any loss insured under subparagraphs 11.3.1 and 11.3.2 is to be adjusted with the Owner and made payable to the Owner as trustee for the insureds, as their interests may appear. The Contractor shall pay each Subcontractor a just share of any insurance monies received by the Contractor, and by appropriate agreement shall require such Subcontractor to make payments to his Sub-subcontractors in similar manner.
- 11.3.4 The Owner may purchase insurance for risks other than those described in subparagraphs 11.3.1 and 11.3.2 in the Contract Documents.

JOB 110816

- 11.3.5 The Owner as trustee shall deposit in a separate account any insurance proceeds so received, and he shall distribute it in accordance with such agreement as the parties in interest may reach.
- 11.3.6 The Owner as trustee shall have power to adjust and settle any loss with the insurers.
- 11.3.7 If the Owner finds it necessary to occupy or use a portion or portions of the Work prior to substantial completion thereof, such occupancy or use shall not commence prior to a time mutually agreed to by the Owner and Contractor and to which the insurance company or companies providing the property insurance have consented by endorsement to the policy or policies. This insurance shall not be canceled or lapsed on account of such partial occupancy or use. Consent of the Contractor and of the insurance company or companies to such occupancy or use shall not be unreasonably withheld.
- 11.3.8 The Contractor shall be responsible for paying to repair any such losses as enumerated in Article 10 to the extent that such losses are not covered by the Owner's insurance, including all policy deductibles.

11.4 INSURANCE SCHEDULES

- 11.4.1 The Contractor shall not commence Work under the Construction Contract until he has obtained all the insurance required hereunder and certificates of such insurance have been filed with and reviewed by the Owner. Acceptance of the insurance certificates by the Owner shall not relieve or decrease the liability of the Contractor. Owner shall be named as an additional insured on the policies. Contractor shall not change or modify the insurance coverage without prior notice to the Owner.
- 11.4.2 Unless otherwise provided for in the Contract Documents, the Contractor shall provide and maintain, until the Work covered in the Construction Contract is completed and accepted by the Owner, the minimum insurance coverages in the following schedule.

The minimum required limits may be achieved by purchasing an excess liability policy so long as such policy provides coverages at least as broad as the primary insurance.

- 11.4.3 1. Worker's Compensation and Employer's Liability Insurance
 - a. Worker's Compensation Insurance shall be as required by law and shall include an "all states" or "universal" endorsement.
 - b. Employer's Liability Insurance shall be written for not less than \$500,000 per occurrence.
 - Commercial General and Automobile Liability Insurance
 - a. Minimum Limits:

Per Occurrence \$1,000,000

Aggregate \$1,000,000

JOB 110816

- b. The following coverages must be specifically insured and certified with no internal sublimits. A separate aggregate limit is acceptable for the Products/Completed Operations hazard:
 - 1) Independent Contractors Contingent Liability or Owners Protective Liability
 - 2) Products/Completed Operations Liability
 - Contractual Liability
 - 4) "X, C, U" Hazard Liability (if applicable)
 - 5) Personal Injury Liability including claims related to employment
 - 6) Broad Form Property Damage Liability, or deletion of the "Care, Custody, and Control" exclusion
 - 7) Owned, Hired and Non-Owned Automobile Liability
 - 8) Waiver of Defense of Municipal Liability Immunity
- 3. Builders Risk Insurance
 - 1) Completed value form in an amount equal to the initial contract amount plus Architect fees on a replacement cost basis.
 - 2) The policy shall name as insured The Owner, General Contractor, and all subcontractors on an equal basis.
 - 3) The policy shall be written on an "All Risk" form, to include at least the perils of Fire, Lightning and extended coverage theft, vandalism, malicious mischief, and collapse
- 11.4.4 This furnishing of the required insurance coverages, as may be modified by special Conditions, is one of the Contractor's initial requirements of the Construction Contract that must be performed before a Notice to Proceed can be issued, and if not provided within 15 calendar days after receipt of the Notice of Award, may result in forfeiture of the Contractor's Bid Security. All insurance policies shall be open to inspection by the Owner, and copies of policies shall be submitted to the Owner upon written request.
- 11.4.5 The contractual liability is to be written on a blanket basis for all written or oral contracts, or specifically endorsed to acknowledge the contractual relationship between the insured and ARDOT.
- 11.4.6 All certificates of insurance shall provide that the insurance company shall give the Owner an affirmative statement, with no qualifications, that thirty (30) days prior written notice will be given to the Owner in the event of policy cancellation, non-renewal or material reduction in coverage provided under the policy, including impairment of any aggregate limits less than \$1,000,000.

JOB 110816

11.4.7 A waiver of subrogation in favor of ARDOT will be endorsed to all policies. ARDOT will be named as an additional insured where the Owner's interest may appear.

ARTICLE 12

CHANGES IN WORK

12.1 CHANGE ORDERS

- 12.1.1 A "Change Order" is a written modification to the Contract signed by the Owner, the Architect/Engineer, and the Contractor issued after award of the Construction Contract authorizing a change in the Work and an adjustment, if any, in the Contract Sum or the Contract Time. The Contract Sum and the Contract Time may be changed only by Change Order. A Change Order signed by the Contractor indicates his agreement therewith, including the adjustment in the Contract Sum or the Contract Time.
- 12.1.2 Routine changes in the Construction Contract shall be formally initiated by the Architect/Engineer by means of a "Change Proposal Request" form detailing requirements of the proposed change. The Contractor shall prepare a Change Proposal ("CP") based on the CPR form. This action may be preceded by communications between the Contractor, Architect/Engineer, and Owner concerning the need for and nature of the change, but such communications shall not constitute a basis for beginning the proposed Work by the Contractor. Except for emergency conditions defined in subparagraph 12.1.10 or for conditions described in subparagraph 12.2.3, approval of the Contractor's Change Proposal by the Architect/Engineer and Owner will be required for authorization to proceed with the Work being changed. Without prior approval the Contractor may be required to remove Work so installed.
- 12.1.3 The cost or credit to the Owner resulting from change in the Work shall be determined in one or more of the following ways:
 - by mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - 2. by unit prices stated in the Contract Documents or subsequently agreed upon; or
 - by a cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee. (The Contractor shall keep and present, in such form as the Architect/Engineer or the Owner may prescribe, an itemized accounting together with appropriate supporting data for inclusion in a Change Order.)
- 12.1.4 All proposed costs for Change Order Work must be supported by an itemized accounting of material, equipment, and associated itemized installation costs in sufficient detail to permit analysis by the Architect/Engineer and Owner using current estimating guides and/or prices. Photocopies of Subcontractor and significant vendor proposals supporting the Contractor's Change Proposal shall be furnished unless specifically waived by the Owner. The Contractor shall provide written response to a

JOB 110816

Change Proposal Request within ten (10) days of receipt, unless otherwise specified in the Supplementary Conditions.

- 12.1.5 Unless otherwise provided in the Contract Documents, the "Change Order Base Cost" shall be limited to the following:
 - a. The total cost of materials and supplies, reflecting all available discounts, itemized by cost and quantity;
 - b. The total cost of all labor, including the cost of additional supervision, itemized to show man-hours by trade and classification and burdened hourly rates (which include social security tax, unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance);
 - c. The rental value of equipment and machinery calculated for each type of equipment used in performing the changed Work, based on hours of use. Unless otherwise specified, prices for use of machinery and equipment shall be determined by using 80 percent of the latest schedule of "Equipment Ownership Expense" adopted by Associated General Contractors of America.

 Mobilization costs will not be allowed except when the Contractor demonstrates that the need to mobilize a piece of equipment arose solely because of the changed Work;
 - d. All transportation costs for delivery and handling of materials, equipment, and supplies, and the removal of waste or debris;
 - e. All storage costs in excess of thirty (30) days for materials and supplies, if necessitated solely by the changed Work;
- 12.1.6 The amounts that the Contractor or a Subcontractor adds to the Change Order Base Cost for overhead and profit will also be considered by the Owner before approval is given. The amounts established hereinafter are the maximums that are acceptable to the Owner without a full and complete justification acceptable to the Owner.
 - a. To the total of the Change Order Base Cost, the Contractor will be allowed to add a percentage as noted below to cover overhead and profit combined. Overhead shall be considered to include insurance other than mentioned above, office supervisors and assistants, use of small tools, incidental job burdens and general home office expense, and no separate allowance will be made therefor except as allowed under Article 8. Allowable percentages for overhead and profit on changes will not exceed 15% on the first \$10,000.00, 10% on the next \$10,000.00 and 7 1/2% on the balance over \$20,000.00.
 - b. The allowance to the Contractor for profit and overhead for work done by his own forces or by Subcontractors will be a minimum of \$75.00.

JOB 110816

- c. On changes involving both additions and deletions, percentages for overhead and profit will be allowed only on the net addition.
- d. The amount of credit to be allowed by the Contractor to the Owner for any deletion or change which results in a net decrease in the Contract Sum will be the amount of the actual net cost.
- 12.1.7 When an Excusable Compensable Delay, as defined under 8.3.1.3, occurs, the Contractor shall be entitled to an extension of time and to compensation for the cost of extended general conditions related to the delay, as set forth below:
 - The Contractor shall notify the Owner of a request for an extension of time as described under 8.3.2. The Contractor and Owner recognize and agree that it is beneficial to each other to identify factors affecting the Contractor's cost of performance, and to take prompt action to control them. Therefore, it is agreed that the Contractor shall not be entitled to request a cost adjustment for extended general conditions unless the required notice is submitted timely.
 - 2. The cost adjustment proposal shall be based on itemized documented costs actually incurred. If and only if the actual cost claimed cannot be demonstrated with reasonable certainty, the Contractor may utilize industry- recognized mathematical formulas or models to compute the proposed cost adjustment.
 - 3. No mark up is authorized on the Change Order Base Cost of extended general conditions.
- 12.1.8 No payments can be made on such work until the final amount is agreed and the Change Order approved.
- 12.1.9 The execution of a Change Order by the Owner and the Contractor constitutes the full, final and complete settlement of all claims with regard to the modifications contained in the Change Order for foreseeable impacts on the Contract Sum or the Contract Time.
- 12.1.10 Emergency changes to save life or property may be initiated by the Contractor alone with the claimed cost of such Work to be fully documented as to necessity and detail of the reported costs in accordance with subparagraph 12.1.5.
- 12.1.11 The cumulative total of all Change Orders may not increase the Contract Sum by more than twenty-five percent (25%). The Contract Sum may be decreased by more than eighteen percent (18%) only with the consent of the Contractor.

12.2 CONSTRUCTION CHANGE DIRECTIVE

12.2.1 A Construction Change Directive, (a "CCD"), is a written order prepared by the Architect/Engineer and signed by the Owner and Architect/Engineer, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Construction Contract, order changes in the Work within the general scope of the Construction Contract consisting of additions, deletions or other revisions, the

JOB 110816

Contract Sum, and the Contract Time being adjusted accordingly. All such changes in the Work shall be performed under the applicable conditions of the Contract Documents.

