ROUTINE FACILITIES CONTRACT

REPLACE NEW ROOF AT MAINTENANCE - ROCKWALL MAINTENANCE

LOCATION: 901 East IH 30
CITY/ST: ROCKWALL, TX
SITE NO.: 189783
PROJECT NO.: 1418064
DETAIL NO.: 38-71-1850
ESTIMATED COST: $98,000.00

BID GUARANTY / BID BOND: $2,000.00
PRE-BID DATE, TIME: 8/12/2014 - 10:00 AM
PRE-BID LOCATION: 901 East IH 30, ROCKWALL, TEXAS 75087
BID DATE, TIME: 8/20/2014 - 10:00 AM
BID LOCATION: Houston District Headquarters
BID ADDRESS: 7600 Washington Avenue, HOUSTON, Texas 77007

SUPPORT SERVICES DIVISION (SSD)
FACILITIES MANAGEMENT

7600 Washington Avenue, HOUSTON, Texas 77007

ATTN: ELISKA CARRIER-ROBINSON

RETURN PAGES LABELED “BID PAGE 1-7” OF PROPOSAL AS YOUR BID
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TEXAS DEPARTMENT OF TRANSPORTATION
BID BOND

KNOW ALL PERSONS BY THESE PRESENTS,

That we, (Contractor Name)

Hereinafter called the Principal, and (Surety Name)

a corporation or firm duly authorized to transact surety business in the State of Texas, hereinafter called the Surety, are
held and firmly bound unto the Texas Department of Transportation, hereinafter called the Obligee, in the sum of not less
than two percent (2%) of the department’s engineer’s estimate, rounded to the nearest one thousand dollars, not to exceed
one hundred thousand dollars ($100,000) as a proposal guaranty (amount displayed on the cover of the proposal), the
payment of which sum will and truly be made, the said Principal and the said Surety, bind ourselves, our heirs, executors,
administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for the following project identified as:

DISTRICT: DALLAS
COUNTY: ROCKWALL
LOCATION: 901 East IH 30
PROJECT NO: 1418064
DETAIL NO: 38-71-1850

NOW, THEREFORE, if the Obligee shall award the Contract to the Principal and the Principal shall enter into the Contract
in writing with the Obligee in accordance with the terms of such bid, then this bond shall be null and void. If in the event of
failure of the Principal to execute such Contract in accordance with the terms of such bid, this bond shall become the
property of the Obligee, without recourse of the Principal and/or Surety, not as a penalty but as liquidated damages.

Signed this ______________ Day of __________________________, 20______.

By __________________________

(Contractor/Principal Name)

(Signature and Title of Authorized Signatory for Contractor/Principal)

*By: __________________________

(Surety Name)

(Signature of Attorney-in-Fact)

*Attach Power of Attorney (Surety) for Attorney-in-Fact

Impressed

Surety Seal

Only

RETURN THIS PAGE AS PART OF YOUR OFFICIAL BID
RETURN BIDDERS CHECK PAGE
(NOT REQUIRED IF SUBMITTING A BID BOND)

IMPORTANT

The space provided for the return address must be completed to facilitate the return of your bidder’s check. Care must be taken to provide a legible, accurate, and complete return address, including zip code. A copy of this sheet should be used for each different return address.

NOTE

Successful bidder will receive their guaranty check with the executed contract.

DISTRICT: DALLAS
COUNTY: ROCKWALL
LOCATION: 901 East IH 30
PROJECT NO: 1418064
DETAIL NO: 38-71-1850

IMPORTANT PLEASE RETURN THIS SHEET IN ITS ENTIRETY

Please acknowledge receipt of this check(s) at your earliest convenience by signing below in longhand, in ink, and returning this acknowledgment in the enclosed self-addressed envelope.

Check Received By: ___________________________ Date: ________________
Title: ___________________________
For (Contractor’s Name): ___________________________

RETURN BIDDERS CHECK TO (PLEASE PRINT):

NAME ____________________________________________

STREET ADDRESS ____________________________________________

CITY, ST, ZIP ____________________________________________

RETURN THIS PAGE AS PART OF YOUR OFFICIAL BID
DISTRICT: DALLAS
COUNTY: ROCKWALL
LOCATION: 901 East IH 30
PROJECT NO: 1418064
DETAIL NO: 38-71-1850

ROUTEINE FACILITIES CONTRACT

WORK CONSISTING OF: REPLACE\NEW ROOF AT MAINTENANCE - ROCKWALL MAINTENANCE

LOCATED AT: 901 East IH 30
Site Number: 189783 Building Number: 188076
City/State: ROCKWALL, TX County: ROCKWALL

Bids for the above work will be received until: 8/20/2014 - 10:00 AM
Bids received at the following location: Houston District Headquarters
7600 Washington Avenue, HOUSTON, Texas 77007
(No other time or location is acceptable for the receipt of this bid)
Attention: ELISKA CARRIER-ROBINSON Phone: 713-802-5142

Questions and requests for payment should be referred to the Owner's Representative in charge of all Work for this contract as follows:

Project Manager: GREG NIX
PM Address: 4777 E. Hwy 80, MESQUITE, Texas 75150
PM Phone No: 214-319-6513
PM Email: Greg.Nix@Txdot.gov

Estimated Cost of Work: $98,000.00
Proposal Guaranty Check or Bid Bond: $2,000.00

Pre-Bid Conference: 8/12/2014 - 10:00 AM
Pre-Bid Conference Location: 901 East IH 30, ROCKWALL, TEXAS 75087

Consultant: N/A
Address: N/A
Phone No: N/A
Email: N/A

HUB Subcontracting Plan [ ] Required [XXX] NOT Required

IF REQUIRED, A HUB SUB-CONTRACTING PLAN IS DUE FROM THE AWARDED CONTRACTOR ONLY. THIS PROPOSAL SHALL BECOME THE BINDING CONTRACT WHEN FULLY EXECUTED BY BOTH PARTIES

RETURN THIS PAGE AS PART OF YOUR OFFICIAL BID
PROPOSAL TO THE TEXAS TRANSPORTATION COMMISSION

The undersigned, as bidder, certifies that he/she has carefully examined the form of contract, instructions to bidders, addenda (if issued), profiles, grades, specifications and the plans therein referred to, and has carefully examined the locations, existing conditions and dimensions; classes of materials and/or equipment of the proposed Work; and agrees to provide all the necessary machinery, labor, trades, tools, apparatus, and other means of construction, and will do all the Work and furnish all the materials called for in the contract and specifications in the manner prescribed therein and according to the requirements of the Architect/Engineer as herein set forth.

It is understood that the quantities of Work to be done and materials to be furnished may be increased or diminished as may be considered necessary, in the opinion of the Project Manager, to complete the Work fully as planned and contemplated, and that all quantities of Work, whether increased or decreased, are to be performed at the prices agreed upon or as provided for in the specifications.

It is further understood that the Work is to be completed in full in 120 calendar days.

Accompanying this proposal is a “Proposal Guaranty” check or a “Bid Bond” made payable to the Texas Transportation Commission in the following amount:

Two Thousand Dollars and No Cents Dollars ( $2,000.00 )

Bid must be filled out in ink. Signature(s) must appear on Page 7. Fill out bid forms in this proposal, and return all bid documents as your proposal.

BID ITEM NUMBER 1: For the entire project described, including allowances, in this ROUTINE FACILITIES CONTRACT, specifications, attachments, and project drawings, including addenda – (if issued)

LUMP SUM BID FOR BID ITEM NUMBER 1:
(Print Numbers Carefully in Ink – one number per box)

$ , ,

No further Bid Items.

ONLY THE ABOVE LUMP SUM BID WILL BE READ PUBLICLY BY THE DEPARTMENT AT THE PUBLIC BID OPENING
By signing this proposal the bidder/contractor certifies:

1. Person(s) or parties certify they have not directly or indirectly participated in collusion.
2. Acknowledges receipt of all contractual documents including (if issued) proposals, attachments, special conditions, specifications, drawings, and addenda.
3. The undersigned signatory is an officer of the Company and has full and complete authority to enter into the Contract.

<table>
<thead>
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<th>SIGNED:</th>
<th>Title:</th>
<th>Date:</th>
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<tbody>
<tr>
<td>(Contractor - Signature)</td>
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<td></td>
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<tr>
<td>(Printed Name of Person Signing Above)</td>
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</tr>
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PRINT FULL LEGAL NAME OF COMPANY MAKING PROPOSAL:

<table>
<thead>
<tr>
<th>Address:</th>
<th>City/State:</th>
<th>Zip:</th>
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<table>
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<tr>
<th>Phone:</th>
<th>Fax:</th>
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Texas (Payee) Identification No. (TIN):

RECOMMENDATION FOR AWARD

<table>
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<th>Date:</th>
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<tr>
<td>(Project Manager Signature)</td>
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By:

<table>
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<tr>
<th>Date:</th>
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<tr>
<td>(Division Manager Signature)</td>
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</table>

STATE OF TEXAS

It is acknowledged and agreed by the parties hereto that this contract is the full and complete contract for the construction of the Work called for and described herein. Executed by and approved for the Texas Transportation Commission for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved by the Texas Transportation Commission.

By:

<table>
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<tr>
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<tr>
<td>(Division Director Signature)</td>
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ITEM 1. DEFINITION OF TERMS: Unless the context clearly requires another meaning, the following terms have the meaning assigned herein.

1.1 Addendum: Change in proposal forms developed between advertising and bid submission deadline. Addenda will be issued by the Owner/Project Manager only and must be acknowledged by the bidder for his proposal to be read.

1.2 Advertisement: The public announcement for work to be performed or materials to be furnished. Posting to the Electronic State Business Daily is required by law. (http://esbd.cpa.state.tx.us)

1.3 Apparent Low Bidder: The Bidder determined to have the numerically lowest total bid as a result of the tabulation of bids by the Department.

1.4 Architect of Record: A person registered as an architect or licensed as a landscape architect, in accordance with State law, exercising overall responsibility for the design or significant portion of the design and who performs certain Contract administration responsibilities as described in the Contract; or a firm employed by the State to provide professional architectural services.

1.5 Award: The Commission's acceptance of a Contractor's bid for a proposed Contract that authorizes the Department to enter into a Contract.

1.6 Bid: The offer of the bidder for performing the work described in the plans and specifications including any changes made by addendum.

1.7 Bid Bond: The security executed by the Contractor and the Surety furnished to the Department to guarantee payment of liquidated damages if the Contractor fails to enter into an awarded Contract.

1.8 Bid Error: A mathematical mistake made by the prime Contractor in the bid item price entered into the proposal.

1.9 Bid Guaranty: The security furnished by the bidder as a guaranty that the bidder will enter into a contract if awarded.

1.10 Bidder: An individual, partnership, limited liability company, corporation or joint venture submitting a bid for a proposed contract.

1.11 Building Contract: A contract entered under Transportation Code, Chapter 223, Subchapter A, "Competitive Bids," for the construction or maintenance of a Department building or appurtenant facilities. Building Contracts are considered to be highway improvement Contracts.

1.12 Calendar Day: A calendar day is defined as any day including Saturday, Sunday and legal holidays.

1.13 Certificate of Insurance: A form approved by the Department covering insurance requirements stated in the Contract.

1.14 Change Order: Written order to the Contractor detailing changes to the specified work, item quantities or any other modification to the Contract.
1.15 Claim: A claim is defined as a dispute that is not resolved and requires formal action by the TxDOT Contract Claims Committee.

1.16 Commission: The Texas Transportation Commission or authorized representative.

1.17 Company: (same as Bidder and/or Contractor).

1.18 Completion Contractor: The individual, corporation, company, partnership, firm or other organization that has contracted to complete the Work for the Surety in a takeover.

1.19 Consultant: The licensed professional engineer or engineering firm, or the architect or architectural firm, registered in the State of Texas and under Contract to the Department to perform professional services. The consultant may be the Engineer or Architect of record or may provide services through and be subcontracted to the Engineer or Architect of record.

1.20 Contract: The agreement between the Department and the Contractor establishing the obligation of the parties for furnishing of materials and performance of the Work prescribed in the Contract Documents.

1.21 Contract Documents: Elements of the Contract including but not limited to the proposal, plans, specifications, special provisions, special specifications, special attachments, contract bonds, insurance, addendum, change orders issued after execution of the Contract, and the Routine Facilities contract items.

1.22 Contract Time: The period of time from the date computation of time charges will begin as set forth in the Authorization to Begin Work letter to the number of days or date stated in the Contract for completion of the Work, or the number of days allowed in the Contract for completion of the Work, plus any Owner approved extensions.

1.23 Contractor: The individual, partnership, limited liability company, corporation or joint venture and all principals and representatives with which the Contract is made by the Department. The Surety becomes the Contractor in a takeover.

1.24 Department: The Texas Department of Transportation (TxDOT).

1.25 Dispute: A dispute is defined as a disagreement between TxDOT and a contractor on a contract issue over the interpretation of the Contract Documents.

1.26 District Engineer: The chief executive officer in each of the designated district offices of the Department.
1.27 **Engineer of Record**: A person registered as an engineer or licensed in accordance with State law, exercising overall responsibility for the design or a significant portion of the design and perform certain Contract administration responsibilities as described in the Contract.

1.28 **Executive Director**: The executive director of the Texas Department of Transportation.

1.29 **Final Completion**: The date determined and certified by the Owner on which the Work is fully and satisfactorily complete in accordance with the Contract.

1.30 **Gratuities**: Do not offer Department employees benefits, gifts, or favors. The only exceptions allowed are ordinary business lunches. Failure to honor this policy may result in the termination of the Contract and sanctions under the Texas Administrative Code.

1.31 **HUB - Subcontracting Plan**: A completed HUB Subcontracting Plan is required from the awarded Contractor only. (TAC 43, Part 1, Chapter 9, Subchapter D, Business Opportunity Programs, Rules §9.51 and §9.54,) (1-7-10). Documents submitted by the conditionally awarded contractor in accordance to requirements of the program as regulated by the Texas Comptroller of Public Accounts.

1.32 **Joint Venture**: Any combination of individuals, partnerships, limited liability companies, or corporations submitting a single bid proposal.

1.33 **Letting**: The receipt, opening, tabulation, and determination of the apparent low Bidder.

1.34 **Letting Official**: The executive director or any department employee empowered by the executive director to officially receive bids and close the receipt of bids at a letting.

1.35 **Materially Unbalanced Bid**: A bid that generates a reasonable doubt that award to the Bidder submitting a mathematically unbalanced bid will result in the lowest ultimate cost to the State.

1.36 **Mathematically Unbalanced Bid**: A bid containing bid prices that do not reflect reasonable actual costs plus a reasonable proportionate share of the Bidder's anticipated profit, overhead costs, and other indirect cost.

1.37 **Nonresident Bidder**: A Bidder whose principal place of business is not in Texas. This includes a Bidder whose ultimate parent company or majority owner does not have a principal place of business in Texas.

1.38 **Nonresponsive Proposal**: A proposal that does not meet the criteria for acceptance contained in the proposal form.
1.39 **Notification**: Either written or oral instruction to the Contractor concerning the Work. Voice mail is oral notification.

1.40 **Owner**: Texas Department of Transportation (TxDOT) Agency and/or Owner acting through any responsible instrumentality of the State of Texas.

1.41 **Owner's Representative**: The TxDOT Project Manager or other TxDOT representative so designated in writing to the Contractor to whom the project is awarded. The Owner's Representative will have total responsibility and control of the construction administration for the project unless otherwise designated in writing by the Owner.

1.42 **Payment Bond**: The security executed by the Contractor and the Surety, furnished to the Department, obligating the Surety to guarantee payment of all legal debts of the Contractor pertaining to the Contract.

1.43 **Performance Bond**: The security executed by the Contractor and the Surety, furnished to the Department to guarantee the completion of the Work in accordance with the terms of the Contract.

1.44 **Plans**: The drawings approved by the Department including true reproductions of the drawings that show the location, character, dimensions and details of the Work and are a part of the Contract.

1.45 **Power of Attorney for Surety Bonds**: An instrument under corporate seal appointing an attorney-in-fact to act on behalf of a Surety in signing bonds.

1.46 **Proposal**: The offer of the Bidder submitted on the prescribed form, including all addenda issued, giving a bid price for performing the Work described in the plans and specifications.

1.47 **Proposal Form**: The document issued by the Department for a proposed Contract.

1.48 **Proposal Guaranty**: The security designated in the proposal and furnished by the Bidder as a guaranty that the Bidder will enter into a contract if awarded the Work.

1.49 **Division Directors**: The executive officer in each of the designated Division Offices of the Department.

1.50 **Responsive Bid**: A proposal that meets all requirements of the proposal form for acceptance.

1.51 **Routine Facilities Contract (RFC)**: A Contract let through the routine facilities contracting procedure for the construction or maintenance of a department building or appurtenant facilities.

1.52 **Specifications**: Directives or requirements issued or made pertaining to the method and manner of performing the work or to quantities and qualities of materials to be furnished under the Contract.
1.53 **State**: The State of Texas

1.54 **Subcontract**: The agreement between the Contractor and subcontractor establishing the obligations of the parties for furnishing of materials and performance of the Work prescribed in the Contract documents.

1.55 **Subcontractor**: An individual, partnership, limited liability company, corporation, or any combination thereof to which the Contractor sublets, or proposes to sublet, any portion of a Contract, excluding a material supplier, truck owner-operator, wholly owned subsidiary, or specialty-type business such as security companies and rental companies.

1.56 **Submittals**: The drawings, diagrams, illustrations, schedules, performance charts, brochures and other data prepared by the Contractor, which detail a portion of the Work.

1.57 **Substantial Completion**: The date determined and certified by the Contractor and Owner when the Work or a designated portion thereof is sufficiently complete, in accordance with the Contract, so as to be operational and fit for the use intended.

1.58 **Superintendent**: The representative of the Contractor who is available at all times and able to receive instructions from the authorized Department representatives and to act for the Contractor.

1.59 **Unilateral Change Order**: A Change Order issued by the Owner without the agreement of the Contractor.

1.60 **Surety**: The corporate body or bodies authorized to do business in Texas bound with and for the Contractor for the faithful performance of the Work covered by the Contract and for the payment for all labor and material supplied in the prosecution of the Work.

1.61 **Wage Rates**: Davis-Bacon Wage Determinations issued by the U.S. Department of Labor.

1.62 **Work**: The furnishing of all labor, plant, materials, facilities, equipment, and all other incidentals necessary for the successful completion of the Contract.

1.63 **Work Order**: Written notice to the Contractor to begin the Work. The work order may include the date on which work or time charges are to begin.

1.64 **Written Notice**: Written notice is considered to have been duly given if delivered in person to the individual or member for whom it is intended or if sent by regular, registered, or certified mail to the last know business address; sent by facsimile to the last known phone number; or sent by e-mail to the last known address. The date of the letter will serve as the beginning day of notice. Unclaimed mail or failure to provide current mailing address will not be considered a failure to provide written notice.

2.1 The proposal shall be executed in ink with the complete and correct name of the individual, firm, corporation or combination thereof making the proposal. The person authorized to bind the Bidder or Bidders must sign the proposal.

2.2 Verify whether addenda have been issued on a proposed Contract. Acknowledge all addenda.

2.3 If a HUB Plan is required - complete and sign the HUB Subcontracting Plan (HSP) Commitment Form included in proposal.

ITEM 3. Proposal Guaranty or Bid Bond.

3.1 Proposal Guaranty: Include a proposal guaranty in the amount indicated on the proposal, in the form of either a guaranty check or a bid bond. The proposal guaranty amount is fixed at the amount indicated on the proposal form on the date the bid proposal is released to the public. Amount of proposal guaranty required is shown on Page 5.

