

**351 - State School For The Blind
Ten Year Capital Plan by Project Class**

2023-25 Biennium

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Version: 24 2024 Supplemental Capital Request

Report Number: CBS001

Date Run: 10/26/2023 11:01AM

Project Class: Preservation

Agency	Estimated	Prior	Current	Reapprop	New	Estimated	Estimated	Estimated	Estimated
Priority	Total	Expenditures	Expenditures	2023-25	Approp	2025-27	2027-29	2029-31	2031-33
Project by Account-EA Type					2023-25				
1									
40000021									
2023-25 Campus Preservation (Minor Works)									
057-1 State Bldg	11,000,000				2,600,000	2,100,000	2,100,000	2,100,000	2,100,000
Constr-State									

Total Account Summary

Account-Expenditure Authority Type	Estimated	Prior	Current	Reapprop	New	Estimated	Estimated	Estimated	Estimated
	Total	Expenditures	Expenditures	2023-25	Approp	2025-27	2027-29	2029-31	2031-33
					2023-25				
057-1 State Bldg Constr-State	11,000,000				2,600,000	2,100,000	2,100,000	2,100,000	2,100,000

Ten Year Capital Plan by Project Class

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Report Number: CBS001
Date Run: 10/26/2023 11:01AM

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Functional Area	*	All Functional Areas
Agency	351	351
Version	24-A	24-A
Project Classification	*	All Project Classifications
Include Enacted	Yes	Yes
Sort Order	Project Class	Project Class
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

351 - State School For The Blind
Capital Project Request

2023-25 Biennium

*

Version: 24 2024 Supplemental Capital Request

Report Number: CBS002

Date Run: 10/26/2023 11:05AM

Project Number: 40000021

Project Title: 2023-25 Campus Preservation (Minor Works)

Project Class:

Funding

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State					
	Total	0	0	0	0	0
Future Fiscal Periods						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
057-1	State Bldg Constr-State					
	Total	0	0	0	0	

351 - State School For The Blind Capital Project Request

2023-25 Biennium

*

Version: 24 2024 Supplemental Capital Request

Report Number: CBS002

Date Run: 10/26/2023 11:05AM

Project Number: 40000021
 Project Title: 2023-25 Campus Preservation (Minor Works)
 Project Class: Preservation

Description

Starting Fiscal Year: 2024
 Agency Priority: 1

Project Summary

Campus Preservation (Minor Works) Request for 2023-25. Includes 5 sub-projects.

Project Description

WSSB's 2023-25 Campus Preservation (Minor Works) Request includes the following projects:

- 1) Track and Turf Renovation: Replace grass turf with artificial turf and resurface track.
- 2) Old Main 3rd Floor Remodel: Reconfigure three restrooms, replace carpet, replace doors and closers, add furniture and casework.
- 3) Replace/Refurbish Roof Dry Building: Replace roof on workshop building to stop leaks and improve energy efficiency.
- 4) Replace Cottage Lighting: Convert fluorescent lights to dimmable LED.
- 5) Pool and Locker Room Renovations: Resurface floors and replace drainage system.

See Subprojects for Detailed Project Descriptions

Location

City: Vancouver

County: Clark

Legislative District: 049

Project Type

Facility Preservation (Minor Works)

Growth Management impacts

N/A

Funding

Acct Code	Account Title	Estimated Total	Expenditures		2023-25 Fiscal Period	
			Prior Biennium	Current Biennium	Reapprops	New Approps
057-1	State Bldg Constr-State	500,000				500,000
	Total	500,000	0	0	0	500,000
Future Fiscal Periods						
		<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>	
057-1	State Bldg Constr-State					
	Total	0	0	0	0	

Operating Impacts

No Operating Impact

SubProjects

**351 - State School For The Blind
Capital Project Request**

2023-25 Biennium

*

Version: 24 2024 Supplemental Capital Request

Report Number: CBS002

Date Run: 10/26/2023 11:05AM

Project Number: 40000021

Project Title: 2023-25 Campus Preservation (Minor Works)

Project Class: Preservation

SubProjects

SubProject Number: 40000030

SubProject Title: ORC Roof Restoration

SubProject Class: Preservation

351 - State School For The Blind Capital Project Request

2023-25 Biennium

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Version: 24 2024 Supplemental Capital Request

Report Number: CBS002

Date Run: 10/26/2023 11:05AM

Project Number: 40000021
 Project Title: 2023-25 Campus Preservation (Minor Works)
 Project Class: Preservation

SubProjects

SubProject Number: 40000030
 SubProject Title: ORC Roof Restoration
 SubProject Class: Preservation

Starting Fiscal Year: 2024
 Agency Priority: 1

Project Summary

Restore single-membrane TPO roof of Ogden Resource Center. This project was funded in 21-23 biennium with \$225,000 capital preservation money. When bids came back we were looking at a \$375,000 project. Another 21-23 biennium project came back with a bid more than twice as much as was funded. So, we took this \$225,000 and added it to our allocated \$250,000 Irwin School Lighting Project monies to convert from fluorescent to dimmable and color-tunable LEDs. This project is complete. We now seek \$500,000 supplemental capital allocation to fund the ORC roof restoration project. Asking amount calculated by taking 12/12/2022 JDES Job Order Contract No J20-06 Total Funding Amount of \$374,368.30 and multiplying by a 25% escalation for a total of \$467,960. The \$32,039 (\$500,000 - \$467,960) leaves a buffer for contingencies.

Project Description

Washington State School for the Blind's Ogden Resource Center (ORC), commissioned in 2003, is a 12,000-square-foot braille printing, warehousing, and shipping facility. In addition to braille services and materials, ORC also provides the blind and low vision community access to assistive technologies, and brailers (braille typewriters). As of 2023 the federally funded and WSSB-administered Center for Assistive Technology and Training NW (CATT) is co-located in the ORC. CATT's mission is to provide assistive technology training to teachers of blind/low vision children, utilizing a "train the trainer" model, while also providing support/training for other professionals working with blind or low vision children as well as parents/caregivers of a child who is blind or has low vision, including those with additional disabilities.

The problem is that the ORC single-membrane TPO (thermoplastic polyolefin) roof is 20 years old and in increasing lifecycle failure with leak threatening interior goods. In the winter of '22-'23 we needed to tarp over several shelving units in the warehouse to prevent the destruction of our braille master books. While we have worked to repair the leaks, new leaks are developing as time goes on.

This request will result in a refurbished roof with a 20-year leak free warranty. We will be using a Tremco product called AlphaGuard. This is a majority bio-based two-part product, with a base primer, an embedded reinforcing mesh, and a final coating. We would get our flashings replaced, all wet insulation and underlayment removed and replaced, and, in five dormers with rows of clerestory windows, the aging window sealants would be removed and replaced with new. The project is "shovel ready." We have scope, specifications, and bids. In fact part of the work is already done. The roof used to be a "green roof". It was an early generation green roof, and, ultimately, not very effective. The roof was filled with 800 2-foot by 4-foot plastic trays that had gone to weed. In order to assess the single membrane, we needed to remove all the trays from the roof. We spent \$15,000 doing so. Then the high bid came back.

If we took no action we would see an increase in the frequency and severity of leaks, putting our entire braille warehouse, printing operation, and assistive technology center in increasing jeopardy. Leaks exist currently, and more can be expected. We explored removal and replacement of the single membrane system. This would necessitate the removal and replacement of photovoltaic systems on each of the five dormers. A landfill load would also be generated. And we would get the same warranty - 20 year leak free warranty. A ROM for this method was from \$1.0M to \$1.5M. We have had good results with the AlphaGuard system on our Old Main Building. We like the equal warranty of a \$1.5M project for a \$500,000 stake, with reduced waste footprint.

Braille services at the Ogden Resource Center are available to anyone. Most Washington state agencies use the Ogden Resource Center for braille printing needs. If a teacher in a school district anywhere needs a textbook converted to braille, they contract with our Ogden Resource Center. If a blind child learning how to write needs a brailier, the ORC will provide it. If the parents of a blind or low vision child need academic materials, the ORC can meet these needs. The co-located Center of Assistive Technology and Training provides, via WSSB employees paid through Federal monies, the latest and most proven

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Project Number: 40000021
Project Title: 2023-25 Campus Preservation (Minor Works)
Project Class: Preservation

SubProjects

SubProject Number: 40000030
SubProject Title: ORC Roof Restoration
SubProject Class: Preservation

adaptive technologies and training to blind and low vision persons in a ten-state/territory region: Washington, Oregon, Idaho, Montana, Wyoming, Alaska, Hawaii, Guam, Northern Mariana Islands and American Samoa. These are some of the user groups and populations that would be negatively affected if this roof project did not happen.

We are not aware of any non-state funding available for this work.

Our agency vision is "Every blind and low vision student in Washington has the supports and services they need to succeed." The activities happening in the Ogden Resource Center are directly linked to our Strategic Plan's vision statement. Without the services provided by the ORC, we would be unable to provide the necessary supports to blind and low vision students statewide. And, a leaky roof makes the provision of these services more difficult.

There are no IT costs anticipated with this project.

This proposed project is a "green" project for the following reasons: 1) We will not be removing, nor needing new manufacture of, the TPO (thermoplastic polyolefin) single membrane roof. This product is manufactured through a petroleum and chemical process. 2) The proposed new restoration product, AlphaGuard, from Tremco, is a mostly non-petroleum polyurethane product, with 70 percent bio-based materials. 3) The finished roof will be white, and this reflective of heat. 4) After a 20 year warranty, there is the option to recoat with the same product, for a 15 year warranty.

This project benefits the blind and low vision population as mentioned above. The ORC also contracts with up to 20 female inmates in the Washington State Department of Corrections. ORC trains these individuals how to read and transcribe braille. These incarcerated individuals are then employed to transcribe books of any type into braille. These electronic files are then sent to the ORC braille printing facility.

This project was approved and funded in the 21-23 biennium for \$225,000. Due to pandemic-related construction cost escalations, the project bid total came back in autumn 2022 at \$375,000. Due to a similar cost escalation on another approved and funded 21-23 WSSB project, we worked with OFM to combine the monies to fund the one project with most importance to our students and teachers. The project we completed was the conversion of our school lights from fluorescent to dimmable and color-tunable LEDs. That has been a great success. We calculated this first year '24 supplemental request by multiplying our previous ORC Roof project total of \$375,000 by a 25% escalation factor, to get \$467,960. \$500,000 - \$467,960, leaves a \$32,000 buffer for contingencies.