- 12.2.2 A Construction Change Directive shall be used if one of the following circumstances applies:
 - 1. If the Contractor fails to provide a written Change Proposal within 10 days of receiving a Change Proposal Request or fails or refuses to execute an agreed Change Order within the time required to prevent a delay to the Construction Schedule;
 - If negotiations fail to achieve an agreed price; or
 - If, in the Owner's judgement based on the Construction Schedule, a failure to authorize the Contractor to proceed with a Change Order under the normal process may adversely affect the timely completion of the Work.
- 12.2.3 Any unexpected circumstances which necessitates an immediate change in order to prevent damage to the Work in place, to avoid a delay in the Construction Schedule, or to maintain safety shall be expedited by verbal communication and authorization between the Contractor, Architect/Engineer and Owner with written Construction Change Directive following as soon as may be practical. Should consultation with all other interested parties be precluded by events, the Owner may act alone. A limiting not-to-exceed estimate of cost will be requested prior to authorizing Work to proceed. Should a cost estimate be impractical for any reason, the Owner may authorize the use of detailed cost records of such Work to establish and confirm the actual costs for documentation in a formal Change Order.
- 12.2.4 If the Construction Change Directive provides for an adjustment to the Contract Sum, the basis and method for determining the cost or credit to the Owner shall be in accordance with either subparagraph 12.1.3 or as described below.
- 12.2.5 If the Contractor does not respond promptly or disagrees with the method for adjustment of the Contract Sum, the Contractor shall be paid "Actual Field Cost" plus overhead and profit. "Actual Field Cost" is calculated to include the same costs as outlined in 12.1.5, also known as the Change Order Base Cost. Overhead and profit is determined in accordance with subparagraph 12.1.6. The Owner may direct the form in which accounts of Actual Field Cost shall be kept and records of those accounts shall be made available to the Owner. When Contractor's field office must be maintained solely on account of such extra work; then the cost to maintain and operate the same shall be included in Actual Field Cost.
- 12.2.6 When Actual Field Cost is used to determine the cost of the Construction Change Directive, the Contractor's representative and the Owner inspector shall compare records of Work done for the CCD at the end of each day. Copies of these records will be made upon suitable forms approved for this purpose by the Owner and signed by both the Owner's and the Contractor's representatives, one copy being forwarded to the ARDOT Project Manager and one to the Contractor. All claims for work performed for the CCD shall be submitted to the Architect/Engineer by the Contractor upon certified statements to which shall be attached certified copies of invoices covering the cost of, and the freight charges on, all materials used in such Work. Such statements shall be filed not later that the tenth day of the month following that

JOB 110816

- in which the work was actually performed. The statements shall separate charges in accordance with subparagraph 12.1.5.
- 12.2.7 When the estimated cost of work related to the CCD is less than \$500.00, payment of same may be made on the basis of an invoice submitted to the Architect/Engineer by the Contractor. The invoice shall include the Contractor's actual cost for materials, labor, equipment and incidentals necessary to complete the extra work.
- 12.2.8 When the Owner and Contractor agree on the adjustments to the Contract Sum and Contract Time, such agreement shall be recorded by preparation and execution of an appropriate Change Order in accordance with 12.1.

12.3 CONCEALED CONDITIONS

- 12.3.1 The Contractor is responsible for having visited the site and having ascertained pertinent local conditions such as location, accessibility, and general character of the site or building, the character and extent of existing Work within and adjacent to the site, and any other Work being performed thereon at the time of the submission of its proposal. Any failure to do so will not relieve it from responsibility for successfully performing the Work without additional expense to the Owner.
- 12.3.2 If, in the performance of the Contract, subsurface, latent or concealed conditions at the site are found to be materially different from the information included in the Bid Documents, or if unknown conditions of an unusual nature are discovered differing materially from the conditions usually inherent in Work of the character shown and specified, the Contractor shall notify Owner in writing of such conditions before proceeding with the Work. If necessary, the Owner shall develop a solution and provide it to Contractor. If the solution prompts changes to the Contract Sum and/or Time, the Contract shall be adjusted under Article 12 hereof.

12.4 CLAIMS FOR ADDITIONAL COST

- 12.4.1 If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give the Architect/Engineer written notice thereof within twenty (20) days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding with the Work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with paragraph 10.3. No such claims shall be valid unless so made. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.
- 12.4.2 If the Contractor claims that additional cost is involved because of, but not limited to, (1) any written interpretation (2) any order by the Owner to stop the Work pursuant to paragraph 3.3 where the Contractor was not at fault, or (3) failure of payment by the Owner pursuant to paragraph 9.7, the Contractor shall make such claim as provided in subparagraph 12.4.1.

JOB 110816

12.5 **DISPUTES**

12.5.1 The Purchasing Agent acts as the Owner representative in the issuance and administration of this Construction Contract. In the case of a Dispute, any document, notice, or correspondence not issued by or to the Purchasing Agent is void unless otherwise stated in this Contract. If Contractor does not agree with any document, notice, or correspondence issued by the Purchasing Agent, or other authorized Owner person, Contractor must submit a written notice to the Purchasing Agent within ten (10) calendar days after receipt of the document, notice, or correspondence, outlining the exact point of disagreement in detail. If the matter is not resolved to Contractor's satisfaction, Contractor may submit a Notice of Appeal to the Building Committee, through the Purchasing Agent, if the Notice is submitted within ten (10) calendar days after receipt of the unsatisfactory reply. Contractor then has the right to be heard by ARDOT Building Committee.

ARTICLE 13

UNCOVERING AND CORRECTION OF WORK

13.1 UNCOVERING OF WORK

13.1.1 If any portion of the Work should be covered contrary to the request of the Architect/Engineer or the Owner or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Architect/Engineer or the Owner, be uncovered for their observation and shall be replaced at the Contractor's expense.

13.2 CORRECTION OF WORK

- 13.2.1 The Contractor shall promptly correct all Work rejected by the Architect/Engineer or the Owner as defective or as failing to conform to the Contract Documents whether observed before or after Substantial Completion and whether or not fabricated, installed, or completed. The Contractor shall bear all costs of correcting such rejected Work, including any and all additional costs incurred by the Owner as a result thereof.
- 13.2.2 If any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. This obligation shall survive termination of the Construction Contract. The Owner shall give such notice within ten (10) days after discovery of the condition.
- 13.2.3 The Contractor shall remove from the site all portions of the Work which are defective or non-conforming and which have not been corrected under subparagraphs 4.5, 13.2.1, and 13.2.2, unless removal is waived in writing by the Owner.

JOB 110816

- 13.2.4 If the Contractor fails to correct defective or non-conforming Work as provided in subparagraphs 4.5, 13.2.1 and 13.2.2, the Owner may correct it in accordance with Paragraph 3.4.
- 13.2.5 If the Contractor does not proceed with the corrections of such defective non-conforming Work within a reasonable time fixed by written notice from the Architect/Engineer or the Owner, the Owner may remove it and may store the materials or equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten (10) days thereafter, the Owner may upon ten (10) additional days' written notice sell such work at auction or at private sale and shall account for the net proceeds therefor, after deducting all costs that should have been borne by the Contractor, including compensation for the Architect/Engineer's additional services made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be charged to the Contractor and an appropriate Change Order shall be issued. If the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.
- 13.2.6 The Contractor shall bear all costs of making good all Work of the Owner or separate contractors destroyed or damaged by such correction or removal.
- 13.2.7 Nothing contained in this Paragraph 13.2 shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including Paragraph 4.5 hereof. The establishment of the specific obligation of the Contractor to correct the Work has no relationship to his obligation to comply with the Contract Documents, nor to proceedings which may be commenced to establish the Contractor's liability with respect to his obligations other than specifically to correct the Work.

13.3 ACCEPTANCE OF DEFECTIVE OR NON-CONFORMING WORK

13.3.1 If the Owner prefers to accept defective or nonconforming Work, he may do so instead of requiring its removal and correction, in which case a Change Order will be issued to reflect a reduction in the Contract Sum where appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 14

TERMINATION OF THE CONTRACT

14.1 TERMINATION BY THE OWNER

14.1.1 If the Contractor is adjudged a bankrupt, or if he makes a general assignment for the benefit of his creditors, or if a receiver is appointed on account of his insolvency, or if he persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he fails to make prompt payment to Subcontractors or for materials or labor, or persistently disregards laws, ordinances, rules, regulations or order of any public authority having jurisdiction, or otherwise is guilty of a substantial violation of a provision of the Contract Documents, then

JOB 110816

the Owner may, without prejudice to any right or remedy and after giving the Contractor and his surety, if any, seven (7) days' written notice, terminate the employment of the Contractor and take possession of the site and all materials, equipment, tools, construction equipment, and machinery thereon owned by the Contractor and may finish the Work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished.

14.1.2 If the unpaid balance of the Contract Sum exceeds the cost of finishing the Work, including compensation for the Architect/Engineer's additional services made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or to the Owner, as the case may be, shall be certified by the Architect/Engineer, upon application, in the manner provided in paragraph 9.4, and this obligation for payment shall survive the termination of the Construction Contract.

14.2 TERMINATION FOR DEFAULT

Failure by either party in performing any of its provisions shall be a breach of contract, in which case, either party may require corrective action within ten (10) days after date of receipt of written notice citing the exact nature of the breach. Failure to take corrective action or failure to provide a satisfactory written reply excusing failure within the prescribed ten (10) days shall be a default. The defaulting party shall be given a twenty (20) day period within which to show cause why the Construction Contract should not be terminated for default. ARDOT Building Committee may take whatever action as its interest may appear, resulting from the notice. All notices shall be issued by the Purchasing Agent or the Owner's legal representative only and all replies shall be made in writing to the Purchasing Agent at the address provided herein. Notices issued by or to anyone other than the Purchasing Agent or Owner's legal representative shall be void, and shall be considered as not having been issued or received. The defaulting party shall be liable for actual damages as stipulated in this Construction Contract. Liquidated damages, if specified in the Construction Contract, may also apply. The Owner may enforce the performance of this Construction Contract in any manner allowed by law in the event of breach or default, and may contract with another party with or without solicitation of bids or further notification to the Contractor. As a minimum, the Contractor shall be required to pay any difference in the cost of securing the products or services covered by this Construction Contract, or compensate for any loss or damage the Owner derived if it is necessary to contract with another source because of his default, plus reasonable administrative costs and attorney's fees. If termination for default occurs, Owner and its officials, agents and representatives shall not be liable for loss of any profits anticipated to be made.

14.3 TERMINATION FOR CONVENIENCE

The Owner may terminate this Construction Contract upon thirty (30) days written notice if the ARDOT Building Committee finds that termination serves the public interest, or results from any law, ordinance, regulation, or court order. If the Owner terminates this Construction Contract under this paragraph, it must pay the Contractor the cost directly attributable to Work done or supplies obtained in preparation for compliance with this Construction Contract prior to termination. The Owner is not required to pay costs that are recoverable in the normal course of doing the business in which the Contractor is engaged or costs which can be recouped by selling the Work done or supplies obtained. If the Owner pays for

JOB 110816

supplies or materials, these supplies and materials become the property of the Owner and the Contractor must deliver them to the place designated by the Purchasing Agent. The Owner is not liable for any loss of profits caused by this termination.

ARTICLE 15

OTHER CONDITIONS OR SERVICES

- 15.1 Notwithstanding anything herein to the contrary, the Contractor shall perform all services and responsibilities required of the Contractor by these General Conditions for ARDOT Building Construction Contracts using at least that standard of care which a reasonably prudent contractor in Arkansas would use under the same or similar circumstances. Nothing in these General Conditions for ARDOT Building Construction Contracts shall be construed to relieve the Contractor of this duty.
- Any oral representations or modifications concerning these General Conditions for ARDOT Building Construction Contracts shall be of no force or effect, excepting a subsequent modification in writing, signed by the party to be charged. NO OFFICIAL, AGENT, EMPLOYEE, OR REPRESENTATIVE OF THE OWNER MAY MODIFY OR AMEND THESE GENERAL CONDITIONS FOR ARDOT BUILDING CONSTRUCTION CONTRACTS, EXCEPT PURSUANT TO EXPRESS AUTHORITY GRANTED BY THE ARDOT Building Committee.
- 15.3 The obligations and undertakings of each of the parties to these General Conditions for ARDOT Building Construction contracts shall be performable at Little Rock, Arkansas.

