

# **FLORIDA DEPARTMENT OF TRANSPORTATION**



**INVITATION TO BID**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

Respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the 72-hour period following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the procurement officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.

**ADVERTISEMENT**  
**INVITATION TO BID**  
**STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION**  
**FLORIDA'S TURNPIKE ENTERPRISE**

Invitation to Bid Packages will be received by the State of Florida, Department of Transportation, Florida's Turnpike Enterprise, Contractual Services Office, via electronic submission only (see Instructions for Electronic Submission of Bids), on or before **2:30 P.M. (local time) on Thursday, September 16, 2021** for the following project:

**BID NO.: DOT-ITB-22-8001r-AC**

**SCOPE:** The Florida Department of Transportation, Florida's Turnpike Enterprise (hereinafter referred to as the "Department") seeks the services of a licensed, insured, and experienced Vendor to provide all labor, materials, equipment, and incidentals necessary to remove and replace the existing roof system at Florida's Turnpike Enterprise Headquarters Building No. 5315 located at Florida's Turnpike Mainline, SR-91, Milepost 263, in accordance with the plans and specifications herein, as described in Exhibit "A," Scope of Services attached hereto and made a part hereof. All equipment and materials used by the Vendor shall be completely free of any type of asbestos materials.

**Vendor Qualifications:** Refer to Exhibit "A," Scope of Services.

**All Bidders, Proposers, and Respondents must be registered in the State of Florida's MyFloridaMarketPlace system.** All prospective bidders, proposers, and respondents that are not registered, should go to <https://vendor.myfloridamarketplace.com/> to complete online registration, or call 1-866-352-3776 for assisted registration.

**For services contracts, all out-of-state corporations, out-of-state limited liability companies, and out-of-state limited partnerships must be authorized to do business in the State of Florida.**

For authorization, contact:

Florida Department of State  
Tallahassee, Florida 32399  
(850) 245-6051

**For services contracts, all Bidders, Proposers, and Respondents must be properly licensed if the business being provided requires that individuals be licensed by the Florida Department of Business and Professional Regulation.**

For licensing, contact:

Florida Department of Business and Professional Regulation  
Tallahassee, Florida 32399  
(850) 487-1395

**NOTE:** In accordance with Section 287.057(23), Florida Statutes, respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the seventy-two (72) hour period following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the Procurement Officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.

**Public Meeting Notices and Meeting Agendas:**

Notice of the public meetings scheduled for this solicitation is provided in the Timeline of the attached solicitation, with agendas for the public meetings.

**MFMP Transaction Fee:**

All payment(s) to the Vendor(s) resulting from this competitive solicitation **WILL** be subject to the MFMP Transaction Fee in accordance with the referenced Form PUR 1000 General Contract Condition #14. The Transaction Fee imposed shall be based upon the date of issuance of the payment.

**Scrutinized Companies Lists:**

All Responses, regardless of dollar value, must include a completed Vendor Certification Regarding Scrutinized Companies Lists to certify the respondent is not on either of those lists. The form should be submitted with the Bid Blank.

A Vendor is ineligible to enter into a contract with the Department for goods or services of any amount if, at the time of entering into such contract, the Vendor is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, Florida Statutes, or is engaged in a boycott of Israel.

Section 287.135, Florida Statutes, also prohibits companies from entering into a contract for goods or services of \$1 million or more that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector Lists which were created pursuant to Section 215.473, Florida Statutes.

If the Department determines the Vendor submitted a false certification under Section 287.135 of the Florida Statutes, the Department shall either terminate the Contract after it has given the Vendor notice and an opportunity to demonstrate the Department's determination of false certification was in error pursuant to Section 287.135 of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135 of the Florida Statutes are met.

**Title VI of the Civil Rights Act of 1964:**

**COMPLIANCE WITH NONDISCRIMINATION STATUTES AND AUTHORITIES:** Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21; The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects); Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex); Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27; The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age); Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex); The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and vendors, whether such programs or activities are Federally funded or not); Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 - 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38; The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex); Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations; Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100); Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

**INSPECTOR GENERAL:**

The Contractor/Consultant/Vendor agrees to comply with Section 20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with Section 20.055(5), Florida Statutes.

**MANDATORY PRE-BID CONFERENCE:**

A Mandatory Pre-Bid Conference will be held, however if any potential bidders attended the Pre-Bid Conference held on August 12, 2021, for the previous advertisement No. DOT-ITB-22-8001-AC they do not have to attend the Pre-Bid/Site Visit for this re-advertisement.

Date: September 2, 2021

Time: 10:30am

Location: Florida's Turnpike Enterprise

Mile Post 263

Building 5315

Ocoee, FL 34761

Room No.: Auditorium B

**MANDATORY SITE VISIT:**

A Mandatory Site Visit will be held.

Date: September 2, 2021

Time: Following the Mandatory Pre-Bid Conference.

**HOW TO APPLY:** Prospective bidders may obtain a complete Invitation to Bid (ITB), including specifications and general bid conditions for the above-referenced project by copying the link below into your browser:

[http://www.myflorida.com/apps/vbs/vbs\\_search\\_r2.matching\\_ads](http://www.myflorida.com/apps/vbs/vbs_search_r2.matching_ads)

The Department reserves the right to reject any or all bids.

**NOTE:** All of the Department's **ITB/RFP/ITN ADVERTISEMENTS** appear on the Internet at website:

[http://www.myflorida.com/apps/vbs/vbs\\_main\\_menu](http://www.myflorida.com/apps/vbs/vbs_main_menu)

**Under "Vendor Bid System" Click on "Search Advertisements"**

**Click on the Drop menu for "Agency" and Select "Department of Transportation"**

**Scroll down and Click on "Advertisement Search"**

**Locate the "ITB" number**

We encourage all vendors to regularly check this site.

State of Florida  
Department of Transportation  
Florida's Turnpike Enterprise  
Contractual Services Office

**INVITATION TO BID REGISTRATION**

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**PLEASE COMPLETE AND RETURN THIS FORM ASAP**

**TO [Amanda.Cruz@dot.state.fl.us](mailto:Amanda.Cruz@dot.state.fl.us) OR FAX TO 407-264-3058 Attn: Amanda Cruz.**

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**Bid Number:** DOT-ITB-22-8001r-AC

**Title:** Roof Replacement at the Florida's Turnpike Enterprise Headquarters Building No. 5315

**Bid Due Date & Time (On or Before):** Thursday, September 16, 2021, at 2:30pm

Potential bidders should notify our office by returning this Bid Registration Form as soon as possible after downloading. Complete the information below and fax or e-mail *this sheet only* to the Florida Department of Transportation Procurement Office at 407-264-3058, or e-mail to [amanda.cruz@dot.state.fl.us](mailto:amanda.cruz@dot.state.fl.us)

**THE INVITATION TO BID DOCUMENT YOU RECEIVED IS SUBJECT TO CHANGE. Notice of changes (Addenda), will be posted on the Florida Vendor Bid System at:**

**<http://www.myflorida.com/apps/vbs/vbs> [www.main menu](#)**

**Under "Vendor Bid System" Click on "Search Advertisements"**

**Click on the Drop menu for Agency and Select "Department of Transportation"**

**Scroll down and Click on "Advertisement Search"**

**Locate the "ITB" number.**

**It is the responsibility of all potential bidders to monitor this site for any changing information prior to submitting your bid.**

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

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

City, State, Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Internet E-Mail Address: \_\_\_\_\_

For further information on this process, e-mail or telephone: Amanda Cruz at [amanda.cruz@dot.state.fl.us](mailto:amanda.cruz@dot.state.fl.us) or (407-264-3411)

## INSTRUCTIONS FOR ELECTRONIC SUBMISSION OF BIDS

Due to restrictions/limitations concerning COVID-19 (Coronavirus), the Florida Department of Transportation is requiring the electronic submission of bids. Please follow the instructions below:

- Failure to follow these instructions, may result in your bid being found non-responsive.
- Non-responsive bids will not be considered.
- Bids shall be submitted to: [TP.Purch@dot.state.fl.us](mailto:TP.Purch@dot.state.fl.us)
- Subject line must show: *DOT-ITB-22-8001r-AC*– (Insert Bidder’s Name)
- All bids submitted electronically shall be marked as follows:  
*BID PACKAGE - DOT-ITB-22-8001r-AC* (Insert Bidder’s Name)  
(See Exhibit “C,” Bid Blank for all forms and required documentation)

### NOTES:

- Documents shall be submitted in portable document format (PDF) and have a size limit of 25MB.  
*(A Vendor may split their Bid Package into separate PDF files if the file size exceeds the 25MB size limitation. Bid Package files should be marked as “Bid Package file 1 of..., 2 of... etc.”)*  
  
The bidder must include any materials it asserts to be exempted from public disclosure under Chapter 119, Florida Statutes, in a separate document labeled "The ITB number - Bidder’s name - Confidential Material." The bidder must identify the specific Statute that authorizes exemption from the Public Records Law. Any claim of confidentiality on materials the bidder asserts to be exempt from public disclosure and placed elsewhere in the bid will be considered waived by the bidder upon submission, effective after opening.
- The body of the email shall not contain any information.
- It is the Bidder’s responsibility to ensure that the bid package is sent to the proper email address **on or before** the bid due date and time (See Introduction Section 2 Timeline). Bids which for any reason are not so received will not be considered.
- By submitting a bid, the Bidder represents that it understands and accepts the terms and conditions to be met and the character, quality and scope of services to be provided.
- All bids and associated forms shall be signed and dated in ink by a duly authorized representative of the Bidder.
- Each Bidder shall fully acquaint itself with the conditions relating to the performance of the services under the conditions of this Invitation to Bid. This may require an on-site observation.
- A Confirmation notice will be sent to each Bidder when a bid is received. **Do not copy anyone on your submittal email.**

**FLORIDA DEPARTMENT  
OF TRANSPORTATION**



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ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

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**FLORIDA DEPARTMENT  
OF  
TRANSPORTATION**



**Invitation to Bid**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

**PROCUREMENT CONTACT INFORMATION:**

**Amanda Cruz, Procurement Agent**  
**Florida Department of Transportation**  
**Florida's Turnpike Enterprise**  
**Phone (407) 264-3411**  
**Fax: (407) 264-3058**  
**Email: [Amanda.Cruz@dot.state.fl.us](mailto:Amanda.Cruz@dot.state.fl.us)**

**SUBMIT BIDS VIA ELECTRONIC SUBMISSION ONLY:**

**[TP.Purch@dot.state.fl.us](mailto:TP.Purch@dot.state.fl.us)**

**See Instructions for Electronic Submission of Bids**

It is the Bidder's responsibility to ensure that the bid is sent to the proper email address on or before the bid due date and time (See Introduction Section 2 Timeline). Bids which for any reason are not so received, will not be considered.



# INTRODUCTION SECTION

## 1) INVITATION

The State of Florida Department of Transportation, Florida's Turnpike Enterprise (hereinafter referred to as the "Department") is soliciting written bids from qualified bidders to establish a contract to provide all labor, materials, equipment and incidentals necessary to remove and replace the existing roof system at Florida's Turnpike Enterprise Headquarters Building No. 5315 located at Florida's Turnpike Mainline, SR 91, Milepost 263, in accordance with the plans and specifications herein, as described in Exhibit "A," Scope of Services attached hereto and made a part hereof. It is anticipated that a Notice to Proceed (NTP) will be issued within thirty (30) calendar days after Contract execution and the Contract shall be effective for eighteen (18) months thereafter.

For the purpose of this document, the term "bidder" means the bidder acting on its own behalf and those individuals, partnerships, firms, or corporations comprising the bidder's team. The term "bid package" means the complete response of the bidder to the Invitation to Bid including properly completed forms and supporting documentation. After the award, said bidder will be referred to as the "Vendor."

## 2) TIMELINE

Provided below is a list of critical dates and actions. These dates are subject to change. Notices of changes (Addenda) will be posted on the Florida Vendor Bid System at [http://www.myflorida.com/apps/vbs/vbs\\_main\\_menu](http://www.myflorida.com/apps/vbs/vbs_main_menu) (click on "Search Advertisements," click on the drop-down arrow beside the box under Agency, select DEPARTMENT OF TRANSPORTATION, then go to the bottom of the same page and click on Advertisement Search) under this bid number. It is the responsibility of all potential bidders to monitor this site for any changing information prior to submitting a bid.

<u>ACTION/LOCATION</u>	<u>DATE</u>	<u>LOCAL TIME</u>
<b>MANDATORY PRE-BID CONFERENCE</b> Florida Turnpike Headquarters, MP 263.0 Turkey Lake Service Plaza Bldg. 5315 Ocoee, Florida 34761 Auditorium B A Mandatory Pre-Bid Conference will be held, however if any potential bidders attended the Pre-Bid Conference held on August 12, 2021, for the previous advertisement No. DOT-ITB-22-8001-AC they do not have to attend the Pre-Bid/Site Visit for this re-advertisement. (See Note 1)	<b>09-02-2021</b> Bring a copy of this package to the meeting.	<b>10:30 AM</b>
<b>MANDATORY SITE VISIT</b>	<b>09-02-2021</b>	<b>Following the Pre-Bid Conference</b>
<b>DEADLINE FOR TECHNICAL QUESTIONS</b> Via email to <a href="mailto:Amanda.Cruz@dot.state.fl.us">Amanda.Cruz@dot.state.fl.us</a> Reference DOT-ITB-22-8001r-AC in the subject box. There is no deadline for administrative questions.	<b>09-09-2021</b>	<b>05:00 PM</b>
<b>BIDS DUE (ON OR BEFORE)</b> <b>SUBMIT BIDS VIA ELECTRONIC SUBMISSION ONLY</b> (See Instructions for Electronic Submission of Bids) <a href="mailto:TP.Purch@dot.state.fl.us">TP.Purch@dot.state.fl.us</a> (See Note 2)	<b>09-16-2021</b>	<b>02:30 PM</b>
<b>PUBLIC OPENING (In Person Only)</b> (See Note 1) Florida Turnpike Headquarters Florida Turnpike M.P. 263.0 Turkey Lake Service Plaza Bldg. 5315 Ocoee, Florida 34761 Room 2167	<b>09-16-2021</b>	<b>03:00 PM</b>
<b>POSTING OF INTENDED DECISION/AWARD</b> Internet's Vendor Bid System	<b>09-27-2021</b>  <b>09-30-2021</b>	<b>05:00 PM</b> <b>through</b> <b>05:00 PM</b>

[Note 1: All meeting(s) listed above are open to the public.]

[Note 2: It is the Bidder's responsibility to ensure that the bid is sent to the proper email address on or before the bid due date and time (See Introduction Section 2 Timeline). Bids which for any reason are not so received, will not be considered.]

### 3) **BID OPENING AGENDA**

The sealed bids will be opened by the Department's Procurement Office personnel at the date and time referenced in the Timeline. All bid openings are open to the public and will be conducted according to the following agenda:

Opening remarks – By Department Procurement Office personnel. (Approximately two (2) minutes).

Public input period – Public input related to the bid solicitation. (Maximum of fifteen (15) minutes total)

Bids opened – At conclusion of public input or fifteen (15) minutes, whichever occurs first, timely bids received will be opened with bidder's name and prices to be read aloud.

Adjourn - After all bids received timely have been opened, the meeting will be adjourned.

### 4) **SPECIAL ACCOMMODATIONS**

Any person with a qualified disability requiring special accommodations at a pre-bid conference, public meeting, and/or opening shall contact the Procurement Officer at the phone number, e-mail address or fax number provided on the title page at least five (5) working days prior to the event. Hearing or speech impaired individuals may contact this office by using the Florida Relay Services which can be reached at 1 (800) 955-8771 (TDD).

## **SPECIAL CONDITIONS**

### 1) **MYFLORIDAMARKETPLACE**

**BIDDERS MUST BE REGISTERED IN THE STATE OF FLORIDA'S MYFLORIDAMARKETPLACE SYSTEM BY THE TIME AND DATE OF THE BID OPENING OR THEY MAY BE CONSIDERED NON-RESPONSIVE (see Special Condition 21).** All prospective bidders that are not registered should go to <https://vendor.myfloridamarketplace.com/> to complete on-line registration, or call 1-866-352-3776 for assisted registration.

All payment(s) to the Vendor resulting from this competitive solicitation WILL be subject to the MFMP Transaction Fee in accordance with the referenced Form PUR 1000 General Contract Condition #14. The Transaction Fee imposed shall be based upon the date of issuance of the payment.

### 2) **FLORIDA DEPARTMENT OF FINANCIAL SERVICES (DFS) W-9 REQUIREMENT**

The Florida Department of Financial Services (DFS) requires all vendors that do business with the state to submit an electronic Substitute Form W-9. Vendors must submit their W-9 forms electronically at <https://flvendor.myfloridacfo.com> to receive payments from the state. Contact the DFS Customer Service Desk at (850) 413-5519 or [FLW9@myfloridacfo.com](mailto:FLW9@myfloridacfo.com) with any questions.

### 3) **QUESTIONS & ANSWERS**

In accordance with Section 287.057(23), Florida Statutes, respondents to this solicitation or persons acting on their behalf may not contact, between the release of the solicitation and the end of the seventy-two (72) hour period following the agency posting the notice of intended award, excluding Saturdays, Sundays, and state holidays, any employee or officer of the executive or legislative branch concerning any aspect of this solicitation, except in writing to the Procurement Officer or as provided in the solicitation documents. Violation of this provision may be grounds for rejecting a response.

Any technical questions arising from this Invitation to Bid must be forwarded, in writing, to the Procurement Officer identified below. Questions must be received no later than the time and date reflected in the Timeline. The Department's written response to written inquiries submitted timely by bidders will be posted on the Florida Vendor Bid System at [http://www.myflorida.com/apps/vbs/vbs\\_main\\_menu](http://www.myflorida.com/apps/vbs/vbs_main_menu) (click on "Search Advertisements," click on the drop-down arrow beside the box under Agency, select DEPARTMENT OF TRANSPORTATION, then go to the bottom of the same page and click on Advertisement Search), under this bid number. It is the responsibility of all potential bidders to monitor this site for any changing information prior to submitting a bid.

**WRITTEN TECHNICAL QUESTIONS** should be submitted to: **Amanda Cruz**, [Amanda.Cruz@dot.state.fl.us](mailto:Amanda.Cruz@dot.state.fl.us)  
Questions regarding administrative aspects of the bid process should be directed to the Procurement Officer in writing at the email address above or by phone: (407) 264-3411.

**4) ORAL INSTRUCTIONS/CHANGES TO THE INVITATION TO BID (ADDENDA)**

No negotiations, decisions, or actions will be initiated or executed by a bidder as a result of any oral discussions with a state employee. Only those communications which are in writing from the Department will be considered as a duly authorized expression on behalf of the Department.

Notices of changes (Addenda) will be posted on the Florida Vendor Bid System at [http://www.myflorida.com/apps/vbs/vbs\\_main\\_menu](http://www.myflorida.com/apps/vbs/vbs_main_menu) (click on "Search Advertisements," click on the drop-down arrow beside the box under Agency, select DEPARTMENT OF TRANSPORTATION, then go to the bottom of the same page and click on Advertisement Search) under this bid number. It is the responsibility of all potential bidders to monitor this site for any changing information prior to submitting a bid. All Addenda will be acknowledged by the Addenda Acknowledgement Form included herein and shall be submitted with the vendor's bid package.

**5) DIVERSITY ACHIEVEMENT**

**MINORITY BUSINESS ENTERPRISE (MBE) UTILIZATION**

The Department, in accordance with Title VI of the Civil Rights Act of 1964, 42 USC 2000d- 2000d-4, Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that the Department will affirmatively ensure that in any contract entered into pursuant to this advertisement, minority and disadvantaged business enterprises will be afforded the full opportunity to submit bids in response to this invitation and will not be discriminated on the basis of race, color, national origin, or sex in consideration for an award.

The Department encourages small, minority, women, and service-disabled veteran businesses to compete for Department contracts, both as "Vendor" and as sub-vendors. The Department, its vendors, suppliers, and consultants should take all necessary and reasonable steps to ensure that such businesses have the opportunity to compete for and perform contract work for the Department in a nondiscriminatory environment. Bidders are requested to indicate their intention regarding MBE participation on the MBE Planned Utilization Form and to submit the completed form with their bid package. The Contract Vendor will be asked to submit payment certification for MBE subcontractors used.

To request certification or to locate certified MBEs, call the Office of Supplier Diversity, Department of Management Services at (850) 487-0915, or access their MBE directory on the Internet at [www.osd.dms.state.fl.us/](http://www.osd.dms.state.fl.us/).

**6) SCOPE OF SERVICES**

Details of the services, information and items to be furnished by the Vendor are described in Exhibit "A," Scope of Services, attached hereto and made a part hereof.

**7) INTENDED AWARD**

The Department intends to award this Contract to the responsive and responsible bidder that submits the lowest responsive bid. If the Department is confronted with identical pricing or scoring from multiple vendors, the Department shall determine the order of award using the following criteria, in the order of preference listed below (from highest priority to lowest priority):

1. Section 295.187(4), Florida Statutes; Veteran Business Enterprise
2. Section 287.087, Florida Statutes; Drug Free Work Place
3. Section 287.057(11), Florida Statutes; Minority Business Enterprise

In the event that the application of the above referenced preferences does not resolve the identical replies, the Department shall determine the award by means of random drawing.

**8) MANDATORY PRE-BID CONFERENCE**

A MANDATORY Pre-Bid Conference will be held at the date, time and location in the Timeline. The purpose of this meeting is to provide an open forum for the Department to review the Exhibit "A," Scope of Services and respond to questions from potential bidders regarding the Exhibit "A," Scope of Services, ITB requirements, contractual requirements, method of compensation, and other conditions or requirements that may, in any manner, effect the work to be performed. Any changes and/or resulting Addenda to the ITB will be the sole prerogative of the Department.

Attendance at this Pre-Bid Conference is MANDATORY. Failure by a bidder to attend or be represented at this Pre-Bid Conference will constitute a non-responsive determination of its bid package. Bids found to be non-responsive will not be considered.

A Mandatory Pre-Bid Conference will be held, however if any potential bidders attended the Pre-Bid Conference held on August 12, 2021, for the previous advertisement No. DOT-ITB-22-8001-AC they do not have to attend the Pre-Bid/Site Visit for this re-advertisement.

8.1 MANDATORY SITE-VISIT

Will be held following the Pre-Bid Conference.

9) QUALIFICATIONS:

Refer to Exhibit "A," Scope of Services, Page A-2 for Vendor Qualifications.

9.1 BIDDER QUALIFICATIONS

When submitting a bid, each bidder must submit a written statement ("Minimum Qualifications Statement" Form 1), detailing the qualifications that demonstrate the minimum qualifications contained herein are met. Failure by the Bidder to provide the above item(s) will constitute a non-responsive determination. Bids found to be non-responsive will not be considered.

9.2 AUTHORIZED TO DO BUSINESS IN THE STATE OF FLORIDA

In accordance with Sections 607.1501, 605.0211(2)(b), and 620.9102, Florida Statutes, out of state corporations, out of state limited liability companies, and out of state limited partnerships must be authorized to do business in the State of Florida. Such authorization should be obtained by the bid due date and time, but in any case, must be obtained prior to the award of the Contract. For authorization, contact:

Florida Department of State  
Tallahassee, Florida 32399  
(850) 245-6051

9.3 LICENSE TO CONDUCT SERVICES IN THE STATE OF FLORIDA

If the services being provided require that individuals be licensed by the Department of Business and Professional Regulation, such licenses should be obtained by the bid due date and time, but in any case, must be obtained prior to posting of the intended award of the Contract. For licensing, contact:

Florida Department of Business and Professional Regulation  
Tallahassee, Florida 32399  
(850) 487-1395

10) WARRANTY/SUBSTITUTIONS

When performance of the services requires the supply of commodities, a warranty is required on all items provided against defective materials, workmanship, and failure to perform in accordance with required industry performance criteria for a period of not less than ninety (90) days from the date of acceptance by the purchaser. Any deviation from this criterion must be documented in the bid response or the above statement shall prevail. Delivery of substitute commodities requires prior written approval from the ordering location.

Replacement of all materials found defective within the warranty period shall be made without cost to the purchaser, including transportation if applicable. All fees associated with restocking cancelled orders shall be the responsibility of the Vendor.

All items provided during the performance of the Contract found to be poorly manufactured will not be accepted, but returned to the Vendor, at their expense, for replacement. Replacement of all items found defective shall be made without cost to the Department, including transportation, if applicable. As it may be impossible for each facility to inspect all items upon arrival, a reasonable opportunity must be given to these facilities for inspection of the items and returning those items that are defective.

**11) LIABILITY INSURANCE**

The Vendor shall not commence any work until they have obtained the following types of insurance, and certificates of such insurance have been received by the Department. Nor shall the Vendor allow any sub-vendor to commence work on this project until all similar insurance required of the sub-vendor has been so obtained. The Vendor shall submit the required Certificates of Insurance to the **Florida Department of Transportation, Procurement Office, Amanda Cruz, Florida's Turnpike Headquarters, Florida's Turnpike M.P. 263.0, Turkey Lake Service Plaza, Bldg. 5315, Ocoee, Florida 34761** within ten (10) days after the ending date of the period for posting the intended award decision.

The Vendor must carry and keep in force during the period of this Contract a general liability insurance policy or policies with a company authorized to do business in the State of Florida, affording public liability insurance with combined bodily injury limits of at least \$200,000 per person and \$300,000 each occurrence, and property damage insurance of at least \$200,000 each occurrence, for the services to be rendered in accordance with this Contract.

WORKERS' COMPENSATION. The Vendor shall also carry and keep in force Workers' Compensation insurance as required for the State of Florida under the Workers' Compensation Law.

With respect to any general liability insurance policy required pursuant to this Agreement, all such policies shall be issued by companies licensed to do business in the State of Florida. The Vendor shall provide to the Department certificates showing the required coverage to be in effect with endorsements showing the Department to be an additional insured prior to commencing any work under this Contract. The certificates and policies shall provide that in the event of any material change in or cancellation of the policies reflecting the required coverage, thirty days advance notice shall be given to the Department or as provided in accordance with Florida law.

The Department shall be exempt from, and in no way liable for, any sums of money which may represent a deductible in any insurance policy. The payment of such deductible shall be the sole responsibility of the Vendor or subcontractor providing such insurance. Policies that include Self Insured Retention (SIR) will not be accepted.

**12) PERFORMANCE BOND**

The intended award bidder shall provide the Department with a Performance Bond for the full amount of the bid. The Performance Bond shall be provided by a surety company authorized to do business in the State of Florida. The Performance Bond shall be executed and furnished to the Department prior to Contract execution and no later than ten (10) days after the ending date of the period for posting the intended award decision, unless the Department extends the time period in writing. Failure to provide the required Performance Bond (Form 375-040-27) to the Department within the aforementioned timeframe will void the intended award's bid and the Department will proceed in contracting with the next lowest responsive bidder.

The bidder must submit, with its bid, a current letter from a surety company or bonding agent authorized to do business in the State of Florida and written on company letterhead, to document the bidder's present ability to obtain a Performance Bond for the full amount of the bid. Failure by the bidder to provide this letter with its bid will constitute a non-responsive determination for its bid. Bids found to be non-responsive will not be considered.

**13) METHOD OF COMPENSATION**

Refer to Exhibit "B," Method of Compensation.

**14) CONTRACT DOCUMENT**

**STANDARD WRITTEN AGREEMENT**

The Department's "Standard Written Agreement" is attached hereto and made a part hereof. The terms and conditions contained therein will become an integral part of the Contract resulting from this solicitation. In submitting a bid, the bidder agrees to be legally bound by these terms and conditions.

**15) REVIEW OF BIDDER'S FACILITIES & QUALIFICATIONS**

After the bid due date and prior to Contract execution, the Department reserves the right to perform or to have performed, an on-site review of the bidder's facilities and qualifications. This review will serve to verify data and representations submitted by the bidder and may be used to determine whether the bidder has adequate facilities, equipment, qualified and experienced staff, and overall management capabilities to provide the required services. The review may also serve to verify whether the bidder has financial capabilities adequate to meet the Contract requirements.

**Should** the Department determine that the bid package has material misrepresentations or that the size or nature of the bidder's facilities, equipment, management capabilities, or the number of experienced personnel (including technical staff) are not adequate to ensure satisfactory contract performance, the Department has the right to reject the bid.

**16) PROTEST OF INVITATION TO BID SPECIFICATIONS**

Any person who is adversely affected by the contents of this Invitation to Bid must file the following with the Department of Transportation, Clerk of Agency Proceedings, Office of the General Counsel, 605 Suwannee Street, Mail Station 58, Tallahassee, Florida 32399-0450:

1. A written notice of protest within seventy-two (72) hours after the posting of the solicitation, (the notice of protest may be faxed to 850-414-5264), and;
2. A formal written protest in compliance with Section 120.57(3), Florida Statutes, within ten (10) days of the date on which the written notice of protest is filed.

Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

**17) UNAUTHORIZED ALIENS**

The employment of unauthorized aliens by any Vendor is considered a violation of Section 274A(e) of the Immigration and Nationality Act. If the Vendor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of the Contract.

**18) SCRUTINIZED COMPANIES LISTS**

All Responses, regardless of dollar value, must include a completed [Vendor Certification Regarding Scrutinized Companies Lists](#) to certify the respondent is not on either of those lists. The form should be submitted with the Bid Blank.

A Vendor is ineligible to enter into a contract with the Department for goods or services of any amount if, at the time of entering into such Contract, the Vendor is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, Florida Statutes, or is engaged in a boycott of Israel.

Section 287.135, Florida Statutes, also prohibits companies from entering into a contract for goods or services of \$1 million or more that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector Lists which were created pursuant to Section 215.473, Florida Statutes.

If the Department determines the Vendor submitted a false certification under Section 287.135 of the Florida Statutes, the Department shall either terminate the Contract after it has given the Vendor notice and an opportunity to demonstrate the Department's determination of false certification was in error pursuant to Section 287.135 of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135 of the Florida Statutes are met.

**19) RESERVATIONS**

The Department reserves the right to accept or reject any or all bids received and reserves the right to make an award without further discussion of the bids submitted. Therefore, the bidder should make sure that the bid package submitted is complete and accurate and submitted to ensure delivery on or before the bid opening time and date specified in this solicitation. It is understood that the bid will become a part of the Department's official file, without obligation to the Department.

**20) ADDITIONAL TERMS & CONDITIONS**

No conditions may be applied to any aspect of the ITB by the bidder. Any conditions placed on any aspect of the bid documents by the bidder may result in the bid being rejected as a conditional bid (see "RESPONSIVENESS OF BIDS"). **DO NOT WRITE IN CHANGES ON ANY ITB SHEET**. The only recognized changes to the ITB prior to bid opening will be a written Addenda issued by the Department.

**21) RESPONSIVENESS OF BIDS**

Bids will not be considered if not received by the Department on or before the date and time specified as the due date for submission. All bids must be typed or printed in ink. A responsive bid is an offer to provide the services specified in this Invitation to Bid in accordance with all requirements of this Invitation to Bid. Bids found to be non-responsive will not be considered. Bids may be rejected if found to be irregular or not in conformance with the requirements and instructions herein contained. A bid may be found to be irregular or non-responsive by reasons that include, but are not limited to, failure to utilize or complete prescribed forms, modifying the bid requirements, submitting conditional bids or incomplete bids, submitting indefinite or ambiguous bids, or executing forms or the bid sheet with improper and/or undated signatures. Other conditions which may cause rejection of bids include, evidence of collusion among bidders, obvious lack of experience or expertise to provide the required services, and failure to perform or meet financial obligations on previous contracts. All determinations of responsiveness will be the responsibility of the Department.

**22) BID BLANK**

The Bidder must use the attached Exhibit "C," Bid Blank, to submit its bid. The Exhibit "C," Bid Blank, must be signed and dated in ink by a representative who is authorized to contractually bind the Bidder. All Exhibit "C," Bid Blank, and other documentation submitted in response to this solicitation must be executed and submitted. **(See Instructions for Electronic Submission of Bids)**

**23) ESTIMATED QUANTITIES**

The Department anticipates purchasing the estimated quantities shown on the bid sheet(s), for an eighteen (18) month period of any contract resulting from this bid. The estimated quantities are given only as a guideline for preparing your bid and should not be construed as representing the actual quantities to be authorized under this Contract. The Vendor(s) shall supply, at bid prices, the actual quantities authorized regardless of whether the total of such quantities is more or less than anticipated. This bid and the resulting Contract will be subject to annual appropriated funding.

**24) "DRUG-FREE WORK PLACE" PREFERENCE**

Whenever two (2) or more bids which are equal with respect to price, quality, and service are received, the Department shall determine the order of award first in accordance with Section 295.187(4), Florida Statutes, giving preference to "Veteran Business Enterprise" then to bid responses from vendors that certify the business has implemented a drug-free workplace program in accordance with Section 287.087, Florida Statutes. The "Drug-Free Workplace Program Certification" must be completed and submitted with the bid response to be eligible for this preference.