Location

City: Vancouver

County: Clark

Legislative District: 049

Project Type

Facility Preservation (Minor Works)

Growth Management impacts

N/A

Funding

<u>Acct Code</u>	<u>Account Title</u>	<u>Estimated Total</u>	<u>Expenditures</u>	<u>2023-25 Fiscal Period</u>		
			<u>Prior Biennium</u>	<u>Current Biennium</u>	<u>Reappropriations</u>	<u>New Appropriations</u>
057-1	State Bldg Constr-State	500,000				500,000
Total		500,000	0	0	0	500,000

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Version: 24 2024 Supplemental Capital Request

Report Number: CBS002

Date Run: 10/26/2023 11:05AM

Project Number: 40000021

Project Title: 2023-25 Campus Preservation (Minor Works)

Project Class: Preservation

SubProjects

SubProject Number: 40000030

SubProject Title: ORC Roof Restoration

SubProject Class: Preservation

Future Fiscal Periods

	<u>2025-27</u>	<u>2027-29</u>	<u>2029-31</u>	<u>2031-33</u>
057-1 State Bldg Constr-State				
Total	0	0	0	0

Operating Impacts

Total one time start up and ongoing operating costs

Capital Project Request

2023-25 Biennium

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<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	351	351
Version	24-A	24-A
Project Classification	*	All Project Classifications
Capital Project Number	*	All Project Numbers
Sort Order	Project Class	Project Class
Include Page Numbers	Y	Yes
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget
User Id	*	All User Ids

OFM

351 - State School For The Blind
Reapprop & New Approp Version Compare by Agency & Project

2023-25 Biennium

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Version 1: 24-A - 2024 Supplemental Capital Request

Version 2: 24-A - 2024 Supplemental Capital Request

Report Number: CBS010

Date Run: 10/26/2023 11:07AM

Enacted Parameter: Include Matching Enacted

Project Totals

	Version 24-A		Version 24-A		Difference (24-A-24-A)	
	Reapprop	New Approp	Reapprop	New Approp	Reapprop	New Approp
40000030 ORC Roof Restoration						
057-1 - State Building Construction Account - State		500,000		500,000		

OFM

All Agencies
Reapprop & New Approp Version Compare by Agency & Project
2023-25 Biennium
*

Version 1: 24-A
Version 2: 24-A

Report Number: CBS010
Date Run: 10/26/2023 11:07AM
Enacted Parameter: Include Matching Enacted

Account Totals

	Version 24-A		Version 24-A		Difference (24-A-24-A)	
	Reapprop	New Approp	Reapprop	New Approp	Reapprop	New Approp
057-1 - State Building Construction Account - State		500,000		500,000		
Grand Total		500,000		500,000		

OFM

All Agencies
Reapprop & New Approp Version Compare by Agency & Project

2023-25 Biennium

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Version 1: 24-A

Version 2: 24-A

Report Number: CBS010

Date Run: 10/26/2023 11:07AM

Enacted Parameter: Include Matching Enacted

<u>Parameter</u>	<u>Entered As</u>	<u>Interpreted As</u>
Biennium	2023-25	2023-25
Agency	351	351
Version 1	24-A-A	24-A
Version 2	24-A-A	24-A
Include Enacted	Yes	Include Matching Enacted
Project Classification	*	All Project Classifications
Account	*	All Accounts
Include COP Account	Y	Yes
Budgeted Appropriation	All	All Budgeted Appropriations
Project Variances Only	N	No
For Word or Excel	N	N
User Group	Agency Budget	Agency Budget

DES Work Order Form

Work Title:	WSSB Ogden Resource Center Roof Repair	Job Order Contract No.:	J20-06
Location*:	2214 E 13th Street	DES Project No.:	
<small>*include zip code of work location</small>	Vancouver, WA 98661	JOC Contractor Ref.:	
Funding Agency:	WSSB / DES	Other Agency Ref.:	
		Work Order No.:	
		Modification No.:	

Section 1: Work Order Request

Date of Request: **12/12/2022**

Brief Description of Work: Agency/Requester requirements consisting of an overall statement of work and objectives. Attach any sketches, plans, and/or photos, exclusions, and a detailed Scope of Work

Per Scope of Work labeled: Scope of Work dated November 4, 2022.

Project Summary: Rehabilitate existing membrane roof with a complete overlay of the existing roof field to include parapet walls, all roof penetrations and sawtooth skylight structure walls up to 12"+/-. Probe all windows for active leaks and pre-existing degradation. Remove and install new window sealant.

MODIFICATION REASON FOR CHANGE: Design Errors Design Omissions Agency Latent Conditions Code Req. Value Engineering

Schedule of Work: Desired start date, substantial completion date, other dates that are required by Agency/Requester*

Per attached schedule dated 12/12/2022. Included additional time for inclement weather.

* Include Liquidated Damages as part of Schedule of Work if they are to be applied to this Work Request

Special Requirements: Design requirements, dimensions, quantities, materials, finishes, component types or brands

No hazardous materials anticipated with this change.

A/E for this Work Order:	A/E not utilized <input type="checkbox"/>
RCW 39.10.450 (8) Conditions apply for Apprentiship (WO >\$350k & >600 Single Trade mhs)	Apprenticeship <input type="checkbox"/>
	Apprentiship n/a <input type="checkbox"/>
Scope includes hazardous material abatement and associated Insurance Requirements (JOC Manual Section 2.02.B.5)	Hazardous Waste <input type="checkbox"/>

Contacts	Name	Organization	Email	Phone
Requested by:	Nate Abkemeier	DES	nate.abkemeier@des.wa.gov	253-820-1155
JOC Project Manager	Peggy Togioka	Saybr Contractors, Inc.	ptogioka@saybr.com	206-730-8305
Owner/DES PM	Nate Abkemeier	DES	nate.abkemeier@des.wa.gov	253-820-1155
Cost Engineer	Brian Thomas	DES	brian.thomas@des.wa.gov	360 407 8023

Work Title: **WSSB Ogden Resource Center Roof Repair**

Location*: **2214 E 13th Street**
*include zip code of work location **Vancouver, WA 98661**

Funding Agency: **WSSB / DES**

Job Order Contract No.: **J20-06**

DES Project No.: _____

JOC Contractor Ref.: _____

Other Agency Ref.: _____

Work Order No.: _____

Modification No.: _____

Date of Proposal: **12/12/2022**

Completion (Days from NTP): **NTP + 164d**

Liquidated Damages: **per contract**

JOC Firm: **Saybr Contractors, Inc.**

Brief Description of Work: additional information can be found on the attached Scope of Work or on page 1

Per Scope of Work labeled: Scope of Work dated November 4, 2022.

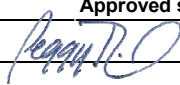
CSI / Summary of Work Order Items Listed in Unit Price Book

CSI or item #	Description of Base Bid Items	Bare Cost Total	City Cost Index	Contractor Coefficient	Division Total Price
DIV 01	General Conditions	\$ 31,382.50	1.111	1.032	\$35,981.67
DIV 02	Existing Conditions	\$ 5,725.00	1.111	1.032	\$6,564.01
DIV 05	Metals	\$ 32,912.64	1.111	1.032	\$37,736.05
DIV 07	Thermal & Moisture Protection	\$147,106.71	1.111	1.032	\$168,665.49
DIV 09	Finishes	\$ 18,927.68	1.111	1.032	\$21,701.57
DIV 26	Electrical	\$ 9,225.00	1.111	1.032	\$10,576.94
ADJ	Adjustments	\$ 55,657.46	1.111	1.032	\$63,814.17
		\$ -			\$0.00
		\$ -			\$0.00
		\$ -			\$0.00
		\$ -			\$0.00
Total of all base items listed in Price Book:					\$345,039.91

Work Order Items Not Listed in Unit Price Book (This cannot exceed 20% of the total work order.)

Item No	Work Item Description: Include type of material, manufacture name, part number, type of work...	Materials			Labor		OH&P	Item Price (Includes Negotiated Coefficient)
		Units	Qty	Unit Mat'l Price	Labor Hours	Unit Labor Price		
1	Permits (None Anticipated), NPP Direct Reimbursible			\$ -		\$ -		\$ -
2				\$ -		\$ -		\$ -
3				\$ -		\$ -		\$ -
4				\$ -		\$ -		\$ -
5				\$ -		\$ -		\$ -
Total of all items not listed in Price Book								\$ -

Total Work Order Amount			\$345,039.91
Washington State Sales Tax	8.5%	% in loc. city	\$29,328.39
Total Funding Amount			\$374,368.30

	Approved signatures	Date:	Note: 1: This Work Order Proposal becomes an authorized Work Order when signed by APM.
JOC Contractor		12/12/2022	
Project Manager			
Client Authorized Funding			
Cost Engineer			
Assistant Program Manager (APM)			

Notice to Proceed (NTP) DATE _____

SCOPE OF WORK

Date: November 4, 2022

Contract Name & No.: J20-06, DES SW JOC

Project Name: WSSB Ogden Resource Center Roof Repair

Bid No.: N/A

Work Location: Washington State School of the Blind
2214 E 13th Street
Vancouver, WA 98661

Saybr Project Manager: Peggy Togioka, ptogioka@saybr.com, 206-730-8305

Work Hours: Normal Business Hours, 7am – 5pm, Monday thru Thursday

Estimated Duration: TBD Days following NTP

Long Lead Items: **None anticipated.**

Procurement: TBD

Project Summary: Rehabilitate existing membrane roof with a complete overlay of the existing roof field to include parapet walls, all roof penetrations and sawtooth skylight structure walls up to 12" +/- . Probe all windows for active leaks and pre-existing degradation. Remove and install new window sealant.
IMPORTANT: Must be 100% complete, punched and final walked by June 30, 2023.

GENERAL INFORMATION:

1. This Scope of Work is based on the information received from the Joint Scoping Meeting held on 3/31/2022 with Client representative David Zilavey and onsite meeting with Nate Abkemeier and David Zilavey on 10/26/2022.
2. Performance of all work will be in accordance with all OSHA and Washington DOSH requirements.
3. Daily job site cleanup is required before the work crew leaves the site each day and final clean-up is required prior to final inspection and acceptance.
4. Contractors will be responsible for their own waste disposal.
5. Project requires State Prevailing Wages to be paid and submission of weekly certified payrolls.
6. Outages to be coordinated 72 hours prior to shutdown with Facility Maintenance Manager.
7. All work must be completed 100% including all punch list items and final walked by June 30, 2023.

TECHNICAL SCOPE OF WORK:

1. General Requirements

All work performance shall be completed in accordance with the "Project Drawings," and all local, city, and state AHJ requirements and regulations.

Provide all labor, materials, and equipment to complete the following work package to the extent necessary to complete the intended scope of work including all parts, pieces, and components:

2. Safe-Off Existing HVAC, Solar Panels & Reinstate at Completion

2.1. Prior to starting the work, assure intake HVAC units have been locked out.

2.1.1. Cover louvers before proceeding with any coating work as intake from the roof may impact indoor air quality or activate smoke detectors in the ductwork.

2.2. Confirm connectivity of all solar panel connections that will be affected by the work. Saybr assumes that

solar panel connections will not require repairs for proper operation. If deficiencies are discovered, notify the Facility.

2.2.1. LOTO existing solar panel connections and safe-off for the work. Cables should be coiled up, bagged and secured out of the way.

2.2.2. Reinstate at completion and test for connectivity.

2.3. Existing damaged cabling for the old irrigation controls shall be removed by the Facility.

3. Clean and Repair Existing Roof Failures, Attachment 01

3.1. The existing roof system will be cleaned of all oils, algae and debris.

3.1.1. Utilize 2000 psi oscillating scrubber head.

3.1.2. Protect all roof vents and drains.

3.1.3. Discharge water to be filtered and properly disposed offsite.

3.2. Repair all compromised areas identified in **Attachment 01**.

3.3. Remove existing roof membrane down to substrate. Assuming existing deck and framing is in good working order and needs no repairs, modifications, or adjustments.

3.3.1. Report any damaged substrate or water penetration to Owner.

3.4. Remove compromised insulation per and replace like in kind.

3.5. Repair cuts made extending past the target 12" minimum beyond each repair. Utilize a 3-course repair at each slice.

3.6. Cleanup and properly dispose of all general construction debris off site.

4. Resurface Roof to Include Parapets and Sawtooth Areas Up 12"

4.1. Provide and install AlphaGuard BIO Base Coat per the manufacturer's recommendations.

4.1.1. Coating shall be applied to wall flashings first then on the roof field.

4.1.2. Embed AlphaGuard polyester in the base coat covering the polyester. Polyester mat shall be installed in the roof field to include all flashings.

4.1.3. Allow to dry, 3hrs minimum prior to installing topcoat.

4.2. Apply AlphaGuard BIO Topcoat within 72 hours of Base Coat installation.

4.2.1. Apply AlphaGuard Re-prime if Topcoat cannot be applied within 72 hours of base coat application.

4.2.2. AlphaGuard shall be applied in 50-degree and rising air temperatures, no exceptions. Weather shall be clear of snow, rain, fog and mist.