END OF GENERAL CONDITIONS

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

A. Project Identification: District 2 R.E. Office Building Package

1. Project Location: 4900 Highway 65 South Pine Bluff, AR.

B. Owner: Arkansas Department of Transportation.

1. Owner's Representative: Cameron Parsons, Project Coordinator

9003 Mabelvale Pike,

Little Rock, Arkansas 72209

Ph: (501) 569-4951 Fax: (501) 569-2011

1.2 WORK COVERED BY THE CONTRACT DOCUMENTS

- A. Construction of an R.E. Office at the District 2 Headquarters for the Arkansas Department of Transportation as indicated on the Plans, and as called for in these Specifications, or as directed by the Owner.
- B. The work shall include all labor, materials, equipment, construction tools, machines, services, utilities, and fuel, required to construct the work and place the facilities "in the dry".
- C. Project shall be constructed under a single prime contract and shall include provision for a complete one (1) year warranty period for all aspects of the project with the exception of damage due to normal wear conditions. The warranty period shall commence upon acceptance of the work following a Semi-Final Inspection (as defined in Section 01 77 00). With partial acceptance of work, only the warranty applicable to that portion of the work shall be deemed to be in effect. This warranty will be in addition to specific product or installation warranties from suppliers or subcontractors.

1.3 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.

1.4 WORK RESTRICTIONS

- A. Contractor's Use of Premises: During construction, Contractor will have full use of site indicated. Contractor's use of premises is limited only by Owner's right to perform work or employ other contractors on portions of Project.
- B. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- C. On-Site Work Hours: Limit work to Monday through Friday, unless otherwise indicated. Coordinate with Owner for work outside of normal business hours.
- D. Nonsmoking Building: Once building is "in the dry", smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.
- E. Controlled Substances: Use of controlled substances on Project site is not permitted.
- F. Employee Identification: Provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- G. Employee Screening: Comply with Owner's requirements for drug and background screening of Contractor personnel working on Project site.
 - 1. Maintain list of approved screened personnel with Owner's representative.

1.5 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

- 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
- 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
- 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 10 00

SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 ALLOWANCES

- A. Advise Engineer of the date when selection and purchase of each product or system described by an allowance must be completed to avoid delaying the Work.
- B. At Engineer's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
- C. Purchase products and systems selected by Engineer from the designated supplier.
- D. Submit invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.
- E. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Engineer under allowance and shall include taxes, freight and delivery to Project site.
- F. Unless otherwise indicated, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the Contract Sum and not part of the allowance.

1.2 PAYMENT PROCEDURES

- A. Submit a Schedule of Values at least seven days before the initial Application for Payment. Break down the Contract Sum into at least one line item for each Specification Section in the Project Manual table of contents. Coordinate the schedule of values with Contractor's construction schedule.
 - 1. Arrange schedule of values consistent with format acceptable to Engineer and Owner.
 - 2. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
 - 3. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
 - 4. Provide separate line items in the schedule of values for initial cost of materials and for total installed value of that part of the Work.
 - 5. Provide a separate line item in the schedule of values for each allowance.

- B. Application for Payment Forms: Use forms acceptable to Engineer and Owner as form for Applications for Payment.
- C. Submit one electronic copy of each application for payment according to the schedule established in Owner/Contractor Agreement.
 - 1. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor.
 - 2. With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
 - 3. Submit final Application for Payment with or preceded by conditional final waivers from every entity involved with performance of the Work covered by the application who is lawfully entitled to a lien.
 - a. Include insurance certificates, proof that taxes, fees, and similar obligations were paid, and evidence that claims have been settled.
 - b. Include affidavit of payment of debts and claims.
 - c. Include affidavit of release of liens.
 - d. Include consent of surety to final payment.
 - e. Submit final meter readings for utilities, a record of stored fuel, and similar data as of the date of Substantial Completion or when Owner took possession of and assumed responsibility for corresponding elements of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 20 00

SECTION 01 25 00 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUBSTITUTION PROCEDURES

- A. Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use CSI Form 13.1A.
 - 2. Submit requests within 7 days after the Notice to Proceed.
 - 3. Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.
- C. Engineer will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Engineer will request additional information or documentation for evaluation.
 - Engineer will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- D. Do not submit unapproved substitutions on Shop Drawings or other submittals.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 00

SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 CONTRACT MODIFICATION PROCEDURES

- A. Engineer will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.
- B. Owner-Initiated Proposal Requests: Engineer will issue a detailed description of proposed changes in the Work.
 - 1. Proposal Requests are not instructions either to stop work in progress or to execute the proposed change.
 - 2. Within seven after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time.
- C. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Engineer.
- D. On Owner's approval of a Proposal Request, Engineer will issue a Change Order, for all changes to the Contract Sum or the Contract Time.
- E. Engineer may issue a Construction Change Directive. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- F. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

PROJECT MANAGEMENT AND COORDINATION 1.1

- Subcontract List: Submit a written summary identifying individuals or firms proposed for Α. each portion of the Work.
- Key Personnel Names: Within 15 days of starting construction operations, submit a list B. of key personnel assignments, including superintendent and other personnel in attendance at Project site. List e-mail addresses and telephone numbers.
- Coordinate construction operations included in different Sections of the Specifications C. to ensure efficient and orderly installation of each part of the Work.
- Requests for Information (RFIs): On discovery of the need for additional information or D. interpretation of the Contract Documents, Contractor shall prepare and submit an RFI. Use forms acceptable to Engineer and Owner.
- Project Web Site: Use Owner's Project Web site for purposes of hosting and managing E. project communication and documentation until Final Completion.
- Schedule and conduct progress meetings at Project site at weekly intervals. Notify F. Owner and Engineer of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved in planning, coordination, or performance of future activities.
 - Engineer will record minutes and distribute to everyone concerned, including 1. Owner and Engineer.

SUBMITTAL ADMINISTRATIVE REQUIREMENTS 1.2

- Engineer's Digital Data Files: Electronic digital data files of the Contract Drawings will Α. be provided by Engineer for Contractor's use in preparing submittals.
 - Engineer will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.
 - Engineer makes no representations as to the accuracy or completeness of a. digital data drawing files as they relate to the Contract Drawings.

- b. Contractor shall execute a data licensing agreement in the form of Agreement form acceptable to Owner and Engineer.
- B. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 1. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - 2. Engineer will discard submittals received from sources other than Contractor.
- C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
 - 1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 - 2. Name file with unique identifier, including project identifier, Specification Section number, and revision identifier.
 - 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Engineer.
- D. Identify options requiring selection by Engineer.
- E. Identify deviations from the Contract Documents on submittals.
- F. Contractor's Construction Schedule Submittal Procedure:
 - 1. Submit required submittals in the following format:
 - a. Working electronic copy of schedule file, where indicated,
 - b. PDF electronic file.
 - 2. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - a. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
 - Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.
 - 1. Post electronic submittals as PDF electronic files directly to Engineer's FTP site specifically established for Project.
 - a. Engineer will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 - 2. Submit electronic submittals via email as PDF electronic files.
 - a. Engineer will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

2.2 ACTION SUBMITTALS

- A. Product Data: Mark each copy to show applicable products and options. Include the following:
 - 1. Manufacturer's written recommendations, product specifications, and installation instructions.
 - 2. Wiring diagrams showing factory-installed wiring.
 - 3. Printed performance curves and operational range diagrams.
 - 4. Testing by recognized testing agency.
 - 5. Compliance with specified standards and requirements.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches. Include the following:
 - 1. Dimensions and identification of products.
 - 2. Fabrication and installation drawings and roughing-in and setting diagrams.
 - 3. Wiring diagrams showing field-installed wiring.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.

1. If variation is inherent in material or product, submit at least [three] < Insert number > sets of paired units that show variations.

2.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of Engineers and owners, and other information specified.
- B. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

2.4 DELEGATED DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
 - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer.
- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit one copy of a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
 - Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

2.5 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type schedule within 30 days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
- C. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.

D. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and indicate date by which recovery will be accomplished.

PART 3 - EXECUTION

3.1 SUBMITTAL REVIEW

- A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Engineer will review each action submittal, make marks to indicate corrections or modifications required, will stamp each submittal with an action stamp, and will mark stamp appropriately to indicate action.
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

3.2 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
 - 1. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribute copies of approved schedule to Owner, Engineer, subcontractors, testing and inspecting agencies, and parties identified by Contractor with a need-to-know schedule responsibility. When revisions are made, distribute updated schedules to the same parties.

END OF SECTION 01 30 00

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - `GENERAL

1.1 SECTION REQUIREMENTS

- A. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
- B. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Architect for a decision.
- C. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision.
- D. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
 - 1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Architect.
 - 2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Architect.
- E. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 - Date of issue.
 - 2. Project title and number.
 - 3. Name, address, and telephone number of testing agency.
 - 4. Dates and locations of samples and tests or inspections.
 - 5. Names of individuals making tests and inspections.
 - 6. Description of the Work and test and inspection method.
 - 7. Identification of product and Specification Section.
 - 8. Complete test or inspection data.
 - 9. Test and inspection results and an interpretation of test results.
 - 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 - 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.

- 12. Name and signature of laboratory inspector.
- 13. Recommendations on retesting and reinspecting.
- F. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- G. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated.
- H. Testing Agency Qualifications: An independent agency with the experience and capability to conduct testing and inspecting indicated; and where required by authorities having jurisdiction, that is acceptable to authorities.
- I. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- J. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
 - 1. Notify Architect and Contractor of irregularities or deficiencies in the Work observed during performance of its services.
 - 2. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
 - 3. Do not perform any duties of Contractor.
- K. Associated Services: Cooperate with testing agencies and provide reasonable auxiliary services as requested. Provide the following:
 - 1. Access to the Work.
 - 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 - 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 - 4. Facilities for storage and field curing of test samples.
 - Security and protection for samples and for testing and inspecting equipment.
- L. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.

- M. Special Tests and Inspections: Engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction, as indicated in Statement of Special Inspections attached to this Section.
- N. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and in Statement of Special Inspections attached to this Section.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- B. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Use Charges: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated.
- B. Erosion- and Sedimentation-Control Plan: Submit plan showing compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- C. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- D. Accessible Temporary Egress: Comply with applicable provisions in ICC A117.1.

PART 2 - PRODUCTS

2.1 TEMPORARY FACILITIES

A. Provide field offices, storage and fabrication sheds, and other support facilities as necessary for construction operations. Store combustible materials apart from building.

2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return-air grille in system and remove at end of construction.

PART 3 - EXECUTION

3.1 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
 - Toilets: Use of Owner's existing toilet facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
- C. Heating and Cooling: Provide temporary heating and cooling required for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- D. Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

3.2 SUPPORT FACILITIES INSTALLATION

A. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.

- C. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- D. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Perform control operations lawfully, using environmentally safe materials.
- E. Furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
- F. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- G. 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.
- H. Provide floor-to-ceiling dustproof partitions to limit dust and dirt migration and to separate areas occupied by Owner and tenants from fumes and noise.
- I. Install and maintain temporary fire-protection facilities. Comply with NFPA 241.

3.4 MOISTURE AND MOLD CONTROL

- A. Before installation of weather barriers, protect materials from water damage and keep porous and organic materials from coming into prolonged contact with concrete.
 - 1. Protect stored and installed material from flowing or standing water.
 - 2. Remove standing water from decks.
 - 3. Keep deck openings covered or dammed.
- B. After installation of weather barriers but before full enclosure and conditioning of building, protect as follows:
 - 1. Do not load or install drywall or porous materials into partially enclosed building.
 - 2. Discard water-damaged material.
 - 3. Do not install material that is wet.
 - 4. Discard, replace, or clean stored or installed material that begins to grow mold.
 - 5. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion.
- C. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period.

