

## General Info

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to **disable** Q & A notifications for this solicitation.

Digital ID required

### Deadline

**08/29/2023 11:00 AM CDT**

### Advertised

08/09/2023 01:18 PM CDT

### Business Name

Arkansas Department of Transportation - Equipment and Procurement

### Location(s)

11301 W Baseline Rd, Little Rock, Arkansas, 72209



County of Pulaski, AR, Esri, HERE, Garmin, FAO, NOA... Powered by Esri

### Number

M-24-006H

### Description

Thermoplastic Membrane Roof System for Materials Testing Lab

Job 42-98

FOB: Little Rock

**Allows zero unit prices and labor**

Yes

**Allows negative unit prices and labor**

Yes

**Allows multiple bids per solicitation**

No

## Q & A

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**Deadline**

Same as solicitation deadline.

**Remarks**

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## ATTACHMENT LIST

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CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM.pdf (157 KB)

Download, complete, and upload in the Required ...

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Standard Bid Conditions Revised 2023.pdf (156 KB)

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Job 42-98 Specifications.pdf (1.14 MB)

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

Download, complete, and upload in the Required ...

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## BID INVITATION

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

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

**Company Name:\***

**Name:\***

**Address:\***

**Title:\***

**Federal Tax ID or Social Security No:\***

**Phone:\***

**Fax:**

**E-mail:\***

**Signature:\***

Installation of a new 50 mil. Thermoplastic Membrane Roofing System for the ARDOT Materials Testing Lab located at 11301 West Baseline Road, Little Rock, AR 72209.  
Job 42-98

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

For questions about Bidding requirements contact Danny Keene (501-569-2674)  
For questions about job specifications contact Phillip Watkins (501-351-0488)

**A mandatory pre-bid meeting is scheduled for all potential bidders at the ARDOT Materials Lobby located at 11301 West Baseline Road, Little Rock, AR 72209 at 9:00 A.M. On August 21, 2023.**

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

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

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

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

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

Bid Information and Specifications are available on-line by going to the ARDOT Web Site – [www.ardot.gov](http://www.ardot.gov) and clicking on "Commodities and Services Bids/Contracts

Site: [www.ardot.gov](http://www.ardot.gov) and clicking on "Commodities and Services Bids/Contracts Information". Tabulations will also be available at this site after award of bid/contract. If you have any questions, call this office at 501-569-2667.

**BID SHEET**

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1. Installation of a new 50 mil Thermoplastic Mebrane Roofing System for the ARDOT Materials Testing Lab located at 11301 West Baseline Road, Little Rock, AR 72209

**Lump Sum\***

\$

**Arkansas Contractors License\***

**Notes**

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**Notes**

**ATTACHMENT A - ELIGIBLE  
BIDDER CERTIFICATION**

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

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three-year period preceding this Bid been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph two (2) of this Certification;
4. Have not within a one-year period preceding this application/Bid had one or more public transactions (Federal, State, or local) terminated for cause or default; and

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

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

**BIDDER NAME (Company Name):\***

**BY (Signature):\***

**TITLE:\***

## **BID BOND**

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**In the amount of 5%**

**Guarantee Method\***

Choices...

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

Confirmation\*

Choices...

**Electronic Bid Bond**

Bond ID\*

Surety Agency\*

Choices...

Surety State\*

Principal\*

**ENVELOPE REQUIRED DOCUMENT LIST**

Name	Omission Terms
The information supplied in this component will be available to the owner-agency immediately after the bid deadline, but before the bid is opened.	
Paper Bid Bond, Cashier's Check, Certified Check, Money Order, or an Annual Bond on File Original, wet-ink documents are required at time of bid op...	I have opted to electronically verify my bid bond.

1 Required Document

**REQUIRED DOCUMENT LIST**

Name	Omission Terms
Contract and Grant Disclosure and Certification Form Failure to complete all of the following information may re...	
Certification for Boycott and Illegal Immigrant Restrictions	

2 Required Documents

**Name**

**Omission Terms**

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

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2 Required Documents



## ARDOT - STANDARD BID CONDITIONS

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

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

# CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM

Failure to complete all of the following information may result in a delay in obtaining a contract, lease, purchase agreement, or grant award with any Arkansas State Agency.