4.2.3. Sand areas of polyester that have lifted during installation of base coat and allow to dry.

4.3. **Install non-skid walkway. Submit product data for approval by the Ownersip.**

4.4. Provide and install overlayment to sawtooth walls to establish the required warranty height.

4.4.1. Cut existing TPO horizontally 8"-12" above finished floor and slip new TPO clad metal, fasten every 12".

4.4.2. Weld TPO wall sheet to new TPO clad metal termination.

4.5. Provide overlayment to the mechanical rooftop unit **curbs up to the underside of the drip edge, see Attachment 02.**

4.5.1. Provide and install new 4" slip metal flashing for the existing mechanical rooftop units.

4.6. Provide overlayment to all roof penetrations, see also **Attachment 02** for installation details.

4.6.1. Assure securing the drain strainer attachments do not create a leak point during the work. See detail LA-FR-24.

4.6.2. Assure fasteners are coated with sealant prior to completion, see detail LS-FR-17.

4.6.3. Assure all installations are properly flashed.

4.7. Provide and install new 4" slip metal flashing to all parapet walls to terminate restoration system.

4.7.1. Tented base flashing at perimeter walls to be stagger nailed with 4" screws and barbed plates.

4.7.2. Install a 3-course repair to each fastener head with Geogard Seam Sealer and Permafab.

4.8. Repair existing "mole run" prior to overlayment.

4.8.1. Cut mole run and install wide base coat target. Feather base coat an additional 12" min outside

of the repair.

4.9. Dollup ALL new fasteners with Tremseal Pro, all locations.

4.10. Cleanup and properly dispose of all general construction debris off site.

5. Strip Existing Window Sealant and Reseal

5.1. Prior to starting the work, probe all existing windows in the sawtooth structures (doghouses).

5.1.1. Each single-ply seam shall be investigated around entire window. If any openings are found, properly install TPO welded patches and notify the Facility of any failures found.

5.2. Perform corrective work around windows. Corrective work shall prevent further water infiltration into the building.

5.2.1. Cut and replace window perimeter sealant at every window.

5.2.2. Clean and prep all joints free of debris and wipe with acetone to promote adhesion.

5.3. Tool new Tremseal Pro neatly into place (white) and allow to cure.

5.4. Assure repair is water-tight at completion and test for leaks at completion.

5.5. Cleanup and properly dispose of all general construction debris off site.

ASSUMPTIONS:

1. This proposal excludes hazardous materials investigation, testing and removal. Owner to provide Good Faith Hazardous Materials Report, if available. If suspect material is found, Saybr shall notify the Facility.
2. The existing building requires no additional structural upgrades to execute all work associated with this work order, including all walls, ceilings and floors. All existing structural configurations and components meet all of the current local, city, and state AHJ codes and requirements.

EXCLUSIONS:

1. **Permits. As this is method of rehabilitation is considered maintenance work, a permit is not required.**
2. Hazardous materials remediation.

PERMITS:

1. A roof permit is likely to be required.

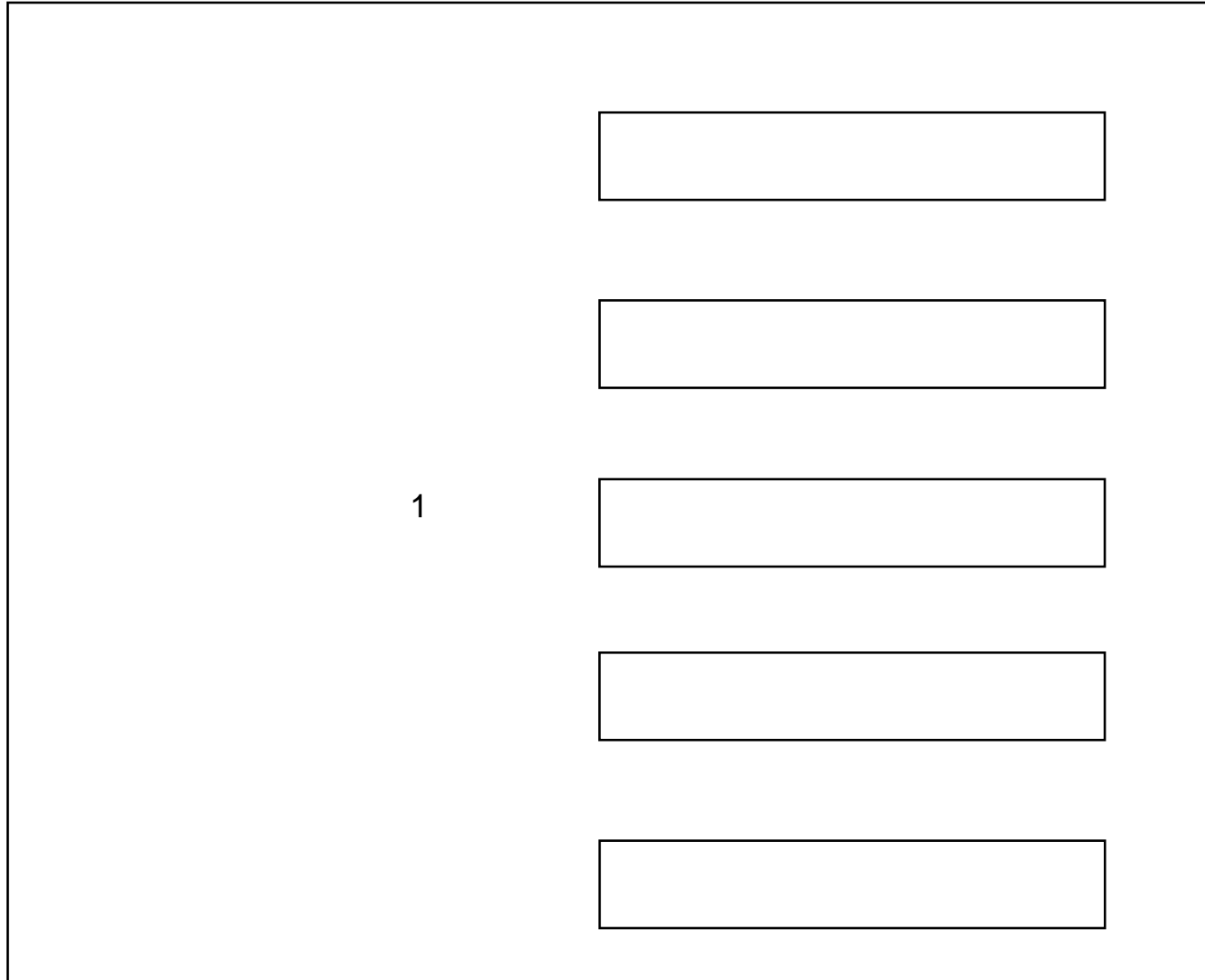
SUBMITTALS:

1. Construction Schedule
2. Site Specific Safety Plan
3. Product Data Sheets:
 - a. SemiCured EPDM Tape
 - b. AlphaGuard BIO Base Coat
 - c. AlphaGuard Polyester
 - d. AlphaGuard Re-prime
 - e. AlphaGuard BIO Topcoat
 - f. **Non-Skid Walkway Product**
 - g. Metal Terminations
 - h. 4" Slip Metal Flashing Profile
 - i. Geogard Seam Sealer and Permafab
 - j. Tremseal Pro (White)
4. O&M Manual:
 - a. Care instructions
 - b. Warranty company contact information
5. Two-year Installer's Warranty.

6. 20-Year Tremco QA Warranty to include housekeeping and inspections on years 2, 5, 10, 15 from the date of substantial completion established by the Owner.



Attachment 01
dated 10/21/2022



*All measurements must be confirmed by the contractor.



Roofing and Building Maintenance

5500 NE 109th CT Suite O Vancouver WA 98662

Washington State School
for the Blind -

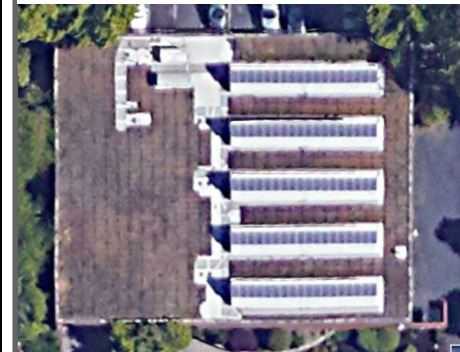
2214 E 13th St
Vancouver, WA 98661

Drawn By:
J.B.


Date:
09/19/2022

Roof 1: 9,800 sq. ft.

Total: 9,800 sq. ft.





 = Wet Area



Roofing and Building Maintenance

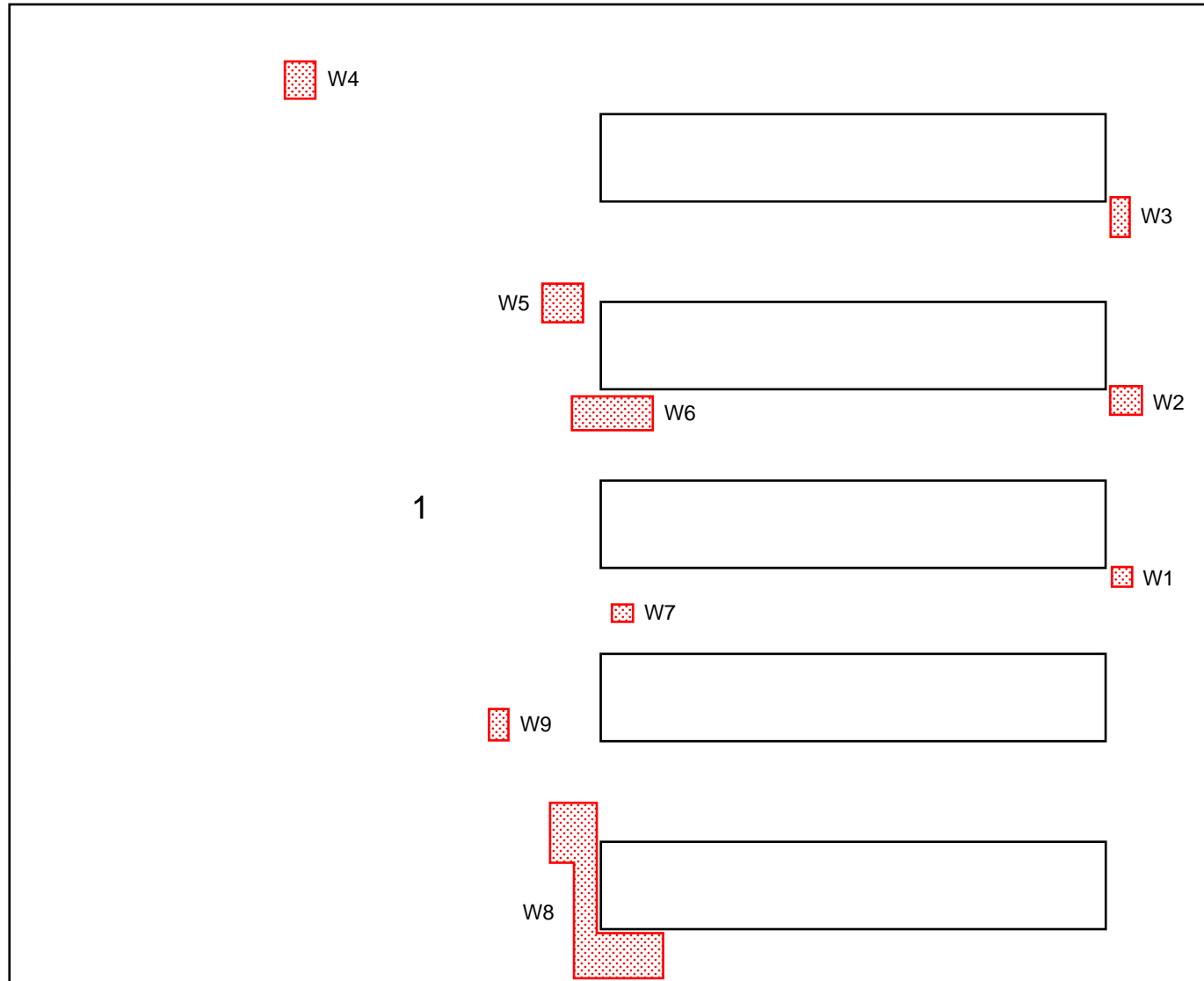
5500 NE 109th CT Suite O Vancouver WA 98662

Washington State School
for the Blind -

2214 E 13th St
Vancouver, WA 98661

Drawn By:
J.B.