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. Engineer 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.
 - 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," Engineer 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 Engineer's sample," provide a product that complies with requirements and matches Engineer's sample. Engineer's decision will be final on whether a proposed product matches.
- D. Where Specifications include the phrase "as selected by Engineer from manufacturer's full range" or similar phrase, select a product that complies with requirements. Engineer 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. Engineer 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 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 EXECUTION REQUIREMENTS

- A. Certificates: Submit certificate signed by land surveyor certifying that location and elevation of improvements comply with requirements.
- B. Cutting and Patching:
 - 1. Structural Elements: When cutting and patching structural elements, notify Engineer of locations and details of cutting and await directions from Engineer before proceeding. Shore, brace, and support structural elements during cutting and patching.
 - Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
 - 3. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Engineer's opinion, reduce the building's aesthetic qualities.
- C. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.2 CLOSEOUT SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- B. Certified List of Incomplete Items: Final submittal at Final Completion.
- C. Operation and Maintenance Data: Submit one copy of manual.
- D. PDF Electronic File: Assemble manual into a composite electronically indexed file. Submit on digital media.
- E. Record Drawings: Submit one set(s) of marked-up record prints.
- F. Record Digital Data Files: Submit data file and one set(s) of plots.

G. Record Product Data: Submit annotated PDF electronic files and directories of each submittal.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

- A. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
- B. Submittals Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
 - Obtain and submit releases from authorities having jurisdiction permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 2. Submit closeout submittals specified in other sections, including project record documents, operation and maintenance manuals, property surveys, similar final record information, warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 3. Submit maintenance material submittals specified in other sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by Engineer.
 - 4. Submit test/adjust/balance records.
 - 5. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Before requesting Substantial Completion inspection, complete the following:
 - 1. Advise Owner of pending insurance changeover requirements.
 - 2. Make final changeover of permanent locks and deliver keys to Owner.
 - 3. Complete startup and testing of systems and equipment.
 - 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 - 5. Advise Owner of changeover in heat and other utilities.
 - 6. Participate with Owner in conducting inspection and walkthrough with local emergency responders.
 - 7. Remove temporary facilities and controls.
 - 8. Complete final cleaning requirements, including touchup painting.
 - 9. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Engineer will proceed with inspection or advise Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.

1.4 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting inspection for determining final completion, complete the following:
 - 1. Submit a final Application for Payment.
 - 2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. Certified copy of the list shall state that each item has been completed or otherwise resolved.
 - 3. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 - 4. Submit pest-control final inspection report.
- B. Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare final Certificate for Payment after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.
 - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
- B. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that comply with Green Seal's GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

2.2 OPERATION AND MAINTENANCE DOCUMENTATION

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information.

- B. Organization: Unless otherwise indicated, organize manual into separate sections for each system and subsystem, and separate sections for each piece of equipment not part of a system.
- C. Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:
 - 1. Manufacturer's operation and maintenance documentation.
 - 2. Maintenance and service schedules.
 - 3. Maintenance service contracts. Include name and telephone number of service agent.
 - 4. Emergency instructions.
 - 5. Spare parts list and local sources of maintenance materials.
 - 6. Wiring diagrams.
 - 7. Copies of warranties. Include procedures to follow and required notifications for warranty claims

2.3 RECORD DRAWINGS

- A. Record Prints: Maintain a set of prints of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued. Mark to show actual installation where installation varies from that shown originally. Accurately record information in an acceptable drawing technique.
 - Identify and date each record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Engineer. When authorized, prepare a full set of corrected digital data files of the Contract Drawings.
 - 1. Format: Annotated PDF electronic file].

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.

- B. Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.
 - 1. Verify compatibility with and suitability of substrates.
 - 2. Examine roughing-in for mechanical and electrical systems.
 - 3. Examine walls, floors, and roofs for suitable conditions.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- D. Take field measurements as required to fit the Work properly. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication.
- E. Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- F. Surface and Substrate Preparation: Comply with manufacturer's written recommendations for preparation of substrates to receive subsequent work.

3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING

- A. Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks.
- B. Engage a land surveyor to lay out the Work using accepted surveying practices.
- C. Engage a land surveyor to prepare a final property survey showing significant features (real property) for Project.
 - 1. At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.3 INSTALLATION

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 - 1. Make vertical work plumb and make horizontal work level.
 - 2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
 - 3. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations.

- C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.
- E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Engineer.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- G. Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

- A. Provide temporary support of work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to minimize interruption to occupied areas.
- D. Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining construction.
 - 1. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
- E. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
 - 1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.

- 2. Where walls or partitions that are removed 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.
- 3. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

3.5 CLEANING

- A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.
 - 1. Remove liquid spills promptly.
 - 2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 - 3. Remove debris from concealed spaces before enclosing the space.
- B. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion:
 - 1. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - 2. Sweep paved areas broom clean. Remove spills, stains, and other foreign deposits.
 - 3. Remove labels that are not permanent.
 - 4. Clean transparent materials, including mirrors. Remove excess glazing compounds.
 - 5. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances. Sweep concrete floors broom clean.
 - 6. Vacuum carpeted surfaces and wax resilient flooring.
 - 7. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and foreign substances. Clean plumbing fixtures. Clean light fixtures, lamps, globes, and reflectors.
 - 8. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.

3.6 OPERATION AND MAINTENANCE MANUAL PREPARATION

A. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

- B. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are unavailable and where the information is necessary for proper operation and maintenance of equipment or systems.
- C. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams.

3.7 DEMONSTRATION AND TRAINING

- A. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following:
 - 1. Include instruction for basis of system design and operational requirements, review of documentation, emergency procedures, operations, adjustments, troubleshooting, maintenance, and repairs.

END OF SECTION 01 70 00

SECTION 04 20 00 - UNIT MASONRY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Face Brick Shall be provided by Owner.
- B. See Section 05 50 00 "Metal Fabrications" for furnishing steel lintels and shelf angles for unit masonry.
- C. Submittals:
 - 1. Samples for decorative concrete masonry units and face brick.
 - 2. Material Certificates: For each type of product indicated. Include statements of material properties indicating compliance with requirements.
- D. Sample Panels: Construct a sample wall panel approximately 48 inches long by 48 inches high to demonstrate aesthetic effects and set quality standards for materials and execution.

PART 2 - PRODUCTS

2.1 MORTAR AND GROUT

- A. Mortar: ASTM C 270, proportion specification.
 - 1. Use masonry cement mortar.
 - 2. Do not use calcium chloride in mortar.
 - 3. For masonry below grade or in contact with earth, use Type M.
 - 4. For reinforced masonry, use Type S.
 - For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions, and for other applications where another type is not indicated, use Type N.
 - 6. Water-Repellent Additive: For mortar used with concrete masonry units made with integral water repellent, use product recommended by manufacturer of units.
- B. Grout: ASTM C 476 with a slump of 8 to 11 inches.

2.2 REINFORCEMENT, TIES, AND ANCHORS

- A. Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60.
- B. Joint Reinforcement: ASTM A 951/A 951M.
 - Coating: Hot-dip galvanized at both interior and exterior walls.
 - Wire Size for Side Rods: 0.187-inch diameter.
 - 3. Wire Size for Cross Rods: 0.187-inch diameter.
 - Wire Size for Veneer Ties: 0.187-inch diameter.
 - For single-wythe masonry, provide either ladder design or truss design.
- C. Veneer Anchors: Hot-dip galvanized steel, two-piece adjustable masonry veneer anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to studs, and acceptable to authorities having jurisdiction.
 - Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. FERO Corporation.
 - b. Heckmann Building Products, Inc.
 - c. Hohmann & Barnard, Inc.

2.3 EMBEDDED FLASHING MATERIALS

- A. Sheet Metal Flashing: Stainless steel, 0.0156 inch thick.
- B. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy, 0.025-inch-thick, with a 0.015-inchthick coating of adhesive. Use only where flashing is fully concealed.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. DuPont Building Innovations: E. I. du Pont de Nemours and Company.
 - b. Hohmann & Barnard, Inc.
 - c. Hyload, Inc.

2.4 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded strips complying with ASTM D 1056, Grade 2A1.
- B. Preformed Control-Joint Gaskets: Designed to fit standard sash block and to maintain lateral stability in masonry wall; made from styrene-butadiene rubber or PVC.

- C. Weep Holes: Cotton or polyester rope, 1/4 to 3/8 inch in diameter, 24 inches long or Free-draining polyethylene mesh, full height and width of head joint.
- D. Loose-Granular Perlite Insulation: ASTM C 549, Type II or IV.
- E. Extruded-Polystyrene Board Insulation: ASTM C 578 Type V, with flame-spread and smoke-developed indexes of 75 and 450 respectively.
- F. Proprietary Acidic Masonry Cleaner: Product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Cut masonry units with saw. Install with cut surfaces and, where possible, cut edges concealed.
- B. Mix units for exposed unit masonry from several pallets or cubes as they are placed to produce uniform blend of colors and textures.
- C. Stopping and Resuming Work: Step back units; do not tooth.
- D. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- E. Build nonload-bearing interior partitions full height and install compressible filler in joint between top of partition and underside of structure above.
- F. Tool exposed joints slightly concave when thumbprint hard unless otherwise indicated.
- G. Keep cavities clean of mortar droppings and other materials during construction.

3.2 LINTELS

- Install lintels where indicated.
- B. Minimum bearing of 8 inches at each jamb unless otherwise indicated.

3.3 FLASHING AND WEEP HOLES

A. Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to the downward flow of water in the wall, and where indicated.

- B. Place through-wall flashing on sloping bed of mortar and cover with mortar. Seal penetrations in flashing before covering with mortar.
 - 1. Extend flashing 4 inches into masonry at each end and turn up 2 inches to form à pan.
- C. Trim wicking material used in weep holes flush with outside face of wall after mortar has set.

3.4 CLEANING

- A. Clean masonry as work progresses. Remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly cured, clean exposed masonry.
 - 1. Wet wall surfaces with water before applying acidic cleaner, then remove cleaner promptly by rinsing thoroughly with clear water.
 - 2. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

END OF SECTION 04 20 00

SECTION 05 12 00 - STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Shop Drawings, Welding Procedure Specifications (WPSs) and mill test reports.
- B. Comply with applicable provisions of the following:
 - 1. AISC 303.
 - 2. AISC 341 and AISC 341s1.
 - AISC 360.
 - RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Connections: Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator.

2.2 STRUCTURAL STEEL

- A. W-Shapes: ASTM A 992/A 992M.
- B. Channels, Angles, M, S-Shapes: ASTM A 36/A 36M.
- C. Plate and Bar: ASTM A 36/A 36M.
- D. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
- E. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.

2.3 ACCESSORIES

A. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy-hex steel structural bolts; ASTM A 563, Grade C heavy-hex carbon-steel nuts; and ASTM F 436, Type 1, hardened carbon-steel washers.

- B. Anchor Rods: ASTM F 1554, Grade 36.
 - 1. Configuration: Hooked.
 - 2. Nuts: ASTM A 563 heavy-hex carbon steel.
 - 3. Plate Washers: ASTM A 36/A 36M carbon steel.
 - Washers: ASTM F 436, Type 1, hardened carbon steel.
- C. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.
- D. Grout: ASTM C 1107, nonmetallic, shrinkage resistant, factory packaged.

2.4 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC 303 and AISC 360.
- B. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.
- C. Shop Priming: Prepare surfaces according to SSPC-SP 2 or SSPC-SP 3. Shop prime steel to a dry film thickness of at least 1.5 mils. Do not prime surfaces to be embedded in concrete or mortar or to be field welded.