SUBCONTRACTOR: \_\_\_\_\_  
 Yes  No

IS THIS FOR:  Goods?  Services?  Both?

TAXPAYER ID NAME: \_\_\_\_\_

YOUR LAST NAME: \_\_\_\_\_ M.I.: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_ COUNTY: \_\_\_\_\_

**AS A CONDITION OF OBTAINING, EXTENDING, AMENDING, OR RENEWING A CONTRACT, LEASE, PURCHASE AGREEMENT, OR GRANT AWARD WITH ANY ARKANSAS STATE AGENCY, THE FOLLOWING INFORMATION MUST BE DISCLOSED:**

**FOR INDIVIDUALS\***

Indicate below if: you, your spouse or the brother, sister, parent, or child of you or your spouse is a current or former: member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee:

Position Held	Mark ( ✓ )		Name of Position of Job Held <small>(senator, representative, name of board/ commission, data entry, etc.)</small>	For How Long?		What is the person(s) name and how are they related to you? <small>(i.e., Jane Q. Public, spouse, John Q. Public, Jr., child, etc.)</small>	Relation
	Current	Former		From MM/YY	To MM/YY		
General Assembly							
Constitutional Officer							
State Board or Commission Member							
State Employee							

None of the above applies

**FOR AN ENTITY (BUSINESS)\***

Indicate below if any of the following persons, current or former, hold any position of control or hold any ownership interest of 10% or greater in the entity: member of the General Assembly, Constitutional Officer, State Board or Commission Member, State Employee, or the spouse, brother, sister, parent, or child of a member of the General Assembly, Constitutional Officer, State Board or Commission Member, or State Employee. Position of control means the power to direct the purchasing policies or influence the management of the entity.

Position Held	Mark ( ✓ )		Name of Position of Job Held <small>(senator, representative, name of board/ commission, data entry, etc.)</small>	For How Long?		What is the person(s) name and what is his/her % of ownership interest and/or what is his/her position of control?	Ownership Interest (%)	Position of Control
	Current	Former		From MM/YY	To MM/YY			
General Assembly								
Constitutional Officer								
State Board or Commission Member								
State Employee								

None of the above applies

## Contract and Grant Disclosure and Certification Form

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

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

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

Failure to make any disclosure required by Governor's Executive Order 98-04, or any violation of any rule, regulation, or policy adopted pursuant to that Order, shall be a material breach of the terms of this subcontract. The party who fails to make the required disclosure or who violates any rule, regulation, or policy shall be subject to all legal remedies available to the contractor.
3. No later than ten (10) days after entering into any agreement with a subcontractor, whether prior or subsequent to the contract date, I will mail a copy of the **CONTRACT AND GRANT DISCLOSURE AND CERTIFICATION FORM** completed by the subcontractor and a statement containing the dollar amount of the subcontract to the state agency.

Signature _____	Title _____ Date _____
Vendor Contact Person _____	Phone No. _____
_____	Title _____

Agency Use Only	Agency Number _____	Agency Name _____	Agency Contact Person _____
			Phone No. _____
			Contract or Grant No. _____



### CERTIFICATION FOR BOYCOTT AND ILLEGAL IMMIGRANT RESTRICTIONS

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

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

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

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

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

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

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

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

- Do not boycott Israel.
- Do not employ illegal immigrants.
- Do not boycott Energy, Fossil Fuel, Firearms, or Ammunition Industries.