Date:
09/19/2022



Roof 1: 9,800 sq. ft.

W1: 4 sq. ft.

W2: 9 sq. ft.

W3: 8 sq. ft.

W4: 12 sq. ft.

W5: 16 sq. ft.

W6: 28 sq. ft.

W7: 4 sq. ft.

W8: 86 sq. ft.

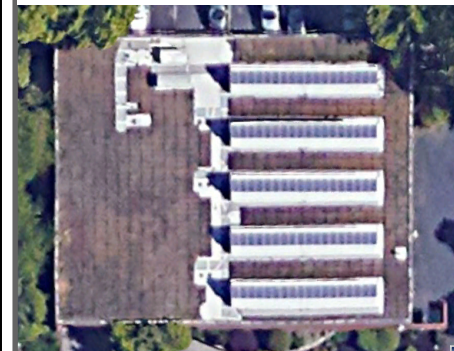
W9: 6 sq. ft.

Roof 1 Wet: 173 sq. ft.

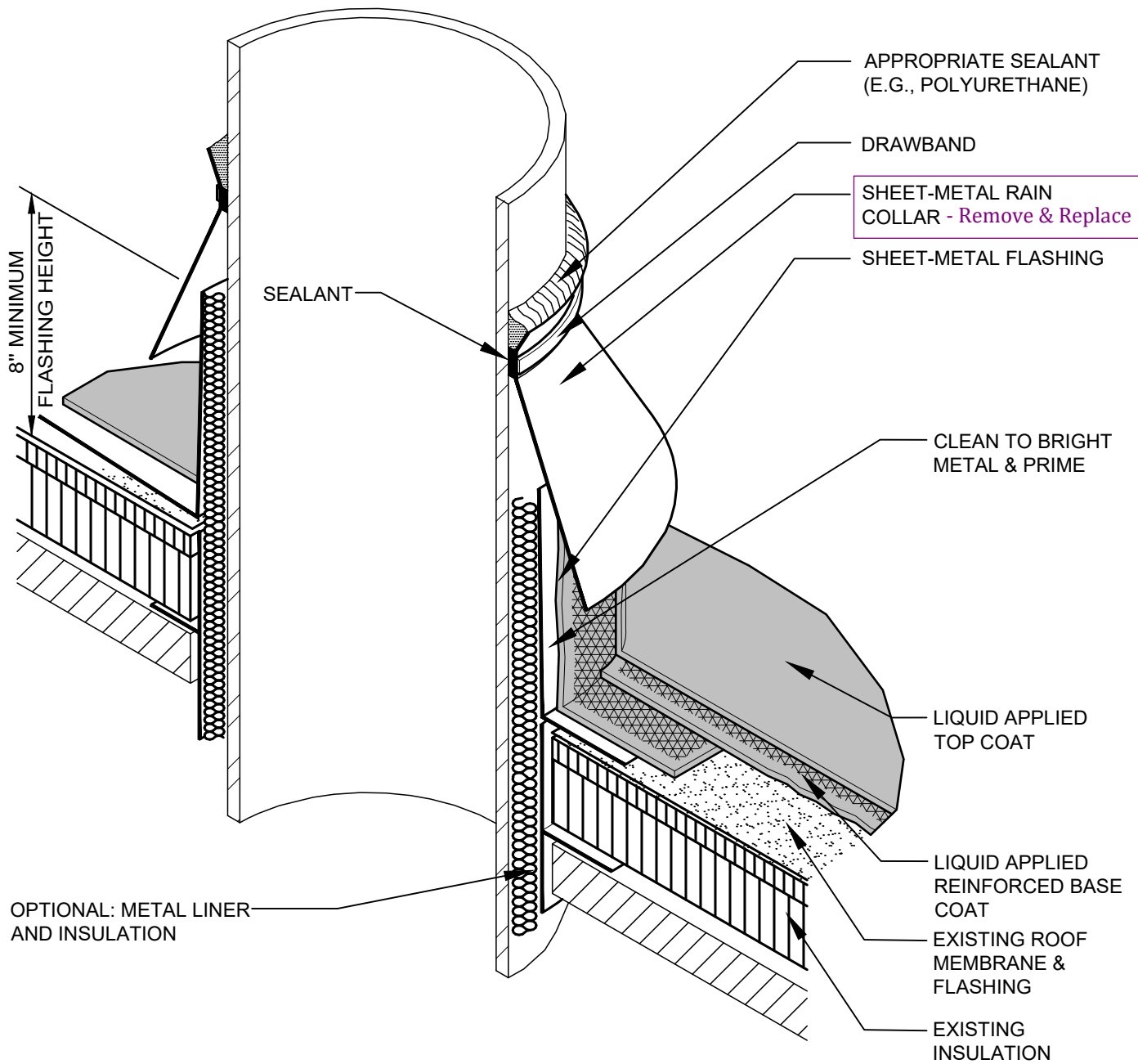
1.7% Wet

Total: 9,800 sq. ft.

173 sq. ft. (1.7%) Wet



*All measurements must be confirmed by the contractor.



NOTES

1. PRIMING OF THE SUBSTRATE MAY BE REQUIRED, FOLLOW SPECIFICATIONS AND MANUFACTURER RECOMMENDATIONS.
2. REINFORCEMENT MUST BE FULLY SATURATED OR ENCAPSULATED IN BASE COAT AS DESCRIBED IN SPECIFICATIONS.

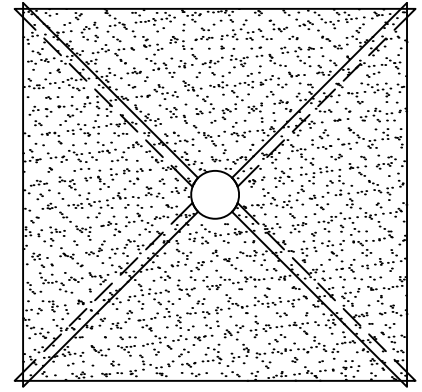
SHEET-METAL STACK VENT [HOT OR COLD]
FULLY REINFORCED RESTORATION

LA-FR-18

N.T.S.

TREMCO
ROOFING & BUILDING MAINTENANCE

DRAIN STRAINER



CUT REINFORCEMENT INTO TRIANGLES AND OVERLAP INTO BOWL.

Assure this penetration does not allow for leaks.

CLAMPING RING

TRIM EXISTING FLASHINGS TO WHERE BOWL TURNS DOWN. ENSURE NEW FLASHINGS FULLY ENCAPSULATES OLD FLASHINGS.

DECK CLAMP

EXTEND LIQUID APPLIED SYSTEM INTO DRAIN

CAST-IRON DRAIN BOWL

CLEAN TO BRIGHT METAL AND PRIME

LIQUID APPLIED REINFORCED BASE COAT

EXISTING INSULATION SUMP

EXISTING ROOF MEMBRANE

NOTES

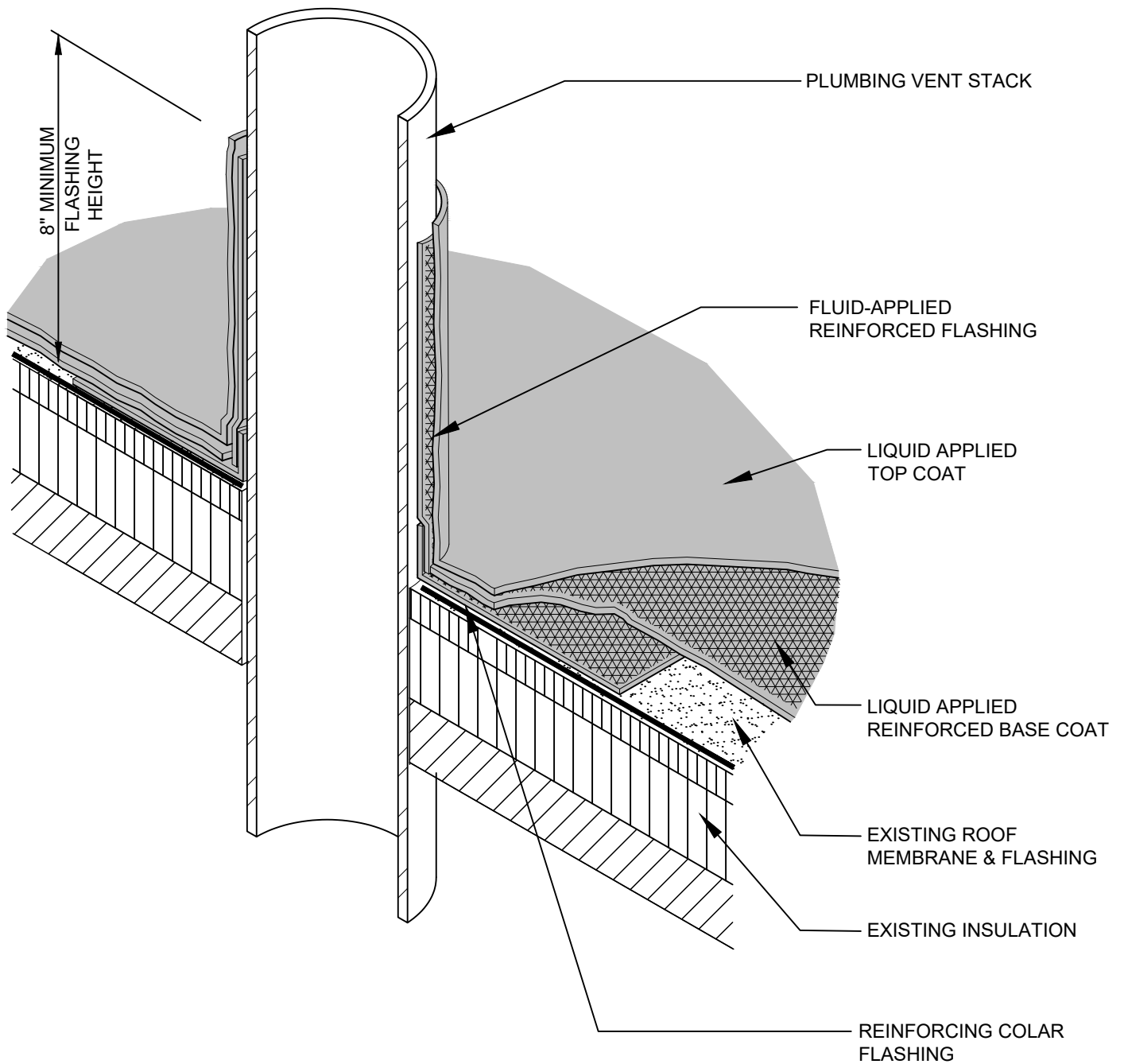
1. PRIMING OF THE SUBSTRATE MAY BE REQUIRED, FOLLOW SPECIFICATIONS AND MANUFACTURER RECOMMENDATIONS.
2. REINFORCEMENT MUST BE FULLY SATURATED OR ENCAPSULATED IN BASE COAT AS DESCRIBED IN SPECIFICATIONS.
3. REMOVE EXISTING FLASHINGS PRIOR TO INSTALLATION OF NEW FLUID APPLIED SYSTEMS.