**25) COPYRIGHTED MATERIAL**

Copyrighted material will be accepted as part of a bid only if accompanied by a waiver that will allow the Department to make paper and electronic copies necessary for the use of Department staff and agents. It is noted that copyrighted material is not exempt from the Public Records Law, Chapter 119, Florida Statutes. Therefore, such material will be subject to viewing by the public, but copies of the material will not be provided to the public.

**26) ATTACHMENT TO ITB SUBMITTAL - CONFIDENTIAL MATERIAL**

The bidder must include any materials it asserts to be exempted from public disclosure under Chapter 119, Florida Statutes, in a separate document labeled "The ITB number - Bidder's name - Confidential Material." The bidder must identify the specific Statute that authorizes exemption from the Public Records Law. Any claim of confidentiality on materials the bidder asserts to be exempt from public disclosure and placed elsewhere in the bid will be considered waived by the bidder upon submission, effective after opening.

**27) ELECTRONIC SUBMISSION OF BIDS:**

See Instructions for Electronic Submission of Bids

**28) REVISED BIDS**

Bidders may modify submitted bids at any time prior to the bid due date. Revised bids must be received by the bid due date and time to be considered. Bidders shall submit revised bids in a separate email to be opened at the same time as the bid. The ITB number - Bidder's name - REVISED shall appear in the subject line of the revised bid.



**29) POSTING OF INTENDED DECISION/AWARD**

**29.1 General:**

The Department's decision will be posted on the Florida Vendor Bid System, [http://www.myflorida.com/apps/vbs/vbs\\_main\\_menu](http://www.myflorida.com/apps/vbs/vbs_main_menu) (click on "Search Advertisements," click on the drop-down arrow beside the box under Agency, select DEPARTMENT OF TRANSPORTATION, then go to the bottom of the same page and click on Advertisement Search) on date and time in the Timeline, and will remain posted for a period of seventy-two (72) hours. Any bidder who is adversely affected by the Department's recommended award or intended decision must file the following with the Department of Transportation, Clerk of Agency Proceedings, Office of the General Counsel, 605 Suwannee Street, Mail Station 58, Tallahassee, Florida 32399-0450:

1. A written notice of protest within seventy-two (72) hours after posting of the Intended Award, (the notice of protest may be faxed to 850-414-5264), and;
2. A formal written protest and protest bond in compliance with Section 120.57(3), Florida Statutes, within ten (10) days of the date on which the written notice of protest is filed. At the time of filing the formal written protest, a bond (a cashier's check or money order may be accepted) payable to the Department must also be submitted in an amount equal to one percent (1%) of the estimated Contract amount based on the Contract price submitted by the protestor.

Failure to file a protest within the time prescribed in Section 120.57(3), Florida Statutes, or failure to post the bond or other security required by law within the time allowed for filing a bond shall constitute a waiver of proceedings under Chapter 120, Florida Statutes.

**29.2 Inability to Post:**

If the Department is unable to post as defined above, the Department will notify all bidders by electronic notification on the Florida Vendor Bid System (see Special Condition 29.1, above) or by mail, fax, and/or telephone. The Department will provide notification of any future posting in a timely manner.

**29.3 Request to Withdraw Bid:**

Requests for withdrawal will be considered if received by the Department, in writing, within seventy-two (72) hours after the bid opening time and date. Requests received in accordance with this provision will be granted by the Department upon proof of the impossibility to perform based upon obvious error on the part of the bidder. Bidders that do not withdraw as stated above will forfeit their bid bond, if applicable.

**30) AWARD OF THE CONTRACT**

Services will be authorized to begin when the Vendor receives the following document(s), as appropriate, indicating the encumbrance of funds and award of the Contract:

- a) A Standard Written Agreement executed by both parties.

**31) ATTACHED FORMS**

- Form 1 – Minimum Qualifications Statement
- Form 2 – Drug Free Workplace Program Certification
- Form 3 – Contractor Notification Form
- Form 4 – Scrutinized Companies Lists, 375-030-60
- Form 5 – Corporate Resolution
- Form 6 – Addenda Acknowledgement Form
- Form 7 – Exempt Documents/Security System Plan Distribution Form
- Form 8 – Performance Bond Form



**32) TERMS AND CONDITIONS**

**32.1 General Contract Conditions (PUR 1000)**

The State of Florida's General Contract Conditions are outlined in form PUR 1000, which is a downloadable document incorporated into this Invitation to Bid (ITB) by reference. Any terms and conditions set forth in this ITB document take precedence over the PUR 1000 form where applicable.

<http://www.dms.myflorida.com/content/download/2933/11777/1000.pdf>

The following paragraphs do not apply to this Invitation to Bid:

Paragraph 31, Dispute Resolution - PUR 1000

Paragraph 40, PRIDE – PUR 1000, when federal funds are utilized.

**32.2 General Instructions to Respondents (PUR 1001)**

The State of Florida's General Instructions to Respondents are outlined in form PUR 1001, which is a downloadable document incorporated into this Invitation to Bid (ITB) by reference. Any terms and conditions set forth in this ITB document take precedence over the PUR 1001 form where applicable.

<http://www.dms.myflorida.com/content/download/2934/11780/1001.pdf>

The following paragraphs do not apply to this Invitation to Bid:

Paragraph 3, Electronic Submission – PUR 1001

Paragraph 4, Terms and Conditions – PUR 1001

Paragraph 5, Questions – PUR 1001

**33) ORDER OF PRECEDENCE**

All bids are subject to the terms and conditions of this solicitation, which, in case of conflict, shall have the following order of precedence listed:

Standard Written Agreement

Exhibit "A," Scope of Services

Attachments

Invitation to Bid (Special Conditions)

Exhibit "B," Method of Compensation

Exhibit "C," Bid Blank

Instructions to Respondents (PUR 1001)

General Conditions (PUR 1000)

**FLORIDA DEPARTMENT  
OF TRANSPORTATION**



**FORMS**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

## Minimum Qualifications Statement

I, \_\_\_\_\_, \_\_\_\_\_, of \_\_\_\_\_, hereby certify that this Company has been in business for a minimum of the past 5 years and has the experience to perform the services requested by DOT-ITB-22-8001r-AC.

As I have indicated experience above, I now submit the following list of business and client references that will attest to our services and business relationships for the periods indicated and I hereby give permission to the Department to inquire for references as to my performance.

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

Name of Business: \_\_\_\_\_

The Department will review carefully to determine if the Vendor(s) is responsive, responsible and qualified in the area of work contemplated by this Contract.

Describe your work experience in detail for the minimum period required, beginning with your current or most recent project. Use a separate block to describe each project. (Print out additional copies of the form or attach additional sheets as necessary.)

Date: (Mo. & Yr.): From \_\_\_\_\_ To \_\_\_\_\_ Dollar Value of Project: \$ \_\_\_\_\_

Client Name: \_\_\_\_\_ Client's Project Manager: \_\_\_\_\_

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

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_ - \_\_\_\_\_ Fax: ( ) \_\_\_\_\_ - \_\_\_\_\_

Project Description: \_\_\_\_\_

Date: (Mo. & Yr.): From \_\_\_\_\_ To \_\_\_\_\_ Dollar Value of Project: \$ \_\_\_\_\_

Client Name: \_\_\_\_\_ Client's Project Manager: \_\_\_\_\_

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

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_ - \_\_\_\_\_ Fax: ( ) \_\_\_\_\_ - \_\_\_\_\_

Project Description: \_\_\_\_\_

Date: (Mo. & Yr.): From \_\_\_\_\_ To \_\_\_\_\_ Dollar Value of Project: \$ \_\_\_\_\_

Client Name: \_\_\_\_\_ Client's Project Manager: \_\_\_\_\_

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

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: ( ) \_\_\_\_\_ - \_\_\_\_\_ Fax: ( ) \_\_\_\_\_ - \_\_\_\_\_

Project Description: \_\_\_\_\_

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Date: (Mo. & Yr.): From \_\_\_\_\_ To \_\_\_\_\_ Dollar Value of Project: \$ \_\_\_\_\_

Client Name: \_\_\_\_\_ Client's Project Manager: \_\_\_\_\_

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

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: (     ) \_\_\_\_\_ - \_\_\_\_\_ Fax: (     ) - \_\_\_\_\_

Project Description: \_\_\_\_\_

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Date: (Mo. & Yr.): From \_\_\_\_\_ To \_\_\_\_\_ Dollar Value of Project: \$ \_\_\_\_\_

Client Name: \_\_\_\_\_ Client's Project Manager: \_\_\_\_\_

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

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: (     ) \_\_\_\_\_ - \_\_\_\_\_ Fax: (     ) - \_\_\_\_\_

Project Description: \_\_\_\_\_

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Date: (Mo. & Yr.): From \_\_\_\_\_ To \_\_\_\_\_ Dollar Value of Project: \$ \_\_\_\_\_

Client Name: \_\_\_\_\_ Client's Project Manager: \_\_\_\_\_

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

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: (     ) \_\_\_\_\_ - \_\_\_\_\_ Fax: (     ) - \_\_\_\_\_

Project Description: \_\_\_\_\_

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Date: (Mo. & Yr.): From \_\_\_\_\_ To \_\_\_\_\_ Dollar Value of Project: \$ \_\_\_\_\_

Client Name: \_\_\_\_\_ Client's Project Manager: \_\_\_\_\_

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

State: \_\_\_\_\_ Zip: \_\_\_\_\_ Phone: (     ) \_\_\_\_\_ - \_\_\_\_\_ Fax: (     ) - \_\_\_\_\_

Project Description: \_\_\_\_\_

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Name of Business: \_\_\_\_\_

**FORM MUST BE EXECUTED AND SUBMITTED WITH BID PACKAGE**

**DRUG-FREE WORKPLACE PROGRAM,  
 VEHICLE OPERATOR LICENSE & VEHICLE REGISTRATION,  
 NOTICE OF INTENT TO SUBLET**

I, \_\_\_\_\_,  
 (Name) Owner, President, Vice President or Designated Officer (Corp. Resolution\*) \_\_\_\_\_ (Title)  
 of \_\_\_\_\_, hereby certify that;  
 (Name of Business)

**A. Drug-Free Workplace Program Certification**

This firm \_\_\_\_ (has) \_\_\_\_ (has not) implemented a Drug-Free Workplace Program in accordance with the provision of Section 287.087, Florida Statutes.

**B. Vehicle Operator License & Vehicle Registration**

All operators driving bidder vehicles are properly licensed in the State of Florida, for the type of vehicle being operated, in accordance with Chapter 322 Florida Statutes and further states that all vehicles operated, or caused to be operated by said bidder;

- Meet the financial responsibility requirements in accordance with Chapter 324 Florida Statutes and shall remain so for the duration of the Contract.
- Registered in the State of Florida, in accordance with Section 337.11 Florida Statutes and insured in the State of Florida to the limits required within the Contract and in accordance with Sections 320.02, 316.646, and 627.733 Florida Statutes and shall remain so for the duration of the Contract.

**C. Notice of Intent to Sublet**

We \_\_\_\_ (do) \_\_\_\_ (do not) intend to sublet a portion of the work on this project.

If I have indicated above that a portion of the work will be sublet, then I hereby further certify that we have taken affirmative action to seek out and consider Minority Business Enterprises as potential subcontractors and/or suppliers. The classes of work I intend to sublet and the firms considered as potential subcontractors are as follows:

<u>Class of Work</u>	<u>Potential Subcontractors</u>	<u>Percent</u>	<u>MBE (Y) or (N)</u>
_____	_____	_____ %	_____
_____	_____	_____ %	_____
_____	_____	_____ %	_____
_____	_____	_____ %	_____
_____	_____	_____ %	_____
_____	_____	_____ %	_____
_____	_____	_____ %	_____

Percentage must not be for more than 30% of the Contract total

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Owner, President, Vice President or Designated Officer (Corp. Resolution\*)

\*If person signing the form is someone other than the Owner, President or Vice President, a copy of the Corporate Resolution granting signature authorization must be furnished in the bid package.

**FORM MUST BE EXECUTED AND SUBMITTED WITH THE BID PACKAGE**

**CONTRACTOR NOTIFICATION**

**TO:** All Contractors  
**FROM:** Turnpike Asbestos Coordinator  
(954) 975-4855  
Pompano Beach, Florida  
**SUBJECT:** ASBESTOS-CONTAINING MATERIALS IN TURNPIKE FACILITIES

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It is possible that you may encounter Asbestos-containing materials (ACM) while working in State-owned buildings since ACM are present in many of these buildings. The presence of ACM does not necessarily mean that a hazard exists. However, a hazard may be created when ACM is disturbed and asbestos fibers become airborne. The best way to maintain a safe environment is to avoid disturbance of ACM.

Prominently posted in each building is an "Occupant Notification" which summarizes known locations of ACM in that building. An Operations and Maintenance (O & M) plan has been developed for these known locations of ACM. Since the known locations may or may not include all ACM, workers must exercise caution and be watchful for materials that might contain asbestos. You must avoid inadvertently disturbing ACM or suspected ACM as you carry out your work.

If you need additional information regarding ACM in a particular building or would like to see a copy of the O & M Plan, contact the Building Asbestos Contact Person (BACPer) responsible for that building or the Turnpike Asbestos Coordinator. The specific designated BACPer (name and telephone) is listed on the "Occupant Notification."

If your work necessitates the disturbance of ACM, you shall take all precautions necessary to protect human health and the environment from asbestos fibers. At a minimum, you must use the procedures found in the O & M Plan; comply with all federal, state and local laws governing work with asbestos; assure that your employees are medically certified, trained and equipped with the proper personal protective devices for safe handling of ACM; and ensure that all employees performing work with ACM related to State-owned buildings execute a "Certificate of Worker's Acknowledgment" prior to beginning work. Immediately upon inadvertently or before disturbing ACM in any State-owned building you must notify the designated BACPer.

**ACKNOWLEDGMENT OF ASBESTOS WARNING**

I, \_\_\_\_\_ (Name) Owner, President, Vice President or Designated Officer (Corp. Resolution\*) \_\_\_\_\_ (Title)

of \_\_\_\_\_, hereby acknowledge receipt of the above memorandum about  
(Name of Business)

Asbestos-Containing Materials (ACM) Information for Turnpike Facilities and information on how to contact the Building Asbestos Contact Person (BACPer), for information regarding how to find out where asbestos-containing materials are located and how to avoid any contact with ACM.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Owner, President, Vice President or Designated Officer (Corp. Resolution\*)

\* If person signing the form is someone other than the Owner, President or Vice President, a copy of the Corporate Resolution granting signature authorization must be furnished in the bid package.

**FORM MUST BE EXECUTED AND SUBMITTED WITH THE BID PACKAGE**

**VENDOR CERTIFICATION REGARDING  
SCRUTINIZED COMPANIES LISTS**

Respondent Vendor Name: \_\_\_\_\_  
Vendor FEIN: \_\_\_\_\_  
Vendor's Authorized Representative Name and Title: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email Address: \_\_\_\_\_

Section 287.135, Florida Statutes prohibits a company from bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services of any amount if the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.475, Florida Statutes or is engaged in a boycott of Israel. Section 287.135, Florida Statutes also prohibits a company from bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services of \$1,000,000 or more, if the company is on either the Scrutinized Companies with Activities in Sudan List, or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector Lists which are created pursuant to Section 215.473, Florida Statutes.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above in the section entitled "Respondent Vendor Name" is not listed on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or the Scrutinized Companies that Boycott Israel List. I further certify that the company is not engaged in a boycott of Israel. I understand that pursuant to Section 287.135, Florida Statutes, the submission of a false certification may subject company to civil penalties, attorney's fees, and/or costs.

Certified By: \_\_\_\_\_  
who is authorized to sign on behalf of the above referenced company.  
Authorized Signature Print Name and Title: \_\_\_\_\_  
Date: \_\_\_\_\_

**CORPORATE RESOLUTION OF**

\_\_\_\_\_  
**(recite name of Business)**

**WHEREAS**, it is in the best interests of this corporation to enter into a contract with the State of Florida, Department of Transportation for \_\_\_\_\_

\_\_\_\_\_  
**NOW THEREFORE, IT IS RESOLVED**, that \_\_\_\_\_ ( title of authorized officer; (e.g., John Doe, Regional Sales Manager) of this Business is hereby authorized and empowered on behalf of the Business to enter into a contract with the State of Florida, Department of Transportation, in consideration of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), upon the terms and conditions contained in the proposed Contract, a copy of which is attached hereto as Exhibit A, Scope of Services and made a part hereof.

**CERTIFICATE OF RESOLUTION**

I, \_\_\_\_\_, secretary of \_\_\_\_\_ (name of Business), a Florida Business, or a Business founded in the State of \_\_\_\_\_, and authorized by the Secretary of State, State of Florida, to conduct business in the State of Florida, hereby certify that the foregoing is a full, true, and correct copy of the resolution of the Board of Directors of the Business, duly and regularly passed and adopted at a meeting of the Board duly called and held in all respects as required by law, and by the bylaws of the Business, on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, at which meeting a quorum of the Board was present.

Executed by me as secretary of the corporation on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Signature of Secretary

\_\_\_\_\_  
Name of Secretary printed or typed



**FLORIDA DEPARTMENT OF TRANSPORTATION**  
**DOT-ITB-22-8001r-AC**

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**ADDENDA ACKNOWLEDGEMENT FORM**

FORM NO. 6

The Vendor shall acknowledge receipt of each addenda to this Invitation to Bid by completing this form and including in the Vendor's bid package.

<u>Addenda</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Failure to confirm receipt of addenda may cause for rejection of the Vendor's bid.

Dated \_\_\_\_\_

\_\_\_\_\_  
Legal Name of Firm

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

\_\_\_\_\_  
Title

NOTE: Attach additional pages as necessary

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**EXEMPT DOCUMENTS / SECURITY SYSTEM PLAN  
DISTRIBUTION FORM**

**Exempt Documents** being requested or received are included in those exempt from public disclosure as provided by Sections 119.071(3)(b) and 119.071(3)(e), Florida Statutes (Attached). **Security System Plans** being requested are confidential and exempt as provided by Section 119.071(3) (a), Florida Statutes (Attached). The Exempt Documents relate to work being performed for or required by the Florida Department of Transportation, or work related to the Department's structures. The following information is being provided as a record of this request or receipt, and distribution of the Exempt Documents or Security System Plans.

Completion of this form and a signature is required before information will be released (\* Indicates Required to Obtain Security System Plans):

**A. Entity Requesting/Receiving Documents: (Check All That Apply and Provide Full Name of Entity.)**

- State Agency\*:** \_\_\_\_\_
- Federal Agency\*:** \_\_\_\_\_
- Governmental:** \_\_\_\_\_
- Architect:** \_\_\_\_\_
- Engineer:** \_\_\_\_\_
- Contractor:** \_\_\_\_\_
- Other:** \_\_\_\_\_

**B. Entity Name:** \_\_\_\_\_

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

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

**C. Exempt Documents / Security Systems Plans requested or provided:** (Be specific on what is requested or to be provided, and include description, project numbers, FIN, contract numbers, etc.)

**D. Reason for Request/Intended Use:** \_\_\_\_\_

- E. RECIPIENT CERTIFICATION:** I, personally, and/or as representative of the above entity, fully understand (check the applicable certification block)
- the exempt nature of the Exempt Documents I am receiving and agree to maintain the exempt status of this information in accordance with Florida law.
  - the confidential and exempt nature of the Security System Plans I am receiving and agree to maintain the confidential and exempt status of these Security System Plans in accordance with Florida law.

**F. Name of person receiving Exempt Documents / Security Plans:** (Printed): \_\_\_\_\_

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

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

**G. Driver license or photo identification number of recipient:** \_\_\_\_\_

**(Recipient must provide verification of employment with the above entity and verify identity with photo ID)**

**H. FDOT Employee or Other Individual Providing Exempt Documents or Security Plans:**

FDOT Office: \_\_\_\_\_ Employee Name: \_\_\_\_\_

Other Individual Name: \_\_\_\_\_

Name and Office Address of Employer: \_\_\_\_\_

**I. Exempt Documents / Security Systems Plans provided if different than requested:** (Be specific on what is provided, and include description, project numbers, FIN, contract numbers, etc.)

**J. Signature of Person Authorizing Distribution:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Provider's Signature (if different than person authorizing distribution):** \_\_\_\_\_

**K. Method of delivery:**  Pick-up by requestor \_\_\_\_\_ other (specify other method of delivery)

**Date Provided:** \_\_\_\_\_

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**EXEMPT DOCUMENTS / SECURITY SYSTEM PLAN  
DISTRIBUTION FORM**

DOT-ITB-22-8001r-AC  
FPID: 1909701-A1-08  
050-020-26  
STATE HIGHWAY ENGINEER  
02/13  
Page 2 of 2

**EXEMPT DOCUMENTS:**

**Section 119.071(3)(b), Florida Statutes, provides:**

Building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structure owned or operated by an agency are exempt from s. 119.07(1) and s.24(a), Art. I of the State Constitution. This exemption applies to building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the internal layout and structural elements of a building, arena, stadium, water treatment facility, or other structure owned or operated by an agency before, on, or after the effective date of this act. Information made exempt by this paragraph may be disclosed to another governmental entity if disclosure is necessary for the receiving entity to perform its duties and responsibilities; to a licensed architect, engineer, or contractor who is performing work on or related to the building, arena, stadium, water treatment facility, or other structure owned or operated by an agency; or upon a showing of good cause before a court of competent jurisdiction. The entities or persons receiving such information shall maintain the exempt status of the information.

**Section 119.071(3)(e), Florida Statutes, provides:**

Building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the structural elements of 911, E911, or public safety radio communication system infrastructure, including towers, antennae, equipment or facilities used to provide 911, E911, or public safety radio communication services, or other 911, E911, or public safety radio communication structures or facilities owned and operated by an agency are exempt from s. 119.07(1) and s. 24(a), Art. I of the State Constitution. Geographical maps indicating the actual or proposed locations of 911, E911, or public safety radio communication system infrastructure, including towers, antennae, equipment or facilities used to provide 911, E911, or public safety radio services, or other 911, E911, or public safety radio communication structures or facilities owned and operated by an agency are exempt from s. 119.07(1) and s. 24(a), Art. I of the State Constitution. This exemption applies to building plans, blueprints, schematic drawings, and diagrams, including draft, preliminary, and final formats, which depict the structural elements of 911, E911, or public safety radio communication system infrastructure or other 911, E911, or public safety radio communication structures or facilities owned and operated by an agency, and geographical maps indicating actual or proposed locations of 911, E911, or public safety radio communication system infrastructure or other 911, E911, or public safety radio communication structures or facilities owned and operated by an agency, before, on, or after the effective date of this act. Information made exempt by this paragraph may be disclosed to another governmental entity if disclosure is necessary for the receiving entity to perform its duties and responsibilities; to a licensed architect, engineer, or contractor who is performing work on or related to the 911, E911, or public safety radio communication system infrastructure, including towers, antennae, equipment or facilities used to provide 911, E911, or public safety radio communication services, or other 911, E911, or public safety radio communication structures or facilities owned and operated by an agency; or upon a showing of good cause before a court of competent jurisdiction. The entities or persons receiving such information must maintain the exempt status of the information. For purposes of this paragraph, the term "public safety radio" is defined as the means of communication between and among 911 public safety answering points, dispatchers, and first responder agencies using those portions of the radio frequency spectrum designated by the Federal Communications Commission under 47 C.F.R. part 90 for public safety purposes.

**SECURITY SYSTEM PLAN - Section 119.071(3)(a), Florida Statutes, provides:**

As used in this paragraph, the term "security system plan" includes all Records, information, photographs, audio and visual presentations, schematic diagrams, surveys, recommendations, or consultations or portions thereof relating directly to the physical security of the facility or revealing security systems; Threat assessments conducted by any agency or any private entity; Threat response plans; Emergency evacuation plans; Sheltering arrangements; or Manuals for security personnel, emergency equipment, or security training. A security system plan or portion thereof for: Any property owned by or leased to the state or any of its political subdivisions; or Any privately owned or leased property held by an agency is confidential and exempt from s. 119.07(1) and s. 24(a), Art. I of the State Constitution. This exemption is remedial in nature and it is the intent of the Legislature that this exemption apply to security system plans held by an agency before, on, or after the effective date of this paragraph. Information made confidential and exempt by this paragraph may be disclosed by the custodian of public records to The property owner or leaseholder; or Another state or federal agency to prevent, detect, guard against, respond to, investigate, or manage the consequences of any attempted or actual act of terrorism, or to prosecute those persons who are responsible for such attempts or acts.

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: That we, \_\_\_\_\_  
(name)  
\_\_\_\_\_ (hereinafter called Vendor) of \_\_\_\_\_  
(address)

\_\_\_\_\_ and  
\_\_\_\_\_ (hereinafter called Surety) of  
(name)  
\_\_\_\_\_  
(address)

duly authorized to do business in the State of Florida, are held and firmly bound unto the State of Florida in the full and just sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), lawful money of the United States of America, to be paid to the Florida Department of Transportation (hereinafter called the Department), to which payment will and truly to be made we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally and firmly by these presents;

WHEREAS, the above Vendor has subscribed to an agreement with the Department to bear the date of \_\_\_\_\_, for contractual services agreement in connection with \_\_\_\_\_

\_\_\_\_\_ in \_\_\_\_\_ County(ies), particularly known as \_\_\_\_\_

(hereinafter called the Agreement), upon certain terms and conditions in said Agreement more particularly mentioned; and

NOW, THEREFORE, The condition of this obligation is such that if the above Vendor in all respects will comply with the terms and conditions of said Agreement, and its obligations thereunder, including the Scope of Services, Specifications, General Conditions, Special Conditions, Bid Blank therein referred to and made a part thereof, and such alterations as may be made in said conditions and specifications, as therein provided for; and, further, if such Vendor will promptly make payment to all persons supplying labor, material, equipment and supplies, used directly or indirectly by the said Vendor or any subcontractor(s) in the prosecution of the work provided for in said Agreement, and promptly will pay all State Workers' Compensation and Unemployment Compensation taxes incurred in the performance of the said Agreement and will pay to the Department any amount in money or property, the Department may lose or be overcharged or otherwise defrauded of, by reason of any wrongful or criminal act of the Vendor, its agents, or employees, then this obligation is to be void; otherwise, to be and remain in full force and virtue in law.

WITNESS the signature of the Vendor and the signature of the Surety by \_\_\_\_\_ its

(Agent or Attorney-in-Fact, or otherwise)

with seals of said Vendor and Surety hereunto affixed this \_\_\_\_\_ day of \_\_\_\_\_.

\_\_\_\_\_  
Surety  
BY: \_\_\_\_\_  
Signature  
TITLE: \_\_\_\_\_  
Attorney-in-Fact/Agent  
(Surety Seal)

Name/Telephone #: \_\_\_\_\_  
Address: \_\_\_\_\_

\_\_\_\_\_  
Vendor  
BY: \_\_\_\_\_  
Authorized Signature(s)  
TITLE: \_\_\_\_\_  
ATTEST: \_\_\_\_\_  
Secretary/Notary  
BY: \_\_\_\_\_  
Signature

Note: Attach Power of Attorney showing authority of Surety's Agent or Attorney-in-Fact. This bond is not for public works contracts required by Section 25.05, Florida Statutes.

**FLORIDA DEPARTMENT  
OF TRANSPORTATION**



**STANDARD WRITTEN AGREEMENT**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**STANDARD WRITTEN AGREEMENT**

Agreement No.: \_\_\_\_\_

Financial Project I.D.: 1909701-A1-08

F.E.I.D. No.: \_\_\_\_\_

Appropriation Bill Number(s)/Line Item Number(s) for 1<sup>st</sup> year of  
contract, pursuant to s. 216.313, F.S. \_\_\_\_\_  
(required for contracts in excess of \$5 million)

Procurement No.: DOT-ITB-22-8001r-AC

D.M.S. Catalog Class No.: 72152601

BY THIS AGREEMENT, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2021, by and between the STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, hereinafter called the "Department" and \_\_\_\_\_, of \_\_\_\_\_, duly authorized to conduct business in the State of Florida, hereinafter called "Vendor," hereby agree as follows:

1. SERVICES AND PERFORMANCE

- A. In connection with performing all labor, materials, equipment, and incidentals necessary to remove and replace existing roof systems Florida's Turnpike Enterprise Headquarters Building No. 5315 located at Florida's Turnpike Mainline, SR 91, Milepost 263, in accordance with the plans and specifications herein, as described in Exhibit "A," Scope of Services attached hereto and made a part hereof.
- B. Before making any additions or deletions to the work described in this Agreement, and before undertaking any changes or revisions to such work, the parties shall negotiate any necessary cost changes and shall enter into an Amendment covering such work and compensation. Reference herein to this Agreement shall include any amendment(s).
- C. All tracings, plans, specifications, maps, computer files, and reports prepared or obtained under this Agreement, as well as all data collected, together with summaries and charts derived therefrom, shall be the exclusive property of the Department without restriction or limitation on their use and shall be made available, upon request, to the Department at any time during the performance of such services and/or upon completion or termination of this Agreement. Upon delivery to the Department of said document(s), the Department shall become the custodian thereof in accordance with Chapter 119, Florida Statutes. The Vendor shall not copyright any material and products or patent any invention developed under this Agreement. The Department shall have the right to visit the site for inspection of the work and the products of the Vendor at any time.
- D. All final plans, documents, reports, studies, and other data prepared by the Vendor shall bear the professional's seal/signature, in accordance with the applicable Florida Statutes, Administrative Rules promulgated by the Department of Business and Professional Regulation, and guidelines published by the Department, in effect at the time of execution of this Agreement. In the event that changes in the statutes or rules create a conflict with the requirements of published guidelines, requirements of the statutes and rules shall take precedence.
- E. The Vendor agrees to provide project schedule progress reports in a format acceptable to the Department and at intervals established by the Department. The Department shall be entitled at all times to be advised, at its request, as to the status of work being done by the Vendor and of the details thereof. Coordination shall be maintained by the Vendor with representatives of the Department, or of other agencies interested in the project on behalf of the Department. Either party to this Agreement may request and be granted a conference.
- F. All services shall be performed by the Vendor to the satisfaction of the Director who shall decide all questions, difficulties, and disputes of any nature whatsoever that may arise under or by reason of this Agreement, the prosecution and fulfillment of the services hereunder and the character, quality, amount of value thereof; and the decision upon all claims, questions, and disputes shall be final and binding upon the parties hereto. Adjustments of compensation and contract time because of any major changes in the work that may become necessary or desirable as the work progresses shall be subject to mutual agreement of the parties, and amendment(s) shall be entered into by the parties in accordance herewith.

Reference herein to the Director shall mean the

Executive Director and Chief Executive Officer, Florida's Turnpike Enterprise

2. TERM

- A. Initial Term. This Agreement shall begin on date of execution and shall remain in full force and effect through completion of all services required or as selected below, whichever occurs first. Subsequent to the execution of this Agreement by both parties, the services to be rendered by the Vendor shall commence and be completed in accordance with the option selected below. (Select box and indicate date(s) as appropriate):
- Services shall commence \_\_\_\_\_ and shall be completed by \_\_\_\_\_ or date of termination, whichever occurs first.
  - Services shall commence upon written notice from the Department’s Project/Contract Manager and shall be completed within eighteen (18) months or date of termination, whichever occurs first.
- B. RENEWALS (Select appropriate box):
- This Agreement may not be renewed.
  - This Agreement may be renewed for a period that may not exceed three (3) years or the term of the original contract, whichever is longer. Renewals are contingent upon satisfactory performance evaluations by the Department and subject to the availability of funds. Costs for renewal may not be charged. Any renewal or extension must be in writing and is subject to the same terms and conditions set forth in this Agreement and any written amendments signed by the parties.
- C. EXTENSIONS. In the event that circumstances arise which make performance by the Vendor impracticable or impossible within the time allowed or which prevent a new contract from being executed, the Department, in its discretion, may grant an extension of this Agreement. Extension of this Agreement must be in writing for a period not to exceed six (6) months and is subject to the same terms and conditions set forth in this Agreement and any written amendments signed by the parties; provided the Department may, in its discretion, grant a proportional increase in the total dollar amount based on the method and rate established herein. There may be only one extension of this Agreement unless the failure to meet the criteria set forth in this Agreement for completion of this Agreement is due to events beyond the control of the Vendor.

It shall be the responsibility of the Vendor to ensure at all times that sufficient time remains in the Project Schedule within which to complete services on the project. In the event there have been delays which would affect the project completion date, the Vendor shall submit a written request to the Department which identifies the reason(s) for the delay and the amount of time related to each reason. The Department shall review the request and make a determination as to granting all or part of the requested extension.