PART 3 - EXECUTION

3.1 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Baseplates Bearing Plates and Leveling Plates: Clean concrete and masonry surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of base plate.
 - 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.

- 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure.
- C. Align and adjust various members forming part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
- Do not use thermal cutting during erection unless approved by Architect. Finish thermally cut sections within smoothness limits in AWS D1.1/D1.1M.
- E. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Snug tightened.
- F. Weld Connections: Comply with AWS D1.1/D1.1M for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

END OF SECTION 05 12 00

SECTION 05 50 00 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Shop Drawings.

PART 2 - PRODUCTS

2.1 METALS

- A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- B. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40), black finish.
- C. Slotted Channel Framing: Cold-formed steel channels complying with MFMA-4, 1-5/8 by 1-5/8 inches by 0.067-inch minimum thickness, coated with rust-inhibitive, baked-on, acrylic enamel.

2.2 FASTENERS

- A. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use and zinc-plated fasteners at exterior walls. Select fasteners for type, grade, and class required.
 - 1. Provide stainless-steel fasteners for fastening aluminum.
 - Provide stainless-steel fasteners for fastening stainless steel.
 - 3. Provide bronze fasteners for fastening bronze.

2.3 GROUT

A. Nonshrink, Nonmetallic Grout: ASTM C 1107; recommended by manufacturer for exterior applications.

2.4 FABRICATION

A. General: Shear and punch metals cleanly and accurately. Remove burrs and ease exposed edges. Form bent-metal corners to smallest radius possible without impairing work.

- B. Welding: Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. At exposed connections, finish welds and surfaces smooth, with contour of welded surface matching those adjacent.
- C. Fabricate loose lintels from steel angles and shapes. Size to provide bearing length at each side of openings equal to one-twelfth of clear span, but not less than 8 inches.

2.5 STEEL AND IRON FINISHES

- A. Hot-dip galvanized steel fabrications at exterior locations.
- B. Prepare uncoated ferrous metal surfaces to comply with SSPC-SP 3 and paint with a fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Provide anchorage devices and fasteners where needed to secure items to in-place construction.
- B. Perform cutting, drilling, and fitting required for installing miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation, with edges and surfaces level, plumb, true, and free of rack.
- C. Fit exposed connections accurately together to form hairline joints or, where indicated, with uniform reveals and spaces for sealants and joint fillers.

END OF SECTION 05 50 00

SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: ICC-ES evaluation reports for wood-preservative treated wood engineered wood products and metal framing anchors.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: Provide dressed lumber, S4S, marked with grade stamp of inspection agency.
- B. Engineered Wood Products: Acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
 - Allowable Design Stresses: Engineered wood products shall have allowable design stresses, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be demonstrated by comprehensive testing.

2.2 TREATED MATERIALS

- A. Preservative-Treated Materials: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
 - 1. Use treatment containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
 - 2. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
 - 3. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- B. Provide preservative-treated materials for items indicated on Drawings, and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.

- 2. Wood sills, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
- 3. Wood framing members that are less than 18 inches above the ground.
- 4. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FRAMING

A. Dimension Lumber:

- 1. Maximum Moisture Content: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness.
- 2. Non-Load-Bearing Interior Partitions: Construction or No. 2: Mixed southern pine: SPIB;.
- 3. Framing Other Than Non-Load-Bearing Interior Partitions: No. 2: Southern pine: SPIB or Spruce-pine-fir (south): NeLMA, WCLIB, or WWPA.
- 4. Exposed Framing: Provide material hand-selected for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane.
 - a. Species: As specified for framing other than non-load-bearing interior partitions.
 - b. Grade: No. 1.

2.4 MISCELLANEOUS LUMBER

- A. Miscellaneous Dimension Lumber: Construction, or No. 2 grade with 15 percent maximum moisture content of any species. Provide for nailers, blocking, and similar members.
- B. Concealed Boards: Mixed southern pine, No. 2: SPIB; with 15 percent maximum moisture content.

2.5 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: Plywood, Exterior, AC, fire-retardant treated, not less than 3/4-inch nominal thickness.

2.6 MISCELLANEOUS PRODUCTS

A. Fasteners: Size and type indicated. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

- 1. Power-Driven Fasteners: CABO NER-272.
- 2. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- B. Metal Framing Anchors: Structural capacity, type, and size indicated.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. MiTek Industries, Inc.
 - b. Phoenix Metal Products, Inc.
 - c. Simpson Strong-Tie Co., Inc.
 - d. Tamlyn.
 - 2. Use anchors made from hot-dip galvanized steel complying with ASTM A 653/A 653M, G60 coating designation for interior locations where stainless steel is not indicated.
 - 3. Use anchors made from stainless steel complying with ASTM A 666, Type 304 for exterior locations and where indicated.
- C. Sill Sealer: Closed-cell neoprene foam, 1/4 inch thick.
- D. Flexible Flashing: Self-adhesive product consisting of a butyl rubber or rubberized-asphalt compound, bonded to a backing sheet to produce an overall thickness of not less than 0.025 inch.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Do not splice structural members between supports unless otherwise indicated.
- D. Securely attach rough carpentry to substrates, complying with the following:
 - 1. CABO NER-272 for power-driven fasteners.
 - 2. Published requirements of metal framing anchor manufacturer.

END OF SECTION 06 10 00

SECTION 06 16 00 - SHEATHING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: ICC-ES evaluation reports for preservative-treated plywood.

PART 2 - PRODUCTS

2.1 WOOD PANEL PRODUCTS, GENERAL

- A. Plywood: DOC PS 1.
- B. Oriented Strand Board: DOC PS 2.

2.2 TREATED PLYWOOD

- A. Preservative-Treated Plywood: AWPA U1; Use Category UC2.
 - 1. Use treatment containing no arsenic or chromium.
 - 2. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.
- B. Provide preservative-treated plywood for items indicated on Drawings and plywood in contact with masonry or concrete or used with roofing, flashing, vapor barriers, and waterproofing.

2.3 WALL SHEATHING

- A. Plywood Wall Sheathing: Exposure 1 sheathing.
- B. Oriented-Strand-Board Wall Sheathing: Exposure 1 sheathing.

2.4 ROOF SHEATHING

- A. Plywood Roof Sheathing: Exterior, Structural I sheathing.
- B. Oriented-Strand-Board Roof Sheathing: Exposure 1, Structural I sheathing.

2.5 MISCELLANEOUS PRODUCTS

- A. Fasteners: Size and type indicated.
 - 1. For roof and wall sheathing, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
 - 2. Power-Driven Fasteners: CABO NER-272.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Securely attach to substrates, complying with the following:
 - CABO NER-272 for power-driven fasteners.
- B. Fastening Methods:
 - 1. Wall and Roof Sheathing:
 - a. Nail to wood framing.
 - b. Screw to cold-formed metal framing.

END OF SECTION 06 16 00

SECTION 06 17 53 - SHOP-FABRICATED WOOD TRUSSES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data, Shop Drawings, structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation, and ICC-ES evaluation reports for metal plate connectors and metal truss accessories.
- B. Fabricator Qualifications: Shop that participates in a recognized quality-assurance program that complies with quality-control procedures in TPI 1 and that involves third-party inspection by an independent testing and inspecting agency acceptable to Architect and authorities having jurisdiction.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal-plate-connected wood trusses capable of withstanding design loads indicated without exceeding TPI 1 deflection limits.
- B. Comply with applicable requirements and recommendations of the following publications:
 - 1. TPI 1, "National Design Standard for Metal Plate Connected Wood Truss Construction."
 - 2. TPI DSB, "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
 - 3. TPI BCSI, "Guide to Good Practice for Handling, Installing, Restraining & Bracing Metal Plate Connected Wood Trusses."
- C. Wood Structural Design Standard: Comply with applicable requirements in AF&PA's "National Design Specifications for Wood Construction" and its "Supplement."

2.2 MATERIALS

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review, any species, graded visually or mechanically.
 - 1. Provide dry lumber with 19 percent maximum moisture content at time of dressing.

- B. Minimum Chord Size for Roof Trusses: 2 by 6 inches nominal for both top and bottom chords.
- C. Minimum Specific Gravity for Top Chords: 0.50.
- D. Fasteners: Where trusses are exposed to weather or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- E. Metal Framing Anchors: Provide framing anchors made from hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.

2.3 FABRICATION

A. Assemble trusses using jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted. Fabricate wood trusses within manufacturing tolerances in TPI 1.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install and brace trusses according to TPI recommendations and as indicated. Install trusses plumb, square, and true to line and securely fasten to supporting construction.
- B. Anchor trusses securely at bearing points; use metal truss tie-downs or floor truss hangers as applicable. Install fasteners through each fastener hole in metal framing anchor.
- C. Securely connect each truss ply required for forming built-up girder trusses. Anchor trusses to girder trusses.
- D. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.
 - 1. Install bracing to comply with Section 06 10 00 "Rough Carpentry."
 - Install and fasten strongback bracing vertically against vertical web of parallelchord floor trusses at centers indicated.
- E. Install wood trusses within installation tolerances in TPI 1.
- F. Do not alter trusses in field.
- G. Remove wood trusses that are damaged or do not meet requirements and replace with trusses that do meet requirements.

END OF SECTION 06 17 53

SECTION 07 41 13 - METAL ROOF PANELS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Summary: Factory-formed metal roof and soffit panels, fascia, and trim.
- B. Submittals: Product Data, Shop Drawings, and color Samples.
- C. Warranties: Manufacturer's standard written warranty, signed by manufacturer agreeing to promptly repair or replace products that fail to remain weathertight for the period of 20 years.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Energy Performance of Roof Panels: Three-year, aged, solar reflectance not less than 0.55 and emissivity not less than 0.75, or aged, Solar Reflectance Index of not less than 64.
- B. Solar Reflectance Index: Not less than 29 when calculated according to ASTM E 1980.
- C. Wind-Uplift Resistance of Roof Assemblies: UL 580, Class 90.

2.2 METAL ROOF PANELS

- A. Roof Panel Type: standing-seam metal roof panels.
 - Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Advanced Architectural Products.
 - b. Architectural Building Components.
 - c. Architectural Metal Systems.
 - d. Butler Manufacturing Company; a division of BlueScope Buildings North America, Inc.
 - e. MBCI; a division on NCI Group, Inc.
 - f. McElroy Metal, Inc.
 - g. Or approved equal

- B. Metallic-Coated Steel Roof Panels: Fabricated from galvanized steel sheet, ASTM A 653/A 653M, G90, or aluminum-zinc alloy-coated steel sheet, ASTM A 792/A 792M, Class AZ50.
 - 1. Nominal Metal Thickness: 0.028 inch.
 - 2. Finish: Manufacturer's standard three-coat fluoropolymer system with color coat and clear coat containing not less than 70 percent PVDF resin by weight.

2.3 ACCESSORIES

- A. Provide components required for a complete roof panel assembly, including trim, fasciae, clips, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
- B. Flashing and Trim: Formed from 0.025-inch nominal thickness, zinc-coated (galvanized) steel sheet or aluminum-zinc alloy-coated steel sheet. Provide flashing and trim as required to seal against weather and to provide finished appearance. Finish flashing and trim with same finish system as adjacent metal roof panels.
- C. Self-Adhering Sheet Underlayment, High Temperature: Butyl or SBS-modified asphalt; slip-resisting-polyethylene surfaced; with release-paper backing; cold applied. Stable after testing at 240 deg F and passes after testing at minus 20 deg F; ASTM D 1970.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Carlisle Coatings & Waterproofing Inc.
 - b. Drexel Metals.
 - c. Henry Company.
 - d. Owens Corning.
 - e. Or approved equal
- D. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.
- E. Thermal Spacer Blocks: Fabricated from extruded polystyrene, 1 inch thick.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Apply self-adhering sheet underlayment at eaves and rakes from edges of roof to at least 36 inches inside exterior wall line.
- B. Apply self-adhering sheet underlayment at valleys extending 18 inches on each side.