ROOF DRAIN FULLY REINFORCED RESTORATION

LA-FR-24

N.T.S.





NOTES

1. PRIMING OF THE SUBSTRATE MAY BE REQUIRED, FOLLOW SPECIFICATIONS AND MANUFACTURER RECOMMENDATIONS.
2. REINFORCEMENT MUST BE FULLY SATURATED OR ENCAPSULATED IN BASE COAT AS DESCRIBED IN SPECIFICATIONS.

**PLUMBING VENT OR PIPE PENETRATION
FULLY REINFORCED RESTORATION**

LA-FR-19

N.T.S.



Refer also to SOW for slip metal flashing installation requirement.

MEMBRANE
EXTENDED BELOW
NAILER AND SECURED

EXISTING OR NEW METAL
COPING CAP

SLOPE

TOP COAT

FULLY REINFORCED
BASE COAT

8" MINIMUM
FLASHING HEIGHT

EXISTING ROOF MEMBRANE
AND FLASHINGS

EXISTING INSULATION

NOTES

1. PRIMING OF THE SUBSTRATE MAY BE REQUIRED, FOLLOW SPECIFICATIONS AND MANUFACTURER RECOMMENDATIONS.
2. REINFORCEMENT MUST BE FULLY SATURATED OR ENCAPSULATED IN BASE COAT AS DESCRIBED IN SPECIFICATIONS.

BASE FLASHING AT PARAPET WALL WITH METAL COPING FULLY REINFORCED RESTORATION

LA-FR-1

N.T.S.

TREMCO
ROOFING & BUILDING MAINTENANCE

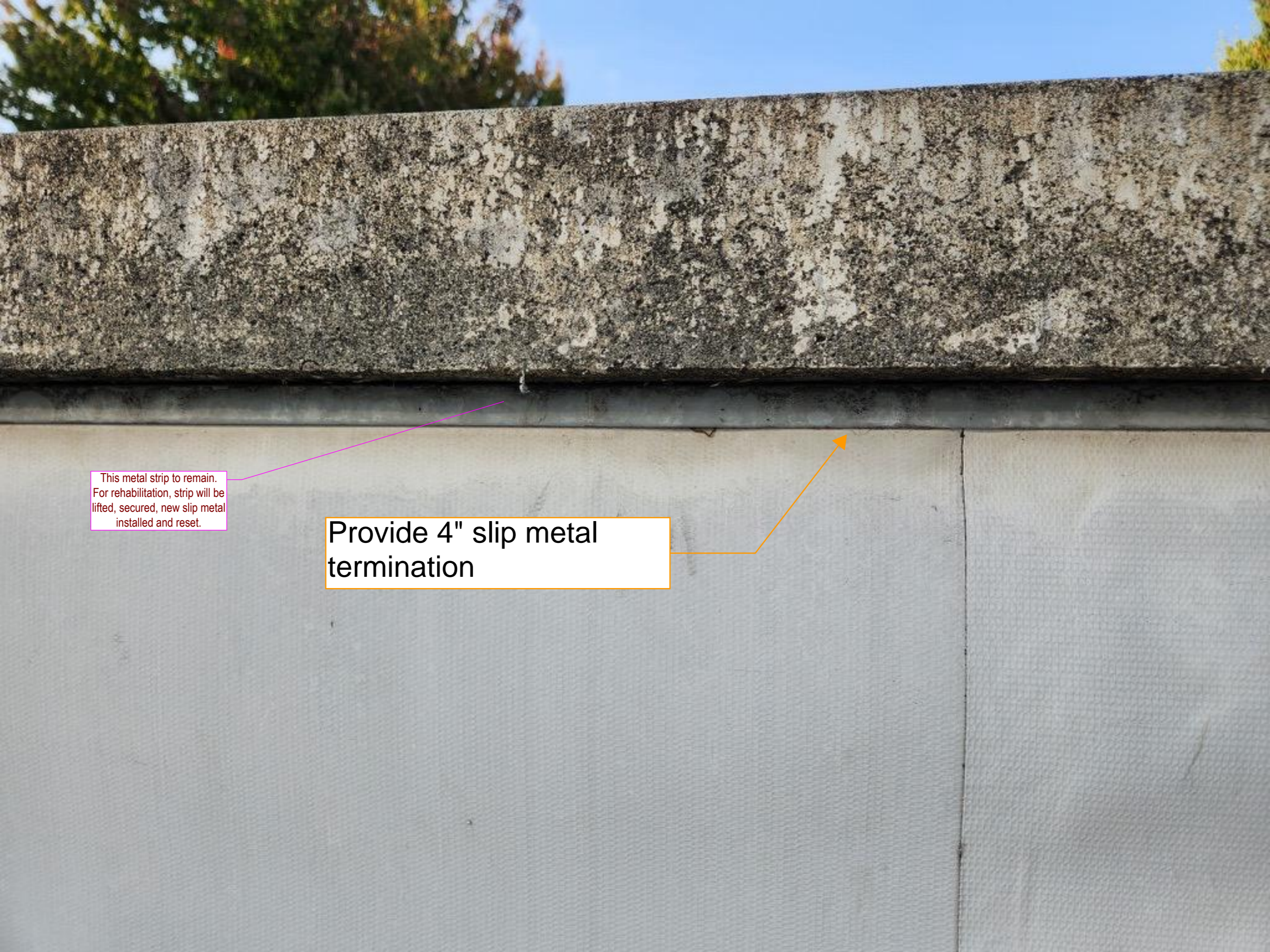


Rehabilitation coating up to drip edge of units.

Remove skirt metal and stop fluid flashing at base of metal. Add new 4" slip metal to terminate

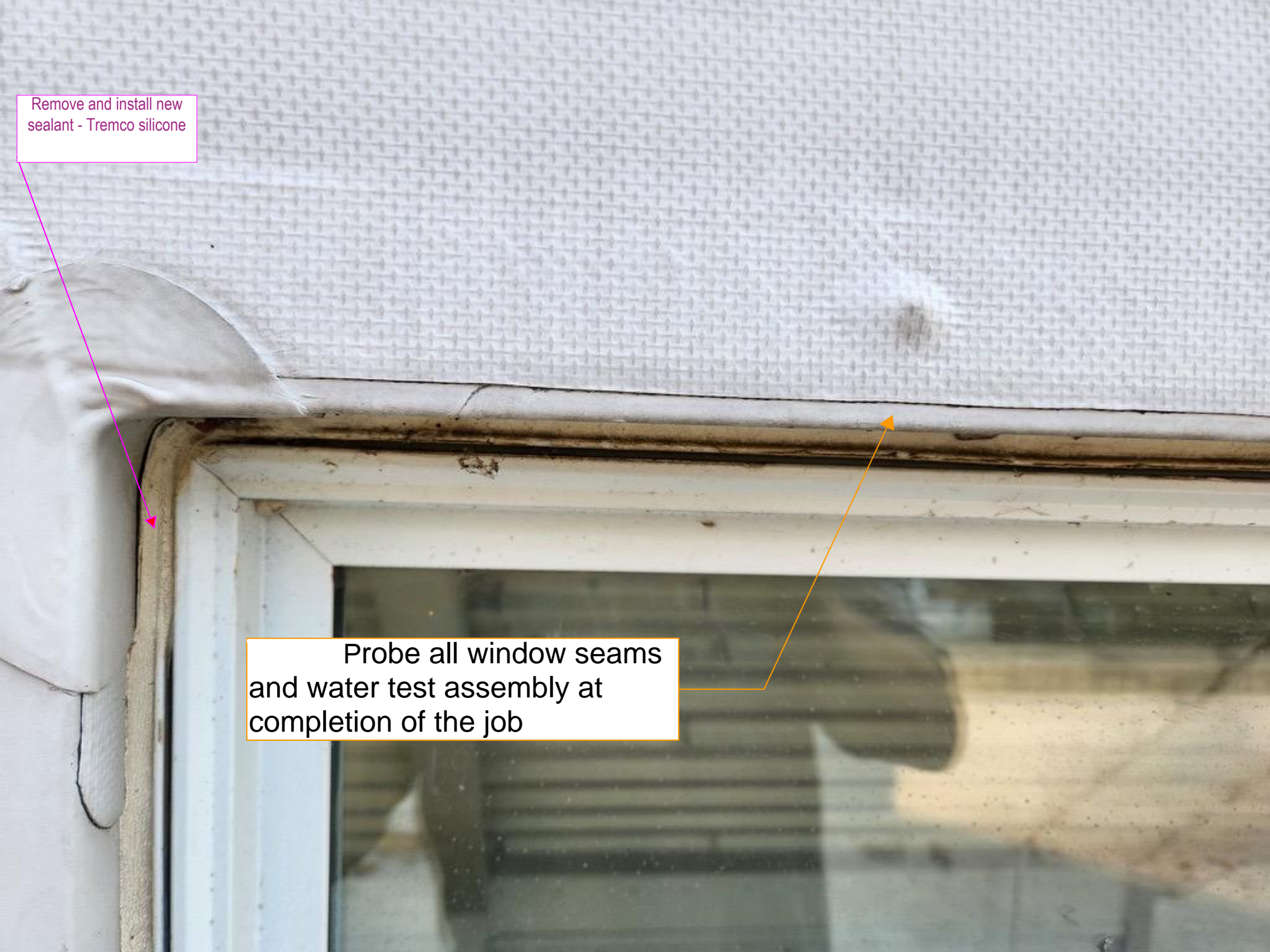
This metal strip to remain.
For rehabilitation, strip will be
lifted, secured, new slip metal
installed and reset.

Provide 4" slip metal
termination



Remove and install new sealant - Tremco silicone

Probe all window seams and water test assembly at completion of the job



DIVISION 07 - THERMAL AND MOISTURE PROTECTION

070150.16 Maintenance Cleaning of Membrane Roofing (RoofTec)

070150.74 Rehabilitation of Single Ply Roofing (AlphaGuard)

SECTION 070150.16 - MAINTENANCE CLEANING OF MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Pressure washing of roof membrane including membrane flashings, with full water reclamation.

B. Related Requirements:

1. Division 07 roofing rehabilitation section for repair and restoration coating of roofing membranes.

1.2 ACTION SUBMITTALS

- A. Product Data: For cleaning compounds.

1.3 INFORMATIONAL SUBMITTALS

- A. Work Plan: For maintenance cleaning, including description of means and methods for water reclamation.

1.4 QUALITY ASSURANCE

- A. Operator Qualifications: Trained and approved by manufacturer of cleaning equipment, with a record of successful roofing membrane cleaning.
- B. Regulatory Requirements: Comply with governing EPA regulations. Comply with hauling and disposal regulations of authorities having jurisdiction.

1.5 PROJECT / FIELD CONDITIONS

- A. Owner will occupy portions of building immediately below roof area to be maintained. Conduct operations so Owner's operations are not disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.
- B. Protect building to be cleaned, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from maintenance operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

PART 2 - PRODUCTS

2.1 CLEANING SYSTEM OPERATORS

- A. Source Limitations: Engage a qualified roofing maintenance cleaning firm to perform cleaning of membrane roofing.
- B. Approved Operators: RoofTec Cleaning Systems, Tremco CPG Inc., Beachwood OH, (800) 562-2728.