3. COMPENSATION AND PAYMENT

- A. Payment shall be made only after receipt and approval of goods and services unless advance payments are authorized by the Chief Financial Officer of the State of Florida under Chapters 215 and 216, Florida Statutes. Deliverable(s) must be received and accepted in writing by the Contract Manager on the Department’s invoice transmittal forms prior to payment. If the Department determines that the performance of the Vendor is unsatisfactory, the Department shall notify the Vendor of the deficiency to be corrected, which correction shall be made within a time-frame to be specified by the Department. The Vendor shall, within five days after notice from the Department, provide the Department with a corrective action plan describing how the Vendor will address all issues of contract non-performance, unacceptable performance, failure to meet the minimum performance levels, deliverable deficiencies, or contract noncompliance. If the corrective action plan is unacceptable to the Department, the Vendor shall be assessed a non-performance retainage equivalent to 10% of the total invoice amount. The retainage shall be applied to the invoice for the then-current billing period. The retainage shall be withheld until the vendor resolves the deficiency. If the deficiency is subsequently resolved, the Vendor will bill the Department for the retained amount during the next billing period. If the Vendor is unable to resolve the deficiency, the funds retained will be forfeited at the end of the agreement period.
- B. If this Agreement involves units of deliverables, then such units must be received and accepted in writing by the Contract Manager prior to payments.
- C. Bills for fees or other compensation for services or expenses shall be submitted in detail sufficient for a proper preaudit and postaudit thereof.
- D. The bills for any travel expenses, when authorized by terms of this Agreement and by the Department’s Project Manager, shall be submitted on the Department’s Travel Form No. 300-000-06 and will be paid in accordance with Section 112.061, Florida Statutes and the most current version of the Disbursement Handbook for Employees and Managers.
- E. Vendors providing goods and services to the Department should be aware of the following time frames. Upon receipt, the Department has five (5) working days to inspect and approve the goods and services, unless otherwise specified herein. The Department has twenty (20) days to deliver a request for payment (voucher) to the Department of Financial Services. The twenty (20) days are measured from the latter of the date the invoice is received or the goods or services are received, inspected and approved.
- F. If a payment is not available within forty (40) days, a separate interest penalty as established pursuant to Section 215.422, Florida Statutes, shall be due and payable, in addition to the invoice amount, to the Vendor. Interest penalties of less than one (1) dollar shall not be enforced unless the Vendor requests payment. Invoices which have to be returned to a Vendor because of Vendor preparation errors shall result in a delay in the payment. The invoice payment requirements do not start until a properly completed invoice is provided to the Department.

- G. The State of Florida, through the Department of Management Services, has instituted MyFloridaMarketPlace, a statewide eProcurement system. Pursuant to Section 287.057(22), Florida Statutes, all payments shall be assessed a transaction fee of one percent (1%), which the Vendor shall pay to the State. For payments within the State accounting system (FLAIR or its successor), the transaction fee shall, when possible, be automatically deducted from payments to the Vendor. If automatic deduction is not possible, the Vendor shall pay the transaction fee pursuant to Rule 60A-1.031(2), Florida Administrative Code. By submission of these reports and corresponding payments, Vendor certifies their correctness. All such reports and payments shall be subject to audit by the State or its designee. The Vendor shall receive a credit for any transaction fee paid by the Vendor for the purchase of any item(s) if such item(s) are returned to the Vendor through no fault, act, or omission of the Vendor. Notwithstanding the foregoing, a transaction fee is non-refundable when an item is rejected or returned, or declined, due to the Vendor's failure to perform or comply with specifications or requirements of the Agreement. Failure to comply with these requirements shall constitute grounds for declaring the Vendor in default and recovering procurement costs from the Vendor in addition to all outstanding fees. **VENDORS DELINQUENT IN PAYING TRANSACTION FEES MAY BE EXCLUDED FROM CONDUCTING FUTURE BUSINESS WITH THE STATE.**
- H. A vendor ombudsman has been established within the Department of Financial Services. The duties of this individual include acting as an advocate for vendors who may be experiencing problems in obtaining timely payment(s) from a state agency. The Vendor Ombudsman may be contacted at (850) 413-5516.
- I. Records of costs incurred under terms of this Agreement shall be maintained and made available upon request to the Department at all times during the period of this Agreement and for three (3) years after final payment for the work pursuant to this Agreement is made. Copies of these documents and records shall be furnished to the Department upon request. Records of costs incurred shall include the Vendor's general accounting records and the project records, together with supporting documents and records of the Vendor and all subcontractors performing work on the project, and all other records of the Vendor and subcontractors considered necessary by the Department for a proper audit of project costs.
- J. The Department, during any fiscal year, shall not expend money, incur any liability, or enter into any contract which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any contract, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such contract. The Department shall require a statement from the comptroller of the Department that funds are available prior to entering into any such contract or other binding commitment of funds. Nothing herein contained shall prevent the making of contracts for periods exceeding one (1) year, but any contract so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years. Accordingly, the Department's performance and obligation to pay under this Agreement is contingent upon an annual appropriation by the Legislature.

#### 4. INDEMNITY AND PAYMENT FOR CLAIMS

- A. **INDEMNITY:** To the extent permitted by Florida Law, the Vendor shall indemnify and hold harmless the Department, its officers and employees from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorney's fees, to the extent caused by negligence, recklessness, or intentional wrongful misconduct of the Vendor and person employed or utilized by the Vendor in the performance of this Agreement.

It is specifically agreed between the parties executing this Agreement that it is not intended by any of the provisions of any part of the Agreement to create in the public or any member thereof, a third party beneficiary hereunder, or to authorize anyone not a party to this Agreement to maintain a suit for personal injuries or property damage pursuant to the terms or provision of this Agreement.

**PAYMENT FOR CLAIMS:** The Vendor guaranties the payment of all just claims for materials, supplies, tools, or labor and other just claims against the Vendor or any subcontractor, in connection with the Agreement. The Department's final acceptance and payment does not release the Vendor's bond until all such claims are paid or released.

- B. **LIABILITY INSURANCE.** (Select and complete as appropriate):
- No general liability insurance is required.
  - The Vendor shall carry and keep in force during the term of this Agreement, a general liability insurance policy or policies with a company or companies authorized to do business in Florida, affording public liability insurance with a combined bodily injury limits of at least \$200,000.00 per person and \$300,000.00 each occurrence, and property damage insurance of at least \$200,000.00 each occurrence, for the services to be rendered in accordance with this Agreement.
  - The Vendor shall have and maintain during the term of this Agreement, a professional liability insurance policy or policies or an irrevocable letter of credit established pursuant to Chapter 675 Section 337.106, Florida Statutes, with a company or companies authorized to do business in the State of Florida, affording liability coverage for the professional services to be rendered in with this Agreement in the amount of \$ \_\_\_\_\_.
- C. **WORKERS' COMPENSATION.** The Vendor shall also carry and keep in force Workers' Compensation insurance as required for the State of Florida under the Workers' Compensation Law.
- D. **PERFORMANCE AND PAYMENT BOND.** (Select as appropriate):
- No Bond is required.



- Prior to commencement of any services pursuant to this Agreement and at all times during the term hereof, including renewals and extensions, the Vendor will supply to the Department and keep in force a bond provided by a surety authorized to do business in the State of Florida, payable to the Department and conditioned for the prompt, faithful, and efficient performance of this Agreement according to the terms and conditions hereof and within the time periods specified herein, and for the prompt payment of all persons furnishing labor, materials, equipment, and supplies therefore.

E. CERTIFICATION. With respect to any general liability insurance policy required pursuant to this Agreement, all such policies shall be issued by companies licensed to do business in the State of Florida. The Vendor shall provide to the Department certificates showing the required coverage to be in effect with endorsements showing the Department to be an additional insured prior to commencing any work under this Contract. Policies that include Self Insured Retention (SIR) will not be accepted. The certificates and policies shall provide that in the event of any material change in or cancellation of the policies reflecting the required coverage, thirty (30) days advance notice shall be given to the Department or as provided in accordance with Florida law.

## 5. COMPLIANCE WITH LAWS

A. The Vendor shall comply with Chapter 119, Florida Statutes. Specifically, the Vendor shall:

- (1) Keep and maintain public records required by the Department to perform the service.
- (2) Upon request from the Department's custodian of public records, provide the Department with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
- (3) Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion of the Agreement if the Vendor does not transfer the records to the Department.
- (4) Upon completion of the Agreement, transfer, at no cost, to the Department, all public records in possession of the Vendor or keep and maintain public records required by the Department to perform the service. If the Vendor transfers all public records to the Department upon completion of the Agreement, the Vendor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Vendor keeps and maintains public records upon completion of the Agreement, the Vendor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the Department, upon request from the Department's custodian of public records, in a format that is compatible with the information technology systems of the Department.

Failure by the Vendor to comply with Chapter 119, Florida Statutes, shall be grounds for immediate unilateral cancellation of this Agreement by the Department.

### **IF THE VENDOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE VENDOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT:**

Turnpike Enterprise Chief Counsel, Florida Turnpike - Office of General Counsel, Turnpike Mile Post 263, Bldg. 5315, Ocoee, FL 34761, (407) 264-3170, TPprcustodian@dot.state.fl.us

- B. The Vendor agrees that it shall make no statements, press releases or publicity releases concerning this Agreement or its subject matter or otherwise discuss or permit to be disclosed or discussed any of the data or other information obtained or furnished in compliance with this Agreement, or any particulars thereof, during the period of the Agreement, without first notifying the Department's Contract Manager and securing prior written consent. The Vendor also agrees that it shall not publish, copyright, or patent any of the data developed under this Agreement, it being understood that such data or information are works made for hire and the property of the Department.
- C. The Vendor shall comply with all federal, state, and local laws and ordinances applicable to the work or payment for work thereof, and will not discriminate on the grounds of race, color, religion, sex, national origin, age, or disability in the performance of work under this Agreement.
- D. If the Vendor is licensed by the Department of Business and Professional Regulation to perform the services herein contracted, then Section 337.162, Florida Statutes, applies as follows:
- (1) If the Department has knowledge or reason to believe that any person has violated the provisions of the state professional licensing laws or rules, it shall submit a complaint regarding the violations to the Department of Business and Professional Regulation. The complaint shall be confidential.
  - (2) Any person who is employed by the Department and who is licensed by the Department of Business and Professional Regulation and who, through the course of the person's employment, has knowledge to believe that any person has violated the provisions of state professional licensing laws or rules shall submit a complaint regarding the violations to the Department of Business

and Professional Regulation. Failure to submit a complaint about the violations may be grounds for disciplinary action pursuant to Chapter 455, Florida Statutes, and the state licensing law applicable to that licensee. The complaint shall be confidential.

- (3) Any complaints submitted to the Department of Business and Professional Regulation are confidential and exempt from Section 119.07(1), Florida Statutes, pursuant to Chapter 455, Florida Statutes, and applicable state law.

- E. The Vendor covenants and agrees that it and its employees and agents shall be bound by the standards of conduct provided in applicable law and applicable rules of the Board of Business and Professional Regulation as they relate to work performed under this Agreement. The Vendor further covenants and agrees that when a former state employee is employed by the Vendor, the Vendor shall require that strict adherence by the former state employee to Sections 112.313 and 112.3185, Florida Statutes, is a condition of employment for said former state employee. These statutes will by reference be made a part of this Agreement as though set forth in full. The Vendor agrees to incorporate the provisions of this paragraph in any subcontract into which it might enter with reference to the work performed pursuant to this Agreement.
- F. A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity, may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work, may not submit a bids, proposals, or replies on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of thirty-six (36) months following the date of being placed on the convicted vendor list.
- G. An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity, may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids, proposals, or replies on leases of real property to a public entity, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with a public entity, and may not transact business with any public entity.
- H. The Department shall consider the employment by any vendor of unauthorized aliens a violation of Section 274A(e) of the Immigration and Nationality Act. If the Vendor knowingly employs unauthorized aliens, such violation shall be cause for unilateral cancellation of this agreement.
- I. The Vendor agrees to comply with the Title VI Nondiscrimination Contract Provisions Appendices A and E, available at <http://www.dot.state.fl.us/procurement/index.shmt>, incorporated herein by reference and made a part of this Agreement.
- J. Pursuant to Section 216.347, Florida Statutes, the vendor may not expend any State funds for the purpose of lobbying the Legislature, the judicial branch, or a state agency.
- K. Any intellectual property developed as a result of this Agreement will belong to and be the sole property of the State. This provision will survive the termination or expiration of the Agreement.
- L. The Vendor agrees to comply with s.20.055(5), Florida Statutes, and to incorporate in all subcontracts the obligation to comply with s.20.055(5), Florida Statutes.

## 6. TERMINATION AND DEFAULT

- A. This Agreement may be canceled by the Department in whole or in part at any time the interest of the Department requires such termination. The Department reserves the right to terminate or cancel this Agreement in the event an assignment be made for the benefit of creditors.
- B. If the Department determines that the performance of the Vendor is not satisfactory, the Department shall have the option of (a) immediately terminating the Agreement, or (b) notifying the Vendor of the deficiency with a requirement that the deficiency be corrected within a specified time, otherwise the Agreement will be terminated at the end of such time, or (c) taking whatever action is deemed appropriate by the Department.
- C. If the Department requires termination of the Agreement for reasons other than unsatisfactory performance of the Vendor, the Department shall notify the Vendor of such termination, with instructions as to the effective date of termination or specify the stage of work at which the Agreement is to be terminated.
- D. If the Agreement is terminated before performance is completed, the Vendor shall be paid only for that work satisfactorily performed for which costs can be substantiated. Such payment, however, may not exceed an amount which is the same percentage of the agreement price as the amount of work satisfactorily completed is a percentage of the total work called for by this Agreement. All work in progress shall become the property of the Department and shall be turned over promptly by the Vendor.
- E. A Vendor is ineligible to enter into a contract with the Department for goods or services of any amount if, at the time of entering into such Contract, the Vendor is on the Scrutinized Companies that Boycott Israel List, created pursuant to Section 215.4725, Florida Statutes, or is engaged in a boycott of Israel, Section 287.135, Florida Statutes, also prohibits companies from entering into a contract for goods or services of \$1 million or more that are on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector Lists which were created pursuant to s. 215.473, Florida Statutes. If the Department determines the Vendor submitted a false certification under Section 287.135 of the Florida Statutes, the Department

shall either terminate the Contract after it has given the Vendor notice and an opportunity to demonstrate the Department's determination of false certification was in error pursuant to Section 287.135 of the Florida Statutes, or maintain the Contract if the conditions of Section 287.135 of the Florida Statutes are met.

7. ASSIGNMENT AND SUBCONTRACTS

A. The Vendor shall maintain an adequate and competent staff so as to enable the Vendor to timely perform under this Agreement and may associate with it such subcontractors, for the purpose of its services hereunder, without additional cost to the Department, other than those cost within the limits and terms of this Agreement. The Vendor is fully responsible for satisfactory completion of all subcontracted work. The Vendor, however, shall not sublet, assign, or transfer any work under this Agreement to other than subcontractors specified in the proposal, bid, and/or Agreement without the written consent of the Department.

B. Select the Appropriate box:

- The following provision is not applicable to this Agreement:
- The following provision is hereby incorporated in and made a part of this Agreement:

It is expressly understood and agreed that any articles that are the subject of, or required to carry out this Agreement shall be purchased from a nonprofit agency for the blind or for the severely handicapped that is qualified pursuant to Chapter 413, Florida Statutes, in the same manner and under the same procedures set forth in Section 413.036(1) and (2), Florida Statutes; and for purposes of this Agreement the person, firm, or other business entity (Vendor) carrying out the provisions of this Agreement shall be deemed to be substituted for the state agency (Department) insofar as dealings with such qualified nonprofit agency are concerned. RESPECT of Florida provides governmental agencies within the State of Florida with quality products and services produced by persons with disabilities. Available pricing, products, and delivery schedules may be obtained by contacting:

RESPECT  
2475 Apalachee Pkwy  
Tallahassee, Florida 32301-4946  
Phone: (850) 487-1471

- The following provision is hereby incorporated in and made a part of this Agreement:

It is expressly understood and agreed that any articles which are the subject of, or required to carry out this Agreement shall be purchased from the corporation identified under Chapter 946, Florida Statutes, in the same manner and under the procedures set forth in Section 946.515(2) and (4), Florida Statutes; and for purposes of this Agreement the person, firm, or other business entity (Vendor) carrying out the provisions of this Agreement shall be deemed to be substituted for this agency (Department) insofar as dealings with such corporation are concerned. The "corporation identified" is Prison Rehabilitative Industries and Diversified Enterprises, Inc. (PRIDE). Available pricing, products, and delivery schedules may be obtained by contacting:

PRIDE Enterprises  
12425 – 28<sup>th</sup> Street, North  
St. Petersburg, FL 33716-1826  
(800) 643-8459

- This Agreement involves the expenditure of federal funds and Section 946.515, Florida Statutes, as noted above, does not apply. However, Appendix I is applicable to all parties and is hereof made a part of this Agreement.

8. MISCELLANEOUS

A. The Vendor and its employees, agents, representatives, or subcontractors are not employees of the Department and are not entitled to the benefits of State of Florida employees. Except to the extent expressly authorized herein, Vendor and its employees, agents, representative, or subcontractors are not agents of the Department or the State for any purpose or authority such as to bind or represent the interests thereof, and shall not represent that it is an agent or that it is acting on the behalf of the Department or the State. The Department shall not be bound by any unauthorized acts or conduct of the Vendor or its employees, agents, representatives, or subcontractors. Vendor agrees to include this provision in all its subcontract under this Agreement.

B. All words used herein in the singular form shall extend to and include the plural. All words used in the plural form shall extend to and include the singular. All words used in any gender shall extend to and include all genders.

C. This Agreement embodies the whole agreement of the parties. There are no promises, terms, conditions, or obligations other than those contained herein, and this Agreement shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties hereto. The State of Florida terms and conditions, whether general or specific, shall take precedence over and supersede any inconsistent or conflicting provision in any attached terms and conditions of the Vendor.

D. It is understood and agreed by the parties hereto that if any part, term or provision of this Agreement is by the courts held to be illegal or in conflict with any law of the State of Florida, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

- E. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida.
- F. In any legal action related to this Agreement, instituted by either party, the Vendor hereby waives any and all privileges and rights it may have under Chapter 47 and Section 337.19, Florida Statutes, relating to venue, as it now exists or may hereafter be amended, and any and all such privileges and rights it may have under any other statute, rule, or case law, including, but not limited to those grounded on convenience. Any such legal actions may be brought in the appropriate Court in the county chosen by the Department and in the event that any such legal action is filed by the Vendor, the Vendor hereby consents to the transfer of venue to the county chosen by the Department upon the Department filing a motion requesting the same.
- G. If this Agreement involves the purchase or maintenance of information technology as defined in Section 282.0041, Florida Statutes, the selected provisions of the attached Appendix II are made a part of this Agreement.
- H. If this Agreement is the result of a formal solicitation (Invitation to Bid, Request for Proposal or Invitation to Negotiate), the Department of Management Services Form PUR1000 and PUR1001, included in the solicitation, are incorporated herein by reference and made a part of this Agreement.
- I. The Department may grant the Vendor’s employees or subconsultants access to the Department’s secure networks as part of the project. In the event such employees’ or subconsultants’ participation in the project is terminated or will be terminated, the Vendor shall notify the Department’s project manager no later than the employees’ or subconsultants’ separation date from participation in the project or immediately upon the Vendor acquiring knowledge of such termination of employees’ or subconsultants’ participation in the project, whichever occurs later.
- J. Vendors/Contractor:
  1. shall utilize the U.S. Department of Homeland Security’s E-Verify system to verify the employment eligibility of all new employees hired by the Vendor/Contractor during the term of the Contract; and
  2. shall expressly require any subcontractors performing work or providing services pursuant to the state Contract to likewise utilize the U.S. Department of Homeland Security’s E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term; and,
  3. shall adhere to requirements in Section 448.095, Florida Statutes.
- K. Time is of the essence as to each and every obligation under this Agreement.
- L. The following attachments are incorporated and made a part of this agreement:  
Exhibit “A,” Scope of Services, Attachments, “A-D,” Exhibit “B,” Method of Compensation, and Exhibit “C,” Bid Blank
- M. Other Provisions:

IN WITNESS WHEREOF, the parties have executed this Agreement by their duly authorized officer on the day, month and year set forth above.

STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

\_\_\_\_\_  
Name of Vendor

BY: \_\_\_\_\_  
Authorized Signature

BY: \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
(Print/Type)

Nicola Liquori  
\_\_\_\_\_  
(Print/Type)

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

Title: Executive Director and Chief Executive Officer

FOR DEPARTMENT USE ONLY

APPROVED:

LEGAL REVIEW:

\_\_\_\_\_  
Procurement Office

\_\_\_\_\_

**FLORIDA DEPARTMENT  
OF TRANSPORTATION**



**EXHIBIT "A"**

**SCOPE OF SERVICES**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

## EXHIBIT "A" SCOPE OF SERVICES

### ROOF REPLACEMENT AT FLORIDA'S TURNPIKE ENTERPRISE HEADQUARTERS BUILDING NO. 5315

#### FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0

#### 1.0 Introduction

##### 1.1 Description of Services

- A. The work specified under this Contract shall consist of providing all labor, materials, equipment, and incidentals necessary to remove and replace the existing roof system at Florida's Turnpike Enterprise Headquarters Building No. 5315 located at Florida's Turnpike Mainline, SR-91, Milepost 263.

##### 1.2 Definition of Terms

For this Contract, whenever the following terms appear, their intent and meaning shall, unless specifically stated otherwise, be interpreted as shown hereunder:

**Contract:** The term "Contract" means the entire and integrated Agreement between the Department and the Vendor (hereinafter collectively referred to as the "Parties"), which supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract documents (Standard Written Agreement, Exhibit "A," Scope of Services, Exhibit "B," Method of Compensation, Exhibit "C," Bid Blank, Attachments, and any amendments and supplements thereto) form the Contract between, and otherwise set forth the obligations of the Parties, including the performance of the work and the basis of payment.

**Department:** State of Florida Department of Transportation, Florida Turnpike Enterprise.

**Department's Project/Contract Manager:** The individual employee(s) of the Department responsible for the management of the Contract, scheduling and monitoring of work being performed, inspection and acceptance of services provided and approval for payment of services requested herein.

**Supplemental Agreement:** A written agreement between the Vendor and the Department modifying the Contract within the limitations set forth in the Contract, and as provided by law.

**Turnpike Facilities:** Turnpike facilities may include administrative offices, communications buildings, law enforcement offices, maintenance facilities, storage buildings, pump houses, service plazas, office buildings, hub buildings, and toll plazas which include toll buildings, tollbooths, canopies, tech shop buildings, generator buildings, concrete walls, barriers, curbs, walkways and other related buildings and structures within the Department's Right of Way.

**Vendor:** The firm selected through the competitive bid process to provide the services requested herein.

**Vendor's Project Manager:** The individual employee of the Vendor responsible for the management of the Contract, scheduling and monitoring of work being performed, inspection of services provided and the submission of payment documents for all services requested herein. The Vendor's Project Manager is responsible for all communication with the Department and the Department's Project/Contract Manager.

**Work Document/Authorization:** A work request issued periodically to the Vendor for work required at the Contract locations, describing work and pay item quantities authorized to the Vendor to proceed with the work.

## 2.0 Locations and Site Descriptions

This project is located at Florida's Turnpike Enterprise Headquarters north of the Turkey Lake Service Plaza on the Mainline of Florida's Turnpike (SR 91), Milepost 263.0. Access to the site is only available from Florida's Turnpike.

## 3.0 Vendor's Qualifications

The Vendor shall maintain and keep in force throughout the life of the Contract and extensions, the requirements specified below. Failure of the Vendor to comply with these requirements will be sufficient grounds for the Department to declare the Vendor in default pursuant to the terms of Section 6, Termination and Default, of the Standard Written Agreement.

### 3.1 Certification and Registration

- A. The Vendor shall be currently licensed and hold a certification or registration issued by the Florida Department of Business and Professional Regulation as a Roofing Contractor, in strict accordance with Chapter 489, Florida Statutes, authorizing the Vendor to perform the specified work in Orange County.
- B. All sub-vendors shall be properly licensed meeting the requirements under the respective trade category for the work to be performed under this Contract.

### 3.2 Business Location

The Vendor shall have a current and valid business tax receipt which states the name of the Vendor and the street address of the business location. A copy of the business tax receipt shall be submitted with the Vendor's bid.

### 3.3 Minimum Qualifications Statement (Form No. 1)

The organized business enterprise (e.g. corporation, LLC or sole proprietorship) shall have been licensed and actively involved in the type of business requested in the scope of work for this Contract for a minimum of five (5) years. The Vendor shall submit documentation (Form No. 1) of the work experience with its bid package.

### 3.4 Performance Bond

Prior to commencement of any services pursuant to this Contract and at all times during the term hereof, including renewals and extensions, the Vendor will supply to the Department and keep in force a bond provided by a surety company authorized to do business in the State of Florida, payable to the Department and conditioned for the prompt, faithful, and efficient performance of this Contract according to the terms and conditions hereof and within the time periods specified herein, and for the prompt payment of all persons furnishing labor, materials, equipment, and supplies therefore.

**The bidder must submit, with its bid**, a current letter from a surety company or bonding agent authorized to do business in the State of Florida and written on company letterhead, to document the bidder's present ability to obtain a Performance Bond in the full amount of the bid. Failure by the bidder to provide this letter with its bid will constitute a non-responsive determination for its bid.

## 4.0 Scope of Services

### 4.1 Replacement In-Kind of Roof System:

The work specified under this Contract shall consist of providing all labor, materials, equipment, and incidentals necessary to perform replacement in-kind of existing roofing system at the Florida's Turnpike Enterprise Headquarters Building No. 5315 located at Florida's Turnpike Mainline, SR-91, Milepost 263.

Refer to the following document for more details:

- Attachment "A" Plans for the Headquarters Building No. 5315
- Attachment "B" Specifications for the Headquarters Building No. 5315

#### 4.2 General Notes and Other Requirements

- A. The Vendor shall examine the Contract documents and site of the proposed work carefully before submitting a bid for the work completed under this Contract. The Vendor shall investigate the conditions to be encountered, the character, quality, and quantities of work to be performed, and the materials to be furnished to complete the work in accordance with the requirements of all Contract documents.
- B. The Vendor shall have a responsible person available on a twenty-four (24) hour basis, seven (7) days a week, in case of emergencies, or to address maintenance of traffic or other problems that might arise. The Vendor shall provide phone numbers and names of personnel designated to be contacted at any time. This contact listing information shall be provided to the Department at the Pre-Work Conference.
- C. At the Pre-Work Conference and prior to the Department issuing the TWO, the Vendor shall submit to the Department for approval, a copy of the Vendor's proposed plan and methods for performing the work, including a list of equipment and personnel anticipated for use.
- D. The Vendor shall maintain an adequate number of qualified personnel for the Vendor to complete all assigned work within the period required under this Contract.
- E. The Vendor shall complete the work in an orderly and efficient manner. The Vendor shall proceed with the work with all due diligence and use all reasonable efforts to complete the same without delay; failure to do so may constitute unsatisfactory performance, and after written warning, the Vendor may be declared in default.
- F. The Vendor and sub-vendor(s) shall ensure that all motor vehicles used on this project are registered and insured. All drivers shall be licensed in the State of Florida.
- G. The Department shall have the right to suspend the work wholly or in part, for such period(s) as the Department deems necessary. The Department will order such suspension in writing, detailing the reasons for the suspension and the Vendor shall not resume operations until it receives written authorization from the Department to do so.
- H. All work shall be completed in strict compliance with all local, state, and federal requirements, laws, and regulations and in accordance with all equipment manufacturer specifications.
- I. Building Permit Process: Orange County Florida (OCFL) has issued a building permit number B21905057 for the Turnpike Headquarters Building 5315. The Vendor is required to pull a permit for the following items as shown in Attachment "A," Plans for the Headquarters Building No. 5315
  - Screen Wall: Remove stucco, plywood, and metal coping. Remove metal stud framing as required where damaged.
  - Extents of new surface mounted metal panel with exposed fasteners.
- J. OCFL has issued a pre-approved Re-Roof Permit # T21006861.
- K. The permit fees will be paid for by the Turnpike directly to OCFL, however, all costs for any failed inspections will be the responsibility of the Vendor.

#### 4.3 Parts or Materials Requirements

- A. All parts or materials provided or used by the Vendor for this project shall be new.
- B. The Vendor shall ensure that all parts, materials, equipment, and incidentals incorporated into the work are completely free of any type of asbestos materials.

#### 4.4 Tools and/or Equipment

The Vendor shall be responsible for providing all tools and/or equipment (owned, leased or rented) that may be needed for this project.



#### 4.5 Submittals

At the Pre-Work Conference, the Vendor shall submit a copy of the following documents to the Department's Project/Contract Manager for the Department's review and records:

- A. A list of all personnel anticipated for employment under this Contract.
- B. List of Vehicles and Equipment.
- C. Emergency Phone List.
- D. The Vendor shall complete and return all required documents provided by the Department with the Pre-Work package, prior to the issuance of the NTP.
- E. Project Schedule

#### 4.6 Work Schedule

The Vendor shall perform all work, unless otherwise approved by the Department's Project/Contract Manager, strictly between the hours of 7:00 a.m. and 5:00 p.m. EST, Monday through Friday, excluding state holidays. The Vendor shall coordinate with the Department's Project/Contract Manager prior to beginning work.

#### 4.7 Sign-in and Sign-out

Upon arrival at each of the Florida's Turnpike Enterprise Headquarters Building, the Vendor, sub-vendors and their employees must sign-in with the Department's Representative, completing all information in the Visitor's Log, where applicable. The Vendor, sub-vendors and their employees shall sign-out after completion of daily work activities. The Vendor, sub-vendors and their employees shall sign-in and sign-out when leaving and returning to the site (including when leaving/returning for breaks).

#### 4.8 Roof Access

The Vendor, sub-vendors and employees shall access the roof from the exterior of the building only, utilizing appropriate equipment intended for roofing work. Access to the roof from the interior of the building, (third (3<sup>rd</sup>) floor roof hatch), will not be permitted without authorization from the Department's representative. The Vendor shall provide temporary portable restrooms (Porta-Potty) for their employees. The roofing Vendor's employees and sub-vendors are not permitted to use the restrooms inside the Florida's Turnpike Enterprise Headquarters Building No. 5315.

#### 4.9 Work Status

The Vendor shall keep the Department's Project/Contract Manager informed of the status of all work being performed throughout the duration of this Contract. The Vendor will attend weekly progress meetings with the Department starting after the NTP and continuing through the life of the project.

#### 4.10 Lighting, Water and Power Source at the Site

- A. If the existing lighting at the site is not adequate, the Vendor shall be responsible for providing, at its sole expense, additional lighting necessary to perform the work required under this Contract. The Department will not be responsible for providing additional lighting that may be required to perform or inspect the work required under this Contract.
- B. If water is not available at the site or is not of sufficient volume or pressure, the Vendor shall be responsible for providing, at its sole expense, additional water necessary to perform the work required under this Contract.

C. The Vendor and sub-vendor(s) may use the Department’s electrical power outlets to power the tools utilized by the Vendor’s or sub-vendors’ personnel to perform the work under this Contract. The amperage of the Vendor’s and sub-vendor’s tools shall not exceed the allotted circuit amperage in the area work is being performed. The Vendor and sub-vendor(s) shall verify the amperage at the time work is to begin and shall ensure the electrical demand for tool power supply will not overload the circuits.

4.11 Notification of Damages and Damage Repair

The Vendor shall notify the Department’s Project/Contract Manager verbally and/or by email of any damages to Turnpike Facilities or property of the traveling public as a result of the Vendor’s operations. The notification shall be completed by no later than the next business day and include, at a minimum, the type of damage, location, nature of the incident, time and date of occurrence, photos and any related injuries. The Vendor shall, at its sole expense, repair all damages within twenty-four (24) hours of occurrence or at such other time approved by the Department’s Project/Contract Manager.

4.12 Clean-up and Disposal

The Vendor shall maintain all site and setup areas in a clean, neat, and presentable condition. Upon completion of the Vendor’s daily work activities, the Vendor shall collect and remove from the site all surplus, discarded materials and any other trash resulting from the work, and properly dispose of the same at a dumpsite approved for the disposal of each different type of material. Daily clean-up and disposal of materials shall be performed to the satisfaction of the Department’s Project/Contract Manager. All roofing materials and equipment, inclusive of all demolition debris, shall be secured and/or covered. The Vendor shall take proper precautions to prevent any materials and debris from the roof or dumpster to blow onto the surrounding property, parking lot, perimeter roads, and the Turnpike mainline. All costs associated with clean-ups and disposals are incidental to this Contract and shall be included in the Vendor’s unit prices shown on the Exhibit “C,” Bid Blank.

4.13 Uniforms

The Vendor, sub-vendor(s) and their employees, at all times, while at a site, shall wear uniforms clearly identifying the company logo and employee’s name.

4.14 Performance Measures

The Vendor will be expected to complete the work within the timeframe established in the Contract. Failure by the Vendor to complete the work within the allowed timeframe will result in a deduction based on the following performance criteria:

<b>PERFORMANCE CRITERIA</b>		
<i>Deficiency Identification</i>	<i>Time Allowed/Criteria</i>	<i>Deduction</i>
a. Work not completed within allowed timeframe.	Work must be completed within timeframe established in this Contract.	One percent (1%) of Contract amount per day late.
b. Work not completed correctly or according to requirements.	Re-perform the work until correct. Work must be completed according to requirements established in this Contract, procedures, specifications, and other Contract documents.	One percent (1%) of Contract amount per day late due to exceeding the allowed timeframe in re-performing the work.

All deductions withheld from the Vendor will occur through adjustments to the final invoice amount.