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<th>Estimated Cost of Work</th>
<th>Proposal Guaranty Amount</th>
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<tbody>
<tr>
<td>$0.00 to $25,000.00</td>
<td>NO proposal guaranty or bid bond required</td>
</tr>
<tr>
<td>$25,000.01 to $300,000.00</td>
<td>2% to the next highest $1,000 or bid bond in same amount as shown in the proposal</td>
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3.2 Guaranty Check: The proposal guarantee must be payable to the order of the Texas Transportation Commission and must be a cashier’s check, money order or teller’s check drawn by or on a state or national bank, a savings and loan association, or a state or federally chartered credit union (collectively referred to as a “bank”). The type of check or money order must be indicated on the face of the instrument and the instrument must be no more than 90 days old. A check must be made payable at or through the institution issuing the instrument; or must be drawn by a bank on a bank; or by a bank and payable at or through a bank. The Department will not accept personal checks, certified checks, or other types of money orders as a proposal guaranty.

3.3 Bid Bond: A bid bond must be on the form provided by the Department, for this contract, and attached to this proposal in the amount specified in the proposal, with dated power of attorney attached. Retyped copies of the bid bond form will not be accepted. The bond form must bear the impressed seal of the Surety and have original signatures of the Bidder and an authorized individual of the Surety. Bid bonds will only be accepted from Sureties authorized to execute a bond under and in accordance with state law.
3.4 **Return of Proposal Guaranty:** The Department will mail the authorized proposal guaranty of all bidders except the apparent low bidder to the address specified in the proposal no more than 72 hours after bids are opened. In case the awarded bidder fails to meet a specified goal or fails to execute and file a contract with the required insurance certificates, bonds and the HUB sub-contracting plan (if required) within the prescribed time after its acceptance, the check or bid bond shall become the property of the Commission, and shall be considered as payment for damages due to delay and other inconveniences suffered by the Commission on account of failure of the bidder to execute contract. If a contract is executed between bidder and the Department, the Bid Bond shall be null and void. The proposal guaranty check of the low Bidder will be retained until after the Contract has been awarded and executed or rejected. Bid bonds will not be returned.

**ITEM 4. HUB SUBCONTRACTING PLAN.** A State of Texas HUB Subcontracting Plan, if required, is due from the awarded contractor only, and submitted with the bonds and insurance. All prime vendors (HUB or Non-HUB) are required to comply. (43 TAC §9.51 and §9.54, Subchapter D, Business Opportunity Programs) (1-7-10).

Texas Department of Transportation must receive the signed HUB Subcontracting Plan Commitment with the bid proposal to show that the bidding contractor has agreed to submit the entire plan and all documentation within 15 days after conditional contract AWARD as specified in the contract or proposal. A respondent must state whether it is a certified HUB. (Only projects with a cost estimate of $100,000.00 and more require submittal of the HUB Plan.)

TxDOT does not endorse any company or individual identified on any listings/directories including or referenced herein. A complete list of all State of Texas certified HUBs may be accessed via the internet at [http://www.window.state.tx.us/procurement](http://www.window.state.tx.us/procurement)

**ITEM 5. DELIVERY OF PROPOSAL.** Place the completed proposal-specification (the entire bound set) all forms and certifications required, and the proposal guaranty in a sealed envelope marked to indicate its contents. When submitted by mail, place the envelope in another envelope and address as indicated in the official advertisement. It is the bidder’s responsibility to ensure that the sealed proposal arrives at the location described in the official advertisement of this project, on or before the hour and date set for the opening. The proposal must be in the hands of the Letting Official by that time, regardless of the method chosen for delivery, in order to be accepted.

**ITEM 6. WITHDRAWAL OF BID.** Prior to the time and date bids are to be opened, a Contractor may withdraw their bid if they:
(1) Come in person to the designated place to withdraw their bid and provide personal identification for themselves and the company they represent, or
(2) Send a signed, written request on their company letterhead to withdraw their bid. The Department will not accept telephone or electronic requests. The request must be made by a person authorized to bind the Bidder and must be in the hands of the Letting Official before the scheduled bid opening. The Department will not make revisions to a proposal on behalf of a Bidder.
ITEM 7. REJECTION OF PROPOSALS. A proposal that has one or more of the deficiencies listed below is nonresponsive and will not be read.

7.1 The person or, in the case of a joint venture, persons do not sign the proposal.
7.2 The Proposal Guaranty does not comply with the requirements in this contract.
7.3 The proposal is in a form other than the official proposal form issued to the bidder.
7.4 The proposal was not in the hands of the letting official at the time and location specified in the official proposal.
7.5 A Bidder submits more than one proposal, under the same or different name, for a specific proposed Contract. (A Bidder may submit a bid proposal and participate as a material supplier, subcontractor, or both to any or all Bidders contemplating submitting a proposal for this Work.)
7.6 The bidder fails to acknowledge or improperly acknowledges receipt of all addenda.
7.7 The bidder modifies the proposal in a manner that alters the conditions or requirements for Work as stated in the proposal form.
7.8 The bidder did not attend a specified mandatory pre-bid conference.
7.9 The Bid Guaranty check is more than 90 days old it will not be accepted.
7.10 A Bid Bond is not attached to the proposal, or is not in the amount specified in this proposal and on the bid bond form. The bond form must have the impressed seal of the Surety and have original signatures by the Bidder and an authorized individual of the Surety, with attached Power of Attorney, dated.
7.11 The bidder fails to complete the Unit Price or Bid Option sheets when included with this proposal.
7.12 The bidder fails to complete and sign the HUB Subcontracting Plan (HSP) Commitment Form when included with this proposal.

ITEM 8. AWARD, REJECTION AND SECOND LOW BIDDER. The Commission will award, reject, or defer the Contract within 30 days after the opening of the proposal. The Department reserves the right to reject any or all proposals and to waive technicalities in the best interest of the State.

8.1 AWARD: The Commission or designated representative will award the Contract to the low Bidder as determined by bid tabulation. The Commission may award a Contract to the second lowest Bidder if the requirements in Item 8.3 have been met.

8.1.1 If TxDOT does not reject all bids, it will award the contract to the lowest bidder. For the purpose of determining the low Bidder on proposed contracts without federal funds, the total bid amount will be based upon the reverse application of the non-resident Bidder’s home state bidding preference, if any.

8.1.2 The Contractor will not be permitted to assign, sell, transfer or otherwise dispose of the Contract or any portion thereof, or its rights, title or interest therein without the approval of the Executive Director and/or designee. Any assignment proposed by the Contractor must be deemed justified or legally acceptable by TxDOT. The Contractor may subcontract specialized portions of the Contract. No subcontract will, in any case, relieve the Contractor of its full responsibility under the Contract and bonds.
8.2 REJECTION: The Commission or designated representative will reject the Contract if:

8.2.1 Collusion may have existed among the Bidders. Collusion participants will not be allowed to bid future proposals for the same Contract.

8.2.2 The lowest bid is mathematically and materially unbalanced. The Bidder will not be allowed to bid future proposals for the same Contract.

8.2.3 The lowest bid is higher than the Department's estimate and re-advertising for bids may result in a lower bid.

8.2.4 The low bid contains a bid error that satisfies the requirements and criteria contained in 43 TAC sec. 9.16(e)(1) and in sec. 9.16(e)(2).

8.2.5 The Commission determines prior to contract execution that it is in the best interest of the State to rescind the award of the contract. In such an instance, the proposal guaranty will be returned to the bidder. No compensation will be paid to the bidder as a result of this cancellation.

8.3 SECOND LOW BIDDER: The Commission may award a Contract to the second lowest Bidder when the following requirements have been met:

8.3.1 The Contract is for routine facilities work with a bid less than $300,000.00.

8.3.2 The low Bidder withdraws its bid in writing.

8.3.3 The low Bidder's lump sum bid price is reasonable.

8.3.4 The Executive Director recommends in writing the award of the Contract to the second lowest Bidder.

8.3.5 The second lowest Bidder agrees to perform the Work at the lump sum price of the low Bidder.

8.3.6 The Commission agrees with the Executive Director's recommendation for award to the second lowest Bidder.

8.3.7 Only upon execution of a contract with the second low bidder will the bid guaranty of the low bidder be returned. The low bidder may be considered in default.

ITEM 9. EXECUTION OF FORMS. Within 15 days after written notification of award of contract, and PRIOR TO WORK STARTING under this Contract, the successful Bidder must furnish to TxDOT for approval the fully completed and signed forms as required: INSURANCE, BONDS, if required, and the BUSINESS OWNERSHIP INFORMATION form. A completed HUB Sub-contracting Plan is submitted by the awarded contractor only, if required on this project. After the bonds, HUB plan, and required forms are approved the contract will be executed.
ITEM 10. By signing the Contract, the Contractor certifies compliance with all applicable laws, rules, and regulations pertaining to workers' compensation insurance or legitimate alternates. This certification includes all subcontractors. Pay all deductibles stated in the policy. Subcontractors must meet the requirements of Table 1 either through their own coverage or through the Contractor's coverage.

<table>
<thead>
<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td>A. Workers' Compensation: Endorsed with a Waiver of Subrogation in favor of TxDOT</td>
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<tr>
<td>B. Commercial General Liability Insurance</td>
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<tr>
<td>C. Business Automobile Policy:</td>
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<tr>
<td>Bodily Injury</td>
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<tr>
<td>D. Builder's Risk Insurance</td>
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<tr>
<td>With TxDOT named under the Loss Payable clause. RFC</td>
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<tr>
<td>Contracts Only: Builder's Risk coverage is required only if contracts less than $100,000; Builders risk coverage is required at 100% for contracts $100,000 and more</td>
</tr>
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</tbody>
</table>

10.1 The Texas Department of Insurance (TDI) can be reached by writing TDI, P.O. Box 149104, Austin, TX 78714 or by phone for the customer help line 1-800-252-3439. TDI web site at www.tdi.texas.gov

10.2 Insurance must cover the contracted work for the duration of the Contract and must remain in effect until final acceptance. Failure to obtain and maintain insurance for the contracted work may result in suspension of work or default of the Contract. If the insurance expires and coverage lapses for any reason, stop all work until the Department receives an acceptable Certificate of Insurance.

10.3 TxDOT will only accept the standard insurance form provided by TxDOT. Certificates of insurance provided by various insurance companies are not acceptable to meet the contract requirements.

10.4 Provide Builder's Risk Insurance to protect the Department against loss by storm, fire or extended coverage perils on work and materials intended for use on the project including the adjacent structures. Name the Department under the Loss Payable Clause, listed in D, above. Notices of policy changes shall be furnished to the State.
10.5 Certificates of insurance required under this Contract and bonding documents, when required, shall be made out to the name of the Company exactly as it appears on the signature page of this Contract.

10.6 If a Contractor has been pre-approved by the TxDOT Construction Division and has approved current insurance on file, this coverage would be acceptable for RFC contracts under $100,000.00 only. All Contractors will be required to file a new insurance form, 1560-RFC, for contracts $100,000.00 and more since Builder's Risk coverage is required. An original insurance form can be requested from the Contractor on any project as determined by TxDOT.

10.7 Prior to beginning of Work, but within fifteen (15) calendar days, or seven (7) calendar days if no bonds are required, after written notice has been issued, the Contractor shall provide TxDOT with the Texas Department of Transportation Certificate of Insurance Form 1560-RFC provided by TxDOT verifying compliance with the insurance coverage listed above. Only this form is acceptable and will be provided by TxDOT at contract award. The coverage must be kept in effect during the full term of the contract or a stop work order will be issued, without suspension of time charges, until full coverage is reinstated.

ITEM 11. BONDS. Execute a performance bond and payment bond in the full amount of the Contract price with powers of attorney. Provide bonds in accordance with Table 2. Furnish the payment and performance bonds as a guaranty for the protection of the claimants and the Department for labor and materials and the faithful performance of the Work.

| Table 2 |
|---|---|
| Bonding Requirements | Required Bonds |
| Contract (Bid) Amount | |
| Less than $25,000 | None |
| $25,000 to $100,000 | Payment |
| More than $100,000 | Performance and Payment |

11.1 The cost of the bond(s) shall be included in the quotation for the work. The Bond(s) shall be executed on a form provided by and returned to TxDOT within fifteen (15) calendar days after written notice has been issued to the Contractor. Bonds must be executed by a surety company authorized to execute surety bonds under and in accordance with the laws of the State of Texas and have original signatures of the Contractor and Surety.

11.2 After contract signing, if a Change Order increases the total of the original contract to more than twenty-five thousand dollars ($25,000.00), the Contractor will not be required to submit a Payment Bond.

11.3 Claims and Indemnification on Bonds: The process of requiring and accepting bonds and making claims thereunder shall be conducted in compliance with Tex. Gov't Code, Chapter 2253. All Payment Bond claimants should be cautioned that no lien exists on the funds unpaid to the Contractor on this Contract, and that reliance on notices sent to the Department may result in loss of their rights against the Contractor and/or its surety. The Department is not responsible in any manner to a claimant for collection of unpaid bills, and accepts no such responsibility because of any representation by any agent or employee. Nonpayment notifications shall be sent to the bonding company, with a copy to the project manager. TxDOT shall furnish a copy of the payment bond and the related Contract to any qualified person seeking same who complies with Tex. Gov't Code. §2253.026.
ITEM 12. **CHILD SUPPORT ORDER COMPLIANCE.** A child support obligor who is more than 30 days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder or owner with an ownership interest of at least 25 percent is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan. By signing the contract, under Section 231.006, Family Code, the Contractor certifies that it is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate. If it is later determined that the Company knowingly rendered an erroneous representation, in addition to other remedies available, TxDOT may terminate the contract for cause or default.

ITEM 13. **BUSINESS OWNERSHIP INFORMATION** form (provided by the Department) will be required before work can start on this project. The Company shall provide immediate written notice to TxDOT if at any time it learns that its representation was erroneous when submitted or has become erroneous by reason of changed circumstances.

ITEM 14. **FAILURE TO EXECUTE CONTRACT.** Should the bidder to whom the Contract is awarded refuse or neglect to execute the bonds, Certificate of Insurance, furnish ownership information and other required forms, including a complete HUB Sub-contracting Plan (if required) within 15 days after written notification of the award of the contract, the Proposal Guaranty or Bid Bond will become the property of the State, not as a penalty, but as liquidated damages. The Contractor forfeiting the proposal guaranty will not be considered in future proposals for the same Work unless there has been a substantial change in design of the Work.

ITEM 15. **COMPUTATION OF CONTRACT TIME.** The Contractor shall complete the Work within the number of calendar days stated. For the purpose of computation, calendar days will be computed beginning ten (10) calendar days after the date of the written authorization by TxDOT to begin Work. A working day is defined as a calendar day. A Calendar Day is any day including Saturday, Sunday, and legal holidays. Contract Time is the period of time from the date computation of time charges will begin as set forth in the Work Order letter to the date stated in the Contract for completion of the Work, or the number of calendar days allowed in the Contract for completion of the Work, plus any Owner approved extensions.

ITEM 16. **FAILURE TO COMPLETE WORK ON TIME.** The time set forth in the Contract for the completion of Work is an essential element of the Contract. A breach of the Contract as to completion time will cause damage to TxDOT. Therefore, for each and every calendar day the Work shall remain incomplete after the expiration of the specified contract time, the amount per calendar day given in the following schedule will be deducted from the money due to the Contractor. This deduction is not as a penalty but is liquidated damages and added expenses incurred by TxDOT for Administrative and Inspection costs.

<table>
<thead>
<tr>
<th>16.1</th>
<th>Liquidated Damages per Calendar Day</th>
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<td>$570.00</td>
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</table>
ITEM 17. **TEXAS (PAYEE) IDENTIFICATION NUMBER.** The awarded low bidder will be required to secure from the Comptroller of Public Accounts, a Texas (Payee) Identification Number. This TIN must correspond to the person(s) or entity shown on this Contract. A valid TIN is required prior to payment being processed for this Contract. Application for Texas Identification Number:

17.1 This TIN may be obtained by contacting the Texas Comptroller of Public Accounts. Phone 512-463-3660 or 800-531-5441. www.window.state.tx.us. Forms, Application #AP-152 (TxDOT Agency 601). Phone 512-463-3660 or 800-531-5441.

17.2 A Texas (Payee) Identification Number is required from every individual, business or organization that intends to bill State Agencies for goods and/or services provided. The Texas (Payee) Identification Number will be required on all vouchers submitted to the Department.

ITEM 18. **MINIMUM WAGE RATE REQUIREMENTS.** The Contractor affirms that all employees, contract Labor and any subcontractor's employees will be paid not less than Federal Minimum Wage as set forth in 29 USC Section 206. Published wage rates for the State of Texas and county of the project can be located at http://www.wdol.gov (Davis-Bacon Act).

The Contractor shall keep a copy of each payroll showing the name, number of hours worked each day and the wage rate paid each employee, contract labor and any subcontractor's employees together with a complete record of all deductions made from such wages. Upon request, the Contractor shall submit copies of the payroll records to TxDOT. TxDOT shall withhold payments due to the Contractor until the Contractor has complied with this provision.

ITEM 19. **DEBT TO THE STATE.** If the State Comptroller of Public Accounts is prohibited from issuing a warrant to the Contractor because of a debt or delinquent tax owed to the State of Texas, the State shall apply all payment due the Contractor to the debt or delinquent tax until the debt or delinquent tax is paid in full.

ITEM 20. **CANCELLATION.** Where it is in the best interest of TxDOT to terminate or cancel this Contract, TxDOT reserves the right to accomplish same by written notice to the Contractor. Upon such termination, TxDOT will pay the Contractor for work accomplished or materials furnished prior to termination, provided such work is in conformance with the terms of this Contract and is acceptable to TxDOT. No claim for loss of anticipated profits shall be considered, and no further compensation will be due or paid.

20.1 Termination of the Contract as stated above, will not relieve the surety or surety companies of any responsibilities under the terms of the Contract.

ITEM 21. **DESCRIPTION AND LIMITS OF WORK.** The Work to be performed under this Contract shall be in accordance with the attached specifications and/or drawings. Time limit for completion of Work covered by this Contract shall be as herein specified. The Contractor shall furnish all labor, materials and equipment necessary to perform the Work shown on the plans and in the specifications, including addenda (if issued). Any Work deleted from that shown or specified must be ordered by TxDOT in writing.
ITEM 22. BUILDING PERMITS AND INSPECTIONS. The State is exempt from all local ordinances requiring city inspections and building permits involving projects undertaken by TxDOT on property owned by the State. Therefore, no building permit will be required, and no city inspections will be made. Required inspections and general observation of Work will be the responsibility of TxDOT.

ITEM 23. STATE SALES TAX. The Owner qualifies for exemption from certain State and Local Sales and Use Taxes pursuant to the provisions of Texas Tax Code, Chapter 151. The Contractor may claim exemption of the applicable State Taxes by complying with procedures prescribed by the Texas Comptroller of Public Accounts. For information call 1-800-252-5555, or 512-463-4600, Tax Assistance Section. Tax forms may be obtained at www.window.state.tx.us, Texas Taxes, Sales & Use, Forms, Resale & Exemption Certificate (01-339 back).

ITEM 24. TEMPORARY SUSPENSION OF WORK AND EXTENSION OF CONTRACT TIME. TxDOT will have authority to suspend the Work for any period it may consider necessary, and the "Contract Time" will be suspended during such period. Notice of suspension of Work, with the reasons, will be given to the Contractor in writing. TxDOT will have authority to grant an extension of the contract time.