2.2 PERFORMANCE REQUIREMENTS

- A. Water Reclamation: Provide maintenance cleaning of membrane roofing that provides 100 percent reclamation of cleaning water and complies with applicable provisions of the US EPA National Pollutant Discharge Elimination System (NPDES) program and requirements of local authorities having jurisdiction.

2.3 MATERIALS

- A. Pre-cleaning Treatment: Detergent-free.
 - 1. Product: Tremco, RoofTec PREKLEEN.
- B. Pressure Wash Cleaning Solution: VOC, detergent, phosphate, and surfactant free.
 - 1. Product: Tremco, RoofTec RENEW Cleaner.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Comply with warranty requirements of existing roof membrane manufacturer.
- 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. Immediately notify Owner of any blockages or restrictions.
- D. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work. Cover air-intake louvers before proceeding with maintenance cleaning work that could affect indoor air quality or activate smoke detectors in the ductwork.
- E. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors.

3.2 MAINTENANCE CLEANING OF ROOF MEMBRANE

- A. Pretreat membrane and flashings when recommended by cleaning equipment manufacturer based upon site assessment of membrane condition.

- B. Apply pressure wash cleaning solution onto membrane and flashing surfaces.
- C. Pressure wash membrane and flashings using equipment and methods recommended in writing by cleaning equipment manufacturer for specific application. Utilize rotating wash head equipment operated at not less than 2,000 psi (13,800 kPa). Use equipment utilizing vacuum removal of wash water and residues.

3.3

3.4 DISPOSAL

- A. Collect cleaning water and associated cleaning compounds and residual material and process to meet US EPA and local environmental requirements for legal discharge.

END OF SECTION 070150.16

SECTION 070150.74 - REHABILITATION OF SINGLE PLY ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Roof membrane coating preparation.
2. Application of reinforced fluid-applied roof membrane and flashings over existing fully adhered TPO membrane roof.

1.2 ROOFING CONFERENCES

A. Roofing Rehabilitation Preinstallation Conference: Conduct conference at Project site to review methods and procedures related to roofing system.

1. Meet with Owner; roofing coating materials manufacturer's representative; roofing rehabilitation Installer including project manager and foreman; and installers whose work interfaces with or affects rehabilitation including installers of roof accessories and roof-mounted equipment requiring removal and replacement as part of the Work.
2. Review temporary protection requirements for existing roofing system that is to remain uncoated, during and after installation.
3. Review methods and procedures related to re-coating preparation, including coating manufacturer's written instructions.
4. Review roof drainage during each stage of coating and review roof drain plugging and plug removal procedures.
5. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
6. Review base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect coating.
7. Review HVAC shutdown and sealing of air intakes.
8. Review shutdown of fire-suppression, -protection, and -alarm and -detection systems.
9. Review procedures for asbestos removal or unexpected discovery of asbestos-containing materials.
10. Review governing regulations and requirements for insurance and certificates if applicable.

11. Review existing conditions that may require notification of Owner before proceeding.

1.3 MATERIALS OWNERSHIP

- A. Demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.
- B. Roofing Coating Preparation: Existing roofing that is to remain and be prepared to accept restorative coating application.
- C. Patching: Removal of a portion of existing membrane roofing system from deck or removal of selected components and accessories from existing membrane roofing system and replacement with similar materials.
- D. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- E. Existing to Remain: Existing items of construction that are not indicated to be removed.

1.5 ACTION SUBMITTALS

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

1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Product Certificate: Submit notarized certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
 1. Provide manufacturer's UL listing certificate for roofing system.
- B. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing rehabilitation system.
- C. Qualification Data: For Installer, Manufacturer, and Roofing Inspector.
 1. Letter written for this Project indicating manufacturer approval of Installer to apply specified products and provide specified warranty.
- D. Warranties: Unexecuted sample copies of special warranties.

- E. Photographs or Video Recordings: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, which might be misconstrued as having been damaged by rehabilitation operations. Submit before Work begins.
- F. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for environmental protection, and for dust control. Indicate proposed locations and construction of barriers.
- G. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions required and carried out.
 - 1. Submit report within 48 hours after inspection.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: To include in maintenance manuals.
- B. Warranties: Executed copies of approved warranty forms.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of three years' experience installing products similar to those specified, able to communicate verbally with Contractor, Architect, and employees, and the following:
 - 1. Qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Manufacturer Qualifications: Primary product manufacturer that is UL listed for roofing system identical to that specified for this Project with minimum five years' experience in manufacture of comparable products in successful use in similar applications, and able to furnish warranty with provisions matching specified requirements.
- C. Roofing Inspector Qualifications: A technical representative of manufacturer experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be:
 - 1. An authorized full-time technical employee of the manufacturer.

1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with rehabilitation work only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.
 - 1. Store all materials prior to application at temperatures recommended by manufacturer.

2. Apply coatings within range of ambient and substrate temperatures recommended by manufacturer.
 3. Do not apply roofing in snow, rain, fog, or mist.
- B. Protect building to be rehabilitated, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from rehabilitation operations.
 - C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
 - D. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 - E. Owner will occupy portions of building immediately below re-coating area. Conduct re-coating so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.

1.10 WARRANTY

- A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
 1. Form of Warranty: Manufacturer's standard warranty form.
 2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
 3. Warranty Period: 20 years from date of completion.
- B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
 1. Inspections to occur in following years: 2, 5, 10, and 15 following completion.
- C. Installer Warranty: Installer's warranty signed by Installer, as follows.
 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
 2. Scope of Warranty: Work of this Section.
 3. Warranty Period: 2 years from date of completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Inc, Beachwood, OH, (800) 562-2728, www.tremcoroofing.com that are named in other Part 2 articles. Provide specified products.
 - 1. Manufacturers of comparable products: Approved by Owner prior to bid.
- B. Source Limitations: Obtain components for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Rehabilitated roofing shall withstand exposure to weather without failure or leaks due to defective manufacture or installation.
 - 1. Accelerated Weathering: Roofing system shall withstand 5000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Exterior Fire-Test Exposure: Roofing system exterior fire-test exposure performance following application of rehabilitation coating shall be not be less than that of the prerehabilitated roof performance when tested in accordance with ASTM E108, based upon manufacturer's tests of identical applications.
- D. Energy Performance: Provide rehabilitated roof meeting initial solar reflectance of 75 when calculated according to ASTM E1980.
- E. Energy Performance: Provide rehabilitated roofing according to the following when tested according to CRRC-1:
 - 1. Three-year, aged solar reflectance of not less than 0.55 and emissivity of not less than 0.75.

2.3 MATERIALS, GENERAL

- A. General: Rehabilitation materials recommended by roofing system manufacturer for intended use and compatible with components of existing membrane roofing system.
- B. Infill Materials: Where required to replace test cores and to patch existing roofing, use infill materials matching existing membrane roofing system materials, unless otherwise indicated.
- C. Temporary Roof Drainage: Design and selection of materials for temporary roof drainage are responsibilities of the Contractor.

2.4 FLUID-APPLIED ROOFING MEMBRANE COATING

- A. Polyurethane Elastomeric Fluid-Applied System: Two-coat fluid-applied roofing membrane formulated for application over prepared existing roofing substrate.
1. Polyurethane Roof Coating System Base Coat: Bio-based, low-odor low-VOC two-part, for use with a compatible top coat.
 - a. Basis of design product: Tremco, AlphaGuard BIO Base Coat.
 - b. Combustion Characteristics, UL 790: Maintains combustion characteristics of existing roof system.
 - c. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 1 g/L.
 - d. Accelerated Weathering, 5000 hours, ASTM G154: Pass.
 - e. Hardness, Shore A, minimum, ASTM D2240: 80.
 - f. Solids, by volume, ASTM D2697: 100 percent.
 - g. Bio-Based Content, Minimum: 70 percent.
 - h. Minimum Thickness, Base Coat reinforced over Smooth BUR, MB, Concrete, Single-Ply: 48 mils (1.22 mm) wet.
 2. Polyurethane roof coating system top coat, bio-based low-odor low-VOC two-part, for application over compatible base coat.
 - a. Basis of design product: Tremco, AlphaGuard BIO Top Coat.
 - b. Combustion Characteristics, UL790: Maintains combustion characteristics of existing roof system.
 - c. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 6 g/L.
 - d. Solar Reflectance Index (SRI), ASTM E1980: For white, not less than 103.
 - e. Accelerated Weathering, 5000 hours, ASTM G 154: Pass.
 - f. Hardness, Shore A, minimum, ASTM D2240: 81.
 - g. Solids, by volume, ASTM D2697: 100 percent.
 - h. Bio-Based Content, Minimum: 60 percent.
 - i. Minimum Thickness, reinforced system: 32 mils (0.81 mm) wet.
 - j. Minimum Thickness, Slip-Resistant Coat: 24 mils (0.60 mm) wet.

k. Color: White.

B. Primers:

1. Primer for Asphaltic and Single-Ply Membranes: Water-based, polymer-modified quick-dry low odor primer.
 - a. Basis of design product: Tremco, AlphaGuard WB Primer.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 1 g/L.
 - c. Solids, by weight: 70 percent.
2. Primer for Intercoat and Substrate Adhesion: Single-part, quick-drying primer to promote adhesion of urethane products to previous urethane coats and to other approved surfaces.
 - a. Basis of design product: Tremco, Geogard Primer.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 100 g/L.
 - c. Coverage Rate, 400 sq. ft/ gal. (10 m²/ L): 4 mils (0.10 mm) wet.

C. Fluid-Applied Roofing Reinforcing Fabric:

1. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded mildew-resistant polyester fabric intended for reinforcement of compatible fluid-applied membranes and flashings and as a protection layer under pavers or stone aggregates.
 - a. Basis of design product: Tremco, Permafab.
 - b. Tensile Strength, Minimum, ASTM D1682: 50 lbf (23 kg) avg..
 - c. Elongation, Minimum, ASTM D1682: 60 percent.
 - d. Tear Strength, Minimum, ASTM D1117: 16 lbf (7.3 kg) avg..
 - e. Weight: 3 oz./sq. yd (102 g/sq. m).

2.5 AUXILIARY ROOFING REHABILITATION MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with existing roofing system and roofing coating system.
- B. Repairs
 1. Semi-Cured EPDM Tape
- C. Joint Sealant: Elastomeric joint sealant compatible with applied coating, with movement capability appropriate for application.

1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
 - a. Basis of design product: Tremco, TremSEAL Pro.
 - b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
 - c. Hardness, Shore A, ASTM C661: 40.
 - d. Adhesion to Concrete, ASTM C794: 35 pli.
 - e. Tensile Strength, ASTM D412: 350 psi (2410 kPa).
 - f. Color: Closest match to substrate.

- D. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.6 WALKWAYS

Submit product data for approval for walkways.

- A. Slip Resistant Product for Fluid-Applied Walkways:

1. Granular Roofing Surfacing: Ceramic-coated roofing granules, No. 11 screen size with 100 percent passing No. 8 (2.36-mm) sieve and 98 percent of mass retained on No. 40 (0.425-mm) sieve.
 - a. Basis of design product: Granular Roofing Surfacing, Colored.
 - b. Aggregate application rate, average: 10 - 15 lb/100 sq ft (0.5 - 0.75 k/m²).
 - c. Color: As selected by Architect from manufacturer's standard colors.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine existing roofing substrates, with Installer present, for compliance with requirements and for other conditions affecting application and performance of roof coatings
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
 2. Verify compatibility with and suitability of substrates.
 3. Verify that substrates are visibly dry and free of moisture.
 4. Verify that roofing membrane surfaces have adequately aged to enable proper bond with base coat.