#### 4.15 Subletting or Assigning of Work

The Vendor shall not sublet, assign, or transfer any work under this Contract without prior written consent by the Department. Upon written consent by the Department, the Vendor will be permitted to sublet a portion of the work but shall perform with its own organization work amounting to not less than seventy percent (70%) of the total Contract amount. All sub-vendors are required to be qualified and certified for the work they intend to perform in accordance with the requirements herein, all federal, state, and local regulations, and approved by the Department. Subletting of work shall not relieve the Vendor of its respective liabilities. The Department recognizes a sub-vendor only in the capacity of an employee or agent of the Vendor. The Vendor, sub-vendor(s), or any of their employees shall not perform any work that is beyond their technical capabilities or for which they are not licensed or certified.

#### 4.16 Notice of Claim

Where the Vendor deems that additional compensation or a time extension is due for work or materials not expressly provided for in the Contract or which is by written directive expressly ordered by the Department, the Vendor shall notify the Department in writing of the intention to make a claim for additional compensation or a time extension before beginning the work on which the claim is based. Such notice by the Vendor shall not in any way be construed as establishing the validity of the claim. If such notice is not submitted to the Department within ten (10) calendar days after the Vendor first recognizes the condition giving rise to the claim, the Vendor hereby waives all right to any claim for additional compensation for such claim.

Rejection of the claim(s) by the Department does not absolve the Vendor of its obligations to meet the requirements in this Contract.

### 5.0 Safety and Worker Protection

#### 5.1 Safety and Worker Protection Requirements

- A. The Vendor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. The Vendor shall provide the necessary protection for the safety of its employees, sub-vendor(s), sub-vendor's employees, and the public to prevent damage, injury, or loss to:
- B. All employees at the site and other persons who may be affected thereby.
- C. All the work and materials, and/or equipment to be incorporated therein, whether in storage on or offsite.
- D. Other property at a site or adjacent thereto, including trees, lawns, walkways, pavements, roadways, structures, and utilities.
- E. The Vendor shall assume full liability for compliance with all federal, state, and local regulations pertaining to the protection of workers and persons occupying this facility and adjacent Turnpike Facilities.
- F. Any damages to the property of the traveling public and/or the Department as a result of the Vendor's work shall be the sole responsibility of the Vendor.
- G. The Vendor shall properly use and dispose of all chemicals and other hazardous materials in strict accordance with applicable local, state, and federal laws and regulations and shall indemnify the Department of any liabilities arising out of the Vendor's handling, use of, and disposal of said chemicals and hazardous materials.
- H. The Vendor's employees and sub-vendor's employees shall always wear safety vests (current Department approved) when working within the Department's Right of Way. Hard hats or safety helmet caps are to be used in areas of overhead hazards.
- I. The Vendor's vehicles/equipment shall have the company name and/or logo with amber strobe lights mounted on top of all vehicles/equipment. These lights shall be used only when required in the course of the work and shall not be used when traveling to and from each site.

## 5.2 Delay of Work Due to Weather or Other Causes

- A. When the work is delayed or precluded from being done on schedule, by inclement weather, natural disaster, emergency condition, other work performed by Department personnel, or another Department Vendor, the Vendor shall reschedule the work and advise the Department's Project/Contract Manager of the change in schedule caused by the weather or any other cause for the delay, such as the example contained herein.
- B. In case of extreme traffic or weather conditions, the Vendor shall be required to remove their operation from the project site, roadway and/or right of way at the discretion of the Department's Project/Contract Manager, the Florida Highway Patrol, or other law enforcement agency having jurisdiction over these roadways.

## 5.3 Lock-out/Tag-out

The Vendor shall comply with the requirements outlined in OSHA Rule 29 CFR 1910.147. The strict compliance with the requirements of "lock-out/tag-out" is to prevent possible employee injury that may result from unexpected energizing or start-up of equipment while conducting maintenance or repair work. These requirements shall be implemented by the Vendor with no exceptions. The Department's Project/Contract Manager shall stop all work if lock-out/tag-out is not implemented. The Vendor shall be responsible for loss of time resulting from not following lock-out/tag-out procedures on the site and shall not reflect or change the time estimated by the Department's Project/Contract Manager on the TWO. Additional hours of work will not be amended/revised for failure to comply with these procedures.

## 5.4 U-Turns

No U-turns are permitted at median openings, maintenance gates, or such other openings that are intended for the use of emergency vehicles. U-turns shall only be permitted at service plazas or at the next available exit.

## **6.0 The Department's Responsibilities**

### 6.1 Administration of Contract

All work under this Contract will be under the administration of the Department.

The Department will assign the Department's Project/Contract Manager to administer the terms and conditions of the Contract at the Pre-Work Conference.

### 6.2 Pre-Work Conference

The Department will contact the Vendor and schedule a Pre-Work Conference prior to the start date of the Contract to review the work involved and the requirements of the Contract.

### 6.3 Periodic Inspection

The Department shall have the right to conduct periodic inspections of work performed and materials used to determine compliance with the requirements of this Contract. The Department's Project/Contract Manager shall have the right to inspect and reject any and all work and materials that does not meet with the requirements of the Contract. Any work or materials rejected by the Department shall be corrected at the Vendor's expense. Failure to reject defective work or materials, whether from lack of discovery or for any other reason, shall not relieve the Vendor from responsibility to complete the work in full compliance with all Contract requirements, and shall in no way prevent later rejection of such defective work or materials by the Department.

### 6.4 Performance Evaluation

The Department shall conduct an evaluation of the Vendor's performance at the end of this Contract. The "Contractor Field Performance Report" shall be used for this purpose. The Vendor shall have an opportunity to review the report and make comments. The Vendor shall be required to sign the report acknowledging receipt of the performance evaluation.

## **7.0 Duration of Contract**

- 7.1 Services shall commence upon written notice from the Department's Project/Contract Manager and shall be completed within eighteen (18) months or date of termination, whichever occurs first.

**FLORIDA DEPARTMENT  
OF TRANSPORTATION**



**ATTACHMENTS**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

**Attachment “A”**

**Plans for the Headquarters Building No. 5315**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA’S TURNPIKE  
ENTERPRISE HEADQUARTERS COMPLEX**

**FLORIDA’S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

**Plans: Plans may be obtained by completing the Exempt Documents/Security Plan Distribution Form (Form No. 7), and return the completed form and all required documentation to [amanda.cruz@dot.state.fl.us](mailto:amanda.cruz@dot.state.fl.us)**

**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION  
SR 91  
TURKEY LAKE SERVICE PLAZA  
FLORIDA'S TURNPIKE, MP 263  
  
HEADQUARTERS BUILDING ROOF  
REPLACEMENT (IN-KIND)**

*The official record of this Technical Special Provision is the electronic file digitally signed and sealed under Rule 61G1-16.005, F.A.C.*



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**THE FOLLOWING SPECIFICATION SECTIONS ARE ADDED AS A TECHNICAL SPECIAL PROVISION AND SHALL GOVERN "LUMP SUM" CONSTRUCTION WORK.**

**THE LISTED SPECIFICATIONS WERE PREPARED UNDER THE DIRECT SUPERVISION OF THE PERSON SIGNING AND SEALING THE COVER SHEET OF THESE TECHNICAL SPECIAL PROVISIONS FOR THEIR RESPECTIVE DISCIPLINES INDICATED.**

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SECTION 024119  
SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Replacement of existing roofing system in preparation for entire new roofing system.
2. Replacement of all existing metal copings on top of parapets.
3. Replacement of all existing curbs for supporting mechanical equipment.

B. Related Requirements:

1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- C. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.5 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.

4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Engineering Survey: Submit engineering survey of condition of building.
- C. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- D. Schedule of Selective Demolition Activities: Indicate the following:
  1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's, on-site operations are uninterrupted.
  2. Interruption of utility services. Indicate how long utility services will be interrupted.
  3. Coordination for shutoff, capping, and continuation of utility services.
  4. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- E. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations. Comply with Section 013233 "Photographic Documentation." Submit before Work begins.
- F. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- G. Warranties: Documentation indicating that existing warranties are still in effect after completion of selective demolition.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.

#### 1.8 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved certification program.

#### 1.9 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

#### 1.10 COORDINATION

- A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ASSE A10.6 and NFPA 241.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Survey of Existing Conditions: Record existing conditions by use of measured drawings and preconstruction photographs or video.
  - 1. Comply with requirements specified in Section 013233 "Photographic Documentation."
  - 2. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

### 3.2 PREPARATION

- A. Refrigerant: Before starting demolition, remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction.

### 3.3 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Arrange to shut off utilities with utility companies.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove equipment, and components indicated on Drawings to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
    - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
    - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
    - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

### 3.4 PROTECTION

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect equipment that have not been removed.
- B. Remove temporary barricades and protections where hazards no longer exist.

### 3.5 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
  2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  3. Do not use cutting torches.
  4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  5. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  6. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.6 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Roofing: Remove no more existing roofing than what can be covered in one day by new roofing and so that building interior remains watertight and weathertight. See Section 075216 (SBS) Modified Bituminous Membrane Roofing for new roofing requirements.
1. Remove existing roof membrane, flashings, copings, and roof accessories.
  2. Remove existing roofing system down to substrate.

### 3.7 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.
1. Do not allow demolished materials to accumulate on-site.
  2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
  4. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- B. Burning: Do not burn demolished materials.

### 3.8 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

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END OF SECTION 024119

SECTION 061000  
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
  - 1. Wood blocking and nailers.

1.3 DEFINITIONS

- A. Boards or Strips: Lumber of less than 2 inches nominal size in least dimension.
- B. Dimension Lumber: Lumber of 2 inches nominal size or greater but less than 5 inches nominal size in least dimension.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
  - 3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D5664.
  - 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.
2. Fire-retardant-treated wood.
3. Power-driven fasteners.
4. Post-installed anchors.

## 1.6 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Stack wood products flat with spacers beneath and between each bundle to provide air circulation. Protect wood products from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Grade lumber by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  1. Factory mark each piece of lumber with grade stamp of grading agency.
- B. Maximum Moisture Content of Lumber: 19 percent.

### 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 Use Category UC3b for exterior construction not in contact with ground.
  1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.
- C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.
- D. Application: Treat all rough carpentry unless otherwise indicated.
  1. Wood nailers and blocking and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  2. Wood blocking and similar concealed members in contact with masonry or concrete.



## 2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, materials shall comply with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame-spread index of 25 or less when tested according to ASTM E84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
  - 1. Treatment shall not promote corrosion of metal fasteners.
  - 2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D2898. Use for exterior locations and where indicated.
  - 3. Design Value Adjustment Factors: Treated lumber shall be tested according to ASTM D5664 and design value adjustment factors shall be calculated according to ASTM D6841. For enclosed roof framing, and where high temperature fire-retardant treatment is indicated, provide material with adjustment factors of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.
- C. Kiln-dry lumber after treatment to maximum moisture content of 19 percent.
- D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
- E. Application: Treat all rough carpentry unless otherwise indicated.

## 2.4 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  - 1. Blocking.
  - 2. Nailers.
- B. Dimension Lumber Items: Construction or No. 2 grade lumber of any of the following species:
  - 1. Hem-fir (north); NLGA.
  - 2. Mixed southern pine or southern pine; SPIB.
  - 3. Spruce-pine-fir; NLGA.
  - 4. Hem-fir; WCLIB or WWPA.
  - 5. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
  - 6. Western woods; WCLIB or WWPA.
  - 7. Northern species; NLGA.
  - 8. Eastern softwoods; NeLMA.
- C. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

- D. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

## 2.5 FASTENERS

- A. General: Fasteners shall be of size and type indicated and shall comply with requirements specified in this article for material and manufacture.
  - 1. Where rough carpentry is exposed to pressure-preservative treated, or in area of high relative humidity, provide fasteners of Type 304 stainless steel.
- B. Nails, Brads, and Staples: ASTM F1667.
- C. Power-Driven Fasteners: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC70.
- D. Post-Installed Anchors: Fastener systems with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01 or ICC-ES AC193 as appropriate for the substrate.
  - 1. Material: Stainless steel with bolts and nuts complying with ASTM F593 and ASTM F594, Alloy Group 1 or 2.

## 2.6 MISCELLANEOUS MATERIALS

- A. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chlorpyrifos as its active ingredient.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry accurately to other construction. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- B. Do not splice structural members between supports unless otherwise indicated.
- C. Sort and select lumber so that natural characteristics do not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- D. Comply with AWPAC M4 for applying field treatment to cut surfaces of preservative-treated lumber.
  - 1. Use inorganic boron for items that are continuously protected from liquid water.
  - 2. Use copper naphthenate for items not continuously protected from liquid water.
- E. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code (IBC).
2. ICC-ES evaluation report for fastener.

- F. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood.

### 3.2 WOOD BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

### 3.3 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

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SECTION 070150.19  
PREPARATION FOR REROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Full tear-off of entire roof system.
2. Re-cover preparation of entire roof area.
3. Removal of copings and related wood nailers.
4. Removal of flashings and counter-flashings.

B. Related Requirements:

1. Section 011000 "Summary" for use of premises and for phasing requirements.
2. Section 015000 "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for reroofing preparation.

1.3 DEFINITIONS

- A. EPS: Molded (expanded) polystyrene.
- B. Full Roof Tear-off: Removal of existing roofing system down to existing concrete deck.
- C. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.

1.4 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Before starting removal Work, conduct conference at Project site.
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  2. Review methods and procedures related to roofing tear-off, including, but not limited to, the following:
    - a. Reroofing preparation, including roofing system manufacturer's written instructions.
    - b. Temporary protection requirements for existing roofing system components that are to remain.
    - c. Existing roof drains and roof drainage during each stage of reroofing, and roof-drain plugging and plug removal.

- d. Construction schedule and availability of materials, Installer's personnel, equipment, and facilities needed to avoid delays.
- e. Existing roof deck conditions requiring Architect notification.
- f. Condition and acceptance of existing roof deck and base flashing substrate for reuse.
- g. Structural loading limitations of roof deck during reroofing.
- h. Base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that affect reroofing.
- i. HVAC shutdown and sealing of air intakes.
- j. Shutdown of fire-suppression, -protection, and -alarm and -detection systems.
- k. Governing regulations and requirements for insurance and certificates if applicable.
- l. Existing conditions that may require Architect notification before proceeding.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
  1. Include certificate that Installer is approved by warrantor of existing roofing system.
  2. Include certificate that Installer is licensed to perform asbestos abatement.
- B. Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, that might be misconstrued as having been damaged by reroofing operations.
  1. Submit before Work begins.

#### 1.7 QUALITY ASSURANCE

- A. Regulatory Requirements:
  1. Comply with governing EPA notification regulations before beginning roofing removal.
  2. Comply with hauling and disposal regulations of authorities having jurisdiction.

#### 1.8 FIELD CONDITIONS

- A. Existing Roofing System: SBS-modified bituminous roofing.
- B. Owner will occupy portions of building immediately below reroofing area.
  1. Conduct reroofing so Owner's operations are not disrupted.
  2. Provide Owner with not less than 72 hours' written notice of activities that may affect Owner's operations.
  3. Coordinate work activities daily with Owner so Owner has adequate advance notice to place protective dust and water-leakage covers over sensitive equipment and furnishings, shut down HVAC and fire-alarm or -detection equipment if needed, and evacuate occupants from below work area.

4. Before working over structurally impaired areas of deck, notify Owner to evacuate occupants from below affected area.
  - a. Verify that occupants below work area have been evacuated before proceeding with work over impaired deck area.
- C. Protect building to be reroofed, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from reroofing operations.
- D. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- E. Conditions existing at time of inspection for bidding will be maintained by Owner as far as practical.
- F. Limit construction loads on existing roof areas to remain, and existing roof areas scheduled to be reroofed to 300# for rooftop equipment wheel loads and 20 PSF for uniformly distributed loads.
- G. Weather Limitations: Proceed with reroofing preparation only when existing and forecasted weather conditions permit Work to proceed without water entering existing roofing system or building.
  1. Remove only as much roofing in one day as can be made watertight in the same day.
- H. Hazardous Materials: It is not expected that hazardous materials, such as asbestos-containing materials, will be encountered in the Work.
  1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner.

## PART 2 - PRODUCTS

### 2.1 REPLACEMENT MATERIALS

- A. Wood blocking, curbs, and nailers are specified in Section 061000 "Rough Carpentry."
- B. Fasteners: Factory-coated steel fasteners with metal or plastic plates listed in FM Approvals' RoofNav, and acceptable to new roofing system manufacturer.

### 2.2 AUXILIARY REROOFING MATERIALS

- A. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer for intended use and compatible with components of new roofing system.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Seal or isolate windows that may be exposed to airborne substances created in removal of existing materials.

- B. Shut off rooftop utilities and service piping before beginning the Work.
- C. Test existing roof drains to verify that they are not blocked or restricted.
  - 1. Immediately notify Architect of any blockages or restrictions.
- D. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
  - 1. Cover air-intake louvers before proceeding with reroofing work that could affect indoor air quality or activate smoke detectors in the ductwork.
- E. During removal operations, have sufficient and suitable materials on-site to facilitate rapid installation of temporary protection in the event of unexpected rain.
- F. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday.
  - 1. Prevent debris from entering or blocking roof drains and conductors.
    - a. Use roof-drain plugs specifically designed for this purpose.
    - b. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
  - 2. If roof drains are temporarily blocked or unserviceable due to roofing system removal or partial installation of new roofing system, provide alternative drainage method to remove water and eliminate ponding.
    - a. Do not permit water to enter into or under existing roofing system components that are to remain.

### 3.2 ROOF TEAR-OFF

- A. Notify Owner each day of extent of roof tear-off proposed for that day and obtain authorization to proceed.
- B. Lower removed roofing materials to ground and onto lower roof levels, using dust-tight chutes or other acceptable means of removing materials from roof areas.
- C. Full Roof Tear-off: Remove existing roofing and other roofing system components down to the existing concrete roof deck.
  - 1. Remove roof insulation and cover board.
  - 2. Remove base flashings and counter-flashings.
  - 3. Remove perimeter edge flashing.
  - 4. Remove copings, including wood nailers at top of parapets.
  - 5. Remove flashings at pipes, curbs, mechanical equipment, and other penetrations.
  - 6. Remove wood blocking, curbs, and nailers.
  - 7. Survey exposed substrate that is to remain using infrared color thermography according to ASTM C1153.
    - a. Prepare survey report of initial scan indicating locations of entrapped moisture, if any, and area calculations of locations of entrapped moisture.

### 3.3 DECK PREPARATION



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- A. Inspect deck after tear-off of roofing system.
- B. If deck surface is unsuitable for receiving new roofing or if structural integrity of deck is suspect, immediately notify Architect.
  - 1. Do not proceed with installation until directed by Architect.

### 3.4 BASE FLASHING REMOVAL

- A. Remove existing base flashings and counter-flashings.
  - 1. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
  - 2. Replace metal flashings and counter-flashings damaged during removal with counter-flashings specified in Section 077100 "Roof Specialties."
- B. Inspect parapet sheathing for deterioration and damage.
  - 1. If parapet sheathing nailers have deteriorated, immediately notify Architect.

### 3.5 DISPOSAL

- A. Collect demolished materials and place in containers.
  - 1. Promptly dispose of demolished materials.
  - 2. Do not allow demolished materials to accumulate on-site.
  - 3. Storage or sale of demolished items or materials on-site is not permitted.
- B. Transport and legally dispose of demolished materials off Owner's property.

END OF SECTION 070150.19

State of Florida, Department of Transportation  
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SECTION 071813  
COLD LIQUID-APPLIED COATING SYSTEM ON CONCRETE ROOF DECKS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes traffic coatings for the following applications:
  - 1. The new coating and surfacing system shall consist of a cold liquid applied, high solids, elastomeric waterproofing urethane system on concrete roof decks.
- B. Related Requirements:
  - 1. Section 070150.19 "Preparation for Reroofing", for removal of materials and preparation of substrates.

1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include installation instructions and details, material descriptions, dry or wet film thickness requirements, and finish.
- B. Shop Drawings: For traffic coatings.
  - 1. Include details for treating substrate joints and cracks, flashings, deck penetrations, and other termination conditions that are not included in manufacturer's product data.
- C. Samples for Initial Selection: For each type of exposed finish.
- D. Samples for Verification: For each type of exposed finish, prepared on rigid backing.
  - 1. Provide stepped Samples on backing to illustrate buildup of traffic coatings.

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## 1.5 INFORMATIONAL SUBMITTALS

- A. Contractor/installer Certification: Submit written certification from waterproofing system manufacturer certifying that the applicator is authorized by the manufacturer to install the specified materials and system.
- B. Product Certificates: For each type of traffic coating.
- C. Field quality-control reports.
- D. Sample Warranty: For manufacturer's warranty.

## 1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For traffic coatings to include in maintenance manuals.

## 1.7 QUALITY ASSURANCE

### A. MANUFACTURER QUALIFICATIONS:

- 1. Manufacturer shall have 15 years of experience manufacturing waterproofing materials.
- 2. Manufacturer shall have trained technical service representatives employed by the manufacturer, independent of sales.
- 3. Manufacturer shall provide specified warranty upon satisfactory project completion.

### B. CONTRACTOR/INSTALLER QUALIFICATIONS:

- 1. Contractor shall be authorized by the manufacturer to install specified materials prior to the bidding period through satisfactory project completion.
- 2. Applicators shall have completed projects of similar scope using the same materials as specified herein.
- 3. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified waterproofing system through satisfactory project completion.
- 4. Applicators shall be skilled in the application methods for all materials.

### C. Mockups: Build mockups to set quality standards for materials and execution.

- 1. Build mockup for each traffic coating and substrate to receive traffic coatings.
- 2. Size: 200 sq. ft. (18.5 sq. m) of each substrate to demonstrate surface preparation, joint and crack treatment, thickness, texture, color, and standard of workmanship.
- 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
- 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.8 FIELD CONDITIONS

- A. Environmental Limitations: Apply traffic coatings within the range of ambient and substrate temperatures recommended in writing by manufacturer. Do not apply traffic coatings to damp or wet substrates, when temperatures are below 40 deg F, when relative humidity exceeds 85 percent, or when temperatures are less than 5 deg F above dew point.

1. Do not apply traffic coatings in frost, rain, fog, or mist, or when such weather conditions are imminent during the application and curing period. Apply only when frost-free conditions occur throughout the depth of substrate.

B. SUBSTRATE EVALUATION:

1. Contractor shall evaluate substrate moisture content and adhesion of waterproofing materials to substrate throughout the work and record with daily inspection reports or other forms of reporting acceptable to the owner or his designated representative and the waterproofing manufacturer.
2. Moisture content: Evaluate substrate moisture content to determine acceptability for application of the specified liquid applied waterproofing materials. Moisture testing shall be performed by means suitable to the project application, or by testing substrate relative humidity (RH) in accordance with ASTM F 2170 when needed, required, or if substrate moisture content is in question.
3. Adhesion: Evaluate soundness and surface preparation of concrete and/or masonry substrates. Prepare representative areas using specified methods complete with applied primer and waterproofing membrane. Test for minimum acceptable tensile bond strength values as required in accordance with ASTM D 4541. Evaluate all areas where concrete appears to differ in appearance or consistency, if multiple areas are involved in the scope of work, evaluate each area with a minimum of (3) tests for every 5,000 ft<sup>2</sup> or as required by project conditions.

- C. Do not install traffic coating until items that penetrate membrane have been installed.

## 1.9 DELIVERY, STORAGE AND HANDLING

- A. Refer to each product data sheet or other published literature for specific requirements.
- B. Refer to product Safety Data Sheets (SDS) for storage and handling related hazards, and take all necessary measures and precautions to comply with storage and handling requirements.
- C. Deliver materials and store them in their unopened, original packaging, bearing the manufacturer's name, related standards, and any other specification or reference accepted as standard.
- D. Protect and store materials in a dry, well-vented, and weatherproof location. Only materials to be used the same day shall be removed from this location.

## 1.10 PROJECT CONDITIONS

A. SAFETY:

1. The contractor shall be responsible for complying with all project-related safety and environmental requirements.
2. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

B. ENVIRONMENTAL CONDITIONS:

1. Proceed with application of material when substrate and ambient temperatures are within acceptable levels per the product data sheets.

2. Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of waterproofing materials. Do not apply if precipitation is expected within 24 hours.
3. Ensure all materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.

#### 1.11 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace traffic coating that fails in materials or workmanship within specified warranty period.
  1. Failures include, but are not limited to, the following:
    - a. Adhesive or cohesive failures.
    - b. Abrasion or tearing failures.
    - c. Surface crazing or spalling.
    - d. Intrusion of water into deck substrate.
  2. Warranty Period: Five years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Source Limitations:
  1. Obtain traffic coatings from single source from single manufacturer.
- B. BASIS OF DESIGN MANUFACTURER:
  1. SOPREMA, located at: 310 Quadral Drive, Wadsworth, OH 44281; Tel: 800-356-3521; Tel: 330-334-0066; Website: [www.soprema.us](http://www.soprema.us).
  2. Alternate manufacturers that meet the specified requirements acceptable upon review and approval by the Designer of Record.

#### 2.2 PERFORMANCE REQUIREMENTS

- A. Material Compatibility: Provide primers; base coat, intermediate coat, and topcoat; and accessory materials that are compatible with one another and with substrate under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

#### 2.3 DECK COATING SYSTEM

- A. BASE COAT:
  1. SOPREMA ALSAN® TRAFIK PU 211: Low odor, single component, polyurethane, elastomeric waterproofing basecoat.
    - a. VOC content: 201 g/L.
    - b. Elongation avg. (ASTM D412): 600%.

- c. Tensile strength avg. (ASTM D-412): 1200 psi.
    - d. Tear strength avg. (ASTM D 624): 80 pli.
    - e. Shore A hardness, avg. (ASTM D2240): 60-70.
  2. SOPREMA ALSAN TRAFIK PU 215: Low odor, multi component, water-catalyzed, polyurethane, elastomeric waterproofing basecoat.
    - a. VOC content: <60 g/L.
    - b. Elongation avg. (ASTM D412): 675%.
    - c. Tensile strength avg. (ASTM D-412): 1350 psi.
    - d. Tear strength avg. (ASTM D 624): 250 pli.
    - e. Shore A hardness, avg. (ASTM D2240): 60.
  3. SOPREMA ALSAN TRAFIK PU 220: Low odor, two component, urethane, elastomeric waterproofing basecoat.
    - a. VOC content: <60 g/L.
    - b. Elongation, avg. (ASTM D412): 1000%.
    - c. Tensile strength, avg. (ASTM D-412): 1500 psi.
    - d. Tear strength, avg. (ASTM D 624): 230 pli.
    - e. Shore A hardness, avg. (ASTM D2240): 64.
- B. INTERMEDIATE & TOPCOAT:
1. SOPREMA ALSAN TRAFIK PU 410: Low odor, aromatic, one component, polyurethane intermediate and topcoat.
    - a. VOC content: 251 g/L.
    - b. Ultimate elongation, avg. (ASTM D412): 100%.
    - c. Tensile strength, avg. (ASTM D-412): 2500 psi.
    - d. Tear resistance, avg. (ASTM D 624, Die C): 200 pli.
    - e. Shore A hardness, avg. (ASTM D2240): 80-90.
  2. SOPREMA ALSAN TRAFIK PU 411: Low odor, aliphatic, one component, polyurethane intermediate and topcoat.
    - a. VOC content: 223 g/L.
    - b. Ultimate elongation, avg. (ASTM D412): 100%.
    - c. Tensile strength, avg. (ASTM D-412): 2500 psi.
    - d. Tear resistance, avg. (ASTM D 624, Die C): 200 pli.
    - e. Shore A hardness, avg. (ASTM D2240): 80-90
  3. SOPREMA ALSAN TRAFIK PU 420: Low odor, aromatic, two component, urethane intermediate and topcoat.
    - a. VOC content: <90 g/L.
    - b. Ultimate elongation, avg. (ASTM D412): 500%.
    - c. Tensile strength, avg. (ASTM D-412): 2500 psi.
    - d. Tear resistance, avg. (ASTM D 624, Die C): 300 pli.
    - e. Shore A hardness, avg. (ASTM D2240): 90.
  4. SOPREMA ALSAN TRAFIK PU 421: Low odor, aliphatic, UV resistant, two component, urethane, topcoat.
    - a. VOC content: <60 g/L.
    - b. Elongation, avg. (ASTM D412): 450%.
    - c. Tensile strength, avg. (ASTM D-412): 3200 psi.
    - d. Tear resistance, avg. (ASTM D 624): 300 pli.
    - e. Shore A hardness, avg. (ASTM D2240): 85.

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## 2.4 ACCESSORY MATERIALS

### A. PRIMERS:

1. SOPREMA ALSAN TRAFIK EP 140: Low odor, two component, solvent free, epoxy primer used to promote adhesion of urethane membranes over plywood, concrete and approved substrates.
  - a. VOC content: 90 g/L
2. SOPREMA ALSAN TRAFIK EP 141: Low odor, two component, solvent based epoxy primer used to promote adhesion of urethane membranes over plywood, concrete, metal flashing, and approved substrates.
  - a. VOC content: 140 g/L
3. SOPREMA ALSAN TRAFIK EP 120: Low odor, two component, polyurethane inter-coat primer used to promote adhesion of urethane membranes over existing and properly prepared existing urethane membranes.
  - a. VOC content: 25 g/L

### B. CATALYST:

1. SOPREMA TRAFIK PU 215 ACCELERATOR: Reactive agent used to rapid cure SOPREMA TRAFIK PU 215 basecoat.

### C. SURFACING AGGREGATE:

1. Washed, rounded silica sand in the 12-20, 16-30, or 20-40 mesh size & 6.5 Mohs scale minimum hardness

### D. MISCELLANEOUS

1. Materials such as joint sealant, backer rod, expansion joints, and cleaners shall be compatible with the specified system.

### E. Joint Sealants: ASTM C920.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, surface smoothness, and other conditions affecting performance of deck -coating work.
- B. Examination includes visual observations, qualitative analysis, and quantitative testing measures as necessary to ensure conditions are satisfactory to begin, and remain satisfactory throughout the project.
- C. The contractor/installer shall examine all waterproofing substrates including, but not limited to: decks, walls, curbs, equipment, fixtures, and wood blocking.



- D. The applicator shall not begin installation until conditions have been properly examined and determined to be clean, dry and, otherwise satisfactory to receive specified waterproofing materials.
- E. Verify that substrates are visibly dry and free of moisture.
  - 1. Test for moisture according to ASTM D4263.
  - 2. Test for moisture content by method recommended in writing by deck-coating manufacturer.
- F. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of deck-coating work.
- G. Proceed with installation only after unsatisfactory conditions have been corrected.
  - 1. Begin coating application only after substrate construction and penetrating work have been completed.
  - 2. Begin coating application only after minimum concrete-curing and -drying period recommended in writing by deck-coating manufacturer has passed and after substrates are dry.
  - 3. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Clean and prepare substrates according to ASTM C1127 and manufacturer's written instructions to produce clean, dust-free, dry substrate for deck-coating application. Remove projections, fill voids, and seal joints if any, as recommended in writing by deck-coating manufacturer.
- B. Before commencing work each day, the contractor shall prepare all substrates to ensure conditions are satisfactory to proceed with the installation of specified materials.
- C. Preparation of substrates includes, but is not limited to, the following:
  - 1. General:
    - a. All substrates must be clean, dry and free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, release agents, lacquers, or any other condition that would be detrimental to adhesion of primer and/or coating materials to the substrate.
    - b. Inspect all substrates, and correct defects before application of waterproofing materials.
  - 2. Concrete Substrates:
    - a. Concrete shall comply with requirements of ACI 301 and ACI 308.
    - b. Concrete compressive strength: 3,500 psi for all primers.
    - c. Surface: Scarify, shot-blast, grind, or prepare by other mechanical measures to ICRl Concrete Surface Profile CSP 3 to CSP 5 without effecting the structural integrity of concrete substrate; CSP 3 being the preferred profile.
    - d. Areas of spalls, voids, bug holes and other deterioration on vertical or horizontal surfaces shall be repaired as required or recommended.
  - 3. Metal Substrates:
    - a. Clean and prepare metal to near-white metal in accordance with SSPC – SP3 (power tool clean) to a point maximum 1/8 in (3 mm) beyond the termination of liquid applied membrane materials and wipe with solvent cleaner to remove oils, debris or contaminants. Immediately prime cleaned surface.