24.1 The Contractor should notify TxDOT immediately in writing when scheduled material deliveries are delayed or of any anticipated delay not the fault of the Contractor. At its discretion, the Department may suspend Contract time or grant a non-compensable extension of contract time for any legitimate documented claim of delay.

ITEM 25. LEGAL REQUIREMENTS. The Contractor will comply with all applicable federal, state, and local laws, ordinances, and regulations that affect the performance of the Work. Indemnify and save harmless the State and its representatives against any claim arising from violation by the Contractor of any law, ordinance, or regulation.

25.1 This Contract is between the Department and the Contractor only. No person or entity may claim third-party beneficiary status under this Contract or any of its provisions, nor may any non-party sue for personal injuries or property damage under this Contract.

ITEM 26. COMPETENCE OF CONTRACTOR. When required by law or by this Contract, the Contractor shall be licensed to perform the Work specified. All workers shall be skilled in the type of work described herein and shall work, at the job site, under the direct supervision of the licensee.

ITEM 27. PAYMENT FOR WORK PERFORMED. Payment for work completed and accepted by TxDOT will be made to the Contractor monthly or upon final completion. A form acceptable to TxDOT shall be used for all payments. HUB subcontractor reports are due with the monthly payment statement.

ITEM 28. RETAINAGE. Five percent (5%) will be withheld on contracts with more than one payment. If the first payment is requested at the completion of the contract, no retainage will be held. If the first and subsequent payments are a portion of the full contract amount, five percent (5%) will be retained from each payment until final completion and acceptance of all Work covered by this contract, when final payment is made.
ITEM 29. PROMPT PAYMENT. The Contractor shall pay the subcontractor for work performed within 10 days after the Contractor receives payment for the work performed by the subcontractor. Any retained monies on a subcontractor's work shall be paid to the subcontractor within 10 days after satisfactory completion of all the subcontractor's work. Completion of all the subcontractor's work shall include test, maintenance and other similar periods that are the responsibility of the subcontractor.

ITEM 30. DEFICIENCIES IN THE WORK. The Owner reserves the right to withhold from funds remaining unpaid under the Contract amounts required to pay costs, but not limited to, the following.

30.1 Special site visits required to re-examine a cited deficiency which has not been corrected after a total of two visits.

30.2 Special monitoring to ensure compliance with the contract documents due to non-performance or poor workmanship.

30.3 Assessments of potential damage resulting from failure of the Contractor to protect the Work.

ITEM 31. CONTRACTOR RESPONSIBILITIES.

31.1 Should the drawings disagree one with another, or with the specifications, the better quality or greater quantity of work or materials shall be performed or furnished. Figures given on drawings govern small scale drawings.

31.2 Workers: All workers employed by the Contractor and subcontractor shall have such skill and experience as will enable them to properly perform the duties assigned.

31.2.1 Any person employed by the Contractor or a subcontractor who, in the opinion of the Owner, does not perform his work in a proper and skillful manner, who is uncooperative, disrespectful, intemperate, disorderly or otherwise objectionable, shall at the written request of the Department be discharged and shall not be employed again on any portion of the Work without the written consent of the Department.

31.3 Interruption of Business: The Contractor is responsible for any monetary damages due to any major interruption of business including, but not limited to, disruption of utilities or mechanical equipment resulting from the actions or lack of action on the part of any workers employed by the Contractor and subcontractors.

31.4 Use of Premises: The Contractor shall confine its apparatus, storage of materials and operations of its workers to limits indicated by the plans or directions of the Owner and shall not encumber the premises, Owner operations, or operations of other contractor(s) with its materials and activities.

31.5 Submittals: Submit with reasonable promptness consistent with the Project Schedule and in orderly sequence all Shop Drawings, Samples, or other information required by the Contract Documents, or subsequently required by Change Order. Prior to submitting, the Contractor shall review each submittal for compliance with Contract Documents and certify by stamp affixed to each copy. Submittal data presented without the Contractor's certification will be returned without review or comment, and any delay resulting from such certification is the Contractor's responsibility.
31.6  **Inspection of Work:** Provide notification of at least seven (7) calendar days or otherwise as mutually agreed, to the Owners Representative of the anticipated need for a cover up inspection. Should the Owners Representative fail to make the necessary inspection within the agreed period, the Contractor may proceed with cover up Work, but is not relieved of responsibility for Work to comply with requirements of the Contract Documents.

31.6.1  Should corrections of the Work be required for approval, do not cover up corrected Work until the Owner indicates approval.

31.7  **Continued Performance:** Neither the occurrence of an event nor the pendency of a claim constitutes grounds for the suspension of performance of the Work by the Contractor, in whole or in part.

**ITEM 32. OWNER RESPONSIBILITIES.**

32.1  **Compliance of Work:** The Work will be observed and inspected by the Owner's Representative, and performed to his/her satisfaction, in accordance with the contract plans and specifications. The Owners Representative will decide all questions that may arise as to the quality or acceptability of materials furnished and work performed; the manner of performance and rate of progress of the Work; the interpretations of the plans and specifications; and the acceptable fulfillment of the contract on the part of the Contractor. His/her decisions will be final, and will have executive authority to enforce and make effective such decisions and orders if the contractor fails to carry out promptly.

32.2  **Review of Submittals:** Review by Owners Representative is only for conformance with the design concept and the information provided in the Contract Documents. Responses to submittals will be in writing. The acceptance of a separate item does not indicate acceptance of an assembly in which the item functions. The acceptance of a submittal does not relieve the Contractor of responsibility for any deviation from the requirements of the Contract unless the Contractor informs the Owners Representative of such deviation in a clear, conspicuous, and written manner on the submittal transmittal and at the time of submission, and obtains the Owner's written specific acceptance of the particular deviation.

**ITEM 33. CONTRACT CHANGES**

33.1  **General**

a. The Owner shall have authority to give instructions during the progress of the Work that may result in minor changes in the Work, not involving an adjustment of costs and not inconsistent with the intent and purpose of the contract documents, in which cases written Change Orders may or may not be issued. All such minor changes in the Work shall be performed under the applicable conditions of the Contract Documents.
33.2 **Unilateral Change Order**: The Owner without invalidating the Contract may order Unilateral Change Orders to work not included in the Contract that it considers necessary for the completion of the project, and will pay the Contractor a reasonable sum.

33.3 **Change Orders**:

33.3.1 The Owner, without invalidating the Contract, may order changes in the Work beyond the general scope of the Contract consisting of additions, deletions, or other revisions. All such changes in the scope of Work must be authorized by Change Order, and performed under the applicable conditions of the Contract Documents. If such changes cause an increase or decrease in the Contractor's costs, or time required for performance of the contract, a mutually agreeable adjustment shall be made and confirmed in writing by Change Order.

33.3.2 **Unilateral Change Order**: It is understood the Owner without invalidating the Contract may order Unilateral Change Orders to work not included in the Contract that it considers necessary for the completion of the project, and pay the Contractor a reasonable sum.

33.3.3 It is recognized by the parties hereto and agreed by them that the specifications and drawings may or may not be complete and free from errors, omissions and imperfections or require changes or additions in order for the Work to be completed to the satisfaction of Owner. Accordingly, it is the express intention of the parties, notwithstanding any other provisions in this Contract, that any errors, omissions or imperfections in such specifications and drawings, or any changes in or additions to same or to the Work ordered by Owner and any resulting delays in the Work or increases in Contractor's costs and expenses, shall not constitute or give rise to any claim, demand or cause of action of any nature whatsoever in favor of Contractor, whether for breach of contract, quantum merit, or otherwise; provided, however, that Owner shall be liable to Contractor for the sum stated to be due Contractor in any Change Order approved and signed by both parties. The sum stated in the Change Order will constitute full compensation to Contractor for all costs, expenses and damages to Contractor, whether direct, consequential or otherwise in any wise incident to, arising out of, or resulting directly or indirectly from the work performed by the Contractor under the Change Order.

33.3.4 If the Contractor wishes to make a claim for additional cost or time over and above any adjustment already being granted in a Change Order, it must submit to the Owner within thirty (30) calendar days after receipt of a written change order, or oral or written order to proceed with a proposed change a written statement setting forth in detail the nature and monetary and/or time extent of such claim.

33.3.5 Change Orders must be signed by all parties prior to starting any work covered by the Change Order except as altered and modified herein.
33.3.6 Any unexpected circumstance that necessitates an immediate change in order to avoid a delay in progress of the Work shall be expedited by verbal communications and authorization between the Contractor and a duly authorized Owner representative authorized to sign Change Orders with written confirmation following as soon as practicable.

33.3.7 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 section titled Change Order Value Determination.

33.4 Change Order Value Determination

33.4.1 Overhead and profit can be included in the costs associated with work performed by Change Order. Any overhead and profit, and other related costs must be returned to the Owner in a deductive Change Order.

33.4.2 If a surety has assumed the responsibilities of the contract, the Owner may pay the surety for the completion contractor's profit and overhead, but it will not pay the surety profit and overhead. On a Change Order, the Owner will not pay profit and overhead to more than three tiers.

33.4.3 The value of changes in the Work, either additive or deductive, executed under a Change Order, shall be determined as follows:

1. Contractor shall furnish the Owner an itemized breakdown, in detail and form acceptable to the Owner, of all costs and supporting information including but not limited to quantities, material prices, tier subcontracted work performed, labor rates and employer payments, and rental rates. The itemized breakdown detail shall be the same for any subcontractor work. The Contractor shall furnish the Owner the following additional information in the itemized breakdown, insurance charges, bond charges, profit and overhead or markups used in computing the lump sum proposal. This information shall also be provided for any subcontractor work. The Contractor shall provide complete supporting information for profit and overhead or markups used when requested by the Owner.

2. Costs shall include: Labor cost, including all classifications through foremen when engaged in the actual direct performance of the Work, and actual employer payments to or on behalf of workers for health and welfare, pension, vacation, insurance, and any similar charges imposed by law or required by applicable collective bargaining agreements; materials installed permanently in the Work or expended in performance thereof; rental cost of construction plant and equipment at the work site; energy, fuel, and supplies consumed in operations of power-drive equipment; insurance; and further revisions of previously finalized shop drawings and/or fabrication drawings.
3. In lieu of providing information for all employer payments to or on behalf of workers excluding actual gross wages the Contractor may use a percentage factor, acceptable to the Owner, which shall constitute full compensation for all employer payments other than actual gross wages. The Contractor shall provide complete supporting information for calculation of the percentage factor (s) when so requested by the Owner.

4. Costs shall not include: (these costs shall be considered a part of overhead and profit or markups) Labor for superintendents, assistant superintendents, office personnel (home and field), timekeepers, and maintenance mechanics at any level of contracting; per diem and travel allowances for any of the aforementioned labor classifications; pieces of equipment, hand tools, or instruments having a new value of $500.00 or less, whether or not consumed by use; safety programs; on site and main offices and operating costs; modifications to record drawings; guarantee period cost allowances; punch list allowances.

5. For work performed by its forces, the Contractor will be allowed to add to the costs as defined in 33.4.3(2) overhead and profit for an amount not to exceed the following percentages. 15% on the first $10,000, 10% on the next $10,000 and 7-1/2% on the balance over $20,000.

6. For subcontracted work each affected subcontractor shall figure its cost, overhead and profit as described above. All subcontractor costs shall be combined, and to that total the Contractor will be allowed to add a maximum mark-up of 10% if the total of all subcontracted work is $10,000 or less; 7.5% if the total of all subcontracted work is $10,000 to $20,000; and 5% if the total of all subcontracted work is over $20,000.

7. For small Change Orders, the allowance to the Contractor for profit and overhead for work done by its own forces or by Subcontractors will be a minimum of $50.00.

8. On changes involving both additions and deletions, percentages for overhead and profit will be allowed only on the net addition.

9. Owner does not accept and will not pay for additional contract cost detailed by accounting records under the title of Extended Overhead or Cost Damages caused by Delays. The Contractor and Subcontractor (if required by the contractor to be bonded) will be allowed to add Bond cost if the change results in an increase in the Bond premium. Provide written evidence from the Bonding Company(s) of any increase in the Bond premium if so requested by TxDOT.

33.5 Contractor Cost Reduction Proposal

a. The Contractor may submit a cost reduction proposal for changing the requirements of the Contract. The proposal shall demonstrate that changing the Contract requirements would:
1. Represent an advantage to the Owner over the specified requirement;
2. Result in a net reduction in the total Contract Sum;
3. Not impact any essential function or characteristic of the Work such as safety, service life, reliability, economy of operation, esthetic, ease of maintenance, and necessary standardize features; and
4. Not detrimentally affect the Contract completion date.

All cost for compliance with this requirement, whether accepted or not, shall be borne by the Contractor.

The determination of the Owner as to acceptability of the proposal will be final and the Owner may accept in whole or in part any proposal submitted pursuant to this provision by issuing a Change Order that will identify the proposal on which it is based. The Change Order will provide for an equitable adjustment in the Contract Sum and will revise any other affected provisions of the Contract Documents.

33.6 Contractor's Risk of Performance. Except as expressly provided or as may be determined, the Contractor shall not be entitled to an increase in the Contract Sum or Contract Time and shall bear full responsibility for all risks affecting the Contractor's cost of performance.

ITEM 34. PROJECT COMPLETION AND ACCEPTANCE.

34.1 Closing Inspections

34.1.1 Request for Substantial Completion Inspection. When the Contractor considers the entire Work or part thereof Substantially Complete, it shall notify the Owner's Representative in writing that the Work will be ready for Substantial Completion Inspection on a specific date. The Contractor shall include with this notice the Contractor's Punch list to indicate that it has previously inspected all the Work associated with the request for inspection; has completed or scheduled completion of items required for Substantial Completion; has corrected other items where possible; and has included all items scheduled for completion or correction prior to final inspection. The failure to include any items on this list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents. If any items on this list required for Substantial Completion are not complete or scheduled for completion the Contractor shall not request a Substantial Completion Inspection. If any items on this list prevent use of the facility for the purposes it is intended to be utilized and not corrected, the Contractor shall not request a Substantial Completion Inspection. The Owner and its representatives will review the list of items and schedule the requested inspection, or inform the Contractor in writing that such an inspection is premature because the Work is not sufficiently advanced, items required to be complete or scheduled for completion are not completed, or conditions are not as represented on the Contractor's list.
34.1.2 Substantial Completion Inspection. On the date requested by Contractor, or a date mutually agreed upon by the Owner, with consideration of the status of the open items list, the Owner's Representative, Contractor and other TxDOT representatives as determined by TxDOT, will jointly attend the Substantial Completion Inspection, which shall be conducted by the Owner's Representative or his/her delegate. If the Owner's Representative determines that the Work is Substantially Complete, the Owner's Representative will issue a Certificate of Substantial Completion to be signed by the Owner and Contractor and AIE if appropriate, establishing the date of Substantial Completion. If the Owner determines the Work is not Substantially Complete the Contractor will be so notified in accordance with other provisions of this item. The Owner's Representative will provide with or independent of this certificate a list of Punch list items (the Substantial Completion Punch list) for completion prior to Final Completion Inspection. This list may include items in addition to those on the Contractor's Punch list, which the inspection team deems necessary to correct or complete prior to Final Completion Inspection. The term "Substantial Completion Punch list" items shall mean details of construction and mechanical and electrical adjustments which are minor in character and do not materially interfere with TxDOT's safe use, enjoyment and operation of the Project or designated portions thereof. If TxDOT elects to occupy the facility upon determination of Substantial Completion, the Contractor shall complete all corrective Work at the convenience of TxDOT, without disruption to TxDOT's use of the facility for its intended purposes.

34.1.3 Requirements for Substantial Completion. The Certificate of Substantial Completion for all or a designated portion of the Work will not be issued if the following items are incomplete, unless otherwise agreed to by TxDOT in writing, as they are considered essential elements of the Project and completion of these is a prerequisite for TxDOT's safe use, enjoyment and operation of the project or designated portions thereof:

34.1.3.1 Complete and accepted operation and maintenance (O&M) manuals for all installed equipment, systems and like items to include, but not be limited to, submittals, shop drawings, operation and maintenance instructions, wiring diagrams, spare parts lists, test/inspection results/reports and written warranties, guarantees, and any other information required by the Contract Documents;

34.1.3.2 Verification that training of designated TxDOT personnel for various items of the Work requiring training as set forth in the Contract Documents is complete, as evidenced by submittal of a copy of the "sign in" sheet for each required training session;

34.1.3.3 A notarized affidavit attesting to TxDOT no hazardous materials were incorporated into the Work unless prior written approval of TxDOT was granted, as verified attaching a copy of the TxDOT authorization;

34.1.3.4 A notarized certification to TxDOT that all equipment and materials used in fulfillment of their contract responsibilities are nori Asbestos Containing Building Materials (ACBM) in compliance with the Asbestos Hazard Emergency Response Act (AHERA - 40 CRF 763-99 (7);
34.1.3.5 Verification, to the satisfaction of TxDOT, that inspections required by any authority having jurisdiction over any element of the Work have been conducted which shall include any registrations as may be required and the issuance of any permits, licenses, certificates, etc. as may be required for any system or equipment, i.e. boilers, elevators, etc., unless specifically stated otherwise in the Plans and Specifications (The Texas Accessibility Standards (TAS) compliance review and inspection will be the responsibility of the Architect/Engineer and is not a condition for Substantial Completion);

34.1.3.6 Demonstration, to the satisfaction of TxDOT’s authorized representative(s), that all equipment and systems function as required by the Contract Documents, i.e commissioning; and

34.1.3.7 Completion of landscaping as set forth in the Contract Documents.

34.1.4 Final Completion Inspection. The Contractor shall complete the list of items identified on the Substantial Completion Punch list within the time frame specified and prior to requesting a Final Completion Inspection. Unless otherwise specified, directed by TxDOT in writing or otherwise agreed in writing by the parties, the Contractor shall complete and/or correct all Substantial Completion Punch list work within thirty (30) calendar days of the Substantial Completion date. Upon completion of the Substantial Completion Punch list work, the Contractor shall give written notice to the Owner’s Representative that the Work will be ready for Final Inspection on a specific date. The Contractor shall accompany this notice with a copy of the updated Substantial Completion Punch list indicating resolution of all items and the original marked-up As-Built drawings reflecting all modifications and changes made to the Work. If the Project is being delivered in phases the original marked-up As-Built drawings shall be delivered at completion of the last phase. On the date specified or as soon thereafter as is practicable, the Owner’s Representative, Contractor and other TxDOT representatives as determined by TxDOT will inspect the Work. The Owner’s Representative will submit a Final Punch list of open items that the inspection team requires corrected or completed before final acceptance of the Work. In the event the time frame set forth in the Certificate of Substantial Completion to complete the Substantial Completion Punch list Work expires and TxDOT has not been provided written notice from the Contractor that the Work is ready for Final Completion Inspection, and as TIME IS OF THE ESSENCE IN COMPLETION OF THE WORK, TxDOT will provide the Contractor written notice of a date specific an inspection will be held. The Owner’s Representative, Contractor, and other TxDOT representatives as determined by TxDOT will inspect the Work. The Owner’s Representative will submit a Final Punch list of open items that the inspection team requires corrected or completed before final acceptance of the Work. In the event the time frame set forth in the Certificate of Substantial Completion to complete the Substantial Completion Punch list Work expires and TxDOT has not been provided written notice from the Contractor that the Work is ready for Final Completion Inspection, and as TIME IS OF THE ESSENCE IN COMPLETION OF THE WORK, TxDOT will provide the Contractor written notice of a date specific an inspection will be held. The Owner’s Representative, Contractor, and other TxDOT representatives as determined by TxDOT shall conduct the inspection. If TxDOT determines the Substantial Completion Punch list Work is not complete and/or corrected, TxDOT shall, without invalidating the Contract, have the right, upon written notice to the Contractor, to complete the Work using duly qualified contractors or TxDOT forces. The Contractor shall reimburse TxDOT for any reasonable costs incurred by TxDOT in completing the Work with offsets and deductions in the Final Payment as provided for in this Item. This provision does not invalidate any other provision in the Contract Documents available to TxDOT for completion and/or correction of the Work.
34.1.5 **Completed Final Punch list Inspection.** The Contractor shall correct or complete all items on the Final Punch list before requesting Final Payment. Unless otherwise agreed to in writing by the parties, the Contractor shall complete this work within seven (7) days of receipt of the Final Punch list and notify the Owner's Representative in writing stating the disposition of each Final Punch list item. The Owner's Representative, Contractor, and other TxDOT representatives as determined by TxDOT shall promptly inspect the completed items. When the Final Punch list is complete, and the Contract is fully satisfied according to the Contract Documents, subject to any limitations set forth in other Items of the Contract, the Owner's Representative will issue a certificate establishing the date of Final Completion. Final Completion of all Work is a condition precedent to the Contractor's right to receive Final Payment. In the event the Contractor fails to complete the Final Punch list items within seven (7) days of receipt of the Final Punch list or as otherwise agreed to in writing by the parties and as **TIME IS OF THE ESSENCE IN COMPLETION OF THE WORK**, TxDOT shall, without invalidating the Contract, have the right, upon written notice to the Contractor, to complete the Final Punch list Work using duly qualified contractors or TxDOT forces and the Contractor shall reimburse TxDOT for any reasonable costs incurred by TxDOT in completing the Work with offsets and deductions in the Final Payment as provided for in this Item. This provision does not invalidate any other provision in the Contract Documents available to TxDOT for completion and/or correction of the Work.