- C. Install felt underlayment on roof deck not covered by self-adhering sheet underlayment.
- D. Apply slip sheet over underlayment before installing metal roof panels.
- E. Install flashings to cover underlayment to comply with requirements specified in Section 07 62 00 "Sheet Metal Flashing and Trim."
- F. Rigidly fasten metal roof panels to structure at one and only one location for each panel. Allow remainder of panel to move freely for thermal expansion and contraction. Predrill panels for fasteners.
 - 1. Steel Roof Panels: Use stainless-steel fasteners for surfaces exposed to the exterior and galvanized-steel fasteners for surfaces exposed to the interior.
 - 2. Aluminum Roof Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior and aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
 - 3. Provide metal closures at rake edges rake walls and each side of ridge and hip caps.
 - 4. Flash and seal metal roof panels with weather closures at eaves, rakes, and perimeter of all openings.
 - 5. Install ridge and hip caps as metal roof panel work proceeds.
- G. Install gaskets, joint fillers, and sealants where required for weatherproof performance of metal roof panel assemblies. Provide types of gaskets, fillers, and sealants recommended by metal roof panel manufacturer.
- H. Separate dissimilar metals with a bituminous coating or self-adhering sheet underlayment.
- 1. Coat back side of aluminum panels with bituminous coating where they will contact wood, ferrous metal, or cementitious construction.

END OF SECTION 07 41 13

SECTION 07 42 13 - METAL WALL PANELS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data, Shop Drawings, and color Samples.
- B. Warranties: Manufacturer's standard written warranty, signed by manufacturer agreeing to promptly repair or replace metal wall panels that show evidence of deterioration of factory-applied finishes for the period of 20 years.

PART 2 - PRODUCTS

2.1 METAL WALL PANELS

- A. Wall Panel Type: Concealed-fastener, lap-seam metal wall panels.
- B. Metallic-Coated Steel Wall Panels: Fabricated from galvanized-steel sheet, ASTM A 653/A 653M, G90, or aluminum-zinc alloy-coated steel sheet, ASTM A 792/A 792M, Class AZ50.
 - 1. Nominal Thickness: 0.028 inch.
 - 2. Exterior Finish: Three-coat fluoropolymer system with color coat and clear coat containing not less than 70 percent PVDF resin by weight; complying with AAMA 621
 - 3. Concealed Finish: Manufacturer's standard white or light-colored acrylic or polyester backer finish.
 - 4. Concealed Finish: Manufacturer's standard white or light-colored acrylic or polyesterbacker finish.
- C. Flashing and Trim: Formed from 0.018-inch nominal thickness, zinc-coated (galvanized) steel sheet or aluminum-zinc alloy-coated steel sheet. Provide flashing and trim as required to seal against weather and to provide finished appearance. Finish flashing and trim with same finish system as adjacent metal wall panels.
- D. Provide components required for a complete wall panel assembly, including trim, copings, fasciae, mullions, sills, corner units, clips, seam covers, flashings, louvers, sealants, gaskets, fillers, closure strips, and similar items.

METAL WALL PANELS 07 42 13 - 1

E. Sheet Metal Accessories: Fabricate flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of item indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Anchor panels securely in place, with provisions for thermal and structural movement. Field-cutting exterior panels by torch is not permitted. Install panels with concealed fasteners unless otherwise indicated. Where exposed, use fasteners finished to match wall panels.
 - 1. Steel Wall Panels: Use stainless-steel fasteners for surfaces exposed to the exterior and galvanized-steel fasteners for surfaces exposed to the interior.
 - 2. Aluminum Wall Panels: Use aluminum or stainless-steel fasteners for surfaces exposed to the exterior and aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
- B. Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of wall panel assemblies. Provide types of gaskets, fillers, and sealants as indicated or as recommended by panel manufacturer.
- C. Separate dissimilar metals and metal panels from contact with wood or cementitious materials by painting each metal surface in area of contact with a bituminous coating or by other permanent separation.

END OF SECTION 07 42 13

METAL WALL PANELS 07 42 13 - 2

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data, Shop Drawings, and color Samples.
- B. Coordinate installation of sheet metal flashing and trim with adjoining roofing and wall materials, joints, and seams to provide a leakproof, secure, and noncorrosive installation.
- C. Fabricator Qualifications: For copings and low-slope roof edge flashings that are SPRI ES-1 tested and FM Approvals approved, shop shall be listed as able to fabricate required details as tested and approved.
- D. Warranty on Finishes: Manufacturer agrees to repair or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within 20 years.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless otherwise indicated. Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- B. FM Approvals' Listing: Manufacture and install copings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-90. Identify materials with name of fabricator and design approved by FM Approvals.

2.2 SHEET METAL

- A. Aluminum Sheet: ASTM B 209, alloy as standard with manufacturer for finish required, not less than 0.032 inch thick; finished as follows:
 - 1. Finish: Manufacturer's standard three-coat fluoropolymer system with color coat and clear coat containing not less than 70 percent PVDF resin by weight.
 - 2. Concealed Finish: Manufacturer's standard white or light-colored acrylic or polyester backer finish.

- B. Metallic-Coated Steel Sheet: Galvanized steel sheet, ASTM A 653/A 653M, G90, or aluminum-zinc alloy-coated steel sheet, ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40; 0.028-inch nominal thickness.
 - 1. Finish: Manufacturer's standard three-coat fluoropolymer system with color coat and clear coat containing not less than 70 percent PVDF resin by weight.
 - 2. Concealed Finish: Manufacturer's standard white or light-colored acrylic or polyester backer finish.

2.3 ACCESSORIES

- A. Self-Adhering, High-Temperature Sheet Underlayment: Butyl or SBS-modified asphalt; slip-resisting-polyethylene surfaced; with release paper backing; cold applied. Stable after testing at 240 deg F and passes after testing at minus 20 deg F; ASTM D 1970.
- B. Slip Sheet: Rosin-sized building paper, 3-lb/100 sq. ft. minimum.
- C. Fasteners: Wood screws, annular-threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners.
 - 1. Exposed Fasteners: Heads matching color of sheet metal roofing using plastic caps or factory-applied coating.
 - 2. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
 - 3. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
 - 4. Fasteners for Metallic-Coated Steel Sheet: Hot-dip galvanized steel or Series 300 stainless steel.
- D. Butyl Sealant: ASTM C 1311, solvent-release butyl rubber sealant.
- E. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D 1187.

2.4 FABRICATION

- A. Fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to the design, dimensions, geometry, metal thickness, and other characteristics of item indicated.
- B. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- C. Fabrication Tolerances: Fabricate sheet metal flashing and trim that are capable of installation to tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with cited sheet metal standards. Allow for thermal expansion; set true to line and level. Install Work with laps, joints, and seams permanently watertight and weatherproof; conceal fasteners where possible.
- B. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- C. Seams: Fabricate nonmoving seams with flat-lock seams. For aluminum, form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
- D. Metal Protection: Where dissimilar metals contact each other, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating.
 - 1. Coat concealed side of aluminum with bituminous coating where it contacts wood, ferrous metal, or cementitious construction.

END OF SECTION 07 62 00

SECTION 07 71 00 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data, Shop Drawings, and color Samples.
- B. Warranties: Provide manufacturer's standard written warranty, without monetary limitation, signed by manufacturer agreeing to promptly repair or replace roof specialties that show evidence of deterioration of factory-applied finishes for the period of 20 years.

PART 2 - PRODUCTS

2.1 ROOF SPECIALTIES

- A. Gutters and Downspouts:
 - Gutters: Manufactured in uniform section lengths, with matching corner units, ends, outlet tubes, and other accessories. Elevate back edge at least 1 inch above front edge. Furnish expansion joints and expansion-joint covers.
 - a. Gutter Style: Rectangular.
 - b. Prepainted, Zinc-Coated Steel: 0.034 inch thick.
 - c. Gutter Supports: Gutter brackets with finish matching the gutters.
 - 2. Downspouts: Plain rectangular with mitered elbows. Furnish wall brackets of same material and finish as downspouts, with anchors.
 - a. Prepainted, Zinc-Coated Steel: 0.034 inch thick.

2.2 MATERIALS

- A. Prepainted, Zinc-Coated Steel Sheet: ASTM A 653/A 653M, G90 coating designation. Prepare, pretreat, and apply coating to comply with ASTM A 755/A 755M.
 - 1. Finish: Manufacturer's standard three-coat fluoropolymer system with color coat and clear coat containing not less than 70 percent PVDF resin by weight; complying with AAMA 621.

- B. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements.
 - 1. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel.
- C. Elastomeric Sealant: ASTM C 920, elastomeric silicone polymer sealant.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement.
- B. Separate dissimilar metals with a bituminous coating or polymer-modified, bituminous sheet underlayment.
- C. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless indicated.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Gutters: Join and seal gutter lengths. Allow for thermal expansion. Attach gutters to firmly anchored gutter supports spaced not more than 24 inches apart. Attach ends with rivets and seal with sealant to make watertight. Slope to downspouts.
- F. Downspouts: Join sections with manufacturer's standard telescoping joints. Provide hangers with fasteners designed to hold downspouts securely to walls and 1 inch away from walls; locate fasteners at top and bottom and at approximately [60 inches] o.c.

END OF SECTION 07 71 00

SECTION 07 72 53 - SNOW GUARDS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data, Shop Drawings, and Samples.

PART 2 - PRODUCTS

2.1 RAIL-TYPE SNOW GUARDS

- A. Seam-Mounted, Rail-Type Snow Guards:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Alpine SnowGuards, a division of Vermont Slate & Copper Services, Inc.
 - b. LMCurbs.
 - c. S-5! Metal Roof Innovations, Ltd.
 - d. Snow Management Systems.
 - e... TRA Snow and Sun, Inc.
 - f. Or approved equal
 - 2. Description: Brackets with one rail.
 - 3. Material and Finish: Aluminum; clear anodized.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Attachment for Standing-Seam Metal Roofing:
 - 1. Do not use fasteners that penetrate metal roofing.
 - 2. Seam-Mounted, Rail-Type Snow Guards: Stainless-steel clamps attached to vertical ribs of standing-seam metal roof panels.

END OF SECTION 07 72 53

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and color Samples.
- B. Environmental Limitations: Do not proceed with installation of joint sealants when ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS

- A. Compatibility: Provide joint sealants, joint fillers, and other related materials that are compatible with one another and with joint substrates under service and application conditions.
- B. Sealant for Use in Building Expansion Joints, One of the Following:
 - 1. Single-component, neutral-curing silicone sealant, ASTM C 920, Type S; Grade NS; Class 50; for Use NT.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1) GE Construction Sealants: Momentive Performance Materials Inc.
 - 2) Sika Corporation; Joint Sealants.
 - 3) The Dow Chemical Company.
 - 2. Single-component, neutral-curing silicone sealant, ASTM C 920, Type S; Grade NS; Class 100/50; for Use NT.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1) GE Construction Sealants: Momentive Performance Materials Inc.