- b. Adhesion: Examine metal substrates by conducting adhesion testing. Use primer where required to achieve adequate adhesion.
  - D. Priming: Prime substrates according to manufacturer's written instructions.
    - 1. Limit priming to areas that will be covered by deck-coating material on same day. Reprime areas exposed for more time than recommended by manufacturer.
  - E. Schedule preparation work so dust and other contaminants from process do not fall on wet, newly coated surfaces.
  - F. Mask adjoining surfaces not receiving deck coatings to prevent overspray, spillage, leaking, and migration of coatings. Prevent deck-coating materials from entering deck substrate penetrations and clogging weep holes and drains.
- 3.3 MIXING
  - A. Follow mixing guidelines in accordance to manufacturers installation instructions.
- 3.4 APPLICATION – GENERAL
  - A. Follow guidelines in accordance to manufacturers installation instructions
  - B. Use a wet mil guage to verify proper thickness is achieved.
- 3.5 APPLICATION – LIGHT PEDESTRIAN TRAFFIC
  - A. Base Coat – Apply 25 wet mils
  - B. Top Coat – Apply 15 wet mils
- 3.6 APPLICATION – HEAVY PEDESTRIAN TRAFFIC
  - A. Primer – Apply 5 wet mils
  - B. Base Coat – Apply 25 wet mils
  - C. Intermediate coat – Apply 15 wet mils
  - D. Top Coat – Apply 15 wet mils
- 3.7 APPLICATION – AGGREGATE
  - A. The amount of aggregate, method used to distribute, and location will be dependant on type of system and type of base coat. Please refer to Installation guidelines for further details.

### 3.8 TERMINATIONS AND PENETRATIONS

- A. Prepare vertical and horizontal surfaces at terminations and penetrations through deck coatings and at expansion joints, drains, and sleeves according to ASTM C1127 and manufacturer's written instructions.
- B. Provide sealant cants at penetrations and at reinforced and nonreinforced, deck-to-wall butt joints.
- C. Terminate edges of deck-to-deck expansion joints with preparatory base-coat strip.
- D. Install sheet flashings at deck-to-wall expansion and dynamic joints, and bond to deck and wall substrates according to manufacturer's written recommendations.

### 3.9 JOINT AND CRACK TREATMENT

- A. Prepare, treat, rout, and fill joints and cracks in substrates according to ASTM C1127 and manufacturer's written recommendations. Before coating surfaces, remove dust and dirt from joints and cracks according to ASTM D4258.
  - 1. Comply with recommendations in ASTM C1193 for joint-sealant installation.
- B. Apply reinforcing strip in deck-coating system where recommended in writing by deck-coating manufacturer.

### 3.10 DECK-COATING APPLICATION

- A. Apply traffic coating according to ASTM C1127 and manufacturer's written instructions.
- B. Apply coats of specified compositions for each type of traffic coating at locations as indicated on Drawings.
- C. Start traffic-coating application in presence of manufacturer's technical representative.
- D. Verify that wet-film thickness of each coat complies with requirements every 100 sq. ft..
- E. Uniformly broadcast and embed aggregate in each coat indicated to receive aggregate according to manufacturer's written instructions. After coat dries, sweep away excess aggregate.
- F. Apply traffic coatings to prepared wall terminations and vertical surfaces to height indicated; omit aggregate on vertical surfaces.
- G. Cure traffic coatings. Prevent contamination and damage during coating application and curing.

### 3.11 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform the following field tests and inspections:
  - 1. Materials Testing:

- a. Samples of material delivered to Project site shall be taken, identified, sealed, and certified in presence of Owner and Contractor.
  - b. Testing agency shall perform tests for characteristics specified, using applicable referenced testing procedures.
  - c. Testing agency shall verify thickness of coatings during traffic-coating application for each 600 sq. ft. of installed traffic coating or part thereof.
2. Testing:
- a. Testing agency shall test each deck area for leaks using method as recommended in writing by traffic-coating manufacturer that locates discontinuities or leaks, if any, in the traffic-coating membrane.
  - b. Testing agency shall perform tests on abutting or overlapping smaller areas as necessary to cover entire test area.
  - c. Testing agency shall provide survey report indicating locations of discontinuities, if any.
- B. Final Traffic-Coating Inspection: Arrange for traffic-coating manufacturer's technical personnel to inspect membrane installation on completion.
1. Notify Architect or Owner 48 hours in advance of date and time of inspection.
- C. Waterproofing will be considered defective if it does not pass tests and inspections.
- D. Prepare test and inspection reports.
- 3.12 PROTECTING AND CLEANING
- A. Upon completion of new work (including all associated work), institute appropriate procedures for protection of finished work during remainder of construction period. Protect all areas where all systems have been installed.
  - B. Do not allow traffic on finished system for a minimum of 24 hours.
  - C. Protect traffic coatings from damage and wear during remainder of construction period.
  - D. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.
    1. Clean up and properly dispose of waste and debris resulting from these operations each day as required to prevent damages and disruptions to operations.

END OF SECTION 071813

SECTION 072200  
ROOF INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Rigid roof insulation board.
- 2. Cover board.
- 3. Cant strips.

- B. Work shall include, but is not limited to, the following:

- 1. Preparation of existing roof deck and all flashing substrates.
- 2. Polyisocyanurate foam-plastic board, for roof insulation.
- 3. SBS Modified Bitumen Laminated Cover-board, over roof insulation.
- 4. All related materials and labor required to complete specified roofing necessary to receive specified manufacturer's warranty.

1.3 RELATED REQUIREMENTS:

- A. Section 061000 "Rough Carpentry", for wood nailers and blocking.
- B. Section 070150.19 "Preparation for Reroofing", for removal of materials and preparation of substrates.
- C. Section 075216 "Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing" for roofing construction.
- D. Section 072610 "SBS Modified Bituminous Sheet Vapor Retarder", provided by manufacturer of SBS modified bituminous membrane roofing, for installation to top surface of existing concrete deck substrate, under new roof insulation.
- E. Section 077100 "Roof Specialties" for premanufactured metal copings, provided by manufacturer of SBS modified bituminous membrane roofing.

1.4 DEFINITIONS

- A. ASTM D 1079-Definitions of Term Relating to Roofing and Waterproofing.
- B. The National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual, Fifth Edition Glossary.

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## 1.5 REFERENCES

- A. AMERICAN SOCIETY OF CIVIL ENGINEERS - Reference Document ASCE 7, Minimum Design Loads for Buildings and Other Structures.
- B. AMERICAN STANDARD OF TESTING METHODS (ASTM):
  - 1. ASTM C 726 - Standard Specification for Mineral Wool Roof Insulation Board.
  - 2. ASTM C 1177/C 1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.
  - 3. ASTM C 1278 - Standard Specification for Fiber-Reinforced Gypsum Panel.
  - 4. ASTM C 1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Insulation Board.
  - 5. ASTM D 41 - Standard Specification for Asphalt Primer Used in Roofing, Damp proofing, and Waterproofing.
- C. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI):
  - 1. ANSI/SPRI FX-1, Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners.
  - 2. ANSI/SPRI IA-1, Standard Field Test Procedure for Determining the Mechanical Uplift Resistance of Insulation Adhesives over Various Substrates.
  - 3. ANSI/FM 4474, American National Standard for Evaluating the Simulated Wind Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures.
- D. FLORIDA BUILDING CODE (FBC):
  - 1. 2020 Florida Building Code (FBC).
- E. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA).
- F. UNDERWRITERS LABORATORY (UL):
  - 1. UL 790 Standard Test Methods for Fire Tests of Roof Coverings.
  - 2. UL 1256 – Fire Test of Roof Deck Constructions.

## 1.6 ACTION SUBMITTALS

- A. Product Data Sheets: Submit manufacturer's product data sheets, installation instructions and/or general requirements for each component.
- B. Sample/Specimen Warranty from the manufacturer and contractor.
- C. Shop Drawings: Provide roof plan and applicable roof system detail drawings.

## 1.7 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- B. Evaluation Reports: For foam-plastic insulation, from ICC-ES.

- C. Contractor Certification: Submit written certification from roofing system manufacturer certifying that the applicator is authorized by the manufacturer to install the specified materials and system.

#### 1.8 CLOSEOUT SUBMITTALS

- A. Warranty: Provide manufacturer's and contractor's warranties upon substantial completion of the roofing system.

#### 1.9 QUALITY ASSURANCE

##### A. MANUFACTURER QUALIFICATIONS:

1. Manufacturer shall have at least 20 years of experience manufacturing roofing materials.
2. Trained Technical Field Representatives, employed by the manufacturer, independent of sales.
3. Provide reports in a timely manner of all site visit reports.
4. Provide specified warranty upon satisfactory project completion.

##### B. CONTRACTOR QUALIFICATIONS:

1. Contractor shall be authorized by the manufacturer to install specified materials prior to the bidding period through satisfactory project completion.
2. Applicators shall have completed at least 3 projects of similar scope using same materials as specified herein.
3. Contractor will have a physical, staffed and operational location within 60 miles of project location.
4. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roof system through satisfactory project completion.
5. Applicators shall be skilled in the application methods for all materials.
6. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
7. Contractor shall maintain a copy of all submittal documents, on-site, available at all times for reference.

#### 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Refer to each product data sheet or other published literature for specific requirements.
- B. Deliver materials and store them in their unopened, original packaging, bearing the manufacturer's name, related standards, and any other specification or reference accepted as standard.
- C. Protect insulation materials from physical damage and from deterioration due to moisture, soiling, and other sources. Store inside and in a dry and well vented weatherproof location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation. Only materials to be used the same day shall be removed from this location.
- D. When materials are to be stored outdoors, store away from standing water, stacked on raised pallets or dunnage, at least 4 in or more above ground level. Carefully cover storage with "breathable" tarpaulins to protect materials from precipitation and to prevent exposure to condensation.

- E. Properly dispose of all product wrappers, pallets, cardboard tubes, scrap, waste, and debris. All damaged materials shall be removed from job site and replaced with new, suitable materials.
- F. Protect foam-plastic board insulation as follows:
  - 1. Do not expose to sunlight except to necessary extent for period of installation and concealment.
  - 2. Protect against ignition at all times. Do not deliver foam-plastic board materials to Project site until just before installation time.
  - 3. Quickly complete installation and concealment of foam-plastic board insulation in each area of construction.

## 1.11 SITE CONDITIONS

### A. SAFETY:

- 1. The contractor shall be responsible for complying with all project-related safety and environmental requirements.
- 2. Refer to NRCA CERTA recommendations, local codes and building owner's requirements for hot work operations.
- 3. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified liquid-applied, or semi-solid roofing materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions.
- 4. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified hot asphalt-applied materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions. .
- 5. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

### B. ENVIRONMENTAL CONDITIONS:

- 1. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.
- 2. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.

## 1.12 PERFORMANCE REQUIREMENTS

### A. FIRE CLASSIFICATION:



1. Roof construction performance testing shall be in accordance with UL 1256, FM 4450 or FM 4470 to meet the specified requirements for interior flame spread and fuel contribution.
  - a. Roof construction meets requirements of UL 1256, or FM Class 1.
- B. ROOF SLOPE:
  1. Finished roof slope shall be ¼ inch per foot (2 percent) minimum for roof drainage.
- C. ENERGY CONSERVATION REQUIREMENTS:
  1. Polyisocyanurate Insulation "R" Value: Shall be determined in accordance with ASTM C1289-11a.
  2. Thermal Resistance 'R' for the specified roof insulation system shall include the continuous insulation (ci) above the roof deck.
    - a. Total Thermal Resistance R Value, continuous insulation (ci) above-deck: R-21 Average.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. SINGLE SOURCE MANUFACTURER: All roofing materials shall be provided by a single supplier with 20 years or more manufacturing history in the US.
  1. Comply with the Manufacturer's requirements as necessary to provide the specified warranty.
- B. PRODUCT QUALITY ASSURANCE PROGRAM: Manufacturer shall be an ISO 9001 registered company.
- C. MANUFACTURER
  1. Basis of Design Product - SOPREMA, located at: 310 Quadral Dr.; Wadsworth, OH 44281; Tel: 800-356-3521; Tel: 330-334-0066; Website: [www.soprema.us](http://www.soprema.us).
  2. Or approved equal product by another manufacturer.

### 2.2 ROOFING SYSTEM

- A. POLYISOCYANURATE RIGID INSULATION:
  1. SOPREMA SOPRA-ISO: Closed cell polyisocyanurate foam core bonded on each side to a glass fiber-reinforced felt facer.
    - a. Thickness: 1.5 in minimum board thickness. Total thickness to meet specified insulation system thermal resistance 'R' value.
    - b. Dimensions: 4 x 4 ft or 4 x 8 ft boards.
    - c. Meets or exceeds ASTM C1289, Type II, Class 1, Grade 2 (20 psi).
  2. SOPREMA SOPRA-ISO Tapered: Closed cell polyisocyanurate foam core bonded on each side to a glass fiber-reinforced felt facer, tapered to provide slope.

- a. Taper: 1/4, 1/2 in per foot. Insulation, crickets and saddles provided with taper as required for positive roof slope.
- b. Dimensions: 4 x 4 ft boards
- c. Meets or exceeds ASTM C1289, Type II, Class 1, Grade 2 (20 psi).

B. SBS MODIFIED BITUMEN LAMINATED COVER-BOARD:

1. 3-1 SOPRASMART BOARD

- a. Non-woven polyester reinforced SBS modified bitumen membrane base ply factory laminated to 1/4 in, thick SOPRABOARD top layer and 3.5 in thick polyisocyanurate insulation bottom layer.
- b. Dimensions: 3 x 8 ft board dimension.
- c. Top Surfacing: SBS-modified bitumen membrane ply with plastic burn-off film on the top surface.
- d. Side-laps: 3 in DUO-Selvage side-lap consisting of 2 in self-adhesive, and 1 in SBS-modified bitumen for heat welding.
- e. End-laps: Butted end-laps, with 1 in membrane overlap. Sealed watertight using SOPRALAP FLAM.

C. SOPRASMART BOARD END-LAP STRIP-IN PLY

1. SOPRALAP FLAM

- a. Heat welded, end-lap strip-in ply for SOPRASMART boards that have a plastic burn-off film on the top surface.
- b. Composite glass fiber and non-woven polyester reinforced.
- c. Thickness: 98.4 mil (2.5 mm)
- d. Top surface: Plastic burn-off film
- e. Bottom Surface: Plastic burn-off film
- f. Dimensions: 13 in x 39.6 ft (0.33 m x 12 m)

D. INSULATION CANT STRIP AND TAPERED STRIP

1. CANT STRIP, MODIFIED BITUMEN

- a. SOPREMA SOPRACANT MB: Modified bitumen cant strips for use with COLPLY ADHESIVE, COLPLY FLASHING CEMENT, asphalt, and heat-welded SBS modified bitumen. Not for use with COLPLY EF nor self-adhered SBS modified bitumen.
  - 1) Length: 39.4 in sections.
  - 2) Cross-section dimensions: 1.25 x 1.25 x 2 in face width. 2.25 x 2.25 x 3.25 in face width. Size as required for flashing conditions.
  - 3) Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing system with vertical surfaces or angle changes greater than 45 deg F (14 deg C).

2. CANT STRIP, RIGID MINERAL WOOL

- a. SOPREMA SOPRAROCK CANT STRIPS (Rockwool Cant Strips): High density, mineral wool, bitumen coated cant strips.
  - 1) Length: 4 ft sections.
  - 2) Cross-section dimensions: 1.5 thick x 4 in face width. 2 in thick x 5 in face width. Size as required for flashing conditions.
  - 3) Surface: Bitumen coated, sanded.
  - 4) Meets or exceeds ASTM C726.
  - 5) Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing system with vertical surfaces or angle changes greater than 45 deg F (14 deg C).

E. INSULATION ADHESIVE

1. POLYURETHANE FOAM INSULATION ADHESIVE

- a. SOPREMA DUOTACK 365: Two-component, polyurethane foam insulation adhesive, applied in ribbons from cartridges or two-component bulk packaging with pump-driven delivery system.
  - 1) Ribbon size: 1/2 in to 3/4 in wide.
  - 2) Ribbon spacing: As required to meet specified wind uplift resistance performance.
    - a) Field of Roof (Zone 1): 12 in on-centers
    - b) Perimeter of Roof (Zone 2): 6 in on-centers
    - c) Corners of Roof (Zone 3): 4 in on-centers
- b. SOPREMA DUOTACK SPF: Two-component, polyurethane foam insulation adhesive, applied in ribbons from two-component compressed cylinders.
  - 1) Ribbon size: 2 1/2 in wide.
  - 2) Ribbon spacing: As required to meet specified wind uplift resistance performance.
    - a) Field of Roof (Zone 1): 12 in on-centers
    - b) Perimeter of Roof (Zone 2): 6 in on-centers
    - c) Corners of Roof (Zone 3): 4 in on-centers

2.3 ACCESSORIES

A. PRIMERS:

- 1. SOPREMA ELASTOCOL 500 PRIMER: Asphalt cut-back primer. Primer for the preparation of substrates for asphalt applications.
  - a. Meets or exceeds ASTM D41.
  - b. VOC content: 350 g/L or less.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examination includes visual observations, qualitative analysis, and quantitative testing measures as necessary to ensure conditions remain satisfactory throughout the project.
- B. Conduct qualitative insulation adhesive adhesion tests, or quantitative bonded pull tests as necessary to ensure satisfactory adhesion is achieved.
- C. The contractor shall examine all roofing substrates including, but not limited to: insulation materials, roof decks, walls, curbs, rooftop equipment, fixtures, and wood blocking.
- D. The applicator shall not begin installation until conditions have been properly examined and determined to be clean, dry and, otherwise satisfactory to receive specified roofing materials.
- E. During the application of specified materials, the applicator shall continue to examine all project conditions to ensure conditions remain satisfactory to complete the specified roofing system.

3.2 PREPARATION

- A. Before commencing work each day, the contractor shall prepare all roofing substrates to ensure conditions are satisfactory to proceed with the installation of specified roofing materials. Preparation of substrates includes, but is not limited to, substrate repairs, securement of substrates, eliminating all incompatible materials, and cleaning.
- B. Where conditions are found to be unsatisfactory, work shall not begin until conditions are made satisfactory to begin work. Commencing of work shall indicate contractor's acceptance of conditions.
- C. Clean substrates of substances that are harmful to insulation, including removing projections capable of puncturing insulation or vapor retarders, or that interfere with insulation attachment.

### 3.3 INSTALLATION, GENERAL

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.

### 3.4 PRIMER APPLICATION

- A. Apply the appropriate specified primer to dry, compatible substrates as required to enhance adhesion of new specified roofing materials.
- B. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet.
- C. Asphalt Primer: Apply SOPREMA ELASTOCOL 500 primer to dry compatible masonry, metal, wood and other required substrates before applying asphalt.

### 3.5 INSULATION ADHESIVE APPLICATION

- A. DUOTACK 365
  - 1. Apply the specified two-component insulation adhesive to adhere (Insulation Base Layer, Insulation Layers, Cover-board) to the deck and insulation substrate(s).
  - 2. Follow insulation adhesive product data sheets and published general requirements for installation requirements.
  - 3. Apply insulation adhesive in uniform ribbons, 1/2 in to 3/4 in wide
  - 4. Immediately install insulation components into insulation adhesive, and apply weight to ensure the materials maintain full contact with all ribbons for complete adhesion. Do not allow insulation adhesive to skin-over before placing the insulation materials into the adhesive.
  - 5. Adhere the insulation system to meet the specified wind uplift resistance performance and specified warranty requirements.
  - 6. Minimum insulation adhesive ribbon spacing:
    - a. Field of Roof (Zone 1): 12 in on-centers.
    - b. Perimeter of Roof (Zone 2): 6 in on-centers.
    - c. Corners of Roof (Zone 3): 4 in on-centers.

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**B. DUOTACK SPF**

1. Apply the specified two-component insulation adhesive to adhere (Insulation Base Layer, Insulation Layers, Cover-board) to the deck and insulation substrate(s).
2. Follow insulation adhesive product data sheets and published general requirements for installation requirements.
3. Apply insulation adhesive in uniform ribbons, 2 1/2 in wide.
4. Immediately install insulation components into insulation adhesive, and apply weight to ensure the materials maintain full contact with all ribbons for complete adhesion. Do not allow insulation adhesive to skin-over before placing the insulation materials into the adhesive.
5. Adhere the insulation system to meet the specified wind uplift resistance performance and specified warranty requirements.
6. Minimum insulation adhesive ribbon spacing:
  - a. Field of Roof (Zone 1): 12 in on-centers.
  - b. Perimeter of Roof (Zone 2): 6 in on-centers.
  - c. Corners of Roof (Zone 3): 4 in on-centers.

**3.6 INSULATION SYSTEM APPLICATION**

- A. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed to ice, rain at any time.
- B. Extend insulation to envelop entire area to be insulated. Fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
- C. Follow insulation system component product data sheets, published general requirements and approvals.
- D. Install all insulation system components on clean, dry, uniform and, properly prepared substrates.
- E. All insulation system boards shall be carefully installed and fitted against adjoining sheets to form tight joints.
- F. Insulation system boards that must be cut to fit shall be saw-cut or knife-cut in a straight line, not broken. Chalk lines shall be used to cut insulation components. Uneven or broken edges shall not be accepted. Remove dust and debris that develops during cutting operations.
- G. Stagger successive layers of insulation 12 in vertically and laterally to ensure board joints do not coincide with joints from the layers above and below.
- H. Crickets, saddles, and tapered edge strips shall be installed before installing Cover-boards.
- I. Install tapered insulation, saddles and crickets as required to ensure positive slope for complete roof drainage.
- J. Cover-boards shall be installed to fit tight against adjacent boards. When required by the Cover-board manufacturer, a uniform gap shall be provided between Cover-boards using a uniform guide placed between board joints to form a gap between all boards during installation.

- K. The finished insulation system surface shall be tight to, and flush with, adjacent substrates to form a satisfactory substrate to install specified roof membrane and flashings.
- L. Install specified cants where required for membrane flashing transitions.

### 3.7 SOPRASMART BOARD APPLICATION

- A. Adhered SOPRASMART boards:
  1. Starting at the low point of the roof, lay out the SOPRASMART boards to ensure the boards are installed perpendicular to the roof slope, shingled to prevent back-water laps.
  2. Unfold boards and lay them out on the prepared substrate.
  3. Ensure SOPRASMART ends are butted and aligned with the 1 in membrane overlapped onto the adjacent board.
  4. Stagger the SOPRASMART joints from the preceding insulation joints to ensure board joints are not aligned vertically.
  5. Apply the specified two-component insulation adhesive (asphalt) to adhere SOPRASMART to the substrate.
  6. During installation, ensure the factory DUO-Selvage side-laps are maintained clean and dry.
  7. Remove the self-adhesive release film while applying pressure with a weighted roller.
  8. Heat-weld the remaining outer 1 in edge of the SOPRASMART side-lap to ensure the side-laps are sealed watertight.
  9. Seal end-laps by heat welding the SOPRALAP FLAM or SOPRALAP SP strip-in ply, centered along the end joint.
  10. Prime the SOPRASMART end joints using ELASTOCL STICK, ELASTOCOL STICK ZERO and fully adhere SOPRALAP STICK strip-in ply, centered along the end joint.
  11. Each day, physically inspect all side and end-laps, and ensure the SOPRASMART is sealed watertight. Where necessary, use a roof torch or hot-air welder and a clean trowel to ensure all laps are fully sealed.
  12. Repair all voids, wrinkles, open laps and all other deficiencies before installing subsequent materials above SOPRASMART.

### 3.8 PROTECTION

- A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes. Provide temporary coverings or enclosures where insulation is subject to abuse and cannot be concealed and protected by permanent construction immediately after installation.

### 3.9 CLEAN-UP

- A. Clean-up and properly dispose of waste and debris resulting from these operations each day as required to prevent damages and disruptions to operations.

END OF SECTION 072200

SECTION 072610  
SBS MODIFIED BITUMINOUS SHEET VAPOR RETARDER

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes SBS modified bituminous sheet vapor retarder.
- B. Work shall include, but is not limited to, the following:
1. Preparation of existing concrete roof deck, and all flashing substrates.
  2. SBS-modified bitumen roof vapor retarder.
  3. SBS-modified bitumen membrane flashings at penetrations
  4. Liquid-applied, reinforced flashings at penetrations.
  5. All related materials and labor required to complete specified roofing necessary to receive the specified manufacturer's warranty.
- C. Related Requirements:
1. Section 070150.19 "Preparation for Reroofing", for removal of materials and preparation of substrates.
  2. Section 072200 "Roof Insulation", for roof insulation and cover board.
  3. Section 075216 "SBS Modified Bituminous Membrane Roofing".
  4. Section 077100 "Roof Specialties" for premanufactured metal copings, provided by manufacturer of SBS modified bituminous membrane roofing.

1.3 DEFINITIONS

- A. ASTM D 1079-Definitions of Term Relating to Roofing and Waterproofing.
- B. The National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual, Fifth Edition Glossary.

1.4 REFERENCES

- A. AMERICAN SOCIETY OF CIVIL ENGINEERS - Reference Document ASCE 7, Minimum Design Loads for Buildings and Other Structures.
- B. AMERICAN STANDARD OF TESTING METHODS (ASTM):
1. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants
  2. ASTM D 41 - Standard Specification for Asphalt Primer Used in Roofing, Damp proofing, and Waterproofing.

3. ASTM D 2178 - Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.
4. ASTM D 3019 - Standard Specification for Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos-Fibered, and Non-Asbestos-Fibered.
5. ASTM D 3746 - Standard Test Method for Impact Resistance of Bituminous Roofing System.
6. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
7. ASTM D 5147 - Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material.
8. ASTM D 5849 - Standard Test Method for Evaluating Resistance of Modified Bituminous Roofing Membrane to Cyclic Fatigue (Joint Displacement)
9. ASTM D 6163 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
10. ASTM D 6164 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
11. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.

C. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)::

1. ANSI/SPRI FX-1, Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners.
2. ANSI/FM 4474- American National Standard for Evaluating the Simulated Wind Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures.

D. FLORIDA BUILDING CODE (FBC):

1. 2020 Florida Building Code (FBC).

E. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA).

F. UNDERWRITERS LABORATORY (UL):

1. UL 790 Standard Test Methods for Fire Tests of Roof Coverings.
2. UL 1256 – Fire Test of Roof Deck Constructions.

## 1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1. Review vapor retarder requirements and installation, special details, mockups, bond testing, vapor retarder protection, and work scheduling that covers vapor retarder.

## 1.6 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include manufacturer's written instructions for evaluating, preparing, and treating each substrate; technical data; and tested physical and performance properties of products.

B. Shop Drawings: For vapor retarder assemblies.

1. Show locations and extent of vapor retarder materials, accessories, and assemblies specific to Project conditions.



2. Include details for substrate joints and cracks, counterflashing strips, penetrations, inside and outside corners, terminations, and tie-ins with adjoining construction.
3. Include details of interfaces with other materials that form part of vapor retarder.

- C. Sample/Specimen Warranty from the manufacturer and contractor.
- D. Shop Drawings: Provide roof plan and applicable roof system detail drawings.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Contractor Certification: Submit written certification from roofing system manufacturer certifying that the applicator is authorized by the manufacturer to install the specified materials and system.
- B. Product Certificates: From vapor retarder manufacturer, certifying compatibility of vapor retarder and accessory materials with Project materials that connect to or that come in contact with vapor retarder.
- C. Product Test Reports: For each vapor retarder assembly, for tests performed by a qualified testing agency.
- D. Field quality-control reports.

#### 1.8 QUALITY ASSURANCE

##### A. MANUFACTURER QUALIFICATIONS:

1. Manufacturer shall have at least 20 years of experience manufacturing SBS-modified bitumen roofing materials.

##### B. CONTRACTOR QUALIFICATIONS:

1. Contractor shall be authorized by the basis of design roofing manufacturer to install specified materials prior to the bidding period through satisfactory project completion; and the Contractor shall be an entity that employs installers and supervisors who are trained and approved by manufacturer.
2. Applicators shall have completed at least 3 projects of similar scope using same materials as specified herein.
3. Contractor will have a physical, staffed and operational location within 60 miles of project location.
4. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roof system through satisfactory project completion.
5. Applicators shall be skilled in the application methods for all materials.
6. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
7. Contractor shall maintain a copy of all submittal documents, on-site, available at all times for reference.

#### 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Refer to each product data sheet or other published literature for specific requirements.

- B. Deliver materials and store them in their unopened, original packaging, bearing the manufacturer's name, related standards, and any other specification or reference accepted as standard.
- C. Protect and store materials in a dry, well-vented, and weatherproof location. Only materials to be used the same day shall be removed from this location. During cold weather, store materials in a heated location, removed only as needed for immediate use.
- D. When materials are to be stored outdoors, store away from standing water, stacked on raised pallets or dunnage, at least 4 in or more above ground level. Carefully cover storage with "breathable" tarpaulins to protect materials from precipitation and to prevent exposure to condensation.
- E. Carefully store roof membrane materials delivered in rolls on-end with selvage edges up. Store and protect roll storage to prevent damage.
- F. Properly dispose of all product wrappers, pallets, cardboard tubes, scrap, waste, and debris. All damaged materials shall be removed from job site and replaced with new, suitable materials.
- G. Remove and replace liquid materials that cannot be applied within their stated shelf life.
- H. Protect stored materials from direct sunlight.

#### 1.10 SITE CONDITIONS

##### A. SAFETY:

1. The contractor shall be responsible for complying with all project-related safety and environmental requirements.
2. Heat-welding shall include heating the specified membrane ply using propane roof torches or electric hot-air welding equipment. The contractor shall determine when and where conditions are appropriate to utilize heat-welding equipment. When conditions are determined by the contractor to be unsafe to proceed, equivalent SBS-modified bitumen materials and methods shall be utilized to accommodate requirements and conditions.
3. Refer to NRCA CERTA recommendations, local codes and building owner's requirements for hot work operations.
4. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified liquid-applied, or semi-solid roofing materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions.
5. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified hot asphalt-applied materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions.
6. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

B. ENVIRONMENTAL CONDITIONS:

1. Environmental Limitations: Apply vapor retarder within the range of ambient and substrate temperatures recommended in writing by vapor retarder manufacturer.
  - a. Protect substrates from environmental conditions that affect vapor retarder performance.
  - b. Do not apply vapor retarder to a damp or wet substrate or during frost, rain, fog, or mist.
2. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.
3. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.
4. Heat-Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to proceed with the use of torches and hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated and primers shall be fully dry before proceeding with heat-welding operations. Refer to NRCA CERTA recommendations.

1.11 PERFORMANCE REQUIREMENTS

A. FIRE CLASSIFICATION:

1. Vapor Retarder/Air Barrier included in system performance testing in accordance with UL 790, ASTM E108, FM 4450 or FM 4470.
  - a. Meets requirements of UL Class A or FM Class A.

1.12 WARRANTY

- A. Vapor Retarder/Air Barrier shall be included in the specified roofing Manufacturer's No Dollar Limit (NDL) Warranty. The Vapor Retarder/Air Barrier manufacturer shall provide the owner with the manufacturer's warranty for 20 years from the date the warranty is issued.
- B. The contractor shall guarantee the workmanship and shall provide the owner with the contractor's warranty covering workmanship for a period of 2 years from completion date.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Source Limitations: Obtain primary vapor retarder materials and vapor retarder accessories from single source from single manufacturer.

2.2 MANUFACTURER

- A. PRODUCT QUALITY ASSURANCE PROGRAM: Manufacturer shall be an ISO 9001 registered company. A 'Quality Compliance Certificate (QCC) for reporting/confirming the tested values of the SBS-Modified Bitumen Membrane Materials will be supplied upon request.
- B. ACCEPTABLE MANUFACTURER:
1. Basis of Design Product: SOPREMA ELASTOPHENE SP 3.0 SBS-modified bitumen membrane, manufactured by SOPREMA, located at: 310 Quadral Dr.; Wadsworth, OH 44281; Tel: 800-356-3521; Tel: 330-334-0066; Website: [www.soprema.us](http://www.soprema.us).
  2. Or approved equal product by another manufacturer.

### 2.3 PERFORMANCE REQUIREMENTS

- A. Vapor Retarder Performance: Vapor retarder assembly and seals with adjacent construction shall be capable of performing as a continuous vapor retarder. Vapor retarder assemblies shall be capable of accommodating substrate movement and of sealing substrate expansion and control joints, construction material changes, penetrations, and transitions at perimeter conditions without deterioration and vapor leakage exceeding specified limits.