34.1.6 **Annotation.** Any Certificate issued under this Item may be annotated to indicate that it is not applicable to specified portions of the Work, or that it is subject to limitation(s) as determined by TxDOT.

34.1.7 **Purpose of Inspection.** Inspection is for determining the completion of the Work, and does not relieve the Contractor of its overall responsibility for completing the Work in a good and workmanlike manner, in compliance with the Contract. Work accepted with incomplete Punch list items or failure of TxDOT or other parties to identify Work that does not comply with the Contract Documents or is defective in operation or workmanship does not constitute a waiver of TxDOT's rights under the Contract or relieve the Contractor of its responsibility for performance or warranties.

34.1.8 **Additional Inspections.**

34.1.8.1 If TxDOT's inspection team determines that the Work is not Substantially Complete at the Substantial Completion Inspection, the Owner's Representative will provide the Contractor written notice listing cause or causes of the rejection. The Owner's Representative may set a time for completion of incomplete or defective work. If a new time is set the Contractor shall complete or correct all work so designated prior to requesting a second Substantial Completion Inspection. Nothing in this subsection shall prohibit TxDOT from completing the Work as set forth in other provisions of this Item nor invalidate any provision in the Contract Documents available to TxDOT for completion and/or correction of the Work.
34.1.8.2 If TxDOT's inspection team determines that the Work is not complete at the Final Inspection, the Owner's Representative will provide the Contractor written notice listing the cause or causes of the rejection. The Owner's Representative may set a time for completion of incomplete or defective work. If a new time is set the Contractor shall complete or correct all work so designated prior to again requesting a Final Inspection. Nothing in this subsection shall prohibit TxDOT from completing the Work as set forth in other provisions of this Item nor invalidate any provision in the Contract Documents available to TxDOT for completion and/or correction of the Work.

34.1.8.3 The Contract Agreement contemplates three (3) comprehensive inspections: the Substantial Completion Inspection, the Final Completion Inspection, and the Completed Final Punch list Inspection. The cost to TxDOT of additional inspections resulting from the Work not being ready for one or more of these inspections shall be charged to the Contractor. TxDOT may issue a Unilateral Change Order deducting these costs from Final Payment. Upon the Contractor's written request, TxDOT will furnish documentation of any costs so deducted. Work added to the Contract by Change Order after the Substantial Completion Inspection is not corrective work for purposes of determining timely completion, or assessing the cost of additional inspections. However, such work shall be subject to all provisions of this Contract.

34.1.9 Phased and Whole Completion. The contract may provide, or project conditions may warrant, as determined by the Owner's Representative, that designated elements or parts of the Work be completed in phases. Where phased completion is required or specifically agreed to by the parties, the provisions of the Contract related to Closing Inspections and Occupancy apply independently to each designated element or part of the Work. For all other purposes, unless otherwise agreed by the parties in writing, Substantial Completion of the Work as a whole is the date on which the last element or part of the Work completed receives a Substantial Completion certificate. Final Completion of the Work as a whole is the date on which the last element or part of the Work completed receives a Final Completion certificate.

34.1.10 Time Charges. The date Time Charges for the project as a whole terminates will be the date set forth in the Certificate of Substantial Completion for the project issued by TxDOT. When the Work is to be completed in designated elements or portions (phases), time charges for the project will not stop until the date set forth in the Certificate of Substantial Completion for the last phase of the Work issued by TxDOT.

34.2 TxDOT's Right of Occupancy. TxDOT may occupy or use all or any portion of the Work following Substantial Completion, or at any earlier stage of completion. Should TxDOT wish to use or occupy the Work, or part thereof, at or prior to Substantial Completion, the Owner's Representative will notify the Contractor in writing. Work performed on the premises by third parties on TxDOT's behalf does not constitute occupation or use of the Work by TxDOT for purposes of this Item. All Work performed by the Contractor after occupancy, whether in part or in whole, shall be at the convenience of TxDOT so as to not disrupt TxDOT's use of, or access to occupied areas of the project.
34.3 **Acceptance & Payment.**

34.3.1 **Request for Final Payment.** Following the certified completion of all work, including all punch list items, cleanup, and the delivery and approval of record documents, the Contractor shall submit an Application for Final Payment. The Contractor shall include all sums held as retainage and forward the Application for Final Payment to the Owner's Representative for review and approval. If TxDOT determines that any item remains incomplete, including but not be limited to, maintenance and operation manuals, training, guarantees and warranties, record documents and all other items required by the Contract that have not been submitted to and approved by TxDOT, TxDOT may take no action on the Application for Final Payment and return the Application for Final Payment to the Contractor with a list of missing or incomplete items.

34.3.2 **Allowances.** If the Contract Documents contains allowance items, all savings under any of the designated Allowance Items shall accrue to the benefit of TxDOT and the Contract Sum shall be reduced by one hundred percent (100%) of such savings.

34.3.3 **Final Payment Documentation.** No Application for Final Payment is complete unless it fully reflects all required modifications and includes all required executed documentation including, but not limited to, the following:

34.3.3.1 TxDOT's Contractor's Application For Payment form;

34.3.3.2 Updated Schedule of Values form;

34.3.3.3 TxDOT's Contractor's Affidavit Of Payments Of Debts and Claims (final) form;

34.3.3.4 If requested, documentation establishing payment or satisfaction of all such obligations connected with the work of the Contract, such as receipts, releases and waivers of claims, to the extent and in such form as designated by TxDOT;

34.3.3.5 If required, TxDOT's Consent of Surety Company To Final Payment form;

34.3.3.6 As-Built drawings of all major changes / instructions / clarifications made during construction.

34.3.3.7 If required, a signed TxDOT Change Order making final adjustment to the Contract Sum or Contract Time as may be required for offsets and deductions, allowance items reconciliation, time adjustments, or any other item requiring a change to the Contract;

34.3.3.8 If required, HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report;

34.3.3.9 If required, Buy America form D-9-USA-1 or approved equivalent.
34.3.4 **TxDOT Approval.** The Owner's Representative will review a submitted complete Application for Final Payment promptly but in no event later than ten (10) days after its receipt. The Owner's Representative will either 1) return the Application for Final Payment to Contractor with corrections for action and resubmission or 2) accept it subject to any offsets and deductions, noting approval and forward for payment processing.

34.3.5 **Offsets and Deductions.** TxDOT may deduct from the Final Payment all sums due from the Contractor. If the Certificate of Final Completion notes any Work remaining, incomplete, or defects not remedied, TxDOT may deduct the cost of remediying such deficiencies from the Final Payment. On such deductions, TxDOT will identify each deduction, the amount, and the explanation of the deduction. Such offsets and deductions shall be incorporated via a final Change Order, including Unilateral Change Order as may be applicable.

34.3.6 **Final Payment Due.** Final Payment is due and payable by the Owner, subject to all allowable offsets and deductions, on the 31st day following TxDOT receipt of a complete Application for Final Payment. If the Contractor disputes any amount deducted by the TxDOT, the Contractor shall give notice of the dispute on or before the thirtieth (30th) day following receipt of Final Payment.

34.3.7 **Effect of Final Payment (TxDOT).** Final Payment, when accepted by the Contractor, constitutes a waiver of all claims by TxDOT, relating to the condition of the Work except those arising from any one, combination or all of the following:

34.3.7.1 Faulty or defective Work appearing after Substantial Completion (latent defects);

34.3.7.2 Failure of the Work to comply with the requirements of the Contract Documents;

34.3.7.3 Terms of any warranties required by the Contract, or implied by law;

34.3.7.4 Claims arising from personal injury or property damage to third parties; and

34.3.7.5 Formal disputes pending resolution.

34.3.8 **Effect of Final Payment (Contractor).** Acceptance of Final Payment constitutes a waiver of all claims by the Contractor, except those specifically identified in writing and submitted prior to or at the time of Final Payment and disputes pending resolution. Provided, however, that the Contract shall not be deemed fully performed and closed until the expiration of all periods of time provided under the Contract Documents or applicable law for the Contractor to submit a claim or protest a Unilateral Change Order (ULCO).

34.3.9 **Effect on Warranty.** Regardless of approval and issuance of Final Payment, the Contract is not deemed fully performed by the Contractor and closed until the expiration of all warranty periods.
ITEM 35. **WARRANTY & GUARANTEE.**

35.1 **Contractor's General Warranty and Guarantee.** Contractor warrants to TxDOT that all Work is executed in accordance with the Contract, complete in all parts and in accordance with approved practices and customs, and of the best finish and workmanship. The Contractor further warrants that unless otherwise specified, all materials and equipment incorporated in the Work under Contract are new. TxDOT may, at its sole option, agree in writing to waive any failure of the Work to conform to the Contract, and to accept a reduction in the Contract Sum for the cost of repair or diminution in value of the Work by reason of such defect. The Certificate of Substantial Completion or the Final Acceptance document(s) shall not constitute an agreement in writing to waive any failure of the Work to conform to the Contract. Absent such a written agreement, the Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute and is not waived by any inspection or observation by TxDOT, its agents or others, by making any progress payment or final payment, by the use or occupancy of the Work or any portion thereof by TxDOT, at any time, or by any repair or correction of such defect made by TxDOT or its agent(s). All warranties must include statements that the warranty is assignable to the end user, subject to Texas laws and that the venue for any legal proceedings under the warranty shall be in a court of competent jurisdiction in the county where the warranted item is incorporated into the Project.

35.2 **Warranty Period.** Except as may be otherwise specified or agreed, the Contractor shall repair all defects in materials, equipment, or workmanship appearing within one year from the date of Substantial Completion of the Work at no cost to TxDOT. If Substantial Completion occurs by phase, then the warranty period for that particular Work begins on the date of completion of the relevant phase, or as otherwise stipulated on the Certificate of Substantial Completion for the particular Work. Regardless of approval and issuance of Final Payment, the Contract is not deemed fully performed by the Contractor and closed until the expiration of all warranty periods.

35.3 **Limits of Warranty.** Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

35.3.1 Modification or improper maintenance or operation by persons other than Contractor, Subcontractors at any tier, and any individual for whom the Contractor is responsible for directly or indirectly.

35.3.2 Normal wear and tear under normal usage after acceptance of the Work by TxDOT.

35.4 **Events Not Affecting Warranty.** Contractor's obligation to perform and complete the Work in a good and workmanlike manner in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents or a waiver of any warranty and guarantee obligation:

35.4.1 Observation by TxDOT and/or its agent(s).

35.4.2 Recommendation to pay any progress or final payment.
35.4.3 The issuance of a certificate of Substantial Completion by TxDOT or any payment by Owner to Contractor under the Contract Documents.

35.4.4 Use or occupancy of the Work or any part thereof by TxDOT.

35.4.5 Any acceptance by TxDOT or any failure to do so.

35.4.6 Any review of a Shop Drawing, sample or submittal; or

35.4.7 Any inspection, test or approval by others.

35.4.8 Final payment by the Owner.

35.4.9 Assignment to TxDOT of a warranty which is not in full compliance with the requirements of the Contract Documents.

35.5 Separate Warranties. If a particular piece of equipment or component of the Work for which the Contract Documents requires a separate warranty is placed in continuous service before Substantial Completion, the Warranty Period for that equipment or component will not begin until Substantial Completion, regardless of any warranty agreements in place between supplier and/or Subcontractors and the Contractor. TxDOT will certify the date of service commencement in the Substantial Completion Certificate.

35.5.1 In addition to the Contractor's warranty and duty to repair, the Contractor expressly assumes all separate warranty obligations required under the Contract for specific building components, systems and equipment.

35.5.2 The Contractor may satisfy any such separate warranty obligation by obtaining and assigning to TxDOT a complying warranty from a manufacturer, supplier, or Subcontractor, provided the warranty provides for assignment to the end user. Where an assigned warranty is tendered to TxDOT but does not fully comply with the requirements of the Contract Documents, the Contractor remains liable to TxDOT on all elements of the required warranty not provided by the tendered warranty.

35.5.3 A complying warranty from a manufacturer, supplier, or Subcontractor assigned to TxDOT by the Contractor shall be subject to and governed by the laws of the State of Texas.

35.5.4 The venue for any legal proceedings under a complying warranty assigned to TxDOT shall be in a court of competent jurisdiction in the county where the warranted item is incorporated into the Project.

35.6 Correction of Defects. Upon receipt of written notice from TxDOT, or any agent of TxDOT designated as responsible for management of the Warranty Period, of the discovery of a defect, the Contractor shall promptly remedy the defect(s), and provide written notice to TxDOT and its designated agent indicating action taken. In case of emergency where delay would cause serious risk of loss or damage to TxDOT, or if the Contractor fails to remedy within thirty (30) days, or within another period agreed to in writing, TxDOT may correct the defect and be reimbursed the cost of remedying the defect from the Contractor or its Surety.
ITEM 36. **MAINTENANCE, RETENTION AND AUDIT OF RECORDS.**

36.1 *Retention Period*: The Contractor shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and services provided (hereinafter called the Records). The Contractor shall make the records available at its office during the contract period and for four years from the date of final payment under this contract, until completion of all audits, or until pending litigation has been completely and fully resolved, whichever occurs last.

36.2 * Availability*: The State or any of its duly authorized representatives, the Federal Highway Administration, the United States Department of Transportation, Office of Inspector General, and the Comptroller General shall have access to the Contractor's Records which are directly pertinent to this contract for the purpose of making audits, examinations, excerpts and transcriptions.

36.3 *Examination*: The State shall require the Contractor to make the Records available for the purpose of checking the amount of work performed by the Contractor at the time of contract termination or for other reasons of its own, not subject to agreement by the Contractor.

ITEM 37. **TERMINATION OF WORK.**

37.1 *Termination by Owner*. The Owner may declare the Contractor to be in default of the Contract if the Contractor:

(1) Fails to begin the Work within the number of days specified,
(2) Fails to prosecute the Work as to insure its completion within the time specified,
(3) Fails to supply enough properly skilled workers or proper materials,
(4) Fails to perform the Work in accordance with the Contract requirements,
(5) Fails or refuses to remove and replace rejected materials or unacceptable Work,
(6) Fails to continue the prosecution of the Work without the Owner's approval to discontinue,
(7) Fails to resume the Work that has been discontinued within a reasonable number of days after notice to do so,
(8) Fails to conduct the Work in an acceptable manner,
(9) Makes an unauthorized assignment,
(10) Disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction,
(11) Is uncooperative, disruptive or threatening, or
(12) Is otherwise guilty of a substantial violation of a provision of the Contract Documents.
If any of these, or other conditions justifying default occur and an extension of time has not been granted where appropriate, the Owner may, without prejudice to any right or remedy, give the Contractor and Surety, if any Surety, written notice of the intent to declare the Contractor in default. If the Contractor does not proceed as directed within ten (10) days after the notice, the Owner may upon written notice to the Contractor and Surety, if any Surety, declare the Contractor to be in default of the Contract, terminate the employment of the Contractor and take possession of the site and any or all materials thereon that it deems suitable and acceptable for completion of the Work. Time charges will continue until completion of the Contract. The Contractor may also be subject to sanctions under Title 43, Texas Administrative Code.

The Owner will determine the method used for completion of the remaining Work as follows:

a. **Contracts without Performance Bonds.** The Owner will determine the most expeditious and efficient way to complete the Work, arrange for completion of the Work and deduct the cost thereof, including the cost of additional Architect/Engineer service made necessary by such default or neglect, from the unpaid Contract sum remaining, in which event no further payment shall be made by the Owner until all costs of completing the Work shall have been paid. If the costs of finishing the Work exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive the termination of the Contract.

b. **Contracts with Performance Bonds.** The Owner will, without violating the Contract, demand the Contractor's Surety complete the remaining Work in accordance with the terms of the original Contract. The Surety becomes the Contractor in a takeover. A Completion Contractor will be considered a subcontractor of the Surety. The Owner reserves the right to approve or reject proposed Completion Contractors. Work may resume after the Owner receives and approves certificates of insurance as required in the Contract Documents. Certificates of insurance may be issued in the name of the completing Contractor. The Surety is responsible for making every effort to expedite the resumption of the Work and completion of the Contract. The Owner may complete the Work using any or all materials at the work location that it deems suitable and acceptable. Any costs incurred by the Owner for the completion of the Work under the Contract will be the responsibility of the Surety including, but not limited to, the cost of additional Architect/Engineer services made necessary by such default or neglect.

From the time of notification of the default until Work resumes (either by the Surety or the Owner), the Owner will maintain traffic control devices and will do any other work it deems necessary, unless otherwise agreed upon by the Owner and the Surety. All costs associated with this work will be deducted from money due to the Surety.
The Owner will hold all money earned but not disbursed by the date of default. Upon resumption of the Work after the default, all payments will be made to the Surety. All costs and charges incurred by the Owner as a result of the default, including the cost of completing the Work under the Contract, costs of maintaining traffic control devices, costs for other work deemed necessary, cost of any Architect/Engineer services, and any applicable liquidated damages will be deducted from money due the Contractor for completed Work. If these costs exceed the sum that would have been payable under the Contract, the Surety will be liable and pay the Owner the balance of these costs in excess of the Contract price. This obligation for payment shall survive the termination of the Contract.

In case the costs incurred by the Owner are less than the amount that would have been payable under the Contract if the Work had been completed by the original Contractor, the Owner will be entitled to retain the difference.

If a Contractor defaults, Owner approval of all subcontractors is required. HUB's must continue to be used in accordance with the commitments previously approved by the Owner.

If it is determined, after the Contractor is declared in default, that the Contractor was not in default, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of the Owner as provided in Termination for Convenience of Owner provision of the Contract Documents.