Contract Number & Description	
Name of Public Entity	Arkansas Department of Transportation
Name of Vendor/Contractor	
AASIS Vendor Number	N/A

Contractor Signature

Date

**ARKANSAS DEPARTMENT OF TRANSPORTATION  
JOB NO. 42-98  
MATERIALS LAB  
ROOF REPLACEMENT**

**PROJECT MANUAL**

April 27, 2023

**JOB NO. 42-98  
MATERIALS LAB  
ROOF REPLACEMENT  
PULASKI COUNTY**

**ARKANSAS DEPARTMENT OF TRANSPORTATION**

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

**ARKANSAS DEPARTMENT OF TRANSPORTATION  
JOB NO. 42-98  
MATERIALS LAB  
ROOF REPLACEMENT**

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01 70 00	EXECUTION AND CLOSEOUT REQUIREMENTS

**DIVISION 07 - THERMAL AND MOISTURE PROTECTION**

07 54 23	THERMOPLASTIC POLYOLEFIN (TPO) ROOFING
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**ARKANSAS DEPARTMENT OF TRANSPORTATION  
JOB NO. 42-98  
MATERIALS LAB  
ROOF REPLACEMENT**

**SECTION 01 10 00 - SUMMARY**

**PART 1 - GENERAL**

**1.1 PROJECT INFORMATION**

- A. Project Identification: **MATERIALS LAB ROOF REPLACEMENT**
  - 1. Project Location: **11301 West Baseline Road Little Rock, AR 72209**
- B. Owner: **Arkansas Department of Transportation.**
  - 1. Owner's Representative: **Phillip Watkins,  
9003 Mabelvale Pike  
Little Rock, Arkansas 72203-2261  
Office: (501) 569-4950 Mobile: (501) 351-0488  
Fax: (501) 569-2011**

**1.2 WORK COVERED BY THE CONTRACT DOCUMENTS**

- A. Remove blistered and damaged areas of existing roof and overlay existing roof using a 50 mil TPO membrane for the Arkansas Department of Transportation as indicated on the Plans, and as called for in these Specifications, or as directed by the Owner.
- B. The work shall include all labor, materials, equipment, construction tools, machines, services, utilities, and fuel, required to construct the work and place the facilities constructed into operation to form a complete, operating system.
- C. Project shall be constructed under a single prime contract and shall include provision for a complete one (1) year warranty period for all aspects of the project with the exception of damage due to normal wear conditions. The warranty period shall commence upon acceptance of the work following a Semi-Final Inspection (as defined in Section 01 77 00). With partial acceptance of work, only the warranty applicable to that portion of the work shall be deemed to be in effect. This warranty will be in addition to specific product or installation warranties from suppliers or subcontractors.

**1.3 WORK UNDER SEPARATE CONTRACTS**

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



**ARKANSAS DEPARTMENT OF TRANSPORTATION  
JOB NO. 42-98  
MATERIALS LAB  
ROOF REPLACEMENT**

**1.4 WORK RESTRICTIONS**

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

**1.5 SPECIFICATION AND DRAWING CONVENTIONS**

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

**ARKANSAS DEPARTMENT OF TRANSPORTATION  
JOB NO. 42-98  
MATERIALS LAB  
ROOF REPLACEMENT**

2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 10 00**

**ARKANSAS DEPARTMENT OF TRANSPORTATION  
JOB NO. 42-98  
MATERIALS LAB  
ROOF REPLACEMENT**

**SECTION 01 25 00 - SUBSTITUTION PROCEDURES**

**PART 1 - GENERAL**

**1.1 SUBSTITUTION PROCEDURES**

- A. Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Substitution Request Form: Use CSI Form 13.1A.
  - 2. Submit requests within 10 days after the Notice to Proceed.
  - 3. Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.
- C. Owner will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Owner will request additional information or documentation for evaluation.
  - 1. Owner will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
- D. Do not submit unapproved substitutions on Shop Drawings or other submittals.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 25 00**

**ARKANSAS DEPARTMENT OF TRANSPORTATION  
JOB NO. 42-98  
MATERIALS LAB  
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**SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES**