### 2.4 A VAPOR RETARDER, HEAT-WELDED:

- A. SOPREMA ELASTOPHENE SP 3.0: SBS-modified bitumen membrane with plastic burn-off film on the bottom surface and sanded top surface. Glass fiber reinforcement. Meets or exceeds ASTM D6163, Type I, Grade S, per ASTM D5147 test methods:
1. Thickness: 118 mils (3.0 mm)
  2. Width: 39.4 in (1 m)
  3. Length: 32.8 ft (10 m)
  4. Roll weight: 90 lb (40.8 kg)
  5. Net mass per unit area, lb/100 sq ft (g/sq m):
    - a. 83.6 lb (4082 g)
  6. Peak load @ 0°F (-18°C), lbf/in (kN/m):
    - a. MD 115 lbf/in (20.1 kN/m), XMD 100 lbf/in (17.5 kN/m)
  7. Elongation at peak load @ 0°F (-18°C), lbf/in (kN/m):
    - a. MD 4%, XMD 4%
  8. Peak load @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 50 lbf/in (8.8 kN/m), XMD 40 lbf/in (7.0 kN/m)
  9. Elongation at peak load @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 5%, XMD 4%
  10. Ultimate Elongation @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 65%, XMD 65%
  11. Tear Strength @ 73.4°F (23°C), lbf (N):
    - a. MD 60 lbf (267 N), XMD 60 lbf (267 N)
  12. Low temperature flexibility, °F (°C):
    - a. MD/XMD: -15°F (-26°C)
  13. Dimensional stability, %:
    - a. MD/XMD: Less than 0.1%
  14. Compound stability, °F (°C):
    - a. MD/XMD: 250°F (121°C)

### 2.5 ACCESSORY MATERIALS

- A. Requirement: Provide primers, transition strips, termination strips, joint sealants, counterflashing strips, flashing sheets and metal termination bars, termination mastic, substrate patching materials, adhesives, tapes, foam sealants, lap sealants, and other accessory materials that are recommended in writing by vapor retarder manufacturer to produce a complete vapor retarder assembly and that are compatible with primary vapor retarder material and adjacent construction to which they may seal.
- B. PRIMERS:
1. SOPREMA ELASTOCOL 500 Primer: Asphalt cut-back primer. Primer for the preparation of roof membrane and flashing substrates for asphalt, heat-welded, hot asphalt and SOPREMA COLPLY ADHESIVE, solvent-based, cold adhesive-applied and cement applications.
    - a. Meets or exceeds ASTM D41.
    - b. VOC content: 350 g/L or less.
- C. FLASHING CEMENT
1. SOPREMA COLPLY FLASHING CEMENT: SBS-modified bitumen membrane flashing cement for use with sanded base ply flashing and granule-surfaced Cap Sheet flashing.
    - a. VOC Content: 250 g/L or less.
    - b. Meets or exceeds ASTM D4586.
  2. SOPREMA COLPLY EF FLASHING CEMENT: Premium , non-toxic, low-odor, solvent-free, polymeric membrane flashing cement for use with sanded base ply and all sanded Cap Sheet flashing applications.
    - a. VOC Content: 32 g/L or less VOC Content.
- D. GENERAL PURPOSE ROOFING CEMENT AND MASTIC
1. SOPREMA SOPRAMASTIC: SBS Mastic. Fiber-reinforced, roofing cement, packaged in 5-gallon pails. General purpose roofing cement for low-slope roofing used for sealing membrane T-joints and membrane edges along terminations, transitions and at roof penetrations.
    - a. VOC Content: 190 g/L or less.
    - b. Meets or exceeds ASTM D4586, Type I, Class II.
  2. SOPREMA SOPRAMASTIC: SBS Mastic. Fiber-reinforced, roofing cement, packaged in 10.4 oz caulk tubes. General purpose roofing cement for low-slope roofing used for sealing membrane T-joints and membrane edges along terminations, transitions and at roof penetrations.
    - a. VOC Content: 190 g/L or less.
    - b. Meets or exceeds ASTM D4586, Type I, Class II.
- E. GENERAL PURPOSE SEALANT
1. SOPREMA SOPRAMASTIC SP1: General purpose, paintable, gun-grade, elastomeric, polyether moisture curing sealant for sealing SBS membrane terminations, Kynar 500 PVDF, horizontal and vertical construction joints.
    - a. VOC Content: 20 g/L or less.
    - b. Meets or exceeds ASTM C920, Type S, Grade NS, Class 50.
    - c. Standard color, custom color.
- F. LIQUID-APPLIED REINFORCED FLASHING SYSTEM:

1. SOPREMA ALSAN FLASHING: Single-component, polyurethane-bitumen resin with polyester reinforcing fleece fabric fully embedded into the resin to form roof system flashings.
  - a. VOC Content: 250 g/L.
  - b. SOPREMA ALSAN FLASHING: Liquid resin, Meets or exceeds ASTM C836.
  - c. SOPREMA ALSAN POLYFLEECE: Non-woven polyester reinforcement.
  - d. Surfacing: SOPREMA ALSAN FLASHING with mineral granules broadcast into wet SOPREMA ALSAN FLASHING to match adjacent SBS-modified bitumen cap sheet.
  
2. SOPREMA ALSAN RS 230 FLASH, Catalyzed polymethyl methacrylate (PMMA) SOPREMA ALSAN RS 260 LO FLASH, Catalyzed polymethacrylate (PMA) resin with polyester reinforcing fleece fabric fully embedded into the resin to form fully-reinforced waterproofing membrane flashings. Not for use over SBS cap sheets adhered with solvent-based SOPREMA COLPLY adhesive or flashing cement.
  - a. VOC Content: No VOC content.
  - b. SOPREMA ALSAN RS 230 FLASH SOPREMA ALSAN RS 260 LO FLASH: Polymethyl methacrylate (PMMA) polymethacrylate (PMA) liquid resin.
  - c. SOPREMA ALSAN RS CATALYST POWDER: Reactive agent added to the PMMA liquid resin to induce curing.
  - d. SOPREMA ALSAN RS FLEECE: Polyester reinforcement fabric.
  - e. Color: Flash color and finish to match Field.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
  1. Verify that substrates are sound and free of oil, grease, dirt, excess mortar, or other contaminants.
  2. Verify that substrates have cured and aged for minimum time recommended in writing by vapor retarder manufacturer.
  3. Verify that substrates are visibly dry and free of moisture.
  4. Verify that masonry joints are flush and are filled with mortar.
  
- B. Examination includes visual observations, qualitative analysis, and quantitative testing measures as necessary to ensure conditions remain satisfactory throughout the project.
  
- C. The contractor shall examine all roofing substrates including, but not limited to the following: insulation materials, roof decks, walls, curbs, rooftop equipment, fixtures, and wood blocking.
  
- D. The applicator shall not begin installation until conditions have been properly examined and determined to be clean, dry and, otherwise satisfactory to receive specified roofing materials.
  
- E. Proceed with installation only after unsatisfactory conditions have been corrected.
  
- F. During the application of specified materials, the applicator shall continue to examine all project conditions to ensure conditions remain satisfactory to complete the specified roofing system.

#### 3.2 SURFACE PREPARATION

- A. Before commencing work each day, the contractor shall prepare all roofing substrates to ensure conditions are satisfactory to proceed with the installation of specified roofing materials. Preparation of substrates includes, but is not limited to, substrate repairs, securement of substrates, eliminating all incompatible materials, and cleaning.
- B. Where conditions are found to be unsatisfactory, work shall not begin until conditions are made satisfactory to begin work. Commencing of work shall indicate contractor's acceptance of conditions.
- C. Clean, prepare, treat, fill, and seal substrate and joints and cracks in substrate according to manufacturer's written instructions and details. Provide clean, dust-free, and dry substrate for vapor retarder application.
- D. Mask off adjoining surfaces not covered by vapor retarder to prevent spillage and overspray affecting other construction.
- E. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, and other penetrating contaminants or film-forming coatings from concrete.
- F. Remove fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, and other voids in concrete with substrate-patching membrane.
- G. Remove excess mortar from masonry ties, shelf angles, and other obstructions.
- H. At changes in substrate plane, apply sealant or termination mastic beads at sharp corners and edges to form a smooth transition from one plane to another.
- I. Cover gaps in substrate plane and form a smooth transition from one substrate plane to another with stainless-steel sheet mechanically fastened to structural framing to provide continuous support for vapor retarder.
- J. Bridge isolation joints, expansion joints and discontinuous wall-to-wall, deck-to-wall, and deck-to-deck joints with vapor retarder accessory material that accommodates joint movement according to manufacturer's written instructions and details.

### 3.3 INSTALLATION

- A. Install materials according to vapor retarder manufacturer's written instructions and details.
- B. Primer Application:
  - 1. Examine all substrates, and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.
  - 2. Apply the appropriate specified primer to dry, compatible substrates as required to enhance adhesion of new specified materials.
  - 3. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet.
  - 4. Asphalt Primer: Apply SOPREMA ELASTOCOL 500 primer to dry compatible masonry, metal, wood and other required substrates before applying asphalt and heat-welded membrane plies. Primer is optional for solvent based solvent-based SBS adhesives and cements, refer to product data sheets.
  - 5. Project conditions vary throughout the day. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

6. Apply primer to substrates at required rate and allow it to dry. Limit priming to areas that will be covered by vapor retarder sheet on same day. Reprime areas exposed for more than 24 hours.
- C. Prepare, treat, and seal inside and outside corners and vertical and horizontal surfaces at terminations and penetrations with termination mastic and according to recommendations of the vapor retarder manufacturer.
- D. Apply and firmly adhere vapor retarder sheets over area to receive vapor retarder. Accurately align sheets and maintain uniform 2-1/2-inch-minimum lap widths and end laps. Overlap and seal seams, and stagger end laps to ensure vapor-tight installation.
  1. Apply sheets in a shingled manner to shed water.
  2. Roll sheets firmly to enhance adhesion to substrate.
- E. Apply continuous vapor retarder sheets over accessory strips bridging substrate cracks, construction, and contraction joints.
- F. Seal exposed edges of sheet at seams, cuts, penetrations, and terminations not concealed by metal counterflashings or ending in reglets with termination mastic.
- G. Install vapor retarder sheet and accessory materials to form a seal with adjacent construction and to maintain a continuous vapor retarder.
- H. Apply joint sealants forming part of vapor retarder assembly within manufacturer's recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- I. Repair punctures, voids, and deficient lapped seams in vapor retarder. Slit and flatten fishmouths and blisters. Patch with vapor retarder sheet extending 6 inches beyond repaired areas in all directions.
- J. Do not cover vapor retarder until it has been tested and inspected by testing agency.
- K. Correct deficiencies in or remove vapor retarder that does not comply with requirements; repair substrates and reapply vapor retarder components.

### 3.4 HEAT WELDING

- A. The Contractor is responsible for project safety. Where conditions are deemed unsafe to use open flames, manufacturer's alternate membrane application methods shall be used to install SBS modified bitumen membrane and flashings. Acceptable alternate installation methods include hot asphalt, cold adhesive-applied, self-adhered membranes and mechanically fastened plies. Hot-air welding equipment may be used in lieu of roof torches to seal membrane side and end laps where heat welding the laps is necessary. Refer to NRCA CERTA, local codes and building owner's requirements for hot work operations.
- B. Single or multi-nozzle, hand-held propane roof torches shall be used to install heat-welded plies. Multi-nozzle carts (dragon wagons) may also be utilized to install plies. Seven (7) nozzle carts are recommended for more uniform heat application in lieu of five (5) nozzle carts.



### 3.5 FLASHING CEMENT APPLICATION

- A. The ambient temperature shall be above 50°F (10°C), and the flashing cement temperature shall be a minimum of 70°F (21°C) at the point of membrane application.
- B. To ensure the flashing cement is applied at 70°F (21°C), during cold weather, pails shall be stored in heated areas. Pails exposed to cold temperature on the roof shall be provided with heaters when necessary to ensure the minimum application temperature is maintained
- C. Priming substrates is optional when solvent-based membrane adhesives are used. Primer may be applied to reduce adhesive consumption rates for some absorptive substrates.
- D. SOPREMA COLPLY FLASHING CEMENT may be applied using ¼ inch notched trowel. Apply 2.0 – 2.5 gallons per square to each surface. Primer may be used to reduce consumption of solvent based flashing cement.
- E. SOPREMA COLPLY EF FLASHING CEMENT may be applied using ¼ inch notched trowel. Apply 2.0 – 2.5 gallons per square to each surface. Priming substrates is not required when using SOPREMA COLPLY EF FLASHING CEMENT.
- F. Application rates vary based on substrate porosity and roughness.

### 3.6 SBS MASTIC AND GENERAL-PURPOSE ROOFING CEMENT APPLICATION

- A. Apply SOPREMA SOPRAMASTIC general purpose SBS mastic and roofing cement to seal drain leads, metal flanges, seal along membrane edge at terminations, and where specified and required in detail drawings.
- B. Do not use general purpose SBS mastics and roofing cement where flashing cement applications are required. Do not use SBS mastics and roofing cement beneath SBS-modified bitumen membrane and flashing plies.
- C. Apply general purpose SBS mastic and elastic roofing cement using caulk gun, or notched trowel at 2.0 – 2.5 gallons per square on each surface. Application rates vary based on substrate porosity and roughness. Tool-in as necessary to seal laps

### 3.7 HEAT-WELDED, FULLY ADHERED VAPOR RETARDER APPLICATION

- A. Follow material product data sheets and published general requirements for installation instructions.
- B. Ensure environmental conditions are safe and satisfactory, and will remain safe and satisfactory, during the application of the heat-welded vapor retarder membrane. .
- C. Ensure all primers are fully dry before beginning heat-welding operations.
- D. Unroll membrane onto the roof surface and allow time to relax prior to heat welding.
- E. Starting at the low point of the roof, lay out the membrane to ensure the plies are installed perpendicular to the roof slope, shingled to prevent back-water laps.
- F. Ensure all roofing and flashing substrates are prepared and acceptable to receive the heat-welded membrane.

- G. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge.
  - H. Ensure specified side-laps and end-laps are maintained. End-laps should be staggered 3 ft apart.
  - I. Direct roof torch on the roll as necessary to prevent overheating and damaging the membrane and substrates.
  - J. As the membrane is unrolled, apply heat to the underside of the membrane until the plastic burn-off film melts away. Continuously move the torch side-to-side across the underside of the roll to melt the bitumen on the underside of the sheet, while continuously unrolling the membrane.
  - K. While unrolling and heating the sheet, ensure a constant flow hot bitumen approximately  $\frac{1}{4}$  to  $\frac{1}{2}$  in flows ahead of the roll as it is unrolled, and there is  $\frac{1}{8}$  to  $\frac{1}{4}$  in bleed out at all laps.
  - L. Adjust the application of heat to the underside of the membrane and to substrate as required for varying substrates and environmental conditions.
  - M. At end-laps, cut a 45-degree dog-ear away from the selvage edge, or otherwise ensure the membrane is fully heat-welded watertight at all T-joints.
  - N. Each day, physically inspect all side and end-laps, and ensure the membrane is sealed watertight. Where necessary, use a torch or hot-air welder and a clean trowel to ensure all laps are fully sealed.
  - O. Inspect the installation each day to ensure the plies are fully adhered. Repair all voids, wrinkles, open laps and all other deficiencies.
- 3.8 LIQUID-APPLIED, SINGLE-COMPONENT, BITUMEN-URETHANE FLASHING SYSTEM APPLICATION (SOPREMA ALSAN FLASHING):
- A. Refer to manufacturer's details drawings, product data sheets and published general requirements for application rates and specific installation instructions
  - B. Pre-cut SOPREMA ALSAN POLYFLEECE polyester reinforcing fleece to conform to roof terminations, transitions and penetrations being flashed. Ensure a minimum 2 in overlap of fleece at side and end-laps. Ensure the completed liquid-applied flashing membrane is fully reinforced.
  - C. Apply the base coat of SOPREMA ALSAN FLASHING liquid-applied flashing resin onto the substrate using a brush or roller, working the material into the surface for complete coverage and full adhesion at 2.0 gallons per square.
  - D. Immediately apply the SOPREMA ALSAN POLYFLEECE reinforcing into the wet base coat of resin. Using a brush or roller, work the SOPREMA ALSAN POLYFLEECE into the wet resin while applying the second coat of SOPREMA ALSAN FLASHING resin to completely encapsulate the fleece at 2.0 gallons per square, and extend the liquid resin 1 inch beyond the fleece.
  - E. Apply a finish coat of SOPREMA ALSAN FLASHING resin at 2.0 gallons per square within 2-3 hours. When applying the finish coat more than 24 hours, the surface may need to be cleaned using acetone or MEK to ensure satisfactory adhesion.

- F. Broadcast mineral granules into the wet finish coat as required to match the adjacent cap sheet.

### 3.9 LIQUID-APPLIED, PMMA (PMA) MEMBRANE AND FLASHING SYSTEM APPLICATION ALSAN RS (ALSAN RS LO)

- A. Refer to manufacturer's details drawings, product data sheets and published general requirements for application rates and specific installation instructions.
- B. Pre-cut SOPREMA ALSAN RS FLEECE polyester reinforcing fleece to conform to roof terminations, transitions and penetrations being flashed. Ensure a minimum 2 in overlap of fleece at side and end-laps. Ensure the completed liquid-applied flashing membrane is fully reinforced.
- C. Apply the base coat of catalyzed SOPREMA ALSAN RS resin onto the substrate using a brush or roller, working the material into the surface for complete coverage and full adhesion.
- D. Immediately apply the SOPREMA ALSAN RS FLEECE reinforcing into the wet base coat of resin. Using a brush or roller, work the (SOPREMA ALSAN FLEECE reinforcing fabric into the wet resin while applying the second coat of catalyzed SOPREMA ALSAN RS resin to completely encapsulate the fleece.
- E. Refer to reinforced, polymethyl-methacrylate (PMMA) polymethacrylate (PMA) specification section and application instructions, details drawings, product data sheets and published general requirements for installation instructions.

### 3.10 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Inspections: Vapor retarder materials, accessories, and installation are subject to inspection for compliance with requirements. Inspections may include the following:
  - 1. Continuity of vapor retarder system has been achieved over the roof and parapets, with no gaps or holes.
  - 2. Continuous structural support of vapor retarder system has been provided.
  - 3. Masonry and concrete surfaces are smooth, clean, and free of cavities, protrusions, and mortar droppings.
  - 4. Site conditions for application temperature and dryness of substrates have been maintained.
  - 5. Maximum exposure time of materials to UV deterioration has not been exceeded.
  - 6. Surfaces have been primed.
  - 7. Laps in sheet materials have complied with the minimum requirements and have been shingled in the correct direction, with no fishmouths.
  - 8. Termination mastic has been applied on cut edges.
  - 9. Vapor retarder has been firmly adhered to substrate.
  - 10. Compatible materials have been used.
  - 11. Transitions at changes in direction and structural support at gaps have been provided.
  - 12. Connections between assemblies (vapor retarder and sealants) have complied with requirements for cleanliness, surface preparation and priming, structural support, integrity, and continuity of seal.
  - 13. All penetrations have been sealed.

- C. Tests: As determined by testing agency from among the following tests:
  - 1. Adhesion Testing: vapor retarder assemblies will be tested for required adhesion to substrate according to ASTM D4541 for each 600 sq. ft. of installed vapor retarder or part thereof.
- D. Vapor retarder will be considered defective if it do not pass tests and inspections.
  - 1. Apply additional vapor retarder material, according to manufacturer's written instructions, where inspection results indicate insufficient thickness.
  - 2. Remove and replace deficient vapor retarder components for retesting as specified above.
- E. Repair damage to vapor retarder caused by testing; follow manufacturer's written instructions.
- F. Prepare test and inspection reports.

### 3.11 CLEANING AND PROTECTION

- A. Protect vapor retarder system from damage during application and remainder of construction period, according to manufacturer's written instructions.
  - 1. Protect vapor retarder from exposure to UV light and harmful weather exposure as recommended in writing by manufacturer. If exposed to these conditions for longer than recommended, remove and replace vapor retarder according to vapor retarder manufacturer's written instructions.
  - 2. Protect vapor retarder from contact with incompatible materials and sealants not approved by vapor retarder manufacturer.
- B. Clean-up and properly dispose of waste and debris resulting from these operations each day as required to prevent damages and disruptions to operations.
- C. Clean spills, stains, and soiling from construction that would be exposed in the completed Work, using cleaning agents and procedures recommended in writing by manufacturer of affected construction.

END OF SECTION 072610

## SECTION 074213.13 - FORMED METAL WALL PANELS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Exposed-fastener, lap-seam metal wall panels.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
- B. Shop Drawings:
  - 1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
  - 2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches.
- C. Samples for Verification: For each type of exposed finish, prepared on Samples of size indicated below:
  - 1. Metal Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal panel accessories.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- B. Sample Warranties: For special warranties.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For metal panels to include in maintenance manuals.

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## 1.6 QUALITY ASSURANCE

- A. UL-Certified, Portable Roll-Forming Equipment: UL-certified, portable roll-forming equipment capable of producing metal panels warranted by manufacturer to be the same as factory-formed products. Maintain UL certification of portable roll-forming equipment for duration of work.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels during installation.

## 1.8 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

## 1.9 COORDINATION

- A. Coordinate metal panel installation with existing support framing and any other adjoining work.

## 1.10 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including rupturing, cracking, or puncturing.
    - b. Deterioration of metals and other materials beyond normal weathering.
  - 2. Warranty Period: Two years from date of Substantial Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Delta E units when tested according to ASTM D2244.

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- b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
  - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
2. Finish Warranty Period: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:
  1. Wind Loads: As indicated on Drawings.
  2. Deflection Limits: For wind loads, no greater than 1/240 of the span.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

### 2.2 EXPOSED-FASTENER, LAP-SEAM METAL WALL PANELS

- A. Provide factory-formed metal panels designed to be field assembled by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps. Include accessories required for weathertight installation.
- B. Tapered-Rib-Profile, Exposed-Fastener Metal Wall Panels: Formed with raised, trapezoidal major ribs and a flat pan between major ribs.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Berridge Manufacturing Company.
    - b. CENTRIA.
    - c. PAC-CLAD; Petersen Aluminum Corporation; a Carlisle company.
  2. Aluminum Sheet: Coil-coated sheet, ASTM B209, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
    - a. Thickness: 0.032 inch.
    - b. Surface: Smooth, flat finish.
    - c. Exterior Finish: Two-coat fluoropolymer.
    - d. Color: Interstate Blue.
  3. Rib Spacing: 6 inch o.c.
  4. Panel Coverage: 42 inches.
  5. Panel Height: 0.75 inch.

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### 2.3 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Subframing and Furring: ASTM C645, cold-formed, metallic-coated steel sheet, ASTM A653/A653M, G90 coating designation or ASTM A792/A792M, Class AZ50 aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Flashing and Trim: Provide flashing and trim formed from same material as metal panels to provide finished appearance. Locations include, but are not limited to corners, parapet caps, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
- C. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

### 2.4 FABRICATION

- A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.
- C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
  - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
  - 2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
  - 3. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
  - 4. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
    - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

### 2.5 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.



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- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
  
- C. Aluminum Panels and Accessories:
  - 1. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
  - 1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.
  
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C754 and metal panel manufacturer's written recommendations.

#### 3.3 INSTALLATION

- A. Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
  - 1. Shim or otherwise plumb substrates receiving metal panels.
  - 2. Install screw fasteners in predrilled holes.
  - 3. Locate and space fastenings in uniform vertical and horizontal alignment.
  - 4. Install flashing and trim as metal panel work proceeds.
  - 5. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
  - 6. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
  
- B. Fasteners:

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1. Aluminum Panels: Use aluminum or stainless steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
- C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.
1. Lap ribbed or fluted sheets one full rib. Apply panels and associated items true to line for neat and weathertight enclosure.
  2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.
  3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
  4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
- E. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal panel system including corners, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal wall panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.
- F. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof performance.
  2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).
- 3.4 CLEANING AND PROTECTION
- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
- B. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

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END OF SECTION 074213.13

SECTION 075216

STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Styrene-butadiene-styrene (SBS)-modified bituminous membrane roofing.
2. Walkways.

B. Work shall include, but is not limited to, the following:

1. Preparation of existing concrete roof deck, and all flashing substrates.
2. SBS-modified bitumen base and inter-ply sheet heat-welded.
3. SBS-modified bitumen cap sheet heat-welded.
4. SBS-modified bitumen membrane flashings.
5. Liquid-applied, reinforced flashings.
6. Refer to related Sections for SBS Modified Bituminous Sheet Vapor Retarder and Parapet Coping Systems.
7. All related materials and labor required to complete specified roofing necessary to receive specified manufacturer's warranty.

C. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood nailers and blocking.
2. Section 070150.19 "Preparation for Reroofing", for removal of materials and preparation of substrates.
3. Section 072200 "Roof Insulation", for roof insulation and cover board.
4. Section 072610 "SBS Modified Bituminous Sheet Vapor Retarder", provided by manufacturer of SBS modified bituminous membrane roofing, for installation to top surface of existing concrete deck substrate, under new roof insulation.
5. Section 077100 "Roof Specialties" for premanufactured metal copings, provided by manufacturer of SBS modified bituminous membrane roofing.

1.3 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.
- B. ASTM D 1079-Definitions of Term Relating to Roofing and Waterproofing.

#### 1.4 REFERENCES

- A. AMERICAN SOCIETY OF CIVIL ENGINEERS - Reference Document ASCE 7, Minimum Design Loads for Buildings and Other Structures, latest edition.
- B. Latest editions of the following standards of the AMERICAN STANDARD OF TESTING METHODS (ASTM):
1. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard
  2. ASTM C 836 - Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course.
  3. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants.
  4. ASTM D 41 - Standard Specification for Asphalt Primer Used in Roofing, Damp proofing, and Waterproofing.
  5. ASTM D 3019 - Standard Specification for Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos-Fibered, and Non-Asbestos-Fibered.
  6. ASTM D 3746 - Standard Test Method for Impact Resistance of Bituminous Roofing System.
  7. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
  8. ASTM D 5147 - Standard Test Methods for Sampling and Testing Modified Bituminous Sheet Material.
  9. ASTM D 5849 - Standard Test Method for Evaluating Resistance of Modified Bituminous Roofing Membrane to Cyclic Fatigue (Joint Displacement).
  10. ASTM D 6164 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
  11. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.
  12. ASTM F 2170 - Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes.
- C. Latest editions of the following standards of the AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI):
1. ANSI/SPRI/FM 4435/ES-1 Wind Design Standard for Edge System Used with Low Slope Roofing System.
  2. ANSI/SPRI IA-1, Standard Field Test Procedure for Determining the Mechanical Uplift Resistance of Insulation Adhesives over Various Substrates.
- D. FLORIDA BUILDING CODE (FBC):
1. 7th Edition, 2020 Florida Building Code (FBC).
- E. Latest editions of the following standards of the NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA).
1. UL 790 Standard Test Methods for Fire Tests of Roof Coverings.
  2. UL 1256 – Fire Test of Roof Deck Constructions.

#### 1.5 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site.
1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.

3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review deck substrate requirements for conditions and finishes, including flatness.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

B. Preinstallation Roofing Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

## 1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sample warranty from the manufacturer and contractor.
- C. Shop Drawings: Include plans, sections, details, and attachments to other work, including the following:
1. Roof plan.
  2. Layout and thickness of insulation.
  3. Base flashings and membrane terminations.
  4. Flashing details at penetrations.
  5. Tapered insulation, including slopes.
  6. Crickets, saddles, and tapered edge strips, including slopes.
- D. Samples for Verification: For the following products:
1. Cap Sheet: Samples of manufacturer's standard colors for selection by Architect.
  2. Flashing Sheet: Samples of manufacturer's standard colors for selection by Architect.
  3. Aggregate surfacing material in gradation and color required.

4. Walkway Pads: Samples of manufacturer's standard colors for selection by Architect.

E. Wind Uplift Resistance Submittal: For roofing system indicating compliance with wind uplift performance requirements.

#### 1.7 INFORMATIONAL SUBMITTALS

A. Manufacturer Certificates:

1. Performance Requirement Certificate: Signed by roof membrane manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.

a. Submit evidence of complying with performance requirements.

2. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.

B. Submit a letter from the roofing manufacturer indicating the contractor is an authorized applicator.

C. Product Test Reports: For roof membrane and insulation, tests performed by a qualified testing agency, indicating compliance with specified requirements.

D. Evaluation Reports: For components of membrane roofing system, from ICC-ES.

E. Field Test Reports:

1. Concrete internal relative humidity test reports.

F. Field quality-control reports.

G. Sample Warranties: For manufacturer's special warranties.

#### 1.8 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing system to include in maintenance manuals.

B. Warranty: Provide manufacturer's and contractor's warranties upon project completion

#### 1.9 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is UL listed or listed in FM Approvals' RoofNav for roofing system identical to that used for this Project.

1. Manufacturer shall have at least 20 years of manufacturing experience.

2. Manufacturer shall have trained technical service representatives employed by the manufacturer, independent of sales.

3. Manufacturer shall provide site visit reports in a timely manner

- B. Contractor/Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
1. Contractor shall be authorized by the manufacturer to install specified materials prior to the bidding period through satisfactory project completion.
  2. Applicators shall have completed at least 3 projects of similar scope using same materials as specified herein.
  3. Contractor will have a physical, staffed and operational location within 60 miles of project location.
  4. Contractor shall self-perform the roof installation phase (no sub-contractors) and provide full time, on-site superintendent or foreman experienced with the specified roofing from beginning through satisfactory project completion. Sub-contractor use solely for the tear-off phase of the project is permitted.
  5. Applicators shall be skilled in the application methods for all materials. Contractor shall submit proof of training certifications for key personnel showing competency in the roof application method specified.
  6. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
  7. Contractor shall maintain a copy of all submittal documents, on-site, available at all times for reference.

#### 1.10 DELIVERY, STORAGE, AND HANDLING

- A. Refer to each product data sheet or other published literature for specific requirements.
- B. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- C. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer.
1. Protect and store materials in a dry, well-vented, and weatherproof location. Protect stored liquid material from deterioration by sunlight, moisture, soiling, and other sources. Only materials to be used the same day shall be removed from this location. During cold weather, store materials in a heated location, removed only as needed for immediate use.
  2. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- D. When materials are to be stored outdoors, store away from standing water, stacked on raised pallets or dunnage, at least 4 in or more above ground level. Carefully cover storage with "breathable" tarpaulins to protect materials from precipitation and to prevent exposure to condensation.
- E. Carefully store roof membrane materials delivered in rolls on-end with selvage edges up. Store and protect roll storage to prevent damage.
- F. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- G. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.



- H. Properly dispose of all product wrappers, pallets, cardboard tubes, scrap, waste, and debris. All damaged materials shall be removed from job site and replaced with new, suitable materials.

#### 1.11 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

- B. SAFETY:

1. The contractor shall be solely responsible for complying with all project-related safety and environmental requirements.
2. Heat-welding shall include heating the specified membrane ply using propane roof torches or electric hot-air welding equipment. The contractor shall determine when and where conditions are appropriate to utilize heat-welding equipment. When conditions are determined by the contractor to be unsafe to proceed, equivalent SBS-modified bitumen materials and methods shall be utilized to accommodate requirements and conditions.
3. Refer to NRCA CERTA recommendations, local codes and building owner's requirements for hot work operations.
4. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified liquid-applied, or semi-solid roofing materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions.
5. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified hot asphalt-applied materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions, or equivalent approved materials and methods shall be utilized to accommodate requirements and conditions.
6. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

- C. ENVIRONMENTAL CONDITIONS:

1. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.
2. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.
3. Heat-Welding Application: Take all necessary precautions and measures to monitor conditions to ensure all environmental conditions are safe to use roof torches and hot-air welding equipment. Combustibles, flammable liquids and solvent vapors that represent a hazard shall be eliminated. Flammable primers and cleaners shall be fully dry before proceeding with heat-welding operations. Prevent or protect wood, paper, plastics and other such combustible materials from direct exposure to open flames from roof torches. Refer to NRCA CERTA recommendations.

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## 1.12 PERFORMANCE REQUIREMENTS

### A. WIND UPLIFT RESISTANCE:

1. Performance testing shall be in accordance with ANSI/FM 4474, FM 4450, FM 4470, UL 580 or UL 1897.
  - a. Roof System Design Pressures: Calculated in accordance with ASCE 7, or applicable standard, for the specified roof system attachment requirements.
    - 1) Design Pressures: As indicated on the Drawings.
    - 2) Approval Rating:
      - a) Traditional assembly: FBC Approval FL3915-R29 assembly C-52 with C-VB-14, Maximum Design Pressure -367.5 psf.
      - b) SopraSmart assembly: FBC Approval FL3915-R29 assembly C-53 with C-VB-14, Maximum Design Pressure -187.5 psf.

### B. FIRE CLASSIFICATION:

1. Performance testing shall be in accordance with UL 790, ASTM E108, FM 4450 or FM 4470 shall meet the 1/2:12 roof slope requirement.
  - a. Meets requirements of UL Class A or FM Class A.

### C. ROOF SLOPE:

1. Finished roof slope for SBS modified bitumen surfaces shall be 1/4-inch per foot (2 percent) minimum for roof drainage.

### D. IMPACT RESISTANCE:

1. Performance testing for impact resistance shall be in accordance with FM 4450, FM 4470, ASTM D3746 or CGSB 37-GP 56M to meet the specified impact resistance requirements.
  - a. Meets requirements for FM-SH (Severe Hail), ASTM D3746, or CGSB 37-GP 56M.

### E. CYCLIC FATIGUE:

1. The roof system shall pass ASTM D5849 Standard Test Method for Evaluating Resistance of Modified Bituminous Roofing Membrane to Cyclic Fatigue (Joint Displacement). Passing results shall show no signs of cracking, splitting or tearing over the joint.
  - a. Roof system shall pass Test Condition 5, tested at -4°F (-20°C) in accordance with ASTM D5849. **(SOPREMA SOPRALENE polyester reinforced membranes).**

## 1.13 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
  1. Special warranty includes roof membrane, base flashings, roof insulation, cover boards, vapor retarder, and other components of roofing system.
  2. Manufacturer's No Dollar Limit (NDL) Warranty. The manufacturer shall provide the owner with the manufacturer's warranty providing labor and materials for 25 years from the date of Substantial Completion.

- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane, base flashing, roof insulation, cover boards, vapor retarders, and walkway products, for the following warranty period:
1. Warranty Period: Two years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed roofing system and flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roof system and flashings shall remain watertight.
1. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
  2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.
- C. Wind Uplift Resistance: Design roofing system to resist the following wind uplift pressures when tested according to FM Approvals 4474, UL 580, or UL 1897:
1. Refer to the Drawings for wind pressures on roof and parapet coping.
- D. FM Approvals' RoofNav Listing: Roof membrane, base flashings, and component materials shall comply with requirements in FM Approvals 4450 or FM Approvals 4470 as part of a roofing system, and shall be listed in FM Approvals' RoofNav for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals Certification markings.
1. Fire/Windstorm Classification: Class 1A-90.
  2. Hail-Resistance Rating: SH.
- E. ENERGY STAR Listing: Roofing system shall be listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.
- F. Energy Performance: Roofing system shall have a cap sheet embedded with smog reducing granules designed with photo-catalyst coating that absorbs nitrogen oxide gasses and washed away by rainwater.
- G. Exterior Fire-Test Exposure: ASTM E108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency.
1. Identify products with appropriate markings of applicable testing agency.

H. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated.

1. Identify products with appropriate markings of applicable testing agency.

## 2.2 MANUFACTURER

A. Source Limitations: Obtain components, including SBS Modified Bituminous Sheet Vapor Retarders & Air Barriers for roofing system, from roof membrane manufacturer.

1. All SBS modified bitumen membrane and flashing sheets shall be manufactured by a single supplier with 20 years or more manufacturing history in the US.
2. Comply with the Manufacturer's requirements as necessary to provide the specified warranty.

B. PRODUCT QUALITY ASSURANCE PROGRAM: Manufacturer shall be an ISO 9001 registered company. A Quality Compliance Certificate (QCC) for reporting/confirming the tested values of the SBS-Modified Bitumen Membrane Materials shall be supplied upon request.

C. ACCEPTABLE MANUFACTURER, BASIS OF DESIGN PRODUCT: SOPREMA, located at 310 Quadral Dr.; Wadsworth, OH 44281; Tel: 800-356-3521; Tel: 330-334-0066; Website: [www.soprema.us](http://www.soprema.us).

1. Or approved equal product by another manufacturer.

## 2.3 BASE SHEETS AND INTER-PLY SHEETS, HEAT-WELDED

A. SOPREMA SOPRALENE FLAM 180: SBS-Modified Bitumen Polyester Mat Base Sheet, with plastic burn-off film on top and bottom surfaces; non-woven polyester reinforcement; meets or exceeds ASTM D6164/D6164M, Type I, Grade S, SBS-modified asphalt sheet, reinforced with polyester fabric, smooth surfaced, suitable for torch application method.

1. Traditional assembly: 2 plies
2. SopraSmart assembly: 1 ply
3. Thickness: 120 mils (3.0 mm)
4. Width: 39.4 in (1.0 m)
5. Length: 32.8 ft (10.0 m)
6. Roll weight: 81 lb (36.7 kg)
7. Net mass per unit area, lb/100 sq ft (g/sq m):
  - a. 75 lb (3662 g)
8. Peak load @ 0°F (-18°C), lbf/in (kN/m):
  - a. MD 115 lbf/in (20.1 kN/m), XMD 90 lbf/in (15.8 kN/m)
9. Elongation at peak load @ 0°F (-18°C), lbf/in (kN/m):
  - a. MD 35%, XMD 40%
10. Peak load @ 73.4°F (23°C), lbf/in (kN/m):
  - a. MD 85 lbf/in (14.9 kN/m), XMD 65 lbf/in (11.4 kN/m)
11. Elongation at peak load @ 73.4°F (23°C), lbf/in (kN/m):
  - a. MD 55%, XMD 60%
12. Ultimate Elongation @ 73.4°F (23°C), lbf/in (kN/m):
  - a. MD 65%, XMD 80%
13. Tear Strength @ 73.4°F (23°C), lbf (N):

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- a. MD 125 lbf (556 N), XMD 85 lbf (378 N)
- 14. Low temperature flexibility, °F (°C):
  - a. MD/XMD: -15°F (-26°C)
- 15. Dimensional stability, %:
  - a. MD/XMD: Less than 0.5%
- 16. Compound stability, °F (°C):
  - a. MD/XMD: 240°F (116°C)

## 2.4 FLASHING BASE PLY, HEAT-WELDED:

- A. SOPREMA SOPRALENE FLAM 180: SBS-modified bitumen membrane with plastic burn-off film on top and bottom surfaces. Non-woven polyester reinforcement. Meets or exceeds ASTM D6164, Type I, Grade S, per ASTM D5147 test methods:
  - 1. Thickness: 118 mils (3.0 mm)
  - 2. Width: 39.4 in (1 m)
  - 3. Length: 32.8 ft (10 m)
  - 4. Roll weight: 81 lb (36.7 kg)
  - 5. Net mass per unit area, lb/100 sq ft (g/sq m):
    - a. 75 lb (3662 g)
  - 6. Peak load @ 0°F (-18°C), lbf/in (kN/m).
    - a. MD 115 lbf/in (20.1 kN/m), XMD 90 lbf/in (15.8 kN/m)
  - 7. Elongation at peak load @ 0°F (-18°C), lbf/in (kN/m):
    - a. MD 35%, XMD 40%
  - 8. Peak load @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 85 lbf/in (14.9 kN/m), XMD 65 lbf/in (11.4 kN/m)
  - 9. Elongation at peak load @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 55%, XMD 60%
  - 10. Ultimate Elongation @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 65%, XMD 80%
  - 11. Tear Strength @ 73.4°F (23°C), lbf (N):
    - a. MD 125 lbf (556 N), XMD 85 lbf (378 N)
  - 12. Low temperature flexibility, °F (°C):
    - a. MD/XMD: -15°F (-26°C)
  - 13. Dimensional stability, %:
    - a. MD/XMD: Less than 0.5%
  - 14. Compound stability, °F (°C):
    - a. MD/XMD: 240°F (116°C)

## 2.5 CAP SHEET, HEAT-WELDED

- A. SOPREMA SOPRALENE FLAM 180 FR GR: SBS-modified bitumen membrane Cap Sheet with a burn-off film bottom surface and mineral granule top surface. Non-woven polyester reinforced. UL Class A for specified roof slope requirements. Meets or exceeds ASTM D6164/D6164M, Type I, Grade G, per ASTM D5147 test methods, suitable for torch application method.
1. Thickness: 157 mils (4.0 mm)
  2. Width: 39.4 in (1 m)
  3. Length: 32.8 ft (10 m)
  4. Roll weight: 118 lb (53.5 kg)
  5. Net mass per unit area, lb/100 sq ft (g/sq m):
    - a. 110 lb (5371 g)
  6. Peak load @ 0°F (-18°C), lbf/in (kN/m).
    - a. MD 115 lbf/in (20.1 kN/m), XMD 90 lbf/in (15.8 kN/m)
  7. Elongation at peak load @ 0°F (-18°C), lbf/in (kN/m):
    - a. MD 35%, XMD 40%
  8. Peak load @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 85 lbf/in (14.9 kN/m), XMD 65 lbf/in (11.4 kN/m)
  9. Elongation at peak load @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 55%, XMD 60%
  10. Ultimate Elongation @ 73.4°F (23°C), lbf/in (kN/m):
    - a. MD 65%, XMD 80%
  11. Tear Strength @ 73.4°F (23°C), lbf (N):
    - a. MD 125 lbf (556 N), XMD 85 lbf (378 N)
  12. Low temperature flexibility, °F (°C):
    - a. MD/XMD: -15°F (-26°C)
  13. Dimensional stability, %:
    - a. MD/XMD: Less than 0.5%
  14. Compound stability, °F (°C):
    - a. MD/XMD: 240°F (116°C)
  15. Granule Surfacing:
    - a. SOPREMA ECO3 GRANULE: Smog-reducing mineral granules designed with photo-catalyst coating that absorbs nitrogen oxide gasses and washed away by rainwater.

## 2.6 FLASHING CAP SHEET, HEAT-WELDED:

- A. SOPREMA SOPRALENE FLAM 180 FR GR: SBS-modified bitumen membrane Cap Sheet with a burn-off film bottom surface and mineral granule top surface. Non-woven polyester reinforced. UL Class A for specified roof slope requirements. Meets or exceeds ASTM D6164, Type I, Grade G
1. Thickness: 157 mils (4.0 mm)
  2. Width: 39.4 in (1 m)
  3. Length: 32.8 ft (10 m)
  4. Roll weight: 118 lb (53.5 kg)
  5. Net mass per unit area, lb/100 sq ft (g/sq m):
    - a. 110 lb (5371 g)
  6. Peak load @ 0°F (-18°C), lbf/in (kN/m).
    - a. MD 115 lbf/in (20.1 kN/m), XMD 90 lbf/in (15.8 kN/m)

7. Elongation at peak load @ 0°F (-18°C), lbf/in (kN/m):
  - a. MD 35%, XMD 40%
8. Peak load @ 73.4°F (23°C), lbf/in (kN/m):
  - a. MD 85 lbf/in (14.9 kN/m), XMD 65 lbf/in (11.4 kN/m)
9. Elongation at peak load @ 73.4°F (23°C), lbf/in (kN/m):
  - a. MD 55%, XMD 60%
10. Ultimate Elongation @ 73.4°F (23°C), lbf/in (kN/m):
  - a. MD 65%, XMD 80%
11. Tear Strength @ 73.4°F (23°C), lbf (N):
  - a. MD 125 lbf (556 N), XMD 85 lbf (378 N)
12. Low temperature flexibility, °F (°C):
  - a. MD/XMD: -15°F (-26°C)
13. Dimensional stability, %:
  - a. MD/XMD: Less than 0.5%
14. Compound stability, °F (°C):
  - a. MD/XMD: 240°F (116°C)
15. Granule Surfacing:
  - a. SOPREMA ECO3 GRANULE: Smog-reducing mineral granules designed with photo-catalyst coating that absorbs nitrogen oxide gasses and washed away by rainwater

## 2.7 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
  1. Adhesives and Sealants: Comply with VOC limits of authorities having jurisdiction.
- B. PRIMERS:
  1. SOPREMA ELASTOCOL 500 Primer: Asphalt cut-back primer. Primer for the preparation of membrane substrates for asphalt, heat-welded, hot asphalt and COLPLY ADHESIVE, solvent-based, cold adhesive-applied and cement applications. NOTE: Priming is not required for SOPREMA COLPLY EF ADHESIVE and SOPREMA COLPLY EF FLASHING CEMENT applications.
    - a. Meets or exceeds ASTM D41.
    - b. VOC content: 350 g/L or less.
- C. FLASHING CEMENT:
  1. SOPREMA COLPLY FLASHING CEMENT: SBS-modified bitumen membrane flashing cement for use with sanded base ply flashing and granule-surfaced Cap Sheet flashing.
    - a. VOC Content: 250 g/L or less.
    - b. Meets or exceeds ASTM D4586.
  2. SOPREMA COLPLY EF FLASHING CEMENT: Premium, non-toxic, low-odor, solvent-free, polymeric membrane flashing cement for use with sanded base ply and all sanded Cap Sheet flashing applications.
    - a. VOC Content: 32 g/L or less VOC Content.

D. GENERAL PURPOSE ROOFING CEMENT AND MASTIC:

1. SOPREMA SOPRAMASTIC: SBS Mastic. Fiber-reinforced, roofing cement, packaged in 5-gallon pails. General purpose roofing cement for low-slope roofing used for sealing membrane T-joints and membrane edges along terminations, transitions and at roof penetrations.
  - a. VOC Content: 190 g/L or less.
  - b. Meets or exceeds ASTM D4586, Type I, Class II.
2. SOPREMA SOPRAMASTIC: SBS Mastic. Fiber-reinforced, roofing cement, packaged in 10.4 oz caulk tubes. General purpose roofing cement for low-slope roofing used for sealing membrane T-joints and membrane edges along terminations, transitions and at roof penetrations.
  - a. VOC Content: 190 g/L or less.
  - b. Meets or exceeds ASTM D4586, Type I, Class II.

E. GENERAL PURPOSE SEALANT:

1. SOPREMA SOPRAMASTIC SP1: General purpose, paintable, gun-grade, elastomeric, polyether moisture curing sealant for sealing SBS membrane terminations, Kynar 500 PVDF, horizontal and vertical construction joints.
  - a. VOC Content: 20 g/L or less.
  - b. Meets or exceeds ASTM C920, Type S, Grade NS, Class 50.
  - c. Standard color, custom color.
2. SOPREMA SOPRAMASTIC ALU: Modified bitumen mastic, aluminum hued for application to membrane edge and perimeter metal.
  - a. VOC Content: 270 g/L or less.
  - b. Standard color.

F. LIQUID-APPLIED REINFORCED FLASHING SYSTEM:

1. SOPREMA ALSAN FLASHING: Single-component, polyurethane-bitumen resin with polyester reinforcing fleece fabric fully embedded into the resin to form roof system flashings.
  - a. VOC Content: 250 g/L.
  - b. SOPREMA ALSAN FLASHING: Liquid resin, Meets or exceeds ASTM C836.
  - c. SOPREMA ALSAN POLYFLEECE: Non-woven polyester reinforcement.
  - d. Surfacing: SOPREMA ALSAN FLASHING with mineral granules broadcast into wet SOPREMA ALSAN FLASHING to match adjacent SBS-modified bitumen cap sheet.
2. SOPREMA ALSAN RS 230 Flash, Catalyzed polymethyl methacrylate (PMMA) SOPREMA ALSAN RS 260 LO FLASH, Catalyzed polymethacrylate (PMA) resin with polyester reinforcing fleece fabric fully embedded into the resin to form fully-reinforced waterproofing membrane flashings. Not for use over SBS cap sheets adhered with solvent-based SOPREMA COLPLY adhesive or flashing cement.
  - a. VOC Content: No VOC content.
  - b. SOPREMA ALSAN RS 230 FLASH SOPREMA ALSAN RS 260 LO FLASH: Polymethyl methacrylate (PMMA) polymethacrylate (PMA) liquid resin.
  - c. SOPREMA ALSAN RS CATALYST POWDER: Reactive agent added to the PMMA liquid resin to induce curing.
  - d. SOPREMA ALSAN RS FLEECE: Polyester reinforcement fabric.
  - e. Color: Flash color and finish to match Field.

G. MINERAL GRANULES:



1. SOPREMA Granules: No. 11, mineral coated colored granules, color to match cap sheet, supplied by membrane cap sheet manufacturer.
  - a. SOPREMA ECO3 GRANULE: Smog-reducing mineral granules designed with photo-catalyst coating that absorbs nitrogen oxide gasses and washed away by rainwater

#### H. WALKWAY PROTECTION:

1. SOPREMA SOPRAWALK: Polyester reinforced SBS modified bitumen walkway protection with a granule surface and sanded underside.
  - a. Thickness: 200 mils (5.0 mm)
  - b. Width: 39.4 in (1 m)
  - c. Roll Length: 26 ft (7.9 m)
  - d. Granule Surfacing:
    - 1) Color: grey.

I. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.

J. Miscellaneous Accessories: Provide those recommended by roofing system manufacturer.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
  1. Examination includes visual observations, qualitative analysis, and quantitative testing measures as necessary to ensure conditions remain satisfactory throughout the project.
  2. The contractor shall examine all roofing substrates including, but not limited to: insulation materials, roof decks, walls, curbs, rooftop equipment, fixtures, and wood blocking.
  3. Verify that roof openings and penetrations are in place and roof-drain bodies are securely clamped in place.
  4. Verify that cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  5. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer, when tested according to ASTM F2170.
    - a. Test Frequency: One test probe per each 1000 sq. ft. of roof deck, with not less than three test probes.
    - b. Submit test reports within 24 hours of performing tests.
  6. Verify that concrete-curing compounds that impair adhesion of roofing components to roof deck have been removed.
  7. Verify that joints in concrete roof decks have been grouted flush with top of concrete.
- B. During the application of specified materials, the applicator shall continue to examine all project conditions to ensure conditions remain satisfactory to complete the specified roofing system.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

1. The applicator shall not begin installation until conditions have been properly examined and determined to be clean, dry and, otherwise satisfactory to receive specified roofing materials.

### 3.2 PREPARATION

- A. Before commencing work each day, the contractor shall prepare all roofing substrates to ensure conditions are satisfactory to proceed with the installation of specified roofing materials. Preparation of substrates includes, but is not limited to, substrate repairs, securement of substrates, eliminating all incompatible materials, and cleaning.
- B. Where conditions are found to be unsatisfactory, work shall not begin until conditions are made satisfactory to begin work. Commencing of work shall indicate contractor's acceptance of conditions.
- C. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions.
  1. Remove sharp projections.
- D. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.
  1. Remove roof-drain plugs when no work is taking place or when rain is forecast.

### 3.3 INSTALLATION OF ROOFING, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions, FM Approvals' RoofNav assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.
- B. Start installation of roofing in presence of roofing system manufacturer's technical personnel and in presence of the testing and inspection agency.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast.
  1. Remove and discard temporary seals before beginning work on adjoining roofing.
- D. Substrate-Joint Penetrations: Prevent roofing asphalt and adhesives from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.
- E. Coordinate installation of roofing system so insulation and other components of the roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
  1. Provide tie-offs at end of each day's work to cover exposed roofing sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt, with joints and edges sealed.
  2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.

### 3.4 PRIMER APPLICATION

- A. Examine all substrates, and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.
- B. Apply the appropriate specified primer to dry, compatible substrates as required to enhance adhesion of new specified roofing materials.
- C. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet. Lightly prime for uniform coverage, do not apply heavy or thick coats of primer.
- D. Asphalt Primer: Apply SOPREMA ELASTOCOL 500 primer to dry compatible masonry, metal, wood and other required substrates before applying asphalt and heat-welded membrane plies. Primer is optional for solvent based solvent-based SBS adhesives and cements. Refer to product data sheets.
- E. Primer is not required for SOPREMA COLPLY EF ADHESIVE and SOPREMA COLPLY EF FLASHING CEMENT.
- F. Project conditions vary throughout the day. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

### 3.5 HEAT WELDING

- A. The Contractor is solely responsible for project safety. Where conditions are deemed unsafe to use open flames, manufacturer's alternate membrane application methods shall be used to install SBS modified bitumen membrane and flashings. Acceptable alternate installation methods include hot asphalt, cold adhesive-applied, and self-adhered membranes. Hot-air welding equipment may be used in lieu of roof torches to seal membrane side and end laps where heat welding the laps is necessary. Refer to NRCA CERTA, local codes and building owner's requirements for hot work operations.
- B. Single or multi-nozzle, hand-held propane roof torches shall be used to install heat-welded membrane and flashing plies. Multi-nozzle carts (dragon wagons) may also be utilized to install membrane plies. Seven (7) nozzle carts are recommended for more uniform heat application in lieu of five (5) nozzle carts.

### 3.6 SBS MASTIC AND GENERAL-PURPOSE ROOFING CEMENT APPLICATION

- A. Apply SOPREMA SOPRAMASTIC general purpose SBS mastic and roofing cement to seal drain leads, metal flanges, seal along membrane edge at terminations, and where specified and required in detail drawings.
- B. Do not use general purpose SBS mastics and roofing cement where flashing cement applications are required. Do not use SBS mastics and roofing cement beneath SBS-modified bitumen membrane and flashing plies.
- C. Apply general purpose SBS mastic and elastic roofing cement using caulk gun, or notched trowel at 2.0 – 2.5 gallons per square on each surface. Application rates vary based on substrate porosity and roughness. Tool-in as necessary to seal laps
- D. Embed matching granules into wet cement where exposed.

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### 3.7 HEAT-WELDED, FULLY ADHERED MEMBRANE APPLICATION

- A. Follow material product data sheets and published general requirements for installation instructions.
- B. Ensure environmental conditions are safe and satisfactory, and will remain safe and satisfactory, during the application of the heat-welded membrane and flashings.
- C. Ensure all primers are fully dry before beginning heat-welding operations.
- D. Unroll membrane onto the roof surface and allow time to relax prior to heat welding.
- E. Starting at the low point of the roof, lay out the membrane to ensure the plies are installed perpendicular to the roof slope, shingled to prevent back-water laps.
- F. Ensure all roofing and flashing substrates are prepared and acceptable to receive the heat-welded membrane.
- G. Cut membrane to working lengths and widths to conform to rooftop conditions, and lay out to always work to a selvage edge.
- H. Ensure specified side-laps and end-laps are maintained. End-laps should be staggered 3 ft apart.
- I. Direct roof torch on the roll as necessary to prevent overheating and damaging the membrane and substrates.
- J. As the membrane is unrolled, apply heat to the underside of the membrane until the plastic burn-off film melts away. Continuously move the torch side-to-side across the underside of the roll to melt the bitumen on the underside of the sheet, while continuously unrolling membrane.
- K. While unrolling and heating the sheet, ensure approximately  $\frac{1}{4}$  to  $\frac{1}{2}$  in of hot bitumen flows ahead of the roll as it is unrolled, and there is  $\frac{1}{8}$  to  $\frac{1}{4}$  in bleed out at all laps.
- L. Adjust the application of heat to the underside of the membrane and to substrate as required for varying substrates and environmental conditions.
- M. At the 6 in end-laps, melt the plastic burn-off film from the top surface or embed granules and remove surfacing, where present, using a torch or hot-air welder.
- N. At end-laps where T-Joints exist, cut a 45 degree dog-ear away from the selvage edge, or otherwise ensure the membrane is fully heat-welded watertight at all T-joints.
- O. Each day, physically inspect all side and end-laps, and ensure the membrane is sealed watertight. Where necessary, use a torch or hot-air welder and a clean trowel to ensure all laps are fully sealed.
- P. Inspect the installation each day to ensure the plies are fully adhered. Repair all voids, wrinkles, open laps and all other deficiencies.
- Q. Offset cap sheet side and end-laps away from the base ply laps so that cap sheet laps are not located within 18 in of base ply laps.

### 3.8 FLASHING APPLICATION, HEAT WELDED

- A. Refer to SBS manufacturer's membrane application instructions, flashing detail drawings, and follow product data sheets and other published requirements for installation instructions. Refer to manufacturer's membrane flashing detail drawings.
- B. The contractor is responsible for project safety. Refer to NRCA CERTA recommendations and building owner requirements for hot work operations.
- C. Where required to seal substrates for fire safety, install specified adhered, or self-adhered backer ply to the substrate. Ensure backer-ply covers and seals all substrates requiring protection from exposure to torch operations.
- D. Ensure all flashing substrates that require primer are primed, and the primer is fully dry.
- E. Unroll the flashing base ply and flashing cap sheet onto the roof surface to their complete length. Once relaxed, cut the membrane to the required working lengths to accommodate the flashing height, cants and the required over-lap onto the horizontal roof surface.
- F. Cut the flashing membrane from the end of the roll in order to always install flashings to the side-lap line or selvage edge line.
- G. Lay out the flashing base ply and flashing Cap Sheet to offset all side-laps a minimum of 12 inches so that side-laps are never aligned on top of the ply beneath. Shingle the flashing ply laps to prevent back-water laps.
- H. Install non-combustible cant strips at transitions where required.
- I. Ensure correct membrane and flashing sequencing to achieve redundant, multi-ply, watertight flashings.
- J. ROOF MEMBRANE BASE PLY:
  - 1. Before installing flashings, install the roof membrane base ply in the horizontal field of the roof, and extend the base ply up to the top of the cant, where present, at roof terminations, transitions and penetrations.
- K. FLASHING BASE PLY:
  - 1. Install the flashing base ply starting at the top leading edge of the vertical flashing substrate, down over the cant and onto the horizontal surface of the roof a minimum of 3 inches beyond the of base of the cant onto the roof. Cut the base ply at corners to form 3 inch side-laps. Install gussets to seal corner transitions.
  - 2. Install one or more flashing base ply(s) at all roof terminations, transitions and penetrations.
- L. ROOF MEMBRANE CAP SHEET:
  - 1. Install the roof membrane Cap Sheet in the horizontal field of the roof over the flashing base ply up to the roof termination, transition or penetration, and up to the top of cants where present.
  - 2. Using a chalk line, mark a line on the membrane cap sheet a minimum of 4 inches from the base of the cant onto the roof. Where granules are present, embed the cap sheet granules using a torch and trowel or granule embedder to prepare the surface to receive the flashing cap sheet.
- M. FLASHING CAP SHEET:
  - 1. Install the flashing Cap Sheet starting at the top leading edge on the vertical substrate, over the cant and onto the roof surface 4 inches from the base of the cant onto the roof.

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2. Install the flashing Cap Sheet to ensure a minimum two (2) ply flashing system is present at all roof terminations, transitions and penetrations.
- N. During the membrane and flashing installation, ensure all plies are completely adhered into place, with no bridging, voids or openings. Ensure bitumen or flashing cement bleed-out is present at all flashing side and end-laps.
- O. Use a damp sponge float or damp rag to press-in the heat-welded flashing plies during installation.
- P. Where sufficient bitumen bleed-out is not present, and for all self-adhered plies, apply specified gun-grade sealant or mastic to seal the membrane termination along all roof terminations, transitions and penetrations. These include gravel stop edge metal, pipe penetrations, along the top edge of curb and wall flashing, and all other flashing terminations where necessary to seal flashings watertight.
- Q. Fasten the top leading edge of the flashing 8 in on-centers with appropriate 1 in metal cap nails or other specified fasteners and plates. Seal fastener penetrations watertight using specified sealant or mastic.
- R. Manufacturer's liquid-applied, reinforced flashing systems shall be installed where conditions are not favorable to install SBS modified bitumen flashings. Such conditions include irregular shapes penetrating roof surfaces (I-beams), confined areas and low flashing heights. Manufacturer's liquid-applied, reinforced flashing systems are recommended in lieu of pitch pans and lead pipe flashings.
1. For SBS modified bitumen flashings installed using SOPREMA COLPLY adhesive and/or flashing cement, refer to manufacturer's installation guidelines for SOPREMA ALSAN FLASHING.
  2. For SBS modified bitumen flashings that are self-adhesive, heat-welded, installed using hot asphalt or SOPREMA COLPLY EF adhesive and/or flashing cement, refer to manufacturer's installation guidelines for SOPREMA ALSAN FLASHING and SOPREMA ALSAN RS.
- 3.9 LIQUID-APPLIED, SINGLE-COMPONENT, BITUMEN-URETHANE FLASHING SYSTEM APPLICATION (SOPREMA ALSAN FLASHING):
- A. Refer to manufacturer's details drawings, product data sheets and published general requirements for application rates and specific installation instructions.
- B. Pre-cut SOPREMA ALSAN POLYFLEECE polyester reinforcing fleece to conform to roof terminations, transitions and penetrations being flashed. Ensure a minimum 2 in overlap of fleece at side and end-laps. Ensure the completed liquid-applied flashing membrane is fully reinforced.
- C. Apply the base coat of SOPREMA ALSAN FLASHING liquid-applied flashing resin onto the substrate using a brush or roller, working the material into the surface for complete coverage and full adhesion at 2.0 gallons per square.
- D. Immediately apply the SOPREMA ALSAN POLYFLEECE reinforcing into the wet base coat of resin. Using a brush or roller, work the SOPREMA ALSAN POLYFLEECE into the wet resin while applying the second coat of SOPREMA ALSAN FLASHING resin to completely encapsulate the fleece at 2.0 gallons per square, and extend the liquid resin 1 inch beyond the fleece.

- E. Apply a finish coat of SOPREMA ALSAN FLASHING resin at 2.0 gallons per square within 2-3 hours. When applying the finish coat more than 24 hours, the surface may need to be cleaned using acetone or MEK to ensure satisfactory adhesion.

- F. Broadcast mineral granules into the wet finish coat as required to match the adjacent cap sheet.

### 3.10 LIQUID-APPLIED, PMMA (PMA) MEMBRANE AND FLASHING SYSTEM APPLICATION ALSAN RS (ALSAN RS LO)

- A. Refer to manufacturer's details drawings, product data sheets and published general requirements for application rates and specific installation instructions.
- B. Pre-cut SOPREMA ALSAN RS FLEECE polyester reinforcing fleece to conform to roof terminations, transitions and penetrations being flashed. Ensure a minimum 2 in overlap of fleece at side and end-laps. Ensure the completed liquid-applied flashing membrane is fully reinforced.
- C. Apply the base coat of catalyzed SOPREMA ALSAN RS resin onto the substrate using a brush or roller, working the material into the surface for complete coverage and full adhesion.
- D. Immediately apply the SOPREMA ALSAN RS FLEECE reinforcing into the wet base coat of resin. Using a brush or roller, work the (SOPREMA ALSAN FLEECE reinforcing fabric into the wet resin while applying the second coat of catalyzed SOPREMA ALSAN RS resin to completely encapsulate the fleece.
- E. Refer to reinforced, polymethyl-methacrylate (PMMA) polymethacrylate (PMA) specification section and application instructions, details drawings, product data sheets and published general requirements for installation instructions.

### 3.11 INSTALLATION OF FLASHING AND STRIPPING

- A. Install roofing cap-sheet stripping where metal flanges and edgings are set on roofing according to roofing system manufacturer's written instructions.
- B. Roof Drains: Set 30-by-30-inch-4-pound lead flashing in bed of asphaltic adhesive on completed roofing membrane.
  - 1. Cover lead flashing with roofing cap-sheet stripping, and extend a minimum of 6 inches beyond edge of metal flashing onto field of roofing membrane.
  - 2. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.
  - 3. Install stripping according to roofing system manufacturer's written instructions.

### 3.12 INSTALLATION OF WALKWAYS

- A. Walkway Pads: Install walkway pads using units of size indicated or, if not indicated, of manufacturer's standard size, according to walkway pad manufacturer's written instructions.
  - 1. Install walkways at the following locations:
    - a. Locations indicated on Drawings.

- b. And as otherwise required by roof membrane manufacturer's warranty requirements. Cut walkway from end of walkpad rolls. No piece shall be less than 24 in. Alternatively, walkpads can be cut out of the specified cap sheet rolls at similar dimensions.

2. Provide 2-inch clearance between adjoining pads.
3. Spot adhere walkway protection with SOPREMA SOPRAMASTIC SP1.

### 3.13 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion, in presence of Architect, and to prepare inspection report.
  1. Notify Architect and Owner 48 hours in advance of date and time of inspection.
- B. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.
- C. Roofing system will be considered defective if it does not pass tests and inspections.
  1. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

### 3.14 PROTECTING AND CLEANING

- A. Clean-up and properly dispose of waste and debris resulting from these operations each day as required to prevent damages and disruptions to operations.
- B. Protect roofing system from damage and wear during remainder of construction period.
  1. When remaining construction does not affect or endanger roofing, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- C. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- D. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

### 3.15 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS \_\_\_\_\_ of \_\_\_\_\_, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
  1. Owner: <Insert name of Owner>.
  2. Address: <Insert address>.
  3. Building Name/Type: <Insert information>.
  4. Address: <Insert address>.
  5. Area of Work: <Insert information>.



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100% Submission

6. Acceptance Date: \_\_\_\_\_.
7. Warranty Period: **<Insert time>**.
8. Expiration Date: \_\_\_\_\_.

- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. lightning;
    - b. peak gust wind speed exceeding **<Insert mph>**;
    - c. fire;
    - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
    - f. vapor condensation on bottom of roofing; and
    - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
  2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
  3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
  4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
  5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
  6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.

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- 7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

- 1. Authorized Signature: \_\_\_\_\_.
- 2. Name: \_\_\_\_\_.
- 3. Title: \_\_\_\_\_.

END OF SECTION 075216

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SECTION 077100  
ROOF SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Copings.
2. Roof-edge specialties.

- B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood nailers and blocking.
2. Section 072713 "SBS Modified Bituminous Sheet Vapor Retarder", provided by manufacturer of SBS modified bituminous membrane roofing, for installation to top surface of existing concrete deck substrate, under new roof insulation.
3. Section 077200 "Roof Accessories" for set-on-type curbs, equipment supports, roof hatches, vents, and other manufactured roof accessory units.
4. Section 079200 "Joint Sealants" for field-applied sealants between roof specialties and adjacent materials.

- C. Preinstallation Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, roofing-system testing and inspecting agency representative, roofing Installer, roofing-system manufacturer's representative, Installer, structural-support Installer, and installers whose work interfaces with or affects roof specialties, including installers of roofing materials and accessories.
2. Examine substrate conditions for compliance with requirements, including flatness and attachment to structural members.
3. Review special roof details, roof drainage, and condition of other construction that will affect roof specialties.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

- B. Shop Drawings: For roof specialties.

1. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.

2. Include details for expansion and contraction; locations of expansion joints, including direction of expansion and contraction.
3. Indicate profile and pattern of seams and layout of fasteners, cleats, clips, and other attachments.
4. Detail termination points and assemblies, including fixed points.
5. Include details of special conditions.

C. Samples: For each type of roof specialty and for each color and texture specified.

D. Samples for Initial Selection: For each type of roof specialty indicated with factory-applied color finishes.

E. Samples for Verification:

1. Include Samples of each type of roof specialty to verify finish and color selection, in manufacturer's standard sizes.
2. Include copings made from 12-inch lengths of full-size components in specified material, and including fasteners, cover joints, accessories, and attachments.