37.2 Termination by Contractor: If the Work is stopped for a period of ninety (90) calendar days under an order of any court or other public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the Work under a contract with the Contractor, then the Contractor may, upon ten (10) additional calendar days written notice to the Owner, terminate the Contract and recover from the Owner payment for all Work executed and for any loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and overhead associated with such work or losses and reasonable expenses resulting from such termination. If the cause of the Work stoppage is removed prior to the end of the ten (10) calendar day notice period, the Contractor may not terminate the Contract.

37.3 Termination for Convenience of Owner: Prior to, or during the performance of the Work, the Owner reserves the right to terminate the Contract for unforeseen causes not limited to court orders, loss of funding, acts of the federal government to discontinue the Work, etc., that may occur. Upon such an occurrence, the following procedures will be adhered to:

37.3.1 The Owner will immediately notify the Contractor in writing, specifying the effective termination date of the contract.

37.3.2 After receipt of the notice of termination, the Contractor shall immediately proceed with the following obligations, regardless of any delay in determining or adjusting any amounts due at that point in the Contract.
(a) Stop all Work.
(b) Place no further subcontracts or orders for materials or services.
(c) Terminate all subcontracts.
(d) Cancel all material and equipment orders as applicable.
(e) Take action that is necessary to protect and preserve all property related to this Contract that is in the Contractor's possession.

37.3.3 Within 180 calendar days of the date of the notice of termination, the Contractor shall submit a final termination settlement proposal to the Owner based upon costs up to the date of termination, reasonable profit on work done only, and reasonable demobilization costs. If the Contractor fails to submit the proposal within the time allowed, the Owner may determine the amount due to the Contractor because of the termination and shall pay the determined amount to the Contractor.

37.3.4 If the Contractor and the Owner fail to agree on the settlement amount, the matter will be handled as a contract claim.

ITEM 38. RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor agrees to indemnify and save harmless the State and its agents and employees from all suits, action or claims and from all liability and damages for any injury or damage to any person or property due to the Contractor's negligence in the performance of the Work and from any claims arising or amounts recovered under any laws, including workers' compensation and the Texas Tort Claims Act. Indemnify and save harmless the State and assume responsibility for all for all damages and injury to property of any character occurring during the prosecution of the Work resulting from any act, omission, neglect or misconduct on the Contractor's part in the manner or method of executing the Work; from failure to properly execute the Work; or from defective work or materials. The Contractor shall not be released from these responsibilities until all claims have been settled and suitable evidence to that effect furnished to TxDOT.

38.1 If the Contractor asserts any claim or brings any type of legal action (including an Original Action, Third Party Action, or Cross Claim) against any Commissioner, or individual employee of the Department for any cause of action or claim for alleged negligence arising from the Contract, the Contractor will be ineligible to bid on any contract with the Department during the pendency of the claim or legal action.

38.2 Individual owners of a contracting firm are treated the same as a contractor. Therefore, the requirement is met when owners of a contracting firm bring a claim or legal action against a TxDOT employee.

38.3 The Construction Division (CST) will maintain a list of contractors who have brought claims or legal actions against TxDOT employees in relation to contracts where the provision is included.
ITEM 39. CIVIL RIGHTS COMPLIANCE. The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, which are herein incorporated and made a part of this contract.

During the performance of this contract, the Contractor, awarded the contract, for itself, its assignees and successors in interest (hereinafter referred to as the "Company"), agrees as follows:

39.1 Compliance with Regulations: The Company shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the U. S. Department of Transportation, Title 49, Code of Federal Regulations, Part 21, and Title 23, Code of Federal Regulations, Part 710.405(b), as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

39.2 Nondiscrimination: The Company, with regard to the work performed by him during the contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Company shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 and part 710.405(b) of the Regulations, including employment practices when the contract covers a program set forth in Appendix 8 of the Regulations.

39.3 Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Company for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Company of the Company's obligation under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, sex, or national origin.

39.4 Information and Reports: The Company shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to his books, records, accounts, other sources of information, and his facilities as may be determined by the Department or the Federal Highway Administration to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of the Company is in the exclusive possession of another who fails or refuses to furnish this information, the Company shall so certify to the Department or the Federal Highway Administration, as appropriate, and shall set forth what efforts he has made to obtain the information.

39.5 Sanctions for Noncompliance: In the event of the Company's noncompliance with the nondiscrimination provisions of this contract, the Department shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

(a) withholding of payments to the Company under the contract until the Company complies and/or
(b) cancellation, termination, or suspension of the contract, in whole or in part
39.6 Incorporation of Provisions: The Company shall include the provisions of paragraphs (39.1) thru (39.5) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant hereto. The Company shall take such action with respect to any subcontract or procurement as the Department or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance provided, however, that in the event the Company becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Company may request the Texas Department of Transportation to enter into such litigation to protect the interests of the State, and, in addition, the Company may request the United States to enter into such litigation to protect the interests of the United States.

ITEM 40. ATTACHMENTS:

Project Specifications and/or Drawings

HUB Information (if required)
SECTION 01 10 20
DEFINITIONS AND STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Summary
B. Definitions
C. Specification Format and Content Explanation
D. Drawing Symbols
E. Industry Standards
F. Governing Regulations / Authorities
G. Submittals

1.2 SUMMARY: This section specifies administrative requirements for compliance with governing regulations, codes and standards.

A. Requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards.

1.3 DEFINITIONS

A. General: Definitions contained in this Article are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract documents.

B. Indicated: Refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help locate the reference; not limitation on location is intended except as specifically noted.

C. Directed: Terms such as "directed," "requested," "authorized," "selected," "reviewed," "required," and "permitted" mean "directed by the Architect/Engineer," "requested by the Architect/Engineer," and similar phrases. However, no implied meaning shall be interpreted to extend the Architect/Engineer's responsibility into the Contractor's area of construction supervision.

D. Review: The term "reviewed" where used in conjunction with the Architect/Engineer's action on the Contractor's submittals, applications, and requests, is limited to the responsibilities and duties of the Architect/Engineer stated in Uniform General
Conditions. Such review shall not release the Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.

E. Regulation: The term "Regulations" includes laws, statutes, ordinances and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work, whether they are lawfully imposed by authorities having jurisdiction or not.

F. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

G. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.

H. Provide: The term "provide" means "to furnish and install, complete and ready for use".

I. Installer: An "Installer" is an entity engaged by the Contractor, either as an employee, subcontractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the construction they are engaged to perform.

J. The term "experienced," when used with the term "Installer" means having a minimum of 5 previous Projects similar in size and scope to this Project and familiar with the precautions required, and has complied with requirements of the authority having jurisdiction.

K. Project Site is the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other construction as part of the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.

L. Testing Laboratories: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on, and, if required, to interpret results of those inspections or tests. TxDOT reserves the right and at its sole discretion to perform as the "test laboratory", in part or in entirety, utilizing TxDOT laboratories and staff.

1.4 SPECIFICATION FORMAT AND CONTENT EXPLANATION: This Article is provided to help the user of these specifications understand the format, language, implied requirements, and similar conventions. None of the explanations shall be interpreted to modify the substance of Contract requirements.

A. Specification Format: These Specifications are organized in accordance with Construction Specifications Institute (CSI) 44 major divisions format. This organization conforms generally to recognized construction industry practice.

B. Specification Content: This Specification has been produced employing conventions in the use of language and the intended meaning of certain terms, words, and phrases
when used in particular situations or circumstances. These conventions are explained as follows:

1. Language used in the Specifications and other Contract Documents is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and where the full context of the Contract Documents so indicates.

2. Imperative Language is used generally in the Specifications. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.

C. Assignment of Specialists: The Specifications requires that certain specific Construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and the assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.

1. This requirement shall not be interpreted to conflict with enforcement of building codes and similar regulations governing the Work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

2. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter". It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.


1.5 DRAWING SYMBOLS

A. Graphic Symbols used on the Drawings are those recognized in the construction industry for purposes indicated. Where not otherwise noted, symbols are defined by "Architectural Graphic Standards," published by John Wiley & Sons, Inc., seventh edition.

B. Mechanical/Electrical Drawings: Graphic symbols used on mechanical and electrical Drawings are generally aligned with symbols recommended by ASHRAE. Where appropriate, they are supplemented by more specific symbols recommended by technical associations including, ASME, ASPE, IEEE and similar organizations. Refer instances of uncertainty to the Architect/Engineer for clarification before proceeding.

1.6 INDUSTRY STANDARDS

A. Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Such standards are made a part
of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.

1. Referenced standards take precedence over standards that are not referenced but recognized in the construction industry as applicable.
2. Non-referenced standards are not directly applicable to the Work, except as a general requirement of whether the Work complies with construction industry standards.
3. Non-referenced standards: Except as otherwise limited by the Contract Documents, standards not referenced by recognized in the industry as applicable will be enforced for performance of the Work. The Architect/Engineer will decide whether a code or standard is applicable, or which of several are applicable.

B. Publication Dates: Where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.

1. Updated Standards: At the request of the Architect/Engineer, Contractor or authority having jurisdiction, submit a Change Order proposal where an applicable code or standard has been revised and reissued after the date of the Contract Documents and before performance of Work affected. The Architect/Engineer will decide whether to issue a Change Order to proceed with the updated standard.

C. Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Architect/Engineer for a decision before proceeding.

1. Minimum Quantities or Quality Levels: In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances of uncertainty to the Architect/Engineer for decision before proceeding.

D. Copies of standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entities' Construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.
2. Although copies of standards needed for enforcement of requirements may be part of required submittals, the Architect/Engineer reserves the right to require the Contractor to submit additional copies as necessary for enforcement of requirements.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable
to the context of the text provision. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

F. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms as referenced in Contract Documents are defined to mean the associated names. Names and addresses are subject to change, and are believed to be, but are not assured to be, accurate as of date of Contract Documents:

<table>
<thead>
<tr>
<th></th>
<th>Abbreviation</th>
<th>Name</th>
<th>Address</th>
<th>City, State, Zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
<td>444 No. Capitol St., Suite 225, Washington, DC 20001</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>ACI</td>
<td>American Concrete Institute</td>
<td>P. O. Box 19150, Detroit, MI 48219</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>ACIL</td>
<td>American Council of Independent Laboratories</td>
<td>1725 K Street, NW, Washington, DC 20006</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>ACPA</td>
<td>American Concrete Pipe Association</td>
<td>8320 Old Courthouse Road, Vienna, VA 22180</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>AGA</td>
<td>American Gas Association</td>
<td>1515 Wilson Blvd., Arlington, VA 22209</td>
<td></td>
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<tr>
<td>6.</td>
<td>AI</td>
<td>Asphalt Institute</td>
<td>Asphalt Institute Building, College Park, MD 20740</td>
<td></td>
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<tr>
<td>7.</td>
<td>AIA</td>
<td>American Institute of Architects</td>
<td>1735 New York Ave., NW, Washington, DC 20006</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>AIHA</td>
<td>American Industrial Hygiene Association</td>
<td>475 Wolf Ledges Parkway, Akron, OH 44311</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>AISC</td>
<td>American Institute of Steel Construction</td>
<td>400 No. Michigan Ave., 8th Floor, Chicago, IL 60611</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>AISI</td>
<td>American Iron and Steel Institute</td>
<td>1000 Sixteenth St., N.W., Washington, DC 20036</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>ALI</td>
<td>Associated Laboratories</td>
<td>641 So. Vermont Street, Palatine, IL 60067</td>
<td></td>
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<tr>
<td>12.</td>
<td>ANSI</td>
<td>American National Standards Institute</td>
<td>1430 Broadway, New York, NY 10018</td>
<td></td>
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<td>13.</td>
<td>API</td>
<td>American Petroleum Institute</td>
<td>1220 L Street, N.W.</td>
<td></td>
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<tr>
<td>14.</td>
<td>ASC</td>
<td>Adhesive and Sealant Council</td>
<td>Washington, DC 20005</td>
<td>703-841-1112</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1500 Wilson Blvd., Suite 515</td>
<td>Arlington, VA 22209</td>
<td></td>
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<tr>
<td>15.</td>
<td>ASME</td>
<td>American Society of Mechanical Engineers</td>
<td>345 East 47th St. New York, New York 10017</td>
<td>212-705-7722</td>
</tr>
<tr>
<td>16.</td>
<td>ASPE</td>
<td>American Society of Plumbing Engineers</td>
<td>3617 Thousand Oaks Blvd., Suite 210 Westlake, CA 91362</td>
<td>805-495-7120</td>
</tr>
<tr>
<td>17.</td>
<td>ASSE</td>
<td>American Society of Sanitary Engineering</td>
<td>P. O. Box 40362 Bay Village, OH 44140</td>
<td>216-835-3040</td>
</tr>
<tr>
<td>19.</td>
<td>AWS</td>
<td>American Welding Society</td>
<td>P. O. Box 351040 Miami, FL 33135</td>
<td>305-443-9353</td>
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<tr>
<td>20.</td>
<td>AWWA</td>
<td>American Water Works Association</td>
<td>6666 W. Quincy Ave. Denver, CO 80235</td>
<td>303-794-7711</td>
</tr>
<tr>
<td>21.</td>
<td>CRSI</td>
<td>Concrete Reinforcing Steel Institute</td>
<td>933 Plum Grove Road Schaumburg, IL 60195</td>
<td>312-490-1700</td>
</tr>
<tr>
<td>22.</td>
<td>IEEE</td>
<td>Institute of Electrical and Electronic Engineers</td>
<td>345 E. 47th St. New York, NY 10017</td>
<td>607-723-3531</td>
</tr>
<tr>
<td>23.</td>
<td>ISA</td>
<td>Instrument Society of America</td>
<td>P. O. Box 12277 67 Alexander Drive Research Triangle Park, NC 27709</td>
<td>919-549-8411</td>
</tr>
<tr>
<td>24.</td>
<td>LPI</td>
<td>Lightning Protection Institute</td>
<td>P. O. Box 458 Harvard, IL 60033</td>
<td>815-943-7211</td>
</tr>
<tr>
<td>25.</td>
<td>MCAA</td>
<td>Mechanical Contractor's Association of America</td>
<td>5410 Grosvenor Lane, Suite 120 Bethesda, MD 20814</td>
<td>301-897-0770</td>
</tr>
<tr>
<td>26.</td>
<td>MSS</td>
<td>Manufacturers Standardization Society of the Valve and Fittings Industry</td>
<td>127 Park St., NE Vienna, VA 22180</td>
<td>703-281-6613</td>
</tr>
<tr>
<td>27.</td>
<td>NAPA</td>
<td>National Asphalt Pavement Association</td>
<td>Calvert Building, Suite 620 6811 Kenilworth Ave.</td>
<td>301-779-4880</td>
</tr>
</tbody>
</table>
Federal Government Agencies: Names and titles of federal government standard or Specification producing agencies are frequently abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or Specification producing agencies of the federal government. Names and addresses are subject to change, but are believed to be, but are not assured to be, accurate and up-to-date as of the date of the Contract Documents.

1. CE Corps of Engineers
   (US Dept. of the Army)
   Chief of Engineers - Referral
   Washington, DC 20314

28. NEC National Electric Code (by NFPA)
29. NECA National Electrical Contractors Association
    7315 Wisconsin Ave.
    Bethesda, MD 20814
30. NEMA National Electrical Manufacturers Association
    2101 L Street, NW, Suite 300
    Washington, DC 20037
31. NFPA National Fire Protection Association
    Batterymarth Park
    Quincy, MA 02269
32. NPCA National Paint and Coatings Association
    1500 Rhode Island Ave., NW
    Washington, DC 20005
33. PDI Plumbing and Draining Institute
    (c/o Austin O. Roche, Jr.)
    5342 Boulevard Pl.
    Indianapolis, IN 46208
34. PEI Petroleum Equipment Institute
    6514 East 69th St.
    Tulsa, OK 74133-1719
35. SSPC Steel Structures Painting Council
    4400 Fifth Avenue
    Pittsburgh, PA 15213
36. UL Underwriters Laboratories
    333 Pfingsten Rd.
    Northbrook, IL 60062
37. WRI Wire Reinforcement Institute
    8361 A Greensboro Drive
    McLean, VA 22102
38. WSC Water Systems Council
    600 S. Federal St., Suite 400
    Chicago, IL 60605
39. WWPA Woven Wire Products Association
    2515 No. Nordica Ave.
    Chicago, IL 6063
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<tbody>
<tr>
<td>3.</td>
<td>CPSC</td>
<td>Consumer Product Safety Commission 1111 Eighteenth St., NW Washington, DC 20207</td>
<td>202-634-7700</td>
</tr>
<tr>
<td>5.</td>
<td>DOC</td>
<td>Department of Commerce 14\textsuperscript{th} St and Constitution Ave., NW Washington, DC 20230</td>
<td>202-377-2000</td>
</tr>
<tr>
<td>6.</td>
<td>DOT</td>
<td>Department of Transportation 400 Seventh St. SW Washington, DC 20590</td>
<td>202-426-4000</td>
</tr>
<tr>
<td>7.</td>
<td>EPA</td>
<td>Environmental Protection Agency 401 M St., SW Washington, DC 20460</td>
<td>202-829-3535</td>
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<td>8.</td>
<td>FS</td>
<td>Federal Specification (General Services Administration) Specifications Unit (WFSIS) 7\textsuperscript{th} and D St., SW Washington, DC 20406</td>
<td>202-472-2205 202-472-2140</td>
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<tr>
<td>9.</td>
<td>GSA</td>
<td>General Services Administration F Street and 18\textsuperscript{th} St., NW Washington, DC 20405</td>
<td>202-655-400</td>
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<tr>
<td>11.</td>
<td>NBS</td>
<td>National Bureau of Standards (US Dept. of Commerce) Gaithersburg, MD 20234</td>
<td>301-921-1000</td>
</tr>
<tr>
<td>13.</td>
<td>PS</td>
<td>Product Standard of NBS (US Dept. of Commerce)</td>
<td>202-783-3238</td>
</tr>
</tbody>
</table>
1.7 GOVERNING REGULATIONS/AUTHORITIES: The Architect/Engineer has contacted authorities having jurisdiction where necessary to obtain information necessary for the preparation of Contract Documents; that information may or may not be of significance to the Contractor. Contact authorities having jurisdiction directly for information and decisions having a bearing on the Work.

A. Copies of Correspondence: During preparation of the Contract Documents, the Architect/Engineer has maintained a file containing correspondence with authorities having jurisdiction. This file is available at the Architect/Engineer’s office for reference. If requested, the Architect/Engineer will provide copies of correspondence at cost of reproduction.

B. Copies of Regulations: Obtain copies of the following regulations and retain at the Project Site, available for reference by parties who have a reasonable need for such reference.

C. Trade Union Jurisdictions: The Contractor shall maintain, and require subcontractors to maintain complete current information on jurisdictional matters, regulations and pending actions, as applicable to construction activities. The manner in which Contract Documents have been organized and subdivided is not intended to indicate of trade union or jurisdictional agreements.
   1. Discuss new developments at Project meetings at the earliest feasible dates. Record relevant information and actions agreed upon.
   2. Assign and subcontract construction activities, and employ tradesmen and laborers, in a manner that will not unduly risk jurisdictional disputes that could result in conflicts, delays, claims and losses.

1.8 SUBMITTALS

A. Permits, Licenses, and Certificates: For the Owner’s records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4

END OF SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Schedule of values.
B. Applications for payment.
C. Change procedures.
D. Defect assessment.

1.2 SCHEDULE OF VALUES

A. Submit printed schedule on Owner provide form or electronic media.

B. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
   1. Correlate line items in the Schedule of Values with other required administrative forms and schedules, including the following:
      a. Application for Payment forms with Continuation Sheets
      b. Submittals Schedule
      c. Contractor's Construction Schedule
   2. Submit the Schedule of Values to the Architect in duplicate no later than seven days before the date scheduled for submittal of initial Applications for Payment.