**PART 1 - GENERAL**

**1.1 CONTRACT MODIFICATION PROCEDURES**

- A. Owner will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.
- B. Owner-Initiated Proposal Requests: Owner will issue a detailed description of proposed changes in the Work.
  - 1. Proposal Requests are not instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request or 20 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time.
- C. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Owner.
- D. On Owner's approval of a Proposal Request, Owner will issue a Change Order for signatures of Owner and Contractor, for all changes to the Contract Sum or the Contract Time.
- E. Owner may issue a Construction Change Directive. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  - 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- F. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

**END OF SECTION 01 26 00**

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**SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 PROJECT MANAGEMENT AND COORDINATION**

- A. Subcontract List: Submit a written summary identifying individuals or firms proposed for each portion of the Work. Use CSI Form 1.5A.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. List e-mail addresses and telephone numbers.
- C. Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work.
- D. Requests for Information (RFIs): On discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI. Use forms acceptable to Owner.

**1.2 SUBMITTAL ADMINISTRATIVE REQUIREMENTS**

- A. Owner's Digital Data Files: Electronic digital data files of the Contract Drawings will not be provided by Owner for Contractor's use in preparing submittals.
- B. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 1. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
  - 2. Submit three copies of each action submittal. Owner will return two copies.
  - 3. Submit one copy of each informational submittal. Owner will not return copies.
  - 4. Owner will discard submittals received from sources other than Contractor.
- C. Paper Submittals: Place a permanent label or title block on each submittal for identification. 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 Owner. Include the following information on the label:
  - 1. Project name.
  - 2. Date.
  - 3. Name and address of Contractor.
  - 4. Name and address of subcontractor or supplier.
  - 5. Number and title of appropriate Specification Section.

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- D. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  2. Name file with unique identifier, including project identifier, Specification Section number, and revision identifier.
  3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Owner.
- E. Identify options requiring selection by Owner.
- F. Identify deviations from the Contract Documents on submittals.
- G. Contractor's Construction Schedule Submittal Procedure:
1. Submit required submittals in the following format:
    - a. Working electronic copy of schedule file, where indicated.
    - b. PDF electronic file.
  2. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
    - a. Submit a working electronic copy of schedule, using software indicated, and labeled to comply with requirements for submittals. Include type of schedule (initial or updated) and date on label.
  3. Coordinate Contractor's construction schedule with the schedule of values, list of subcontracts, submittal schedule, progress reports, payment requests, and other required schedules and reports.

**PART 2 - PRODUCTS**

**2.1 SUBMITTAL PROCEDURES**

- A. General Submittal Procedure Requirements: Prepare and submit submittals required by individual Specification Sections.
1. Submit electronic submittals via email as PDF electronic files.
    - a. Owner will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.

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**2.2 ACTION SUBMITTALS**

- A. Submit three paper copies of each submittal unless otherwise indicated. Owner will return two copies.
- B. Product Data: Mark each copy to show applicable products and options. Include the following:
  - 1. Manufacturer's written recommendations, product specifications, and installation instructions.
  - 2. Wiring diagrams showing factory-installed wiring.
  - 3. Printed performance curves and operational range diagrams.
  - 4. Testing by recognized testing agency.
  - 5. Compliance with specified standards and requirements.
- 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. Submit on sheets at least 8-1/2 by 11 inches but no larger than 30 by 42 inches. Include the following:
  - 1. Dimensions and identification of products.
  - 2. Fabrication and installation drawings and roughing-in and setting diagrams.
  - 3. Wiring diagrams showing field-installed wiring.
  - 4. Notation of coordination requirements.
  - 5. Notation of dimensions established by field measurement.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.
  - 1. If variation is inherent in material or product, submit at least three sets of paired units that show variations.

**2.3 INFORMATIONAL SUBMITTALS**

- A. Informational Submittals: Submit one paper copy of each submittal unless otherwise indicated. Owner will not return copies.
- B. Qualification Data: Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- C. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

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**2.4 CONTRACTOR'S CONSTRUCTION SCHEDULE**

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type schedule within 10 days of date established for the Notice to Proceed.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
- C. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.
- D. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and indicate date by which recovery will be accomplished.