- C. Sealant for General Exterior Use Where Another Type Is Not Specified, One of the Following:
 - 1. Single-component, nonsag urethane sealant, ASTM C 920, Type S; Grade NS; Class 25; and for Use NT.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1) BASF Corporation.
 - 2) Bostik, Inc.
 - 3) Polymeric Systems, Inc.
 - 4) Sherwin-Williams Company (The).
 - 5) Sika Corporation; Joint Sealants.
 - Tremco Incorporated.
 - 2. Single-component, nonsag polysulfide sealant, ASTM C 920, Type S; Grade NS; Class 25; for Use NT.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1) W.R. Meadows, Inc.
 - 3. Single-component, pourable urethane sealant, ASTM C 920, Type S; Grade P; Class 25; for Use T.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1) BASF Corporation.
 - 2) Permathane®/Acryl-R®; ITW Polymers Sealants North America.
 - 3) Polymeric Systems, Inc.
 - 4) Sherwin-Williams Company (The).
- D. Sealant for Use in Interior Joints in Ceramic Tile and Other Hard Surfaces in Kitchens and Toilet Rooms and around Plumbing Fixtures:
 - 1. Single-component, mildew-resistant silicone sealant, ASTM C 920, Type S; Grade NS; Class 25; for Use NT; formulated with fungicide.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

- 1) Adfast.
- 2) The Dow Chemical Company.
- 3) Tremco Incorporated.
- E. Sealant for Interior Use at Perimeters of Door and Window Frames:
 - 1. Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1) Pecora Corporation.
 - 2) Sherwin-Williams Company (The).
 - 3) Tremco Incorporated.

F. Acoustical Sealant:

- Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834 that effectively reduces airborne sound transmission as demonstrated by testing according to ASTM E 90.
 - a. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1) GE Construction Sealants; Momentive Performance Materials Inc.
 - 2) Hilti, Inc.
 - 3) Pecora Corporation.
 - 4) Specified Technologies, Inc.
 - 5) Tremco Incorporated.
 - USG Corporation.

2.2 MISCELLANEOUS MATERIALS

- A. Provide sealant backings of materials that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C 1330, of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

D. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with ASTM C 1193.
- B. Install sealant backings to support sealants during application and to produce crosssectional shapes and depths of installed sealants that allow optimum sealant movement capability.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Acoustical Sealant Installation: At sound-rated assemblies and elsewhere as indicated, seal perimeters, control joints, openings, and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions. Comply with ASTM C 919.

END OF SECTION 07 92 00

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Shop Drawings.

PART 2 - PRODUCTS

2.1 HOLLOW METAL DOORS AND FRAMES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. Amweld International, LLC.
 - 2. Ceco Door; ASSA ABLOY.
 - 3. Curries Company; ASSA ABLOY.
 - 4. Pioneer Industries.
 - 5. Steelcraft; an Allegion brand.
 - Windsor Door.
- B. Doors: Complying with SDI A250.8 for level and model and SDI A250.4 for physical-endurance level indicated, 1-3/4 inches thick unless otherwise indicated.
 - Interior Doors: Level 2 and Physical Performance Level B (Heavy Duty), Model 1 (Full Flush).
 - Exterior Doors: Level 3 and Physical Performance Level A (Extra Heavy Duty), Model 1 (Full Flush), metallic-coated steel sheet faces.
 - a. Thermal-Rated (Insulated) Doors: Where indicated, provide doors with thermal-resistance value (R-value) of not less than 2.1 deg F x h x sq. ft./Btu when tested according to ASTM C 1363.
 - 3. Hardware Reinforcement: Fabricate according to SDI A250.6 with reinforcement plates from same material as door face sheets.
- C. Frames: ANSI A250.8; conceal fastenings unless otherwise indicated.
 - 1. Steel Sheet for Interior Frames: 0.053-inch-minimum thickness.
 - Steel Sheet for Exterior Frames: 0.067-inch-minimum thickness, metallic coated.

- 3. Interior Frame Construction: Full profile welded.
- 4. Exterior Frame Construction: Full profile welded.
- 5. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.
- 6. Frame Anchors: Not less than 0.042 inch thick.
- D. Glazing Stops: Nonremovable stops on outside of exterior doors and on secure side of interior doors; screw-applied, removable, glazing stops on inside, fabricated from same material as door face sheet in which they are installed.
- E. Door Silencers: Three on strike jambs of single-door frames and two on heads of double-door frames.
- F. Grout Guards: Provide where mortar might obstruct hardware operation.
- G. Prepare doors and frames to receive mortised and concealed hardware according to SDI A250.6 and BHMA A156.115.
- H. Reinforce doors and frames to receive surface-applied hardware.
- Prime Finish: Manufacturer's standard, factory-applied coat of lead- and chromate-free primer complying with SDI A250.10 acceptance criteria.

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, free of scale, pitting, or surface defects.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, G60 or A60.
- D. Frame Anchors: ASTM A 879/A 879M, 4Z coating designation; mill phosphatized.
 - For anchors built into exterior walls, sheet steel complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M, hot-dip galvanized according to ASTM A 153/A 153M, Class B.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install hollow metal frames to comply with SDI A250.11.
 - 1. Fire-Rated Frames: Install according to NFPA 80.
- B. Install doors to provide clearances between doors and frames as indicated in SDI A250.11.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying rust-inhibitive primer. Use galvanizing repair paint for metallic coated surfaces.

END OF SECTION 08 11 13

SECTION 08 41 13 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Section Includes: Aluminum Storefront Systems, including perimeter trims, stools, accessories, shims and anchors, and perimeter sealing of storefront units.

1.2 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, hardware, finishes, and installation instructions for each type of aluminum-framed storefront system indicated.
- B. Shop Drawings: Include plans, elevations, sections, details, hardware, and attachments to other work, operational clearances and installation details.
- C. Samples for Initial Selection: For units with factory-applied color finishes including samples of hardware and accessories involving color selection.
- D. Samples for Verification: For aluminum-framed storefront system and components required.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency for each type, of aluminum-framed storefront.
- F. Fabrication Sample: Of each vertical-to-horizontal intersection of aluminum-framed systems, made from 12" lengths of full-size components and showing details of the following:
 - 1. Joinery, including concealed welds.
 - 2. Anchorage.
 - 3. Expansion provisions.
 - 4. Glazing.
 - 5. Flashing and drainage.

G. Other Action Submittals:

 Entrance Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule

with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An installer which has had successful experience with installation of the same or similar units required for the project and other projects of similar size and scope.
- B. Manufacturer Qualifications: A manufacturer capable of providing aluminum-framed storefront system that meet or exceed performance requirements indicated and of documenting this performance by inclusion of test reports, and calculations.
- C. Source Limitations: Obtain aluminum-framed storefront system through one source from a single manufacturer.
- D. Product Options: Drawings indicate size, profiles, and dimensional requirements of aluminum-framed storefront system and are based on the specific system indicated. Do not modify size and dimensional requirements.
 - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

1.4 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of aluminum-framed storefront openings by field measurements before fabrication and indicate field measurements on Shop Drawings.

1.5 WARRANTY

- A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty.
 - 1. Warranty Period: Two (2) years from Date of Substantial Completion of the project provided however that the Limited Warranty shall begin in no event later than six months from date of shipment by manufacturer.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Design, engineer, fabricate, and install aluminum-framed storefronts to withstand structural loads indicated.
 - 1. Limit deflection of framing members normal to wall plane to 1/175 of clear span or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.
 - 2. Limit deflection of framing members parallel to glazing plane to L/360 of clear span or 1/8 inch, whichever is smaller.
- B. Structural Testing: Systems tested according to ASTM E 330 at 150 percent of inward and outward wind-load design pressures do not evidence material failures, structural distress, deflection failures, or permanent deformation of main framing members exceeding 0.2 percent of clear span.
- C. Windborne-Debris Resistance: Framing system and doors pass basic-protection testing requirements in ASTM E 1996 for Wind Zone 4 when tested according to ASTM E 1886.
- D. Air Infiltration: Limited to 0.06 cfm/sq. ft. of fixed framing and glass area when tested according to ASTM E 283 at a static-air-pressure difference of 1.57 lbf/sq. ft..
- E. Water Penetration: Systems do not evidence water leakage when tested according to ASTM E 331 at minimum differential pressure of 20 percent of positive wind-load design pressure but not less than 10 lbf/sq. ft..
- Thermal Transmittance (U-factor): Fixed glazing and framing areas shall have U-factor of not more than 0.57 Btu/sq. ft. x h x deg F as determined according to NFRC 100.

2.2 ALUMINUM-FRAMED STOREFRONTS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. EFCO Corporation
 - 2. Kawneer North America; an Alcoa company.
 - 3. TRACO
- B. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated; ASTM B 209 sheet; ASTM B 221 extrusions.

- C. Framing Members: Manufacturer's standard extruded-aluminum framing members of thickness required and reinforced as required to support imposed loads.
 - 1. Construction: Thermally broken.
- D. Doors: 1-3/4-inch-thick glazed doors with minimum 0.125-inch-thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods. Provide snap-on, extruded-aluminum glazing stops and preformed gaskets.
 - 1. Door Design: Wide stile; 5-inch nominal width.
 - 2. Accessible Doors: Smooth surfaced for width of door in area within 10 inches above floor or ground plane.
 - 3. Interior Doors: Provide BHMA A156.16 silencers, three on strike jamb of single-door frames and two on head of double-door frames.
 - 4. Exterior Doors: Provide compression weather stripping at fixed stops. At other locations, provide sliding weather stripping retained in adjustable strip mortised into door edge.
 - 5. Hardware: As specified in Section 08 71 00 "Door Hardware."
- E. Glazing: Comply with Section 08 80 00 "Glazing."
- F. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers.
- G. Fasteners and Accessories: Compatible with adjacent materials, corrosion resistant, nonstaining, and nonbleeding. Use concealed fasteners except for application of door hardware.
- H. Fabrication: Fabricate framing in profiles indicated for flush glazing (without projecting stops). Provide subframes and reinforcing of types indicated or, if not indicated, as required for a complete system. Factory-assemble components to greatest extent possible. Disassemble components only as necessary for shipment and installation.
 - Door Framing: Reinforce to support imposed loads. Factory-assemble door and frame units and factory-install hardware to greatest extent possible. Reinforce door and frame units for hardware indicated. Cut, drill, and tap for factoryinstalled hardware before finishing components.
- I. Aluminum Finish: Baked-enamel or powder-coat finish; thermosetting primer/topcoat system complying with AAMA 2603.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weather tight aluminum-framed storefront installation.
 - 1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
 - 2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure that nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
 - 3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
 - 4. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Isolate metal surfaces in contact with incompatible materials, including wood, by painting contact surfaces with bituminous coating or primer or by applying sealant or tape recommended by manufacturer.
- B. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within the system to exterior.
- C. Set continuous sill members and flashing in full sealant bed as specified in Section 07 92 00 "Joint Sealants" to produce weathertight installation.
- D. Install framing components true in alignment with established lines and grades to the following tolerances:
 - 1. Variation from Plane: Limit to 1/8 inch in 12 feet; 1/4 inch over total length.
 - 2. Alignment: For surfaces abutting in line, limit offset to 1/16 inch. For surfaces meeting at corners, limit offset to 1/32 inch.
 - 3. Diagonal Measurements: Limit difference between diagonal measurements to 1/8 inch.
- E. Install doors without warp or rack. Adjust doors and hardware to provide tight fit at contact points and smooth operation.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Clean aluminum surfaces immediately after installing aluminum-framed storefronts. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- B. Clean glass immediately after installation. Comply with glass manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
- C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.

END OF SECTION 08 41 13

SECTION 08 51 13 - ALUMINUM WINDOWS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data, Shop Drawings, and color Samples.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. All Seasons Window & Door Mfg.; All Seasons Commercial Division, Inc.
 - 2. EFCO Corporation.
 - 3. Graham Architectural Products Corporation.
 - 4. Kawneer North America, an Arconic company.
 - 5. Quaker Windows Products Co.
 - 6. Thermal Windows, Inc.
 - 7. TRACO.
 - 8. Winco Manufacturing Co.
 - 9. YKK AP America Inc.