C. Format and Content: Use the Project Manual table of contents as a guide to establish line items for the Schedule of Values. Provide at least one line item for each Specification Section. Identify separately site mobilization, bonds and insurance, and a breakdown of the General Contractors general conditions.
   1. Identification: Include the following Project identification on the Schedule of Values:
      a. Project name and location
      b. Name of Architect
      c. TxDOT project number
      d. Contractor's name and address
      e. Date of submittal
   2. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
      a. Related Specification Section or Division
      b. Description of the Work
      c. Change Orders (numbers) that affect value
      d. Allowances (numbers) per bid proposal
      e. Dollar value
         1) Percentage of the Contract Sum to nearest one-hundredth percent, adjusted to total 100 percent
3. Provide a breakdown of the Contract Sum (labor & materials) in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.

4. Round amounts to nearest whole dollar; total shall equal the Contract Sum.

5. 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.
   a. Differentiate between items stored on-site and items stored off-site. If specified, include evidence of insurance or bonded warehousing.

6. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.

7. Provide separate line items in the Schedule of Values for each Allowance per bid proposal.

8. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
   a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.

9. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

10. Provide any additional information as set forth in the UGC.

1.3 APPLICATIONS FOR PAYMENT

A. Submit two copies of each application to Architect for review, 7 days prior to Payment Application Time.

B. Each monthly Application for Payment shall be consistent with previous applications and payments as certified by Architect, TxDOT Project Manager, TxDOT District Representative and paid for by Owner.
   1. Initial Application for Payment, Application for Payment at Substantial Completion, and final Application for Payment require additional documentation.

C. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction Work covered by each Application for Payment is the period indicated in the Agreement.

D. Payment Application Forms: Use forms provided by TxDOT for Applications for Payment.

E. Application Preparation: Complete every entry on form. Architect and TxDOT Project Manager will return incomplete applications without action.
   1. Entries shall match data on the Schedule of Values. Use updated schedule if revisions were made.
2. Include amounts of Change Orders approved before last day of construction period covered by application.
3. Submit Contractor's Affidavit of Payment of Debts and Claims – Monthly Progress Payment
5. Submit updated two construction schedules with each Application for Payment.

F. Transmittal: Submit 5 signed original copies of each Application for Payment to Architect by a method ensuring receipt within 24 hours.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.

G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors
2. Schedule of Values
3. Contractor's Construction Schedule
4. Products list
5. Schedule of unit prices
6. Submittals Schedule
7. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work

H. Application for Payment at Substantial Completion: After issuing the Certificate of Substantial Completion, submit an Application for Payment for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

I. Final Payment Application: Submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Updated final statement, accounting for final changes to the Contract Sum
2. Owner provided document, "Contractor's Affidavit of Payment of Debts and Claims – Final Payment"
3. Owner provided document, "Consent of Surety to Final Payment"
4. Evidence that claims have been settled
5. Final liquidated damages settlement statement if applicable.
7. Buy America form D-9-USA 1 or it equivalent.
8. If required, a close-out Change Order.
9. Provide any additional information as set forth in UGC.

J. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question. Include the following with Application for Payment:
1. Affidavits attesting to off-site stored products.
2. Construction progress schedules, revised and current.

1.4 CHANGE PROCEDURES

A. Submittals: Submit name of individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.

B. The Architect/Engineer will advise of minor changes in the Work not involving adjustment to Contract Sum/Price or Contract Time by issuing supplemental instructions.

C. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
   1. Proposal Requests issued by Architect are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
   2. Within 10 days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
      a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
      b. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
      c. Include costs of labor and supervision directly attributable to the change.
      d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

D. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Architect.
   1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
   2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
   3. Indicate applicable delivery charges, equipment rental, and amounts of trade discounts.
   4. Include costs of labor and supervision directly attributable to the change.
   5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Use TxDOT approved Proposal Requests.
   a. Document each quotation for change in cost or time with sufficient data to allow evaluation of quotation.

1.5 CHANGE ORDER PROCEDURES

A. On approval of a Proposal Request, Owner will issue a Change Order for signatures of Contractor and Architect on Owner’s appropriate form.
   1. Execution of Change Orders: Owner will issue Change Orders for signatures of parties as provided in the Contract Document. Final approval of a Change Order is reserved solely to TxDOT in accordance with TxDOT signature authorization policy and may not be delegated.

B. Correlation Of Contractor Submittals:
   1. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as separate line item and adjust Contract Sum/Price.
   2. Promptly revise progress schedules to reflect change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
   3. Promptly enter changes in Project Record Documents.

1.6 DEFECT ASSESSMENT

A. Replace the Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of the Architect/Engineer, it is not practical to remove and replace the Work, the Architect/Engineer and/or Owner will direct appropriate remedy or adjust payment.

C. The defective Work may remain, but unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer and/or Owner.

D. Defective Work will be partially repaired to instructions of Architect/Engineer and/or Owner and unit sum/price will be adjusted to new sum/price at discretion of Architect/Engineer and/or Owner.

E. Individual specification sections may modify these options or may identify specific formula or percentage sum/price reduction.

F. Authority of Architect/Engineer and/or Owner to assess defects and identify payment adjustment, is final.

G. Non-Payment For Rejected Products: Payment will not be made for rejected products for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from transporting vehicle.
   4. Products placed beyond lines and levels of required Work.
5. Products remaining on hand after completion of the Work.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION
SECTION 01330
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures
B. Construction progress schedules
C. Proposed products list
D. Subcontractor List
E. Product data
F. Shop drawings
G. Samples
H. Design data
I. Test reports
J. Certificates
K. Manufacturer's instructions
L. Manufacturer's field reports
M. Erection drawings
N. Construction photographs
O. Project Warranty And Maintenance Manual

1.2 SUBMITTAL PROCEDURES

A. General: Electronic copies of CAD Drawings of the Contract Drawings will not be provided by Architect for Contractor's use in preparing submittals.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
   a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. 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.
   1. Initial Review: Allow 21 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
   2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
   3. Resubmittal Review: Allow 15 days for review of each resubmittal.
   4. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 21 days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.
   5. Schedule submissions at least 40 days before reviewed submittals will be needed, in accordance with the above review times noted above (the above allows for one resubmittal review and distribution) and approved submittal schedule.

D. Insert list of submittals below allowing concurrent review or delete and identify submittals in Sections where they are specified. Structural, mechanical, plumbing, and electrical components are examples of the Work that often require simultaneous transmittal to Architect and consultants.

E. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of the Work and Contract Documents.
   1. Coordinate each submittal with requirements of work of Contract Documents.
   2. Contractor's responsibility for errors and omissions in submittals is not relieved by Architect's review of submittals.
   3. Contractor's responsibility for deviations in submittals from requirements of Contract Documents is not relieved by Architect's review of submittals, unless Architect gives written acceptance of specific deviations.

F. Identification: Place a permanent label or title block on each submittal for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.

2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor’s review and approval markings and action taken by Architect.

3. Include the following information on label for processing and recording action taken:
   a. Project name
   b. Date
   c. Name and address of Architect
   d. Name and address of Contractor
   e. Name and address of Subcontractor
   f. Name and address of Supplier
   g. Name of Manufacturer
   h. Submittal number
   i. Number and title of appropriate Specification Section
   j. Drawing number and detail references, as appropriate
   k. Location(s) where product is to be installed, as appropriate
   l. Other necessary identification

G. Deviations: Highlight, encircle, or otherwise specifically identify deviations from the Contract Documents on submittals.

H. Additional Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
   1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
   2. Additional copies submitted for maintenance manuals will not be marked with action taken and will be returned.

I. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return submittals, without review, received from sources other than Contractor.
   1. Transmittal Form: Use form acceptable to the Owner and Architect.
      Provide locations on form for the following information:
      a. Project name
      b. Date
      c. Destination (To)
      d. Source (from)
      e. Names of Subcontractor, Manufacturer, and Supplier
      f. Category and type of submittal
      g. Submittal purpose and description
      h. Specification Section number and title
      i. Drawing number and detail references
      j. Transmittal number, numbered consecutively
      k. Submittal and transmittal distribution record
      l. Remarks
      m. Signature of Transmitter
2. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Architect on previous submittals, and deviations from requirements in the Contract Documents, including minor variations and limitations. Include same label information as related submittal.

J. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
   1. When revised for resubmission, identify changes made since previous submission.
   2. Mark revised submittals with original number and sequential alphabetic suffix. Note date and content of previous submittal.
   3. Note date and content of revision in label or title block and clearly indicate extent of revision.

K. Allow space on submittals for Contractor and Architect/Engineer review stamps.

L. Resubmit submittals until they are marked 'REVIEWED'.

M. Distribution: Furnish copies of final submittals to Manufacturers, Subcontractors, Suppliers, Fabricators, Installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
   1. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report inability to comply with requirements.

N. Use for Construction: Use only final submittals with mark indicating 'REVIEWED'.
   1. Begin no work which requires submittals until return of submittals with Architect's stamp and initials or signature indicating review.

O. Submittals not requested will not be recognized or processed.

1.3 CONSTRUCTION PROGRESS SCHEDULES

A. Submit preliminary outline Schedules within 15 days after date of Owner-Contractor Agreement for coordination with Owner's requirements. After review, submit detailed schedules within 7 days modified to accommodate revisions recommended by Architect/Engineer and Owner.

B. Related Section 01 32 16 – Construction Progress Schedule: Submit revised Progress Schedules with each Application for Payment.

C. Distribute copies of reviewed schedules to Project site file, Subcontractors, Suppliers, and other concerned parties.

D. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
E. Submit computer generated horizontal bar chart or other approved form with separate line for each section of Work, identifying first work day of each week.

F. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates, and duration.

G. Indicate estimated percentage of completion for each item of Work at each submission.

H. Submit separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products and products identified under Allowances, and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.

I. Indicate delivery dates for Owner furnished products and products identified under Allowances.

J. Revisions To Schedules:
1. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including effect of changes on schedules of separate Contractors.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of Manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give Manufacturer, trade name, model or catalog designation, and reference standards.

1.5 SUBCONTRACTOR LIST

A. Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity perform subcontract or supplying products
2. Number and title of related Specification Sections(s) cover by Subcontractor
3. Drawing number and detail references, as appropriate, covered by subcontract
B. Submit three copies of Subcontractor list, unless otherwise indicated. Architect will return two copies.
   1. Mark up and retain one returned copy as a Project Record Document.

1.6 PRODUCT DATA
A. General: Prepare and submit Action Submittals required by individual Specification Sections.
B. Product Data: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
C. Submit number three Contractor copies, plus two copies Architect/Engineer will retain.
D. Mark each copy to identify applicable products, models, options, and other data. Supplement Manufacturers' standard data to provide information specific to this Project.
E. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
F. Distribute copies after review.

1.7 SHOP DRAWINGS
A. Prior to submitting shop drawings, Contractor shall furnish Architect with complete Shop Drawing Submittal Log. No Submittals will be reviewed until a complete Submittal Log has been submitted to Architect.
   1. Contractor shall submit all required shop drawings and product data to the Architect with reasonable promptness and in an orderly sequence so as to cause no delay in the work.
   2. Prepare and submit, with construction schedule, a separate schedule listing dates for submission and lead dates for reviewed shop drawings, product data and samples for each item.
   3. No extension of time shall be allowed because of failure to properly coordinate and sequence submittals.
B. Shop Drawings: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
C. 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.
   1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
a. Dimensions
b. Identification of products
c. Fabrication and installation drawings
d. Roughing-in and setting diagrams
e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring
f. Shopwork manufacturing instructions
g. Templates and patterns
h. Schedules
i. Design calculations
j. Compliance with specified standards
k. Notation of coordination requirements
l. Notation of dimensions established by field measurement
m. Relationship to adjoining construction clearly indicated
n. Seal and signature of professional engineer if specified
o. Wiring Diagrams: Differentiate between Manufacturer-installed and field-installed wiring

2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 22 by 24 inches.

3. Number of Copies: Submit five opaque copies of each submittal, unless copies are required for operation and maintenance manuals. Architect will retain two copies; remainder will be returned. Mark up and retain one returned copy as a Project Record Drawing

D. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

E. All work must ultimately comply with the contract documents unless Architect/Engineer gives specific written acceptance of specific deviations.

F. Distribute copies after review.

1.8 SAMPLES

A. Samples: Submit to Architect/Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.

B. Samples For Initial Selection as Specified in Product Sections:
   1. Submit to Architect/Engineer for aesthetic, color, or finish selection.
   2. Submit samples of finishes from full range of Manufacturers' standard colors, textures, and patterns for Architect/Engineer selection.

C. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
D. Include identification on each sample, with full Project information.

E. Submit number of samples specified in individual specification sections; Architect/Engineer will retain two samples.
   1. Architect will retain two Sample sets; remainder will be returned. Mark up and retain one returned Sample set as a Project Record Sample.
   2. Retain one sample on construction site for field comparison as needed.

F. Samples will not be used for testing purposes unless specifically stated in specification section.

G. Distribute samples after review.

1.9 DESIGN DATA

A. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.

B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.10 TEST REPORTS

A. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.

B. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.11 CERTIFICATES

A. When specified in individual specification sections, submit certification by Manufacturer, installation/application Subcontractor, or Contractor to Architect/Engineer, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect/Engineer.

1.12 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Architect/Engineer for delivery to Owner in quantities specified for Product Data.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
1.13 MANUFACTURER'S FIELD REPORTS

A. Submit reports for Architect/Engineer's benefit as contract administrator or for Owner.

B. Submit report within 10 days of observation to Architect/Engineer for information.

C. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

1.14 ERECTION DRAWINGS

A. Submit drawings for Architect/Engineer's benefit as contract administrator or for Owner.

B. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

C. Data indicating inappropriate or unacceptable Work may be subject to action by Architect/Engineer or Owner.

1.15 PROJECT WARRANTY AND MAINTENANCE MANUAL:

A. Prior to final payment, the Contractor shall furnish two complete sets, in tabbed standard size ring binders, of equipment data, maintenance information, operations instructions, and warranties for equipment and systems provided under this contract. See Section 01700 for detailed requirements.

B. Provide warranties as specified. Warranties shall not limit length of time for remedy of damages Owner may have by legal statute. Contractor, Supplier, or Installer responsible for performance of warranty shall sign warranties.

C. Material Safety Data Sheets (MSDSs): Submit information directly to TxDOT.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTRACTOR'S 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 Architect.

B. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement...
certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

PART 4 - ARCHITECT'S/ACTION

4.1 General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

A. Action Submittals: Architect will review each submittal, make marks to indicate corrections or modifications required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken.

B. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.

C. Partial submittals are not acceptable, will be considered nonresponsive, and will be returned without review.

D. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

END OF SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Quality control and control of installation.

B. Tolerances.

C. References.

D. Labeling.

E. Mock-up requirements.

F. Testing and inspection services.

G. Manufacturers' field services.

H. Examination.

I. Preparation.

1.2 QUALITY CONTROL AND CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence, and secure Manufacturers certification as certified installer, when applicable.

C. When manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.

D. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

E. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
F. Perform Work by persons qualified to produce required and specified quality. Perform Work by persons qualified to produce required and specified quality. The Contractor shall comply with applicable local, state, and federal codes and regulations.

1. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for or this Project, whose work has resulted in construction with a record of successful in-service performance.

2. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

3. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

4. 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. Engineering services are defined as those performed for installation of the systems, assemblies, or products that are similar to those indicated for this Project in material, design, and extent.

5. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

6. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.

7. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

8. Factory-Authorized Service Representative Qualifications: An authorized representative of Manufacturer who is trained and approved by Manufacturer to inspect installation of Manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

G. Verify field measurements are as indicated on Shop Drawings or as instructed by manufacturer.

H. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

I. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. 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
5. Delivery of samples to testing agencies
6. Preliminary design mix proposed for use for material mixes that require control by testing agency
7. Security and protection for samples and for testing and inspecting equipment at Project site

J. 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.

1.3 TOLERANCES
A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
B. Comply with manufacturers' tolerances. When manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 REFERENCES
A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of standard, except when more rigid requirements are specified or are required by applicable codes.
B. Conform to reference standard by date of issue current on date for receiving bids, except where specific date is established by code.
C. Obtain copies of standards where required by product specification sections.
D. When specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
E. Neither contractual relationships, duties, nor responsibilities of parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in reference documents.

1.5 LABELING
A. Attach label from agency approved by authority having jurisdiction for products, assemblies, and systems required to be labeled by applicable code.
B. Label Information: Include manufacturer's or fabricator's identification, approved agency identification, and the following information, as applicable, on each label.
   1. Model number.
   2. Serial number.
   3. Performance characteristics.
1.6 MOCK-UP REQUIREMENTS

A. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
   1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
   2. Notify Architect 14 days in advance of dates and times when mockups will be constructed.
   3. Demonstrate the proposed range of aesthetic effects and workmanship.
   4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
   5. Allow seven days for initial review and each re-review of each mockup.

B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.

C. Accepted mock-ups shall be comparison standard for remaining Work.

D. Where mock-up has been accepted by Architect/Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so by Architect/Engineer.

1.7 TESTING AND INSPECTION SERVICES

A. Refer to Specifications Section 01 40 10 – Testing Laboratory Services.

B. Employ and pay for services of an independent testing agency or laboratory acceptable to Owner to perform specified testing.
   1. Prior to start of Work, submit testing laboratory name, address, and telephone number, and names of full time specialist and responsible officer.
   2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of deficiencies reported by inspection.

C. The independent firm will perform tests, inspections and other services specified in individual specification sections and as required by Architect/Engineer and / or Owner.
   1. Laboratory: Authorized to operate at Project location.
   2. Laboratory Staff: Maintain full time registered Engineer on staff to review services.
   3. Testing Equipment: Calibrated at reasonable intervals with devices of an accuracy traceable to National Bureau of Standards or accepted values of natural physical constants.

D. Testing, inspections and source quality control may occur on or off project site. Perform off-site testing as required by Architect/Engineer or Owner.

E. The work will be observed by the Architect/Engineer (Owner's Representative) or the Owners field observer and performed to his satisfaction in accordance with the Contract Plans and Specifications. The Owner's representative and Architect/Engineer will decide
all questions which may arise as to the quality of acceptability of materials furnished and work performed; the manner of performance and rate of progress of the work; the interpretations of the contract plans and specifications; and the acceptable fulfillment of the contract on the part of the Contractor. The Owner’s decisions will be final, and he will have executive authority to enforce and make effective such decisions and orders if the contractor fails to carry out the work promptly.

F. Reports will be submitted by independent firm to Architect/Engineer, TxDOT Project Manager (2 copies) and Contractor, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.

G. Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.

1. Notify Architect/Engineer and independent firm 48 hours prior to expected time for operations requiring services.

2. Make arrangements with independent firm and pay for additional samples and tests required for Contractor’s use.

H. Testing and employment of testing agency or laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

I. Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by same independent firm on instructions by Architect/Engineer. Payment for re-testing or re-inspection will be charged to Contractor by deducting testing charges from Contract Sum/Price.

J. Agency Responsibilities:

1. Test samples of mixes submitted by Contractor.


3. Perform specified sampling and testing of products in accordance with specified standards.

4. Ascertaining compliance of materials and mixes with requirements of Contract Documents.

5. Promptly notify Architect/Engineer and Contractor of observed irregularities or non-conformance of Work or products.

6. Perform additional tests required by Architect/Engineer.

7. Attend preconstruction meetings and progress meetings.

K. Agency Reports: After each test, promptly submit two copies of report to Architect/Engineer and to Contractor. When requested by Architect/Engineer, provide interpretation of test results.