**PART 3 - EXECUTION**

**3.1 SUBMITTAL REVIEW**

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

**3.2 CONTRACTOR'S CONSTRUCTION SCHEDULE**

- A. Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule one week before each regularly scheduled progress meeting.
  - 1. As the Work progresses, indicate Actual Completion percentage for each activity.



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- B. Distribute copies of approved schedule to Owner, subcontractors, testing and inspecting agencies, and parties identified by Contractor with a need-to-know schedule responsibility. When revisions are made, distribute updated schedules to the same parties.

**END OF SECTION 01 30 00**

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**SECTION 01 40 00 - QUALITY REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to Owner for a decision.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum. The actual installation may exceed the minimum within reasonable limits. Indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Owner for a decision.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems:
  - 1. Seismic-force-resisting system, designated seismic system, or component listed in the designated seismic system quality-assurance plan prepared by Owner.
  - 2. Main wind-force-resisting system or a wind-resisting component listed in the wind-force-resisting system quality-assurance plan prepared by Owner.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, notices, receipts for fee payments, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.
- E. 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.
- F. 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.

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 40 00**

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**SECTION 01 60 00 - PRODUCT REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- B. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced.
  - 1. Show compliance with requirements for comparable product requests.
  - 2. Owner will review the proposed product and notify Contractor of its acceptance or rejection.
- C. Basis-of-Design Product Specification Submittal: Show compliance with requirements.
- D. Compatibility of Options: If Contractor is given option of selecting between two or more products, select product compatible with products previously selected.
- E. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
  - 4. Store materials in a manner that will not endanger Project structure.
  - 5. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
- F. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

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**PART 2 - PRODUCTS**

**2.1 PRODUCT SELECTION PROCEDURES**

- A. Provide products that comply with the Contract Documents, are undamaged, and, unless otherwise indicated, are new at the time of installation.
1. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
  2. Where products are accompanied by the term "as selected," Owner will make selection.
  3. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Where the following headings are used to list products or manufacturers, the Contractor's options for product selection are as follows:
1. Products:
    - a. Where requirements include "one of the following," provide one of the products listed that complies with requirements.
    - b. Where requirements do not include "one of the following," provide one of the products listed that complies with requirements or a comparable product.
  2. Manufacturers:
    - a. Where requirements include "one of the following," provide a product that complies with requirements by one of the listed manufacturers.
    - b. Where requirements do not include "one of the following," provide a product that complies with requirements by one of the listed manufacturers or another manufacturer.
  3. Basis-of-Design Product: Provide the product named, or indicated on the Drawings, or a comparable product by one of the listed manufacturers.
- C. Where Specifications require "match Owner's sample," provide a product that complies with requirements and matches Owner's sample. Owner's decision will be final on whether a proposed product matches.
- D. Where Specifications include the phrase "as selected by Owner from manufacturer's full range" or similar phrase, select a product that complies with requirements. Owner will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

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**2.2 COMPARABLE PRODUCTS**

- A. Owner will consider Contractor's request for comparable product when the following conditions are satisfied:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  2. Detailed comparison of significant qualities of proposed product with those named in the Specifications.
  3. List of similar installations for completed projects, if requested.
  4. Samples, if requested.

**PART 3 - EXECUTION (Not Used)**

**END OF SECTION 01 60 00**

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**SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 EXECUTION REQUIREMENTS**

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

**1.2 CLOSEOUT SUBMITTALS**

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

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**1.3 SUBSTANTIAL COMPLETION PROCEDURES**

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

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**1.4 FINAL COMPLETION PROCEDURES**

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

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

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

**2.2 OPERATION AND MAINTENANCE DOCUMENTATION**

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



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

### **2.3 RECORD DRAWINGS**

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

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION AND PREPARATION**

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
- B. Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.

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

**3.2 CONSTRUCTION LAYOUT AND FIELD ENGINEERING**

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

**3.3 INSTALLATION**

- A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
1. Make vertical work plumb and make horizontal work level.
  2. Conceal pipes, ducts, and wiring in finished areas unless otherwise indicated.
  3. Maintain minimum headroom clearance of 96 inches in occupied spaces and 90 inches in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations.
- C. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- D. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed.