2.2 PERFORMANCE REQUIREMENTS

- A. Product Standard: AAMA/WDMA/CSA 101/I.S.2/A440.
 - 1. Window Certification: AMMA certified with label attached to each window.
 - 2. Performance Class: LC.
 - Performance Grade: 30.
- B. Thermal Transmittance: NFRC 100 maximum whole-window U-factor of 0.35 Btu/sq. ft. x h x deg F.
- C. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.35.
- D. Windborne-Debris Resistance: Windows pass basic-protection testing requirements in ASTM E 1996 for Wind Zone 4 when tested according to ASTM E 1886.

2.3 ALUMINUM WINDOWS

- A. Window Types: As indicated on Drawings.
- B. Construction: Provide units with a concealed, thermal break.
- C. Finish: Baked-enamel finish, complying with AAMA 2603.
- D. Trim: Provide indicated trim, matching material and finish of frame members.
- E. Equip units with vinyl-coated, glass-fiber mesh insect screens at operable sashes.
- F. Glaze units with tinted, low-E-coated, argon-filled, sealed insulating glass, complying with Section 08 80 00 "Glazing."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set units level, plumb, and true to line, without warp or rack of frames and panels. Provide proper support and anchor securely in place.
- B. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.
- C. Set sill members in bed of sealant or with gaskets, as indicated, to provide weathertight construction.
- D. Adjust operating panels, screens, and hardware to provide a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.
- E. Clean glass and aluminum surfaces immediately after installing windows. Remove nonpermanent labels from glass surfaces.

END OF SECTION 08 51 13

SECTION 08 80 00 - GLAZING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals: Product Data and Samples.

PART 2 - PRODUCTS

2.1 GLASS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. GANA Publications: "Laminated Glazing Reference Manual" and "Glazing Manual"
 - 2. AAMA Publications: AAMA GDSG-1, "Glass Design for Sloped Glazing," and AAMA TIR A7, "Sloped Glazing Guidelines."
 - 3. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Guidelines for Sloped Glazing."
 - 4. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use."
- B. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.
- C. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- D. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IGCC.
- E. Windborne-Debris-Impact Resistance: Exterior glazing shall comply with basic-protection testing requirements in ASTM E 1996 for Wind Zone 4 when tested according to ASTM E 1886. Test specimens shall be no smaller in width and length

than glazing indicated for use on Project and shall be installed in same manner as glazing indicated for use on Project.

- 1. Large-Missile Test: For glazing located within 30 feet of grade.
- 2. Small-Missile Test: For glazing located more than 30 feet above grade.

2.2 GLASS PRODUCTS

- A. Annealed Float Glass: ASTM C 1036, Type I, Quality-Q3.
- B. Fully Tempered Float Glass: ASTM C 1048, Kind FT; Type I; Quality-Q3.
- C. Heat-Strengthened Float Glass: ASTM C 1048, Kind HS; Type I; Quality-Q3.
- D. Reflective-Coated Glass: ASTM C 1376, coated by pyrolytic process.
- E. Patterned Glass: ASTM C 1036, Type II, Form 3; Quality-Q6.
- F. Tempered Patterned Glass: ASTM C 1048, Kind FT, Type II, Form 3; Quality-Q6.
- G. Laminated Glass: ASTM C 1172, and complying with testing requirements in 16 CFR 1201 for Category II materials.
- H. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190.

2.3 GLAZING SEALANTS

- A. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 25, Use NT.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Bostik, Inc.
 - b. GE Construction Sealants; Momentive Performance Materials Inc.
 - c. Polymeric Systems, Inc.
 - d. Sika Corporation.
 - e. The Dow Chemical Company.
 - f. Tremco Incorporated.
- B. Low-Emitting Materials: Sealants shall have a VOC content of not more than 250 g/L.
- C. Low-Emitting Materials: Sealants shall comply with the testing and product requirements of the California Department of Public Health's "Standard Method for the

Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are contained in GANA's "Glazing Manual."
- B. For fire-protection-rated glazing, use methods approved by testing agencies that listed and labeled products.
- C. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- D. Remove nonpermanent labels, and clean surfaces immediately after installation.

3.2 MONOLITHIC-GLASS TYPES

- A. Glass Type: Clear fully tempered float glass.
 - 1. Thickness: 1/4".
 - 2. Safety glazing required.

3.3 INSULATING-GLASS TYPES

- A. Glass Type: Low-E-coated, clear insulating glass.
 - 1. Overall Unit Thickness: 1 inch.
 - 2. Thickness of Each Glass Lite: 1/4".
 - Outdoor Lite: Fully tempered float glass.
 - 4. Interspace Content: Argon.
 - 5. Indoor Lite: Fully tempered float glass.
 - 6. Safety glazing required.

END OF SECTION 08 80 00

NO.

SHEET DESCRIPTION

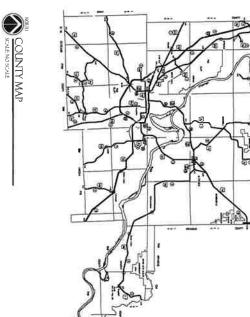
1 TITLE SHEET

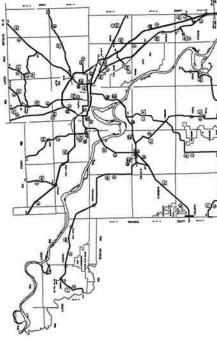
2 FLOOR AND DIMENSION PLANS, DOOR AND WINDOW SCHEDULES, ELEVATIONS AND DETAILS

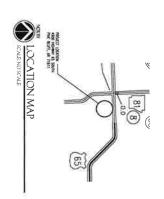
3 BUILDING AND WALL SECTIONS

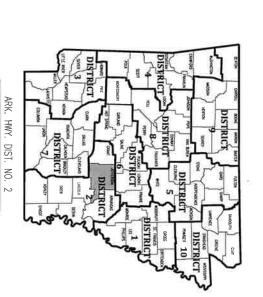
INDEX OF SHEETS

WALL SECTIONS, ROOF FRAMING PLAN, ROOF PLAN AND DETAILS









P @ (1)		SYM	A 3 B
AN AND THE PART OF	ETHER HOSE FINE HOSE H	SYMBOL LEGEND	ABBREVIATIONS ABLEVIATIONS AUTOMORPHISTORY AUTOMORPHIS
H PAMAN	CZZZZ – IKE BOX E PAS (198 SZZ E PAS (198 SZ E PAS (198 SZ	MATERIAL LEGEND	LEV CANNOTO TECH. SCALINO TECH

1 OF 4

DRAWN BY: K B.
REVISIONS:



DISTRICT 2 R.E. OFFICE 23 (PINE BLUFF) (S) BUILDING PACKAGE Pine Bluff, Arkansas Jefferson County

TITLE SHEET



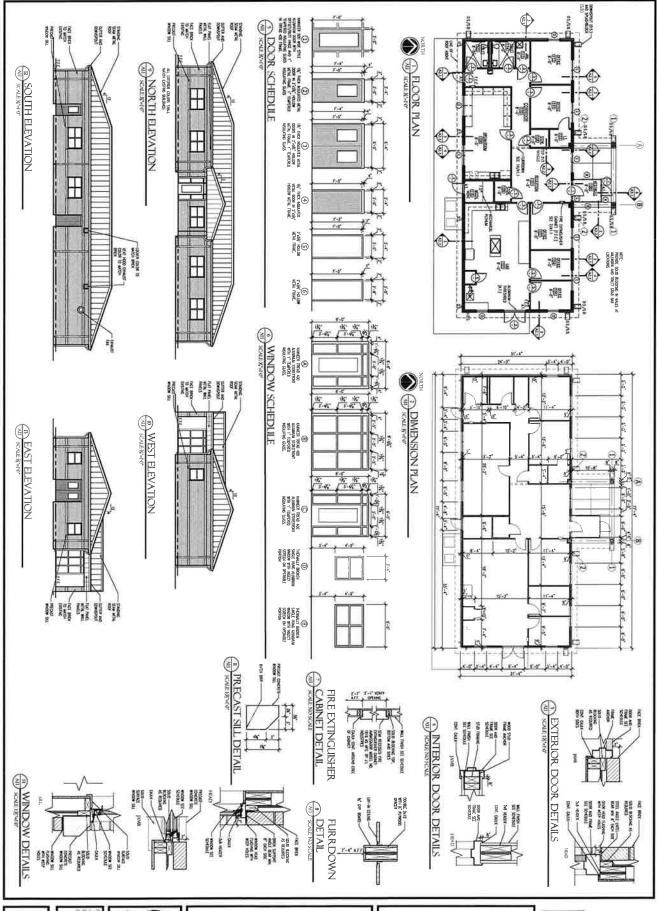
ARKANSAS DEPARTMENT OF TRANSPORTATION CONSTRUCTION PLANS:

DISTRICT 2 R.E. OFFICE 23

BUILDING PACKAGE PINE BLUFF, ARKANSAS

JEFFERSON COUNTY **JOB 020785**

(PINE BLUFF) (S)



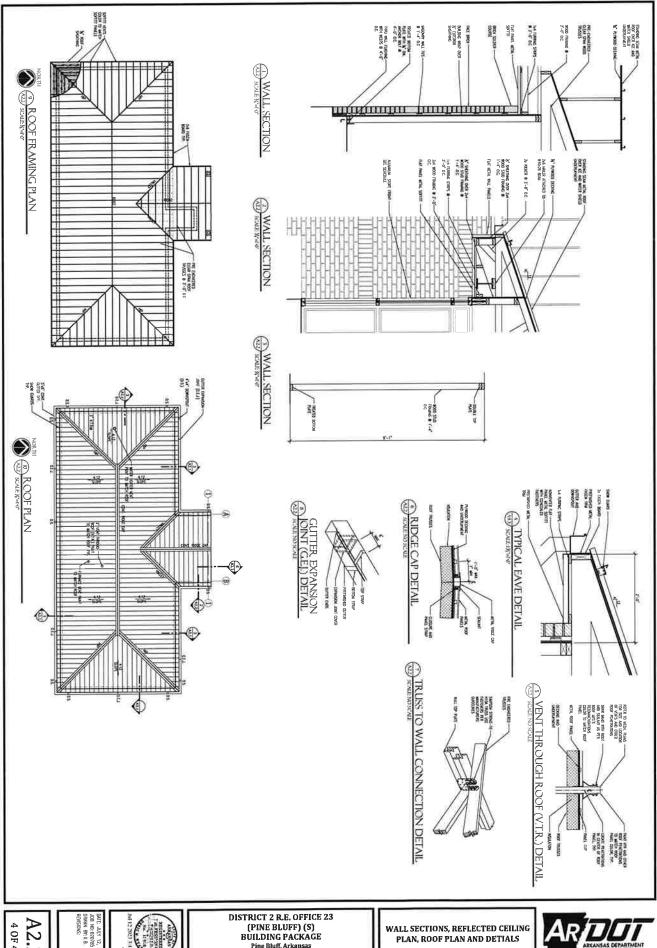
A1.1 2 OF 4 DATE: JULY 12, 2023 JOB NO: 020785 DRAWN BY: K B REVISIONS:



DISTRICT 2 R.E. OFFICE 23 (PINE BLUFF) (S) BUILDING PACKAGE Pine Bluff, Arkansas Jefferson County

FINISH, DOOR, WINDOW SCHEDULES, MILLWORK ELEVATIONS, AND DETAILS





4 OF 4