5. Verify that roofing membrane is free of blisters, splits, open laps, indications of shrinkage, and puncture damage or other indications of impending roof system failure.
6. Provide a site-specific safety plan prior to the start of construction.
7. Commencing application of coatings indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Protect existing roofing system that is indicated not to be rehabilitated, and adjacent portions of building and building equipment.
 1. Mask surfaces to be protected. Seal joints subject to infiltration by coating materials.
 2. Limit traffic and material storage to areas of existing roofing membrane that have been protected.
 3. Maintain temporary protection and leave in place until replacement roofing has been completed.
- B. Shut down air intake equipment in the vicinity of the Work in coordination with the Owner. Cover air intake louvers before proceeding with coating work that could affect indoor air quality or activate smoke detectors in the ductwork.
 1. Verify that rooftop utilities and service piping affected by the Work have been shut off before commencing Work.
- C. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
 1. Do not permit water to enter into or under existing membrane roofing system components that are to remain.

3.3 ROOFING COATING PREPARATION

- A. Removal of Wet Insulation: Remove portions of roofing membrane with underlying wet insulation. Remove wet insulation, fill in tear-off areas to match existing insulation and membrane, and prepare patched membrane for application of roof coating as specified below.
- B. Repair of Ponding Areas: Repair areas indicated as ponding areas or areas of inadequate drainage by removing roof membrane, adding additional insulation as required to provide minimum slopes to drain required by roofing rehabilitation coating manufacturer, and replace membrane with material matching existing. Submit photographic report indicating compliance.
- C. Membrane Surface Preparation:
 1. Remove walkway pads from roofing membrane. Recycle pavers.

2. Remove blisters, ridges, buckles, roofing membrane fastener buttons projecting above the membrane, and other substrate irregularities from existing roofing membrane that would inhibit application of uniform, waterproof coating.
 3. Broom clean existing substrate.
 4. Substrate Cleaning: Clean substrate of contaminants such as dirt, debris, oil, and grease that can affect adhesion of coating by power washing at maximum 2,000 psi (13,800 kPa).
 - a. Dispose of waste water in accordance with requirements of authorities having jurisdiction.
 5. Verify that existing substrate is dry before proceeding with application of coating. Spot check substrates with an electrical capacitance moisture-detection meter.
 6. Verify adhesion of new products.
- D. Existing Flashing and Detail Preparation: Repair flashings, gravel stops, copings, and other roof-related sheet metal and trim elements. Reseal joints, replace loose or missing fasteners, and replace components where required to leave in a watertight condition.
1. Metal counterflashings shall be removed and replaced with same metal, weight or thickness, and finish.
 2. Remove and replace 4" slip metal flashing. Match same metal, weight, or thickness, and finish of existing.
 3. Roof Drains: Remove drain strainer and clamping ring. Grind metal surfaces down to clean, bare, metal.
- E. Surface Priming: Prime surfaces to receive fluid-applied coating using coating manufacturer's recommended product for surface material. Apply at application rate recommended by manufacturer.
1. Ensure primer does not puddle and substrate has complete coverage.
 2. Allow to cure completely prior to application of coating.
- F. Membrane Seam Reinforcement: Reinforce membrane seams using seam sealer mastic and reinforcing fabric overlapping onto field of existing membrane not less than width required by roof coating manufacturer.
- G. Repairs: 3 course repair each slice using EPDM Tape and Polyurethane Roof Base Coat target to each repair area extending target min 12" beyond each repair.

3.4 FLUID-APPLIED FLASHING APPLICATION

- A. Fluid-Applied Flashing and Detail Base Coat Application: Complete base coat and fabric reinforcement at parapets, curbs, penetrations, and drains prior to application of field of fluid-applied membrane. Apply base coat in accordance with manufacturer's written instructions.
1. Apply base coat on prepared and primed surfaces and spread coating evenly. Extend coating minimum of 8 inches (200 mm) up vertical surfaces and 4 inches (100 mm) onto horizontal surfaces.
 2. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 3. Reinforcing Fabric: Embed fabric reinforcement into wet base coat. Lap adjacent flashing pieces of fabric minimum 3 inches (75 mm) along edges and 6 inches (150 mm) at end laps.
 - a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.
 4. Roof Drains: Install base coat onto surrounding membrane surface and metal drain bowl flange. Install target piece of fabric reinforcement immediately into wet base coat and roll to fully embed and saturate fabric. Reinstall clamping ring and strainer following application of top coat. Replace broken drain ring clamping bolts.

3.5 FLUID-APPLIED MEMBRANE APPLICATION

- A. Fluid-Applied Membrane Base Coat: Apply base coat to field of membrane in accordance with manufacturer's written instructions.
1. Do not install Membrane Base Coat unless temperatures are 50 degrees and rising.
 2. Apply base coat on prepared and primed surfaces and spread coating evenly.
 3. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 4. Fabric Reinforcement: Embed fabric reinforcement into wet base coat. Lap adjacent pieces of fabric minimum 3 inches (75 mm) along edges and 6 inches (150 mm) at end laps.
 - a. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.
- B. Fluid-Applied Membrane Top Coat: Apply top coat to field of membrane and flashings uniformly in a complete, continuous installation.
1. Allow base coat to cure prior to application of top coat.

2. Following curing of base coat and prior to application of top coat, sand raised or exposed edges of fabric reinforcement.
3. Prime base coat prior to application of top coat if top coat is not applied within 72 hours of the base coat application, using manufacturer's recommended primer.
4. Apply top coat extending coating up vertical surfaces and out onto horizontal surfaces. Install top coat over field base coat and spread coating evenly.
5. Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
6. Avoid foot traffic on new fluid-applied membrane for a minimum of 24 hours.

3.6 WALKWAY INSTALLATION

- A. Install walkways following application of coating. Locate as indicated, or as directed by Owner.
- B. Slip-Resistant Walkway Topcoat: Apply walkway second topcoat following application and curing of top coat. Locate as indicated on Drawings.
 1. Mask walkway location with tape.
 2. Prime first top coat prior to application of walkway top coat if walkway top coat is not applied within 72 hours of the first top coat application, using manufacturer's recommended primer.
 3. Apply walkway topcoat and back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 4. Broadcast Slip-Resistant Top Coat Aggregate in wet top coat at rate indicated in Part 2 product listing or as otherwise recommended by coating manufacturer.
 - a. Back roll aggregate and top coat creating even dispersal of aggregate. Remove masking immediately.

3.7 FIELD QUALITY CONTROL

- A. Roofing Inspector: Owner will engage a qualified roofing inspector to perform roof tests and inspections and to prepare test reports.
- B. Roof Inspection: Contractor shall engage roofing system manufacturer's technical personnel to inspect roofing installation, and submit report. Notify Owner 48 hours in advance of dates and times of inspections. Inspect work as follows:
 1. Upon completion of preparation of first component of work, prior to application of re-coating materials.

2. Following application of re-coating to flashings and application of base coat to field of roof.
 3. Upon completion of re-coating but prior to re-installation of other roofing components.
- C. Repair fluid-applied membrane where test inspections indicate that they do not comply with specified requirements.
 - D. Arrange for additional inspections, at Contractor's expense, to verify compliance of replaced or additional work with specified requirements.
- 3.8 PROTECTING AND CLEANING
- A. Protect roofing system from damage and wear during remainder of construction period.
 - B. Correct deficiencies in or remove coating that does not comply with requirements, repair substrates, and reapply coating.
 - C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 070150.74

QTY	Line Number	Description	Unit	Material	Labor	Equipment	Total	Notes
		DIV 01					Total	\$ 31,382.50
4	012153650250	Infectious disease precautions, additional costs due to infectious disease precautions, hand washing station, including service twice per week	Week	\$ -	\$ -	\$ -	\$ 632.00	Handwashing station, L&I requirement
2	015416500100	Forklift crew, all-terrain forklift, 45' lift, 35' reach, 9000 lb. capacity, weekly use	Week	\$ 4.00	\$ 4,550.00	\$ 6,300.00	\$ 10,854.00	Onsite lift for duration of the work
1	015433406430	Rent toilet, fresh water flush, garden hose, Incl. Hourly Oper. Cost.	Month	\$ -	\$ -	\$ 342.00	\$ 342.00	Outside restroom for construction personnel use
1	015433407100	Rent truck pickup 3/4 ton 2 wheel drive, Incl. Hourly Oper. Cost.	Month	\$ -	\$ -	\$ 2,084.80	\$ 2,084.80	Roof rehabilitation crew rig (1m)
2	015436501200	Mobilization or demobilization, delivery charge for small equipment, placed in rear of, or towed by pickup truck	Ea.	\$ -	\$ 228.00	\$ 90.00	\$ 318.00	Small specialized tools mob and demob
2	015436501300	Mobilization or demobilization, delivery charge for equipment, hauled on 3-ton capacity towed trailer	Ea.	\$ -	\$ 342.00	\$ 190.00	\$ 532.00	1 each Mob and 1 each Demob for toilet and hand wash station
2	015436501400	Mobilization or demobilization, delivery charge for equipment, hauled on 20-ton capacity towed trailer	Ea.	\$ -	\$ 880.00	\$ 460.00	\$ 1,340.00	1 each Mob and 1 each Demob for forklift
236	017413200052	Cleaning up, cleanup of floor area, continuous, per day, during construction	M.S.F.	\$ 778.80	\$ 12,272.00	\$ 1,250.80	\$ 14,301.60	Daily clean up on roof
11.8	017413200100	Cleaning up, cleanup of floor area, final by GC at end of job	M.S.F.	\$ 41.18	\$ 849.60	\$ 87.32	\$ 978.10	Final clean up on roof
		DIV 02					Total	\$ 5,725.00
2	024119190725	Selective demolition, rubbish handling, dumpster, 20 C.Y., 5 ton capacity, weekly rental, includes one dump per week, cost to be added to demolition cost	Week	\$ 1,130.00	\$ -	\$ -	\$ 1,130.00	Rubbish removal
2	024119190910	Selective demolition, rubbish handling, dumpster, alternate pricing method, delivery, average for all sizes, cost to be added to demolition cost	Ea.	\$ 150.00	\$ -	\$ -	\$ 150.00	Rubbish handling
16	028120103120	Hazardous waste cleanup/pickup/disposal, liquid pickup, vacuum truck, stainless steel tank, 5000 gallons, minimum charge, 4 hours, 2 compartment	Hr.	\$ -	\$ -	\$ -	\$ 3,200.00	Water disposal to meet EPA requirements
3	028120106020	Hazardous waste cleanup/pickup/disposal, dumpsite disposal charge, maximum	Ton	\$ -	\$ -	\$ -	\$ 1,245.00	Water collection for disposal
		DIV 03					Total	\$ 32,912.64
34284	030130721120	Spall repairs by low-pressure spraying (ACI RAP-3), final cleaning by high pressure water	S.F.	\$ -	\$ 25,027.32	\$ 6,856.80	\$ 31,884.12	Cleaning step prior each coat of roofing materials applications, 11428sf x 3ea applications, includes sawtooths and all parapet surfaces to be rehabilitated