#### 1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer.

B. Product Certificates: For each type of roof specialty.

C. Product Test Reports: For copings and roof-edge flashings, for tests performed by a qualified testing agency.

D. Sample Warranty: For manufacturer's special warranty.

#### 1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing specialties to include in maintenance manuals.

#### 1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer offering products meeting requirements that are FM Approvals listed for specified class and SPRI ES-1 tested to specified design pressure.

B. Source Limitations: Obtain roof specialties approved by manufacturer providing roofing-system warranty specified in Section 075216 SBS Modified Bituminous Membrane Roofing.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

A. Do not store roof specialties in contact with other materials that might cause staining, denting, or other surface damage. Store roof specialties away from uncured concrete and masonry.

B. Protect strippable protective covering on roof specialties from exposure to sunlight and high humidity, except to extent necessary for the period of roof-specialty installation.

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## 1.8 FIELD CONDITIONS

- A. Field Measurements: Verify profiles and tolerances of roof-specialty substrates by field measurements before fabrication, and indicate measurements on Shop Drawings.
- B. Coordination: Coordinate roof specialties with flashing, trim, and construction of parapets, roof deck, roof and wall panels, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

## 1.9 WARRANTY

- A. Roofing-System Warranty: Roof specialties are included in warranty provisions in Section 075216 - SBS Modified Bituminous Membrane Roofing
- B. Special Warranty on Painted Finishes: Manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof specialties shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.
- B. FM Approvals' Listing: Manufacture and install copings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-90. Identify materials with FM Approvals' markings.
- C. SPRI Wind Design Standard: Manufacture and install copings tested according to SPRI ES-1 and capable of resisting the following design pressures:
  - 1. Design Pressure: As indicated on Drawings.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, hole elongation, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Provide clips that resist rotation and avoid shear stress as a result of thermal movements. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

## 2.2 COPINGS

- A. Metal Copings: Manufactured coping system consisting of metal coping cap in section lengths not exceeding 12 feet, concealed anchorage; with corner units, end cap units, and concealed splice plates with finish matching coping caps.
1. Manufacturer: Same as manufacturer of roof covering.
    - a. Basis of Design Product: Same manufacturer as roof covering.
      - 1) Soprema Sopra-Tite Coping System, manufactured by SOPREMA, located at 310 Quadral Dr.; Wadsworth, OH 44281; Tel: 800-356-3521; Tel: 330-334-0066; Website: [www.soprema.us](http://www.soprema.us).
    - b. Or approved equal product by another manufacturer.
  2. Formed Aluminum Sheet Coping Caps: Aluminum sheet, 0.063 inch (1.60 mm) thick.
    - a. Surface: Smooth, flat finish.
    - b. Finish: Two-coat fluoropolymer, minimum.
    - c. Color: As selected by Architect from manufacturer's full range.
  3. Extruded-Aluminum Coping Caps: Extruded aluminum, 0.080 inch (2.03 mm) thick.
    - a. Finish: Two-coat fluoropolymer, minimum.
    - b. Color: As selected by Architect from manufacturer's full range.
  4. Corners: Factory mitered and mechanically clinched and sealed watertight.
  5. Coping-Cap Attachment Method: Snap-on, fabricated from coping-cap material.
    - a. Snap-on Coping Anchor Plates: Concealed, galvanized-steel sheet, 12 inches wide, with integral cleats.
    - b. Face-Leg Cleats: Concealed, continuous galvanized-steel sheet.

## 2.3 MATERIALS

- A. Zinc-Coated (Galvanized) Steel Sheet: ASTM A653/A653M, G90 coating designation.
- B. Aluminum Sheet: ASTM B209, alloy as standard with manufacturer for finish required, with temper to suit forming operations and performance required.
- C. Aluminum Extrusions: ASTM B221, alloy and temper recommended by manufacturer for type of use and finish indicated.

## 2.4 UNDERLAYMENT MATERIALS

- A. Self-Adhering, High-Temperature Sheet: Minimum 30 to 40 mils thick, consisting of slip-resisting polyethylene-film top surface laminated to layer of butyl or SBS-modified asphalt adhesive, with release-paper backing; cold applied. Provide primer when recommended by underlayment manufacturer.
1. Manufacturer: Provided by manufacturer of SBS modified bituminous membrane roofing.
  2. Thermal Stability: ASTM D1970/D1970M; stable after testing at 240 deg F.
  3. Low-Temperature Flexibility: ASTM D1970/D1970M; passes after testing at minus 20 deg F.

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## 2.5 MISCELLANEOUS MATERIALS

- A. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:
  - 1. Exposed Penetrating Fasteners: Gasketed screws with hex washer heads matching color of sheet metal.
  - 2. Fasteners for Aluminum: Aluminum or Series 300 stainless steel.
  - 3. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A153/A153M or ASTM F2329.
- B. Elastomeric Sealant: ASTM C920, elastomeric polyurethane polymer sealant of type, grade, class, and use classifications required by roofing-specialty manufacturer for each application.
- C. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type joints with limited movement.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.

## 2.6 FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Coil-Coated Aluminum Sheet Finishes:
  - 1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - a. Two-Coat Fluoropolymer (minimum): AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - b. Concealed Surface Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.
- E. Aluminum Extrusion Finishes:
  - 1. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - a. Two-Coat Fluoropolymer (minimum): AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.



- b. Concealed Surface Finish: Apply pretreatment and manufacturer's standard acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Examine walls, roof edges, and parapets for suitable conditions for roof specialties.
- C. Verify that substrate is sound, dry, smooth, clean, sloped for drainage where applicable, and securely anchored.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps with roller. Cover underlayment within 14 days.
  - 1. Apply continuously under copings and roof-edge specialties.
  - 2. Coordinate application of self-adhering sheet underlayment under roof specialties with requirements for continuity with adjacent air barrier materials.
- B. Felt Underlayment: Install with adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.
- C. Slip Sheet: Install with tape or adhesive for temporary anchorage to minimize use of mechanical fasteners under roof specialties. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.

#### 3.3 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, underlayments, sealants, and other miscellaneous items as required to complete roof-specialty systems.
  - 1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
  - 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
  - 3. Install roof specialties to fit substrates and to result in weathertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
  - 4. Torch cutting of roof specialties is not permitted.

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5. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
    1. Coat concealed side of roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
    2. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof specialties for waterproof performance.
  - C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
    1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise indicated on Drawings.
    2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
  - D. Fastener Sizes: Use fasteners of sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches for nails and not less than 3/4 inch for wood screws, but not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
  - E. Seal concealed joints with butyl sealant as required by roofing-specialty manufacturer.
  - F. Seal joints as required for weathertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.
- 3.4 COPING INSTALLATION
- A. Install cleats, anchor plates, and other anchoring and attachment accessories and devices with concealed fasteners.
  - B. Anchor copings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.
    1. Interlock face and back leg drip edges of snap-on coping cap into cleated anchor plates anchored to substrate at manufacturer's required spacing that meets performance requirements.
- 3.5 ROOF-EDGE SPECIALITIES INSTALLATION
- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
  - B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.
- 3.6 ROOF-EDGE DRAINAGE-SYSTEM INSTALLATION

- A. General: Install components to produce a complete roof-edge drainage system according to manufacturer's written instructions. Coordinate installation of roof perimeter flashing with installation of roof-edge drainage system.
- B. Parapet Scuppers: Install scuppers through parapet where indicated. Continuously support scupper, set to correct elevation, and seal flanges to interior wall face, over cants or tapered edge strips, and under roofing membrane.
  - 1. Anchor scupper closure trim flange to exterior wall and seal or solder to scupper.

### 3.7 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as roof specialties are installed. On completion of installation, clean finished surfaces, including removing unused fasteners, metal fillings, pop rivet stems, and pieces of flashing. Maintain roof specialties in a clean condition during construction.
- D. Replace roof specialties that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

END OF SECTION 077100

SECTION 077200  
ROOF ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
  - 1. Roof curbs.
  - 2. Roof hatches.
  - 3. Roof drains.

1.3 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.
- B. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of roof accessory.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For roof accessories.
  - 1. Include plans, elevations, keyed details, and attachments to other work. Indicate dimensions, loadings, and special conditions. Distinguish between plant- and field-assembled work.
- C. Samples: For each exposed product and for each color and texture specified, prepared on Samples of size to adequately show color.
- D. Delegated-Design Submittal: For roof curbs indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
  - 1. Detail mounting, securing, and flashing of roof-mounted items to roof structure. Indicate coordinating requirements with roof membrane system.

2. Wind-Restraint Details: Detail fabrication and attachment of wind restraints. Show anchorage details and indicate quantity, diameter, and depth of penetration of anchors.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Roof plans, drawn to scale, and coordinating penetrations and roof-mounted items. Show the following:
  1. Size and location of roof accessories specified in this Section.
  2. Method of attaching roof accessories to roof or building structure.
  3. Other roof-mounted items including mechanical and electrical equipment.
  4. Required clearances.
- B. Sample Warranties: For manufacturer's special warranties.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For roof accessories to include in operation and maintenance manuals.

#### 1.7 WARRANTY

- A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finishes or replace roof accessories that show evidence of deterioration of factory-applied finishes within specified warranty period.
  1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Delta units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  2. Finish Warranty Period: 20 years from date of Substantial Completion.

#### 1.8 QUALITY ASSURANCE

- A. Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Roof accessories shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

- B. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design roof curbs to comply with wind performance requirements, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- C. Wind-Restraint Performance: As indicated on Drawings.

## 2.2 ROOF CURBS

- A. Roof Curbs: Internally reinforced roof-curb units capable of supporting superimposed live and dead loads, including equipment loads and other construction indicated on Drawings, bearing continuously on roof structure, and capable of meeting performance requirements; with welded or mechanically fastened and sealed corner joints, stepped integral metal cant raised the thickness of roof insulation, and integrally formed deck-mounting flange at perimeter bottom.
- B. Size: Coordinate dimensions with roughing-in information or Shop Drawings of equipment to be supported.
- C. Supported Load Capacity: Coordinate load capacity with information on Shop Drawings of equipment to be supported.
- D. Material: Aluminum sheet, at least 0.125 inch thick.
  - 1. Finish: Baked enamel or powder coat.
  - 2. Color: As selected by Architect from manufacturer's full range.
- E. Construction:
  - 1. Curb Profile: Manufacturer's standard compatible with roofing system.
  - 2. On ribbed or fluted metal roofs, form deck-mounting flange at perimeter bottom to conform to roof profile.
  - 3. Fabricate curbs to minimum height of 12 inches above roofing surface unless otherwise indicated.
  - 4. Top Surface: Level top of curb, with roof slope accommodated by sloping deck-mounting flange or by use of leveler frame.
  - 5. Sloping Roofs: Where roof slope exceeds 1:48, fabricate curb with perimeter curb height tapered to accommodate roof slope so that top surface of perimeter curb is level. Equip unit with water diverter or cricket on side that obstructs water flow.
  - 6. Insulation: Factory insulated with 1-1/2-inch-thick glass-fiber board insulation.
  - 7. Liner: Same material as curb, of manufacturer's standard thickness and finish.
  - 8. Nailer: Factory-installed wood nailer under top flange on side of curb, continuous around curb perimeter.
  - 9. Wind Restraint Straps and Base Flange Attachment: Provide wind restraint straps, welded strap connectors, and base flange attachment to roof structure at perimeter of curb, of size and spacing required to meet wind uplift requirements.
  - 10. Platform Cap: Where portion of roof curb is not covered by equipment, provide weathertight platform cap formed from 3/4-inch-thick plywood covered with metal sheet of same type, thickness, and finish as required for curb.
  - 11. Metal Counterflashing: Manufacturer's standard, removable, fabricated of same metal and finish as curb.

## 2.3 ROOF HATCHES

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100% Submission

- A. Roof Hatches: Metal roof-hatch units with lids and insulated double-walled curbs, welded or mechanically fastened and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, stepped integral metal cant raised the thickness of roof insulation, and integrally formed deck-mounting flange at perimeter bottom.
1. Manufacturers:
    - a. Basis of Design Product: BILCO Company, PO Box 1203, New Haven CT 06505, phone (800) 366-6530; [www.bilco.com](http://www.bilco.com).
    - b. Or approved equal product by another manufacturer.
- B. Type and Size: Match existing roof hatch.
- C. Loads: Minimum 40-lbf/sq. ft. external live load and 20-lbf/sq. ft. internal uplift load.
- D. Hatch Material: Aluminum sheet.
1. Thickness: Manufacturer's standard thickness for hatch size indicated.
  2. Finish: Baked enamel or powder coat.
  3. Color: As selected by Architect from manufacturer's full range.
- E. Construction:
1. Insulation: 1-inch-thick, glass-fiber board.
    - a. R-Value: 4.3 according to ASTM C1363.
  2. Nailer: Factory-installed wood nailer continuous around hatch perimeter.
  3. Hatch Lid: Opaque, insulated, and double walled, with manufacturer's standard metal liner of same material and finish as outer metal lid.
  4. Curb Liner: Manufacturer's standard, of same material and finish as metal curb.
  5. On ribbed or fluted metal roofs, form flange at perimeter bottom to conform to roof profile.
  6. Fabricate curbs to minimum height of 12 inches above roofing surface unless otherwise indicated.
  7. Sloping Roofs: Where slope or roof deck exceeds 1:48, fabricate curb with perimeter curb height that is tapered to accommodate roof slope so that top surfaces of perimeter curb are level. Equip hatch with water diverter or cricket on side that obstructs water flow.
- F. Hardware: Spring operators, hold-open arm, stainless steel spring latch with turn handles, stainless steel butt- or pintle-type hinge system, and padlock hasps inside and outside.
1. Provide two-point latch on lids larger than 84 inches.
  2. Provide remote-control operation.
- G. Safety Railing System: Roof-hatch manufacturer's standard system including rails, clamps, fasteners, safety barrier at railing opening, and accessories required for a complete installation; attached to roof hatch and complying with 29 CFR 1910.23 requirements and authorities having jurisdiction.
1. Height: 42 inches (1060 mm), minimum, above finished roof deck.
  2. Posts and Rails: Galvanized-steel pipe, 1-1/4 inches in diameter or galvanized-steel tube, 1-5/8 inches in diameter.
  3. Flat Bar: Galvanized steel, 2 inches high by 3/8 inch thick.

4. Maximum Opening Size: System constructed to prevent passage of a sphere 21 inches in diameter.
5. Self-Latching Gate: Fabricated of same materials and rail spacing as safety railing system. Provide manufacturer's standard hinges and self-latching mechanism.
6. Post and Rail Tops and Ends: Weather resistant, closed or plugged with prefabricated end fittings.
7. Provide weep holes or another means to drain entrapped water in hollow sections of handrail and railing members.
8. Fabricate joints exposed to weather to be watertight.
9. Fasteners: Manufacturer's standard, finished to match railing system.
10. Finish: Manufacturer's standard.

a. Color: OSHA Safety Yellow.

H. Ladder-Assist Post: Roof-hatch manufacturer's standard device for attachment to roof-access ladder.

1. Operation: Post locks in place on full extension; release mechanism returns post to closed position.
2. Height: 42 inches above finished roof deck.
3. Material: Steel tube.
4. Post: 5/8-inch-diameter pipe.
5. Finish: Manufacturer's standard baked enamel or powder coat.

a. Color: OSHA Safety Yellow.

## 2.4 METAL ROOF DRAINS

A. Cast-Iron, General-Purpose Roof Drains:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
  - a. Jay R. Smith Mfg Co; a division of Morris Group International.
  - b. MIFAB, Inc.
  - c. Zurn Industries, LLC.
2. Standard: ASME A112.6.4.
3. Body Material: Stainless Steel.
4. Dimension of Body: Match existing diameter.
5. Flow-Control Weirs: Required.
6. Outlet: Bottom.
7. Outlet Type: Threaded.
8. Extension Collars: Not required.
9. Underdeck Clamp: Required.
10. Expansion Joint: Not required.
11. Sump Receiver Plate: Not required.
12. Dome Material: PE.
13. Perforated Gravel Guard: Not required.
14. Vandal-Proof Dome: Not required.
15. Water Dam: Not required.
16. Connectors: All attachment devices through roof system to be stainless steel.



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## 2.5 METAL MATERIALS

- A. Aluminum Sheet: ASTM B209, manufacturer's standard alloy for finish required, with temper to suit forming operations and performance required.
  - 1. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
  - 2. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester-backer finish consisting of prime coat and wash coat, with a minimum total dry film thickness of 0.5 mil.
- B. Aluminum Extrusions and Tubes: ASTM B221, manufacturer's standard alloy and temper for type of use, finished to match assembly where used; otherwise mill finished.
- C. Stainless Steel Sheet and Shapes: ASTM A240/A240M or ASTM A666, Type 304.
- D. Steel Shapes: ASTM A36/A36M, hot-dip galvanized according to ASTM A123/A123M unless otherwise indicated.
- E. Steel Tube: ASTM A500/A500M, round tube.
- F. Galvanized-Steel Tube: ASTM A500/A500M, round tube, hot-dip galvanized according to ASTM A123/A123M.

## 2.6 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Glass-Fiber Board Insulation: ASTM C726, nominal density of 3 lb/cu. ft., thermal resistivity of 4.3 deg F x h x sq. ft./Btu x in. at 75 deg F, thickness as indicated.
- C. Wood Nailers: Softwood lumber, pressure treated with waterborne preservatives for aboveground use, acceptable to authorities having jurisdiction, containing no arsenic or chromium, and complying with AWPA C2; not less than 1-1/2 inches thick.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
- E. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, PVC, or silicone or a flat design of foam rubber, sponge neoprene, or cork.
- F. Elastomeric Sealant: ASTM C920, elastomeric polyurethane polymer sealant as recommended by roof accessory manufacturer for installation indicated; low modulus; of type, grade, class, and use classifications required to seal joints and remain watertight.
- G. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for expansion joints with limited movement.
- H. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required for application.

## 2.7 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- C. Verify dimensions of roof openings for roof accessories.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Install roof accessories according to manufacturer's written instructions.
  - 1. Install roof accessories level; plumb; true to line and elevation; and without warping, jogs in alignment, buckling, or tool marks.
  - 2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
  - 3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
  - 4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
  - 1. Coat concealed side of roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
  - 2. Underlayment: Where installing roof accessories directly on cementitious or wood substrates, install a course of underlayment and cover with manufacturer's recommended slip sheet.
  - 3. Bed flanges in thick coat of asphalt roofing cement where required by manufacturers of roof accessories for waterproof performance.
- C. Roof Curb Installation: Install each roof curb so top surface is level.
- D. Roof-Hatch Installation:
  - 1. Verify that roof hatch operates properly. Clean, lubricate, and adjust operating mechanism and hardware.
  - 2. Attach safety railing system to roof-hatch curb.
  - 3. Attach ladder-assist post according to manufacturer's written instructions.

- E. Roof Drain Installation: Install roof drains at low points of roof areas in accordance with roof membrane manufacturer's written installation instructions.
  - 1. Install flashing collar or flange of roof drain to prevent leakage between drain and adjoining roofing. Maintain integrity of waterproof membranes where penetrated.
  - 2. Install expansion joints, if indicated, in roof drain outlets.
  - 3. Position roof drains for easy access and maintenance.

### 3.3 INSTALLATION OF FLASHING

- A. Fabricate flashing from single piece of metal unless large pans, sumps, or other drainage shapes are required.
- B. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.
- C. Set flashing on floors and roofs in solid coating of bituminous cement.
- D. Secure flashing into sleeve and specialty clamping ring or device.

### 3.4 PROTECTION

- A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

### 3.5 REPAIR AND CLEANING

- A. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing according to ASTM A780/A780M.
- B. Touch up factory-primed surfaces with compatible primer ready for field painting according to Section 099113 "Exterior Painting."
- C. Clean exposed surfaces according to manufacturer's written instructions.
- D. Clean off excess sealants.
- E. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

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END OF SECTION 077200

## SECTION 221423 - STORM DRAINAGE PIPING SPECIALTIES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Metal roof drains.
- B. Related Requirements:
  - 1. Section 076200 "Sheet Metal Flashing and Trim" for penetrations of roofs.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.

#### 1.4 QUALITY ASSURANCE

- A. Drainage piping specialties shall bear label, stamp, or other markings of specified testing agency.

### PART 2 - PRODUCTS

#### 2.1 METAL ROOF DRAINS

- A. Cast-Iron, General-Purpose Roof Drains:
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. Jay R. Smith Mfg Co; a division of Morris Group International.
    - b. MIFAB, Inc.
    - c. Zurn Industries, LLC.
  - 2. Standard: ASME A112.6.4.
  - 3. Body Material: Stainless Steel.
  - 4. Dimension of Body: Match existing diameter.
  - 5. Flow-Control Weirs: Required.
  - 6. Outlet: Bottom.

State of Florida, Department of Transportation  
Turkey Lake Headquarters Building  
Roofing Replacement

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7. Outlet Type: Threaded.
8. Extension Collars: Not required.
9. Underdeck Clamp: Required.
10. Expansion Joint: Not required.
11. Sump Receiver Plate: Not required.
12. Dome Material: PE.
13. Perforated Gravel Guard: Not required.
14. Vandal-Proof Dome: Not required.
15. Water Dam: Not required.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Install roof drains at low points of roof areas in accordance with roof membrane manufacturer's written installation instructions.
  1. Install flashing collar or flange of roof drain to prevent leakage between drain and adjoining roofing. Maintain integrity of waterproof membranes where penetrated.
  2. Install expansion joints, if indicated, in roof drain outlets.
  3. Position roof drains for easy access and maintenance.

#### 3.2 INSTALLATION OF FLASHING

- A. Fabricate flashing from single piece of metal unless large pans, sumps, or other drainage shapes are required.
- B. Install sheet flashing on pipes, sleeves, and specialties passing through or embedded in floors and roofs with waterproof membrane.
- C. Set flashing on floors and roofs in solid coating of bituminous cement.
- D. Secure flashing into sleeve and specialty clamping ring or device.

#### 3.3 PROTECTION

- A. Protect drains during remainder of construction period to avoid clogging with dirt or debris and to prevent damage from traffic or construction work.
- B. Place plugs in ends of uncompleted piping at end of each day or when work stops.

END OF SECTION 221423

**ATTACHMENT "C"**  
**CERTIFICATION**  
**DISBURSEMENT OF PREVIOUS PAYMENTS**

Date: \_\_\_\_\_, 20\_\_\_\_

Contract No.: \_\_\_\_\_

Financial Project No(s): \_\_\_\_\_

**Contract For:**

To release payment for all work performed in the Month of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
(State)

\_\_\_\_\_  
(Zip)

As prime contractor for the above referenced Contract, hereby certifies that all subcontractors, laborers, and material suppliers having an interest in this Contract have received their pro rata share of all previous payments made by the Department for all work completed and materials and equipment furnished in the previous period.

\_\_\_\_\_  
(Name of Business)

\_\_\_\_\_  
(Signature) Owner, President, Vice President or Designated Officer (Corp. Resolution\*)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Print/Type Name)

\_\_\_\_\_  
(City)

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

\*If person signing for the Business is someone other than the Owner, President, or Vice President, a copy of the Corporate Resolution granting signature authorization must be attached to form.

**CERTIFICATION MUST BE ATTACHED TO INVOICE**

**ATTACHMENT "D"**

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
CERTIFICATE OF CONTRACT COMPLETION

Contract Number \_\_\_\_\_ FPI No.: \_\_\_\_\_

Project Description \_\_\_\_\_

Contractor \_\_\_\_\_

Contract Date \_\_\_\_\_ Total Amount \$ \_\_\_\_\_

**CONTRACTOR'S AFFIDAVIT**

I solemnly swear and affirm: That the work under the above named Contract and all Amendments and Supplements thereto have been completed in accordance with the requirements of said Contract; that all costs incurred for equipment, materials, labor, and services against the project have been paid; that no liens have been attached against the project; that no suits are pending by reason of work on the project under the Contract; that all Worker's Compensation claims are covered by Worker's Compensation insurance as required by law; that all public liability claims are adequately covered by insurance, and that the Owner shall save, protect, defend, indemnify, and hold the Department harmless from and against any and all claims which arise as a direct or indirect result of any transaction, event or occurrence related to performance of the work contemplated under said contract.

\_\_\_\_\_  
(Signature), Owner, President, Vice President or other Designated Officer (Corp. Resolution\*) (Title)

**(Corporate Seal)**

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

The foregoing affidavit was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

by \_\_\_\_\_, on behalf of the Vendor. He/She is personally known to me or has  
(Print/Type Name of Person Signing Above)

produced \_\_\_\_\_, as identification.  
(Type of Identification)

Notary Public: \_\_\_\_\_  
(Signature)

**(Notary Stamp)**

Type/Print Name: \_\_\_\_\_

\* If person signing for the Business is someone other than the Owner, President, or Vice President, a copy of the Corporate Resolution granting signature authorization must be furnished in the bid package.

**CERTIFICATION MUST BE ATTACHED TO THE FINAL INVOICE**



**FLORIDA DEPARTMENT  
OF TRANSPORTATION**



**EXHIBIT "B"**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

## **EXHIBIT “B” METHOD OF COMPENSATION**

### **ROOF REPLACEMENT AT FLORIDA’S TURNPIKE ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

#### **FLORIDA’S TURNPIKE (SR 91), MILEPOST 263.0**

#### **1.0 General**

The Vendor shall accept the compensation as provided in this Contract as full payment for furnishing all labor, materials, and equipment, for performing all work under this Contract, and for all other costs including, but not limited to tolls, dump fees, fuel, permits, and any documentation required in this Contract. All work not specifically defined shall be included in the bid item(s).

#### **2.0 Assignment of Work**

It is anticipated that the Notice to Proceed (NTP) will be issued within thirty (30) calendar days after Contract execution for the Headquarters Building No. 5315. Services to be provided on this project will be initiated and completed as directed by the Department’s Project/Contract Manager.

#### **3.0 Pay Item Definition (Basis of Payment)**

The Department agrees to pay the Vendor for the services performed, an amount of compensation and method of payment as described and detailed herein and in Exhibit "C," Bid Blank.

The pay item below represents the total and full compensation to the Vendor for furnishing all labor, materials, tools, equipment including pickup, handling & delivery of Vendor supplied equipment, permits, supplies, travel time and expenses, transportation, mobilization, disposal, traffic & safety devices, profit, overhead, markups, supervisor and all other incidental expenses and costs incurred by the Vendor necessary to perform roof replacement as specified in this Contract and Attachment “A,” Plans for the Headquarters Building No. 5315, Attachment “B,” Specifications for the Headquarters Building No. 5315 for a turn-key project. Payment is based on satisfactory completion of all work, final inspection, and approval by the Department.

- **Pay Item No. 1 – Roof Replacement for the Florida’s Turnpike Enterprise Headquarters Building No. 5315, Lump Sum (LS).**

The Contract lump sum price for this pay item shall cover the cost of performing the services outlined in this Contract including all incidental services needed to complete the work for a turn-key project. Payment is based on satisfactory completion of all work, final inspection, and approval by the Department.

#### **4.0 Method of Measurement**

All measurement of payment will be based on the actual amount of work completed and accepted, in strict accordance with the specifications and all codes/standards specified herein and approved by the Department’s Project/Contract Manager. Work completed under this Contract shall be measured according to the methods outlined in the basis of payment hereunder and shall be paid for at the Contract lump sum price for such activity.

##### **4.1 Compensation**

The Vendor shall be paid, per the compensation details in this Exhibit and price schedule in the Exhibit “C,” Bid Blank for the work accomplished and accepted by the Department’s Project/Contract Manager. The total payment made to the Vendor shall not exceed the maximum amount of the face value of the Contract, without a Supplemental Agreement being processed.

#### 4.2 Method of Payment

Partial payments shall be allowed for this project. The Department reserves the right to withhold full payment or partial payment of the Contractor's invoice when less than the services listed on the invoice were performed or services were inadequate, not authorized, or not completed.

#### 4.3 Invoicing

Payment will be made following receipt and approval of an invoice package for all work performed and accepted by the Department's Project/Contract Manager.

The Vendor's invoice package shall be electronic and submitted to the email to the Department's Project/Contract Manager.

A. The invoice package shall be a provided by the Department to the Vendor that includes the following:

1. Company Name & Address
2. Financial Project Identification Number
3. Remittance address if different from mailing address
4. Date of the Invoice
5. Period of Service
6. Contract Number
7. Pay Item Description
8. Quantities
9. Unit Price
10. Quantity Installed and dollar amount by Pay Item
11. Quantity Remaining after payment for the invoice being processed
12. Total Amount of Invoice

4.4 The Vendor shall provide a statement Attachment "C" Certification Disbursement of Previous Payments, with all but the first and last pay request to the Department which certifies that the Vendor has disbursed to all sub-vendor(s), laborers, and materials suppliers, having an interest in the Contract, their pro-rata shares of the payment, out of the previous payments received by the Vendor for all work completed and materials furnished in the previous period. This certification shall be in the form designated by the Department. The Department shall not make any payments after the initial payment until the Vendor furnishes said certification, unless the Vendor demonstrates good cause for not making any such required payment and provides written notification of any such good cause to both, the Department and the affected sub-vendor(s), laborers, and material suppliers.

4.5 The Vendor shall submit a Certificate of Contract Completion with the final invoice see Attachment "D," Certificate of Contract Completion.

4.6 If funds paid to the Vendor under this Contract are subsequently disallowed by the Department because of accounting errors or charges not in conformity with this Contract, the Vendor agrees that such disallowed amounts are due to the Department upon demand. Further, Vendor agrees that the Department shall have the right to deduct from any payment due to the Vendor under any other contract between the Vendor and the Department or under this Contract, an amount sufficient to satisfy any amount due and owing the Department by the Vendor.

### 5.0 Financial Consequences

See Exhibit "A," Scope of Services, Section 4.14 Performance Measures.

**FLORIDA DEPARTMENT  
OF TRANSPORTATION**



**EXHIBIT "C"**

**DOT-ITB-22-8001r-AC**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE  
ENTERPRISE HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**FPID: 190970-1-A1-08**

**EXHIBIT “C”  
 BID BLANK**

**ROOF REPLACEMENT AT FLORIDA’S TURNPIKE ENTERPRISE  
 HEADQUARTERS BUILDING NO. 5315**

**FLORIDA’S TURNPIKE (SR 91), MILEPOST 263.0**

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY OF ITEM	TOTAL BID AMOUNT
1	Roof Replacement for the Florida’s Turnpike Enterprise Headquarters Building No. 5315 as specified in this Contract	LS	1	\$ _____.

**MyFloridaMarketPlace Transaction Fee:** All payment(s) to the vendor resulting from this competitive solicitation WILL be subject to the MFMP Transaction Fee in accordance with the referenced Form PUR 1000 General Contract Condition #14. The Transaction Fees imposed shall be based upon the date of issuance of the payment.

The undersigned has completed and is returning the following documents as part of its bid package and understands that failure to return any of these documents fully completed may cause rejection of the bid.

- \_\_\_ Bid Blank: Exhibit C, Page C-1 thru C-2.
- \_\_\_ A copy of the business tax receipt stating the name of the Vendor and the street address of the business location.
- \_\_\_ A copy of the Vendor’s license(s) as a certified or registered Roofing Contractor, authorized to perform the work specified in this bid package in the State of Florida in accordance with the laws of the State of Florida. (Refer to Exhibit “A,” Vendor’s Qualifications)
- \_\_\_ A current letter from a surety company or bonding agent authorized to do business in the State of Florida. (Refer to Exhibit “A,” Vendor’s Qualifications)
- \_\_\_ All forms supplied with the bid package (Forms 1 thru 7) return Form 5 & 6 if applicable. Be certain to fill in all the blanks on the forms supplied; do not leave any blank lines on the forms. Sign and return each form. (If awarded the Contract, Form 8 will be required)

It is the Bidder’s responsibility to ensure that the bid package is sent to the proper email address on or before the bid due date and time.

Name of Business: \_\_\_\_\_

**EXHIBIT "C"**  
**BID BLANK**

**ROOF REPLACEMENT AT FLORIDA'S TURNPIKE ENTERPRISE  
HEADQUARTERS BUILDING NO. 5315**

**FLORIDA'S TURNPIKE (SR 91), MILEPOST 263.0**

**Fill in the following information, complete with authorized signature and date.**

Name of Business: (Print) \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Federal I.D. No. : \_\_\_\_\_ M.B.E.: Yes No

Phone Number: ( ) \_\_\_\_\_ Email Address: \_\_\_\_\_

**Emergency Contact Information (After Hours):**

Name: \_\_\_\_\_ Phone Number: ( ) \_\_\_\_\_

Email Address: \_\_\_\_\_ Fax No. :( ) \_\_\_\_\_

Cellular Number: ( ) \_\_\_\_\_

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

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

Owner, President, or Designated Officer (Corporate Resolution)\*\*

Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

Phone Number: ( ) \_\_\_\_\_ Email Address: \_\_\_\_\_

\*\*If person signing the form is someone other than the Owner or President, a copy of the Corporate Resolution granting signature authorization must be furnished in the bid package.