L. Limits On Testing Authority:

1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

2. Agency or laboratory may not approve or accept any portion of the Work.

3. Agency or laboratory may not assume duties of Contractor.

4. Agency or laboratory has no authority to stop the Work.
M. Any materials and/or workmanship which are rejected by the Engineer by reason of failure to conform to the requirements of the plans or specifications shall be removed and replaced at Contractor's expense, including testing expense to correct faulty work.

N. Inspections and testing required by law, ordinances, rules and regulations or other public authorities are the responsibility of the Contractor. It is the sole responsibility of the Contractor to call for testing and any work not tested will be automatically rejected.

O. Contained in the various specification sections are requirements for certification of products, testing, adjusting, and balancing of equipment and other tests and standards. Testing is required for, but not limited to, the following items of work:
   1. Soils-compaction control and hydrocarbon concentrations
   2. Cast-in-place concrete
   3. Concrete reinforcement
   4. Asphalt pavement
   5. Cement-Sand Backfill material
   6. Crushed limestone base materials
   7. Water and sludge
   8. Other items in the Scope of Work

1.8 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel; provide access to the work area.

B. Provide to laboratory, preliminary representative samples of materials to be tested in required quantities.

C. Furnish labor and equipment:
   1. To provide access to the work to be tested.
   2. To obtain and handle samples at the site.
   3. To facilitate inspections and tests.
   4. For laboratory's exclusive use for storage and curing of test samples.

1.9 MANUFACTURERS' FIELD SERVICES

A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and as applicable, and to initiate instructions when necessary.

B. Submit qualifications of observer to Architect/Engineer 30 days in advance of required observations. Observer subject to approval of Architect/Engineer or Owner. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

C. Refer to Section 01 33 00 - Submittal Procedures, MANUFACTURERS' FIELD REPORTS article.
PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify existing substrate is capable of structural support or attachment of new Work being applied or attached.

C. Examine and verify specific conditions described in individual specification sections.

D. Verify utility services are available, of correct characteristics, and in correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

3.3 TEST AND INSPECTION LOG

A. Prepare a record of tests and inspections. Include the following:
   1. Date test or inspection was conducted
   2. Description of the Work tested or inspected
   3. Date test or inspection results were transmitted to Architect
   4. Identification of testing agency or special inspector conducting test or inspection

B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.4 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
   1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
   2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.
C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION
SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Summary
B. Definitions
C. Submittals
D. Quality Assurance
E. Product Delivery, Storage and Handling.
F. Product Warranties.
G. Product Selection Procedures.
H. Product Substitution.
I. Comparable Products.

1.2 SUMMARY

A. Section includes administrative and procedural requirements for selection of products for use in Project.

B. Related Sections:
   1. Section 01 10 20 - Definition and Standards.
   2. Section 01 70 00 – Execution and Closeout Procedures
   3. Division 2 – 14, 21, 22-28, 31-33: Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
   1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature that is current as of date of the Contract Documents.
   2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

B. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

A. 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 form provided by Owner, reference Section 01 63 00 Substitutions and Product Options.

2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
   a. Statement indicating why specified material or product cannot be provided.
   b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
   c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
   d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
   e. Samples, where applicable or requested.
   f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
   g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
   h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
   i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
   j. Cost information, including a proposal of change, if any, in the Contract Sum.
k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
   a. Form of Acceptance: Change Order.
   b. Use product specified if Architect cannot make a decision on use of a proposed substitution within time allocated.

B. Comparable Product 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. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
      a. Form of Approval: As specified in Section 01 33 00 "Submittal Procedures."
      b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.

C. Basis-of-Design Product Specification Submittal: Comply with requirements in Section 01 33 00 "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.

B. Delivery and Handling:
   1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
   2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
   3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

C. Storage
   1. Store products to allow for inspection and measurement of quantity or counting of units.
   2. Store materials in a manner that will not endanger Project structure.
   3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
   4. Store cementitious products and materials on elevated platforms.
   5. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
   6. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
   7. Protect stored products from damage and liquids from freezing.
   8. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.7 PRODUCT WARRANTIES

A. 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. Venue for warranty legal issues shall be as stated in General Conditions.
   1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
   2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
   1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
   2. Refer to Division 2 – 14, 21, 22-28, 31-33 Sections for specific content requirements and particular requirements for submitting special warranties.

C. Submittal Time: Comply with requirements in Section 01 70 00 – Execution and Closeout Requirements.
PART 2 PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
   1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
   2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
   3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
   4. Where products are accompanied by the term "as selected," Architect will make selection.
   5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
   7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved," comply with provisions in Part 2 "Comparable Products" Article to obtain approval for use of an unnamed product.

B. Product Selection Procedures:
   1. Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
   2. Manufacturers: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
   3. Available Products: Where Specifications include a list of names of both products and manufacturers, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
   4. Available Manufacturers: Where Specifications include a list of manufacturers, provide a product by one of the manufacturers listed, or an unnamed manufacturer, that complies with requirements. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product.
   5. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 "Product Substitutions" Article for consideration of an unnamed product or system.
   6. Basis-of-Design Product: Where Specifications name a product and include a list of manufacturers, provide the specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions in Part 2 "Comparable Products" Article for consideration of an unnamed product by the other named manufacturers.
7. Visual Matching Specifications: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
   a. Standard Range: Where specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color pattern, or texture from manufacturer's product line that does not include premium items.
   b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern or texture form manufacturer's product line that include both standard and premium items.

2.2 PRODUCT SUBSTITUTIONS

A. Reference Section 01 63 00 – Substitutions and Product Options

2.3 COMPARABLE PRODUCTS

A. Conditions: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements.
   1. Evidence that the proposed product does not require extensive 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. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
   3. Evidence that proposed product provides specified warranty.
   4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
   5. Samples, if requested.

PART 3 EXECUTION (Not Used)

END OF SECTION
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Product list
B. Contractor's Options
C. Substitutions
D. Product Substitutions
E. Substitution Request Forms

1.2 PRODUCT LIST:

A. Within 30 days after date of Contract, submit to Architect 5 copies of complete list of products and materials which are proposed for installation.

B. Prepare list on basis of each Specification section.

C. For products specified under reference standards, include with listing of each product:
   1. Name and address of manufacturer.
   2. Trade name.
   3. Model or catalog designation.
   4. Manufacturer's data, including performance and test data, reference standards.

1.3 CONTRACTOR'S OPTIONS:

A. For products specified only by reference standards, select any product meeting standards, by any manufacturer.

B. For products specified by naming several products or manufacturers, select any product and manufacturer named.

C. For products specified by naming only one product and manufacturer, there is no option, unless a substitution is approved as specified below.

1.4 SUBSTITUTIONS:

A. During Bidding, Architect will consider written requests from prime Bidders for substitutions, received and approved at least 9 days prior to Bid Date; requests received after that time will not be considered. Approval of proposed substitutions will be set forth in an Addendum or letter of approval. Requests for substitutions shall include data listed
below. Approval of a proposed substitution does not relieve the Contractor from compliance with the requirements of the plans and specifications for the item(s).

B. Within 30 days after date of Contract, Architect will consider formal requests from Contractor for substitutions of products in place of those specified. No request for substitutions will be considered after this date. Approval of a proposed substitution does not relieve the Contractor from compliance with the requirements of the plans and specifications for the item(s).

C. Submit 2 copies of request for substitution. Include in substitution:
   1. Data substantiating compliance of proposed substitution with Contract documents.
   2. For products:
      a. Product identification, including manufacturer's name and address.
      b. Manufacturer's literature, including product description, performance and test data and reference standards.
      c. Samples, if applicable.
      d. Name and address of similar projects on which product was used and date of installation.
   3. For construction methods:
      a. Detailed written descriptions of proposed method.
      b. Complete drawings illustrating methods or revisions.
   4. Itemized comparison of proposed substitution with product or method specified.
   5. Data relating to changes in construction schedule.

D. In making request for substitution, Bidder/Contractor represents:
   1. He has personally investigated proposed product or method and determined that it is equal or superior in all respects to that specified.
   2. He will provide same guarantee for substitution as for product or method specified.
   3. He will coordinate installation of accepted substitution into work, making such changes as may be required for work to be complete in all respects.
   4. He waives all claims for additional costs related to substitution which subsequently becomes apparent

E. Substitutions will not be considered if:
   1. They are indicated or implied on show drawings or product data submittals without formal request as submitted in accordance with Article 1.03 of this Section.
   2. Acceptance will require substantial revision of Contract Documents.

PART 2 PRODUCTS

2.1 PRODUCT SUBSTITUTIONS

A. Timing: Architect will consider requests for substitution if received within 30 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

B. Conditions: Architect will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect
will return requests without action, except to record noncompliance with these requirements.

1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.

2. Requested substitution does not require extensive revisions to the Contract Documents.

3. Requested substitution is consistent with the Contract Documents and will produce indicated results.

4. Substitution request is fully documented and properly submitted.

5. Requested substitution will not adversely affect Contractor's Construction Schedule.

6. Requested substitution has received necessary approvals of authorities having jurisdiction.

7. Requested substitution is compatible with other portions of the Work.

8. Requested substitution has been coordinated with other portions of the Work.

9. Requested substitution provides specified warranty.
CONTRACTOR (BIDDER) HEREBY REQUESTS ACCEPTANCE OF THE FOLLOWING PRODUCT OR SYSTEMS AS A SUBSTITUTION IN ACCORD WITH THE PLANS AND SPECIFICATIONS AND TERMS AND CONDITIONS OF THE CONTRACT DOCUMENTS.

1. SPECIFIED PRODUCT OR SYSTEM:
   Substitution request for ( Generic Description): ______________________________________
   Specification Section No.: __________ Article(s) _________ Paragraph(s) _______

2. SUPPORTING DATA:
   Product data for proposed substitution is attached (description of product, reference standards, performance and test data).
   Sample is attached _____ Sample will be sent if requested _____

3. QUALITY COMPARISON:

<table>
<thead>
<tr>
<th>SPECIFIED PRODUCT</th>
<th>SUBSTITUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name brand:</td>
<td></td>
</tr>
<tr>
<td>Catalog No.:</td>
<td></td>
</tr>
<tr>
<td>Manufacturer:</td>
<td></td>
</tr>
<tr>
<td>Vendor:</td>
<td></td>
</tr>
<tr>
<td>Significant Variations:</td>
<td></td>
</tr>
</tbody>
</table>

   Maintenance Service Available: _______ Yes _________ No

   Spare Part Source: ___________________________
4. PREVIOUS INSTALLATIONS:
Identification of similar projects on which proposed substitution was used:

Project: __________________________  Architect: __________________________
Address: __________________________  Owner: __________________________
Date Installed: __________________________

5. REASON FOR NOT GIVING PRIORITY TO SPECIFIED ITEMS:
__________________________________________________________

6. EFFECT OF SUBSTITUTION:
Proposed substitution affects other parts of Work: [No] _____ [Yes] _____ (If yes, explain)
__________________________________________________________

Change Contract Time: [No] _____ [Yes] _____ (If yes) Add _____ days, Deduct _____ days.
Substitution requires dimensional revision or redesign of structure or M & E Work:
[No] _____ [Yes] _____ (If yes, attach compete data).
Saving or credit to Owner, if any, for accepting substitution: $ __________________________
Extra cost to Owner, if any, for accepting substitution: $ __________________________
7. CONTRACTOR'S (BIDDER'S) STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION TO CONTRACT REQUIREMENTS.

I/we have investigated the proposed substitution.

I/we:

___ believe that it is equal or superior in all respects to specified product, except as stated above.

___ will provide the same warranty as specified for specified product.

___ have included complete cost data and implications of the substitution.

___ will pay redesign and special inspection costs caused by the use of this product.

___ will pay all direct and indirect additional costs to other contractors caused by the substitution.

___ will coordinate the incorporation of the proposed substitution in the Work.

___ will modify other parts of the work as may be needed, to make all parts of the work complete and functioning.

___ waive future claims for added cost to Contract caused by the substitution.

Contractor (Bidder): ___________________________ Date: ______________

By: ________________________________________

Answer all questions and complete all blanks - use "N/A" if not applicable.

ARCHITECT REVIEW AND ACTION

___ Resubmit substitution request:

___ Provide more information in following categories.

__________________________________________

___ Sign Contractor's (Bidder's) Statement of Conformance.

___ Substitution accepted.

___ Substitution is accepted with the following comments.

__________________________________________

__________________________________________

___ Substitution not accepted.

___ Substitution Request received too late.
PART 1 GENERAL

1.1 SECTION INCLUDES

A. Installation
B. Owner-Installed Products
C. Progress Cleaning
D. Closeout procedures.
E. Final cleaning.
F. Starting of systems.
G. Demonstration and instructions.
H. Testing, adjusting and balancing.
I. Protecting installed construction.
J. Project record documents.
K. Operation and maintenance data.
L. Manual for materials and finishes.
M. Manual for equipment and systems.
N. Spare parts and maintenance products.
O. Product warranties and product bonds.
P. Substantial Completion
Q. Final Completion.
R. List of Incomplete Items (punchlist)
S. Completed Final Punchlist Inspection
1.2 INSTALLATION

A. General: 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. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
   3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
   4. Maintain minimum headroom clearance of 8 feet in spaces without a suspended ceiling.

B. Comply with Manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. 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.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
   1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
   2. Allow for building movement, including thermal expansion and contraction.
   3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

H. 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.

I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

1.3 OWNER-INSTALLED PRODUCTS

A. Site Access: Provide access to Project site for Owner's construction forces.
B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction forces.
   1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
   2. Pre-installation Conferences: Include Owner's construction forces at pre-installation conferences covering portions of the Work that are to receive Owner's work. Attend pre-installation conferences conducted by Owner's construction forces if portions of the Work depend on Owner's construction.

1.4 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
   2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
   3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
   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.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of Manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

1.5 FINAL CLEANING

A. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instruction.

C. Conduct the following cleaning operations before requesting inspection for certification of Final Completion for entire or a portion of the Project:

1. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
2. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
3. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
4. Remove tools, construction equipment, machinery, and surplus material from Project site.
5. Remove snow and ice to provide safe access to building.
6. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
7. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
8. Sweep concrete floors broom clean in unoccupied spaces.
9. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
10. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
11. Remove labels that are not permanent.
12. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
13. Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
14. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
15. Replace parts subject to unusual operating conditions.
16. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
17. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
18. Clean ducts, blowers, and coils if units were operated without filters during construction.
   a. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
   b. Leave Project clean and ready for occupancy.

D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

1.6 STARTING OF SYSTEMS

A. Coordinate schedule for start-up of various equipment and systems.

B. Notify Architect/Engineer and Owner 14 days prior to start-up of each item.

C. Verify each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.

D. Verify tests, meter readings, and specified electrical characteristics agree with those required by equipment or system manufacturer.

E. Verify wiring and support components for equipment are complete and tested.

F. Execute start-up under supervision of applicable manufacturer's representative and Contractors' personnel in accordance with manufacturers' instructions.

G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

H. Submit a written report in accordance with Section 01 33 00 - Submittal Procedures that equipment or system has been properly installed and is functioning correctly.
1.7 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of substantial completion.

B. Demonstrate Project equipment and instructed by qualified representative who is knowledgeable about the Project.

C. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

E. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time at equipment location.

F. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

G. Required instruction time for each item of equipment and system is specified in individual sections.

1.8 TESTING, ADJUSTING AND BALANCING

A. Refer to Mechanical and Electrical Specifications for specific requirements.

B. Reports will be submitted by independent firm to Architect/Engineer indicating observations and results of tests and indicating compliance or non-compliance with requirements of Contract Documents.

1.9 PROTECTING INSTALLED CONSTRUCTION

A. Provide for temperature and relative humidity as per manufacturer's written instructions.

B. Protect installed Work and provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
F. Prohibit traffic or storage upon waterproofed or roofed surfaces. When traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Prohibit traffic from landscaped areas.

1.10 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:
   1. Drawings.
   2. Specifications.
   3. Addenda.
   4. Change Orders and other modifications to the Contract.
   5. Reviewed Shop Drawings, Product Data, and Samples.
   6. Manufacturer's instruction for assembly, installation, and adjusting.
   7. Manufacturer's certificates
   8. Reviewed Submittals

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Label and file Record Documents in accordance with Section number listings in Table of Contents of this Project Specifications Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.

E. Record information concurrent with construction progress, not less than weekly.

F. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
   1. Manufacturer's name and product model and number.
   2. Product substitutions or alternates utilized.
   3. Changes made by Addenda and modifications.

G. Record Drawings and Shop Drawings: Provide felt tip pens, maintaining separate colors for each major system, for recording information. Legibly mark each item to record actual construction including:
   2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
   3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
   4. Field changes of dimension and detail.
   5. Details not on original Contract drawings.
   6. Changes made by Addenda and modifications.
   7. References to related shop drawings and modifications.
H. Submit two copies of documents to Architect/Engineer prior to or on Substantial Completion inspection.
   1. Transmit with cover letter listing:
      a. Date
      b. Project title and number
      c. Contractor’s name, address, and telephone number.
      d. Number and title of each Record Document.
      e. Signature of Contractor or authorized representative.

1.11 OPERATION AND MAINTENANCE DATA

A. Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable covers.

B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.

C. Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.

D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

E. Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
   1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
   2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
      a. Significant design criteria.
      b. List of equipment.
      c. Parts list for each component.
      d. Operating instructions.
      e. Maintenance instructions for equipment and systems.
      f. Maintenance instructions for [special] finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
   3. Part 3: Project documents and certificates, including the following:
      a. Shop drawings and product data.
      b. Air and water balance reports.
      c. Certificates.
      d. Originals of warranties and bonds.

F. Submit two copies of documents to Architect/Engineer prior to or on Substantial Completion inspection.
   1. Transmit with cover letter listing:
      a. Date
      b. Project title and number
c. Contractor's name, address, and telephone number.
d. Number and title of each Record Document.
e. Signature of Contractor or authorized representative.

1.12 MANUAL FOR MATERIALS AND FINISHES

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect/Engineer will review draft and return one copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

C. Submit one copy of completed volumes 15 days prior to substantial completion. Draft copy will be reviewed and returned with Architect/Engineer comments. Revise content of document sets as required prior to substantial completion.

D. Submit two sets of revised final volumes in final form before or on date of substantial completion.

E. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations. Include information for re-ordering custom manufactured products.

F. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.


H. Additional Requirements: As specified in individual product specification sections.

I. Include listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.13 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect/Engineer will review draft and return one copy with comments.

B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.

C. Submit one copy of completed volumes 15 days prior to substantial completion. Draft copy will be reviewed and returned with Architect/Engineer comments. Revise content of document sets as required prior to substantial completion.
D. Submit two sets of revised final volumes in final form prior to or on date of substantial completion inspection.

E. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.

F. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.

G. Include color coded wiring diagrams as installed.

H. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and special operating instructions.

I. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

J. Include servicing and lubrication schedule, and list of lubricants required.

K. Include manufacturer's printed operation and maintenance instructions.

L. Include sequence of operation by controls manufacturer.

M. Include original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

N. Include control diagrams by controls manufacturer as installed.

O. Include Contractor's coordination drawings, with color coded piping diagrams as installed.

P. Include charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

Q. Include list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

R. Include test and balancing reports as specified in Section 01 40 00 - Quality Requirements.

S. Additional Requirements: As specified in individual product specification sections.

T. Include listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.
1.14 SPARE PARTS AND MAINTENANCE PRODUCTS

A. Furnish spare parts, maintenance, and extra products in quantities specified in individual specification sections.

B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to or on substantial completion inspection.