QTY	Line Number	Description	Unit	Material	Labor	Equipment	Total	Notes
34284	030130721130	Spall repairs by low-pressure spraying (ACI RAP-3), blow off dust/debris with oil-free dry compressed air	S.F.	\$ -	\$ 1,028.52	\$ -	\$ 1,028.52	Cleaning step prior to application of each coat of roofing materials, 11428sf x 3ea applications, includes sawtooths and all parapet surfaces to be rehabilitated
							Total	\$ 147,106.71
500	070190810118	Joint sealant replacement, joints in concrete floors/slabs, option 1 for hard dry sealant, step 1: sawcut to remove 95% of old sealant, 3/4" x 1-1/2" deep, with double saw blades	L.F.	\$ 45.00	\$ 135.00	\$ 25.00	\$ 205.00	Joint sealant around windows, remove old sealant, some dry and hard
1000	070190810130	Joint sealant replacement, joints in concrete floors/slabs, option 1 for hard dry sealant, step 3: air blast joint faces and edges	L.F.	\$ -	\$ 210.00	\$ 20.00	\$ 230.00	Joint sealant around windows, clean at removed locations, assure substrate is dry prior to placement
500	070190810228	Joint sealant replacement, joints in concrete floors/slabs, option 2 for soft pliable sealant, step 2: sawcut to reface joint faces, 3/4" x 1-1/2" deep, with double saw blades	L.F.	\$ 60.00	\$ 265.00	\$ 50.00	\$ 375.00	Joint sealant around windows, remove old sealant, some soft and pliable
34284	071353103300	Elastomeric sheet waterproofing, bitumen modified polyurethane, 55 mils thick, fluid applied	S.F.	\$ 40,112.28	\$ 40,797.96	\$ -	\$ 80,910.24	3ea coats of rehabilitation material installation, AlphaGuard Base, Prime and Topcoat, includes sawtooths and all parapet surfaces to be rehabilitated
11428	075610100600	Elastomeric roofing, hypalon neoprene, fluid applied, non-woven polyester, reinforced, 20 mils thick	S.F.	\$ 17,256.28	\$ 30,855.60	\$ 6,513.96	\$ 54,625.84	Permafab rolls, after basecoat, separate from coating, fibrous membrane placement
173	072216101755	Roof deck insulation, polyisocyanurate, 3-1/2" thick, 2#/CF density, fastening excluded	S.F.	\$ 441.15	\$ 53.63	\$ -	\$ 494.78	Patching existing roofing, install new insulation to match existing
520	074113200710	Steel roofing panels, on steel frame, flat profile, standard finish, 1-3/4" standing seams, 10" wide, 26 gauge	S.F.	\$ 2,132.00	\$ 941.20	\$ -	\$ 3,073.20	Best fit line item representing the metal component of the Tremply materials. Topcoated metal, 4'X10'
5	075423100100	Thermoplastic-polyolefin roofing (TPO), 45 mils, heat welded seams, loose laid and ballasted (1/2 ton / square)	Sq.	\$ 470.60	\$ 184.60	\$ 16.95	\$ 672.15	Working together with the steel roofing panels, assembly for Tremply TPO coated metal
13	075323204910	Ethylene-propylene-diene-monomer roofing, (EPDM), cover tape for batten strips, 6" x 100' roll	Ea.	\$ 2,028.00	\$ -	\$ -	\$ 2,028.00	Representing the EPDM semi-cured cover tape.
750	075113500100	Walkways for built-up roofs, asphalt impregnated, 3' x 3' x 3/4" thick, hot applied	S.F.	\$ 3,750.00	\$ 742.50	\$ -	\$ 4,492.50	New walkway mats
							Total	\$ 18,927.68
34284	099113900390	Paints & coatings, walls, concrete masonry units (CMU), smooth surface, first coat, waterproof sealer, brushwork	S.F.	\$ -	\$ 17,827.68	\$ -	\$ 17,827.68	Backroll after each coat applied, 3ea coats
2000	090190920520	Paint preparation, surface protection, placement & removal, masking w/paper	S.F.	\$ 140.00	\$ 960.00	\$ -	\$ 1,100.00	Masking at windows
							Total	\$ 9,225.00

QTY	Line Number	Description	Unit	Material	Labor	Equipment	Total	Notes
90	019313160830	Electrical facilities maintenance, control device, trouble shoot	Ea.	\$ -	\$ 4,770.00	\$ -	\$ 4,770.00	Confirm connectivity for each solar panel
90	019313160820	Electrical facilities maintenance, control device, replace	Ea.	\$ -	\$ 4,455.00	\$ -	\$ 4,455.00	Disconnect & reconnect solar panels before and after work
ADJUSTMENTS							Total	\$ 55,657.46
1	012163100400	Taxes, unemployment, combined Federal and State, maximum	%	\$ -	\$ 17,685.07	\$ -	\$ 17,685.07	Unemployment taxes, 12% on labor \$147375.61
1	012163100200	Taxes, social security, on first \$118,500 of wages	%	\$ -	\$ 11,274.23	\$ -	\$ 11,274.23	Employment taxes, 7.65% on labor \$147375.61
1	012153501400	Cost adjustment factors, material handling & storage limitation, add to construction costs for particular job requirements, minimum	Costs	\$ 685.39	\$ 1,473.76	\$ -	\$ 2,159.15	Handle materials within active parking lot
1	075323204930	Hoisting conditions, unfavorable, add, modifications to total project cost summaries	Project	\$ 3,426.96	\$ 7,368.78	\$ 1,214.38	\$ 10,795.75	Working in an active parking lot, around existing landscaping, one point of loading and unloading
1	075323204930	Cost adjustment factors, protection of existing work, add to construction costs for particular job requirements, maximum	Costs	\$ 3,426.96	\$ 10,316.29	\$ -	\$ 13,743.26	Protect existing roof structure, critical to maintain existing system for rehabilitation work

Total \$ 76,078.61 \$ 195,493.75 \$ 25,502.01 \$ 300,936.99

CSI	Net Cost
DIV 01	\$ 31,382.50
DIV 02	\$ 5,725.00
DIV 05	\$ 32,912.64
DIV 07	\$ 147,106.71
DIV 09	\$ 18,927.68
DIV 26	\$ 9,225.00
ADJ	\$ 55,657.46
Total	\$ 300,936.99

Cost Index	1.111	\$ 334,341.00
Saybr Coefficient	1.032	\$ 345,039.91
Total		\$ 345,039.91

WSSB Ogden Roof Repair
Proposal Schedule dated 12/12/2022

ID	Task Name	Work Days	Start	Finish	% Comple	Predecesso	Successors	2022 2023																											
								2022 17 22 27	January 2023 1 6 11 16 21 26	February 2023 31 5 10 15 20 25	March 2023 2 7 12 17 22 27	April 2023 1 6 11 16 21 26	May 2023 1 6 11 16 21 26	June 2023 31 5 10 15 20 25	July 2023 30 5 10 15 20																				
1	Ogden Roof Repair	164 days	Tue 12/27/22	Thu 6/8/23	0%			Ogden Roof Repair																											
2	Award/NTP	0 days	Tue 12/27/22	Tue 12/27/22	0%	5,10,3		/27 Award/NTP																											
3	Inclement Weather	14 wks	Tue 12/27/22	Mon 4/3/23	0%	2	20	Inclement Weather																											
4	PRECONSTRUCTION & PROCUREMENT	57 days	Tue 12/27/22	Tue 3/21/23	0%			PRECONSTRUCTION & PROCUREMENT																											
5	Contracts to Subcontractors	5 days	Tue 12/27/22	Tue 1/3/23	0%	2	6,7	Contracts to Subcontractors																											
6	Contracts Returned from Subcontractors	5 days	Wed 1/4/23	Tue 1/10/23	0%	5	14	Contracts Returned from Subcontractors																											
7	Safety Plans from Subcontractors	5 days	Wed 1/4/23	Tue 1/10/23	0%	5	8	Safety Plans from Subcontractors																											
8	Approval of Subcontractor Safety Plan	5 days	Wed 1/11/23	Wed 1/18/23	0%	7	12	Approval of Subcontractor Safety Plan																											
9	Submittals	25 days	Tue 12/27/22	Wed 2/1/23	0%			Submittals																											
10	Submit Project Schedule	5 days	Tue 12/27/22	Tue 1/3/23	0%	2	11	Submit Project Schedule																											
11	Approve Project Schedule	5 days	Wed 1/4/23	Tue 1/10/23	0%	10		Approve Project Schedule																											
12	Submit Site Specific Safety Plan	5 days	Thu 1/19/23	Wed 1/25/23	0%	8	13	Submit Site Specific Safety Plan																											
13	Approve Site Specific Safety Plan	5 days	Thu 1/26/23	Wed 2/1/23	0%	12	20	Approve Site Specific Safety Plan																											
14	Product Submittals	5 days	Wed 1/11/23	Wed 1/18/23	0%	6	15	Product Submittals																											
15	Approve Product Submittals	5 days	Thu 1/19/23	Wed 1/25/23	0%	14	17,20	Approve Product Submittals																											
16	Procurement	20 days	Thu 1/26/23	Fri 2/24/23	0%			Procurement																											
17	Roofing Materials	4 wks	Thu 1/26/23	Fri 2/24/23	0%	15	28	Roofing Materials																											
18	Preconstruction Meeting	1 day	Tue 3/21/23	Tue 3/21/23	0%	20SS-10 days		Preconstruction Meeting																											
19	CONSTRUCTION	20 days	Mon 4/3/23	Mon 5/1/23	0%			CONSTRUCTION																											
20	Mobilize & Set-up Work Area	0 days	Mon 4/3/23	Mon 4/3/23	0%	15,13,3	18SS-10 days,2	4/3 Mobilize & Set-up Work Area																											
21	LOTO Solar Panels	1 day	Tue 4/4/23	Tue 4/4/23	0%	20		LOTO Solar Panels																											
22	Clean Roof of all Surface Debris	2 days	Tue 4/4/23	Wed 4/5/23	0%	20	23	Clean Roof of all Surface Debris																											
23	Spot Repair Existing Failed Areas	3 days	Thu 4/6/23	Mon 4/10/23	0%	22	24	Spot Repair Existing Failed Areas																											
24	Prepare Roof for Rehabilitation	1 day	Tue 4/11/23	Tue 4/11/23	0%	23	25SS	Prepare Roof for Rehabilitation																											
25	Install Rehabilitation Materials	7 days	Tue 4/11/23	Wed 4/19/23	0%	24SS	26	Install Rehabilitation Materials																											
26	Install New Slip Flashing Throughout	2 days	Thu 4/20/23	Fri 4/21/23	0%	25	27	Install New Slip Flashing Throughout																											
27	Probe and Repair Joint Sealant at Windows	4 days	Mon 4/24/23	Thu 4/27/23	0%	26	28	Probe and Repair Joint Sealant at Windows																											
28	Install Walk-off Mats	2 days	Fri 4/28/23	Mon 5/1/23	0%	27,17	30	Install Walk-off Mats																											
29	CONSTRUCTION COMPLETION	7 days	Tue 5/2/23	Wed 5/10/23	0%			CONSTRUCTION COMPLETION																											
30	Saybr Pre-Walk	1 day	Tue 5/2/23	Tue 5/2/23	0%	28	31	Saybr Pre-Walk																											
31	Punch List Items	2 days	Wed 5/3/23	Thu 5/4/23	0%	30	32	Punch List Items																											
32	Substantial Completion Walk	1 day	Fri 5/5/23	Fri 5/5/23	0%	31	33	Substantial Completion Walk																											
33	Punch List Items	2 days	Mon 5/8/23	Tue 5/9/23	0%	32	34	Punch List Items																											
34	Final Walk	1 day	Wed 5/10/23	Wed 5/10/23	0%	33	38,36	Final Walk																											
35	PROJECT CLOSE OUT	20 days	Thu 5/11/23	Thu 6/8/23	0%			PROJECT CLOSE OUT																											
36	Submit Close Out Documents & Warranty	10 days	Thu 5/11/23	Wed 5/24/23	0%	34	37	Submit Close Out Documents & V																											
37	Approve Close Outs	10 days	Thu 5/25/23	Thu 6/8/23	0%	36	38	Approve Close Outs																											
38	Final Acceptance	0 days	Thu 6/8/23	Thu 6/8/23	0%	37,34		6/8 Final Acceptance																											