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- E. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place. Where size and type of attachments are not indicated, verify size and type required for load conditions.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Owner.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- G. Use products, cleaners, and installation materials that are not considered hazardous.

**3.4 CUTTING AND PATCHING**

- A. Provide temporary support of work to be cut.
- B. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- C. Cutting: Cut in-place construction using methods least likely to damage elements retained or adjoining construction.
  - 1. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
- D. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.
  - 1. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will minimize evidence of patching and refinishing.
  - 2. Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance.
  - 3. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.

**3.5 CLEANING**

- A. Clean Project site and work areas daily, including common areas. Dispose of materials lawfully.

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

**3.6 OPERATION AND MAINTENANCE MANUAL PREPARATION**

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

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**3.7 DEMONSTRATION AND TRAINING**

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

**END OF SECTION 01 70 00**

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**SECTION 07 54 23 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals: Shop Drawings of tapered insulation and ICC-ES evaluation reports for components of membrane roofing system.
- B. Warranties: Manufacturer's 20 year No Dollar Limit to include material and labor.

**PART 2 - PRODUCTS**

**2.1 PERFORMANCE REQUIREMENTS**

- A. Accelerated Weathering: Roofing system shall withstand minimum of 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
- B. Impact Resistance: Roofing system shall resist impact damage when tested according to ASTM D 3746 or ASTM D 4272.
- C. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E 1980.
- D. ENERGY STAR Listing: Roofing system shall be listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.
- E. Energy Performance: Three-year, aged, solar reflectance not less than 0.55 and emissivity not less than 0.75 or aged, Solar Reflectance Index of not less than 64.
- F. Exterior Fire-Test Exposure: ASTM E 108, Class A.

**2.2 ROOFING MATERIALS**

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Duro-Last
  - 2. Firestone Building Products.
  - 3. GAF.
  - 4. Johns Manville; a Berkshire Hathaway company.
- B. Fabric-Reinforced TPO Sheet: ASTM D 6878, internally fabric- or scrim-reinforced, uniform, flexible, fabric-backed TPO sheet.

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1. Thickness: 50 mils, nominal.
  2. Exposed Face Color: White.
- C. Auxiliary Materials: Recommended by roofing system manufacturer for intended use and as follows:
1. Sheet Flashing: Unreinforced TPO sheet flashing, 55 mils thick, minimum, of same color as sheet membrane.
  2. Bonding Adhesive: Manufacturer's standard.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Install substrate board with long joints continuous and perpendicular to roof slopes with end joints staggered. Tightly butt substrate boards together and fasten to steel deck.
- B. Mechanically fasten each layer of insulation to deck.
- C. Install TPO sheet according to roofing system manufacturer's written instructions and as follows:
  1. Adhered Sheet Installation: Apply bonding adhesive to substrate and underside of sheet and allow to partially dry. Do not apply bonding adhesive to splice area of sheet.
  2. Mechanically Fastened Sheet Installation: Secure one edge of sheet using fastening plates or battens centered within the membrane splice, and mechanically fasten sheet to roof deck.
- D. Seams: Clean seam areas, overlap membrane roofing, and hot-air-weld side and end laps of membrane roofing and sheet flashings. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
- E. Spread sealant bed over deck drain flange at roof drains, and securely seal membrane roofing in place with clamping ring.
- F. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- G. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

**END OF SECTION 07 54 23**





- GENERAL NOTES:
1. REFER TO GENERAL CONTRACT DRAWING NO. 1000 FOR MATERIALS AND METHODS OF CONSTRUCTION.
  2. ROOF SHALL BE 12" MINIMUM THICKNESS.
  3. ROOF SHALL BE CONCRETE ON 4" MINIMUM THICKNESS INSULATION.
  4. ROOF SHALL BE FINISHED WITH 1/2" THICK GYP BOARD.
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