1.15 PRODUCT WARRANTIES AND PRODUCT BONDS

A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.

B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.

C. Verify documents are in proper form, contain full information, and are notarized.

D. Co-execute submittals when required.

E. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual. Include Table of Contents and assemble in three D side ring binder with durable plastic cover.
   1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
   2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
   3. Identify each binder on the front and spine with the typed or printed title ‘WARRANTIES,” Project name, and name of Contractor.

F. Submit prior to or on substantial completion inspection.

G. For equipment or components parts of equipment put into service during construction or For items of Work for which acceptance is delayed beyond Date of Substantial Completion refer to the Building General Conditions.

1.16 SUBSTANTIAL COMPLETION

A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
   1. 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.
   2. Advise Owner of pending insurance changeover requirements.
3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
8. Complete startup testing of systems.
10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
15. Complete work on items listed on Punch Lists.

B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for Final Completion.

1.17 FINAL COMPLETION

A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
2. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled
requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.18 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A or form acceptable to the Owner and Architect.

1. Organize list of spaces in sequential order, starting with exterior areas first.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
3. Include the following information at the top of each page:
   a. Project name.
   b. Date.
   c. Name of Architect.
   d. Name of Contractor.
   e. Page number.

1.19 COMPLETED FINAL PUNCHLIST INSPECTION

A. Correct or complete all items on the punchlist before requesting final payment. Unless otherwise agreed upon, the contractor has seven (7) days of receipt of final punchlist. When the final punchlist is complete and the Contract is fully satisfied according to Contract Documents, a certificate establishing the date of Final Completion will be issued.

B. Refer to the Building General Conditions for Owner's right to complete the work in the event the contractor does not complete the final punchlist.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION
MANUFACTURER'S GUIDE SPECIFICATION

INSTACOAT
Premium Products

For
Smooth Surface Built-Up Roofs (Black PLR Only)

Part 1 - General

1.01 General

A. This document is intended to provide only general guidelines regarding the application of listed materials as furnished by Instacoat Premium Products. These general guideline specifications are NOT intended as project-specific specifications and should not be used as such. The information contained herein may be used, and modified where necessary, by the owner, architect, and contractor in preparing specifications for particular waste related restoration projects. It is the responsibility of the owner, architect, and/or contractor to ensure that these general guideline specifications are consistent with the contractual and construction requirements relating to the project.

B. This section describes the requirements for furnishing and installing a VOC compliant dual component spray applied liquid rubber for secondary containment.

C. Work shall be performed by an Instacoat Premium Products. Qualified and Licensed Applicator.

1.02 Quality Assurance

A. Applicator’s Qualifications

1. Applicator shall have knowledge and general understanding of building design as well as Instacoat Premium Products specified for the project.

2. Applicator shall have business stability and own, or have access to, the equipment necessary for successful completion of the project.

3. Applicator to provide all labor and materials to clean and prepare existing surface in accordance with this guide specification and manufacturer’s instructions.

4. Obtain Engineer/Architect/Owners approval of system, appearance, and workmanship standard in a remote area to assure desired results and to ensure proper substrate and conditions.

5. Primary waterproofing materials shall be products of a single manufacturer. Secondary materials shall be recommended by the primary manufacturer. Manufacturer shall have a minimum of five years experience in the manufacture of materials of this type.

6. Technical service on application and suitability of Instacoat Premium Products. Materials are available by contacting:
   Instacoat Premium Products, 44648 Mound Rd. Ste. Sterling Heights, MI 48314-1322 at (877) 552-6724
   Anthony Miriani at (248) 672 9713.
   Brian Butler at (905) 802-5327.

B. Related Work

1.03 Submittals

A. In the normal course of bidding, descriptive literature and technical data on all materials proposed for usage under this specification will be submitted. A surface survey shall be submitted by the bidder identifying total area to be coated, along with pictures of soil conditions and general conditions of surrounding areas.

B. Prior to the start of any application of the Instacoat Premium Products, application the following submittals shall be made for review and approval:

1. Submit literature and manufacturer’s installation instructions.
2. Samples of all materials to be used shall be submitted to the engineer for approval prior to start of work.
3. The manufacturer of the Instacoat Premium Products shall certify that the product complies with the specifications.

1.04 Delivery, Storage and Handling

A. Delivery: Materials shall be delivered in their original unopened containers, clearly marked. Material shall be stored in clean, dry areas away from direct sun in containers at 50°F to 80°F until ready for use.

B. Ordering: Comply with manufacturer’s ordering instruction and lead-time requirements to avoid construction delays.

C. Safety: Refer to all applicable data, including, but not limited to MSDS Sheets, PDS Sheets, Product Labels, and Specific Instructions for Specific Personnel Protection Requirements. Applicator contractor must comply with all Federal, State, and Local regulations pertaining to safety, environmental protection and other pertinent regulations. Safety equipment must comply with OSHA regulations.

Applicators should follow the safety precautions listed below:

1. The work shall be barricaded to prevent pedestrian or vehicular traffic.
2. The membrane applicators shall attend and control their works until wear protection overlays are installed complete.
3. The contractor shall provide work access and sight safety practices to avoid endangering the waterproofing applicator, the passing public, and the building tenants.
4. Avoid contact with eyes and skin; do not ingest or inhale. Prolonged or repeated exposure may cause skin irritation or allergic reactions.
5. Wear safety goggles, rubber gloves, and appropriate clothing.
6. Provide safety protection as previously described under General Conditions to protect all occupants, tenants, visitors, etc. during work operations.

D. Storage and Protection: Store and protect Instacoat Premium Products materials from harmful weather conditions and at temperatures conditions recommended by manufacturer. Do not allow freezing to occur in storage or shipping. Protect from damage during construction and while stored onsite.

1.05 Reference Documents

A. Refer to applicable Material Safety Data Sheets

B. Refer to specific Instacoat Premium Products Technical Data Sheets

1.06 The Work Shall Include but Not Be Limited to the Following Scope

A. Scaffolding (hanging, stationery, swing staging)
1. It will be the responsibility of the Contractor to provide safe, reliable access to the work area to perform the work described herein. The scaffolding and/or work platforms (ladders, etc.) will be provided by, installed, erected, and dismantled by the Contractor.

B. Pedestrian Protection

1. The Contractor shall supply safety protection for pedestrian/patron egress/ingress to the site during working operations. Protection shall be determined by the site and weather conditions inherent to the work schedule.

C. On-Site Sanitary Provisions

1. Contractor shall provide for the duration of the project including each mobilization a portable toilet for the use by the Contractor employees.

D. On-Site Supervision and Coordination of Parking Barricades and Access to the Site During the Work Operations

1. Coordinate work schedule and revisions to patron parking scheme with Superintendent prior to commencement of work operations.

2. Obtain written approval for work schedule, revised parking scheme, etc. from the Superintendent prior to commencement of work operations.

F. On-Site Provisions for Power and Water Source

1. Contractor to provide all hoses and hose connections, power cords and extensions and related accessories to connect to water and power source provided by the Owner.

1.07 Warranty

A. The manufacturer’s limited warranty provided by Instacoat Premium Products, warrants specifically against defective materials. If defective materials are found, Instacoat Premium Products, will provide additional product to re-apply. Specific warranties for labor/workmanship must be provided by installer or by utilization of a performance bond.

B. Manufacturer Warranty: Submit manufacturer’s standard warranty form for dual component spray applied liquid rubber for secondary containment. Approval by manufacturer for warranty is required prior to system application. Submit manufacturer’s Request for Warranty and supporting documentation at completion of installation.

Part 2 - Products as Manufactured by Instacoat Premium Products

2.01 Description

Materials are specified by brand name to establish a basis for quality of design and performance requirements and general description of products. Architect will consider substitutions for brand names on a basis of quality of design and performance when reviewed by Architect. This guide manufacturer’s specification is written around Instacoat Premium Products and products specified are a standard of quality required for this project.

<table>
<thead>
<tr>
<th>Test</th>
<th>Test Procedure</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>Elongation at Break</td>
<td>ASTM-D-412</td>
<td>1,000% Maximum</td>
</tr>
<tr>
<td>Recovery</td>
<td>ASTM-D-412</td>
<td>90%</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM-D-412</td>
<td>Materials Did Not Fail</td>
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<tr>
<td>Tensile</td>
<td>ASTM-D-413</td>
<td>2000 lbs./ft² Uplift Force</td>
</tr>
<tr>
<td>Peel Strength</td>
<td>ASTM-903</td>
<td>Materials Did Not Peel</td>
</tr>
<tr>
<td>Puncture Resistance</td>
<td>ASTM-E-154</td>
<td>No Puncture</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>ASTM-D-570</td>
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<td>Permeance</td>
<td>ASTM-E-96</td>
<td>016 Grains/Hr/ft²</td>
</tr>
</tbody>
</table>
2.02 Products

1. **Instacoat Premium Products** Membrane Emulsion Part “A”.
2. **Instacoat Premium Products** Membrane Catalyst Part “B” 50 lbs.
3. **Instacoat Premium Products** Roller/Brush.

Part 3 - Execution

3.01 Manufacturer’s Instructions

**Compliance**: Comply with manufacturer’s most recently published product technical bulletins including installation instructions, substrate testing, and surface preparation and cleaning, and post installation testing.

3.02 Preparation

A. Surface Inspection

After power broom and cleaning of the roof substrate prior to commencement of work, a thorough inspection of the roof surface should be carried out to determine or confirm the following.

1. Remove all loose granules, dirt, dust, and debris, etc. by mechanical brush, stiff broom, vacuum, Power brooming, etc. to achieve proper bond and all surfaces must be clean and dry before commencement of work.

2. Flashings, blisters, and other damaged areas must be repaired and allowed to cure for 24 hours prior to applying Instacoat Premium Products. (See recommended repaired procedures below.)

3. Check for adhesion and compatibility of any remaining, tightly adhered, existing coating with Instacoat Premium Products. A test application is the best method of determining compatibility with an adhesion to a previously coated surface. Contact Instacoat Premium Products Technical Dept. for further information. A thorough inspection of the roof surface should be carried out to determine or confirm the following:

   a. A positive slope to, and functioning of, the roof drainage system. If gutters are on the back of the building check for rust and remove rusted drip edges required by the manufacturer.

   b. The soundness of the existing roof system to the roof. Applicator is responsible to do an infrared scan or nuclear scan and cores to determine wet insulation and replace wet insulation as needed per manufacturer's recommendations.

   c. The presence of delaminated layers of existing roof felts or sheeting, such as sheet laps, or large blisters, fish mouths, or cracked or brittle areas. All such areas should be clearly marked and repaired following all manufacturer's specifications.

   d. The soundness and proper detailing of roof mounted supports, penetrations, flashings, outlets, turn-ups, sumps and all other items which are to be part of the new restoration coating system. (See manufacturer's details for proper flashings.)

   e. All repair areas that have to be removed down to the deck shall be repaired following Factory Mutual specifications, existing manufacturer's specifications, and per local code requirements.

   f. Verify proper securement of roof mounted equipment with fastening devices per local code requirements.

B. Preparation
1. The Instacoat Premium Product System must be installed on a clean, dry and structurally sound surface, free of sharp edges, loose or foreign material, dirt, oil, grease, or other materials or debris that may damage the Instacoat Premium Product System for a monolithic seal of the entire roof.

A test sample must be done for compatibility and adhesion, and to determine the proper coverage rate of the Instacoat Premium Product System.

2. The following are recommendations to finalize this specification for repair procedures which should include coverage rates.

a. **Flashings.** Repair all flashings per manufacturer's requirements.

b. **Blisters.** Example: Cut out all large blisters and delaminated areas and patch with suitable filler, as follows:
   1) Cut a "Y" through the blister or delaminated area and fold the segments back to a sound roof.
   2) Thoroughly dry any moisture from the exposed area, replace wet insulation if needed and remove any dirt or debris.
   3) Apply suitable adhesive to the exposed area, fold the segments back over the adhesive and trowel smooth. Follow segment back, let it dry to the touch and follow segment back and repeat.
   4) Top-dress the repair with suitable filler and trowel smooth over an area 8" outwards from the outside edges of the repair or top-dress with Instacoat and polyester fabric in a three course application approved by Instacoat Premium Products or approved equal.

c. **Splits.** Example:
   1) Thoroughly dry any moisture from the exposed area, replace wet insulation if needed and remove any dirt or debris.
   2) Apply suitable adhesive to the exposed area, fold the segments back over the adhesive and trowel smooth. Follow segment back, let it dry to the touch and follow segment back and repeat.
   3) Top-dress the repair with suitable filler and trowel smooth over an area 8" outwards from the outside edges of the repair or top-dress with Instacoat and polyester fabric in a three course application approved by Instacoat Premium Products or approved equal.

d. **Alligatoring.** Example:
   1) Thoroughly dry any moisture from the exposed area, replace wet insulation if needed and remove any dirt or debris.
   2) Apply suitable adhesive to the exposed area, fold the segments back over the adhesive and trowel smooth. Follow segment back, let it dry to the touch and follow segment back and repeat.
   3) Top-dress the repair with suitable filler and trowel smooth over an area 8" outwards from the outside edges of the repair or top-dress with Instacoat and polyester fabric in a three course application approved by Instacoat Premium Products or approved equal.

e. **Roof Penetrations.** Example:
   1) Around all penetrations apply Instacoat and polyester fabric in a three course application approved by Instacoat Premium Products or approved equal.

f. **Drip Edges:** Example: which may include adding fasteners or cleats to improve wind uplift around perimeters.
1) Around all penetrations apply Instacoat and polyester fabric in a three course application approved by Premium Liquid Rubber or approved equal.

g. **Rusted or Scaled Areas.** Example: Power wash in the case of heavy rust or scaled areas. Heavy rust or scale may require more than one application. All metal surfaces treated with acid solution should be coated with Premium Liquid Rubber promptly to avoid flash rusting. If it is not possible to use muriatic acid, power wash and apply a Premium Liquid Rubber straight "A" tack coat over areas of heavy rust or on other bare metals.

3. Remove all grates, drain covers, and other fittings and loose items on the roof surface.

4. Repair dry rot and replace wet insulation, as needed. New insulation should be sufficient thickness so as to be level with or higher than existing roof, except around drain areas. Recommend to create sump around drains if possible.

5. Fill any significant cracks or voids in the immediate substrate with suitable filler, where necessary, and trowel material to form a smooth surface with Instacoat Premium Products Roller-Brush, Trowel Grade, filler/polyester mat per manufacturer's recommendations. Any questions check with Instacoat Premium Products Technical Dept.

6. If the existing roof has been coated and the coating found compatible with the Instacoat Premium Products membrane, remove all loose and flaking material. A test sample must be done to check for compatibility and adhesion.

7. Once the existing roof has been determined to be a sound substrate for Instacoat Premium Products. All details on the roof i.e. flashings, drains or penetrations found to be suspect must have Instacoat Premium Products Brush Grade application and polyester mat must be embedded around detail per manufacturer's recommendations.

8. Power broom and otherwise clean all other areas of the roof, as necessary, to provide a dirt-free surface for application and proper adhesion. If in doubt consult Instacoat Premium Products prior to application.

9. Allow 12 hours cure time prior to application of the Instacoat Premium Products membrane over repaired areas, will depend on ambient temperature and humidity.

10. Mask all areas as needed for protection from over spray.

**C. Application**

1. The Instacoat Premium Products membrane application will begin after all repairs have been made as stated above and sufficiently cured following Instacoat Premium Products specifications.

2. Determine the specific thickness of the Instacoat Premium Products membrane application. This application should be at a dry film thickness of 80 mils.

   **Note:** Remember - the smoother the surface, the less material required.

3. Begin spraying flood coats of Instacoat Premium Products straight “A” over entire roof surface to flow into fine crack areas, pores and/or irregular surfaces at 15 - 20 mil thickness. Let cure. (Cure times vary upon humidity levels and temperatures. Allow a minimum of 10 hrs

4. Once material has turned black and is dry to touch repeat step 3 a minimum of 4 times until desired dry film thickness has been achieved.

**D. Spraying Techniques**

Spraying techniques will be demonstrated and understood a lot clearer in the physical training section of the Instacoat Premium Products Certification Training Program. Some important factors must be clearly understood and remembered.
1. **Instacoat Premium Products** product can only be applied with the spray pattern perpendicular to the substrate requiring the membrane.

2. It is not advised to spray excess material into internal/external corners or angles. The same applies to detailing work (excess material to these areas may result in excessive stress to the membrane while curing.)

3. When spraying **Instacoat Premium Products**, always begin from the lowest point working your way up to the highest point. This is required due to the curing nature of the product.

4. When spraying in high winds, the Part B side of the system needs to be facing into the wind. Extra precaution must be taken as in any spray application to avoid over-spray.

**E. Identifying Correct Tip for Each Application**

1. There are various size tips, which can be used for different applications. The most important consideration is to make sure that the tip sizes for both Part A and Part B are calibrated in accordance with the correct ratio of the system.

**F. Minimum Waste**

1. To minimize waste will result in less of a burden to landfills. Leftover product in containers, which can’t be used by the pump and product left in the lines are to be returned to 5-gal. pails.

**G. Cleaning**

1. When cleaning the pumps and lines, it is not necessary to use mineral spirits each time. The best method of re-using mineral spirits is to clean the pumps, allow the contaminated to settle in the bottom of a 5-gal. pail and pour this into another pail leaving any sedimentation. This process can be repeated several times, accumulating the sediment and disposing in the correct manner. The contaminated mineral spirits or diesel fuel can be recycled and re-used as an alternative to using a new mineral spirits, or diesel fuel.

**H. Disposal of Waste**

1. All waste of the **Instacoat Premium Products** System is to be minimized and disposed of in the correct and proper manner. Follow regulations of the County, State, and local requirements in that area.

**3.03 Inspection and Quality Assurance**

A. It will be the Contractor’s responsibility to perform first line inspection of all aspects of the surface preparation and coating application work and to ensure conformance with all pertinent specifications.

B. Contractor shall provide a daily record of all product batch numbers used, application process information, including temperatures, relative humidity, dew point, procedures and inspection data.

C. Proper application is the responsibility of the user. Field visits by **Instacoat Premium Products** personnel are for the purpose of making technical recommendations only, and are not to supervise or provide quality control on the job site.

**Part 4 - Containment**

**4.01 Containment:**

It shall be the complete responsibility of the Contractor/Coating Applicator to provide a dedicated containment system that controls 100% of any hazardous materials.
End of Section
Scope of Work

Metal Roof & Wall

1) Pressure wash existing roof clean
2) Apply insta-coat & fabric on all vertical and horizontal seams and over screws heads on roof & walls
3) Spray apply one coat, white, Ceramic coating over all Metal roof areas & metal walls
4) Prepare underside of metal roof by removing all debris.
5) Spray apply ceramic coating over underside metal to inhibit existing corrosion.

Work Applied To Flat Roof

1) Power broom flat roofs clean of all rock and debris
2) Blow all remaining loose debris from flat roof areas
3) On all outer edges & around projections, flood with Insta-Coat and 3 course fabric and roll in place
4) Apply Insta-Coat over all roof areas approx. 80 wet mils total, to be applied in three separate coats and allowing sufficient drying time between coats
5) Apply one coat of white silicone Top coat over Insta-Coat application, 20mils thickness
6) WARRANTIES TO BE APPLIED 15 Year “Total coverage warranty”