



51 MELCHER - SKYBRIDGE REPAIR

FORT POINT, SOUTH BOSTON, MA

FORT POINT CHANNEL LANDMARKS DISTRICT

APRIL 11, 2024

**STUDIO
TROIKA**

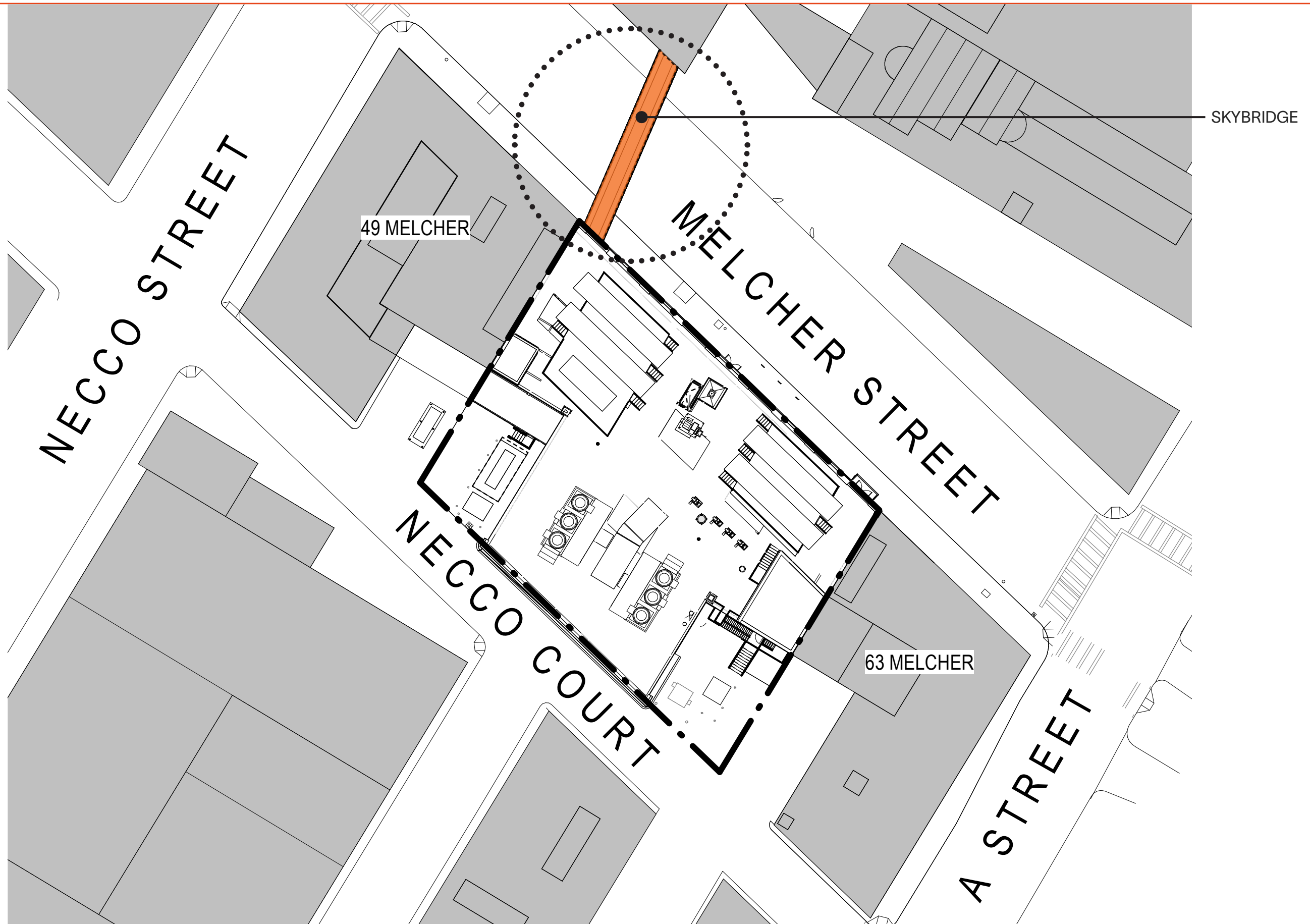
DISCUSSION TOPICS

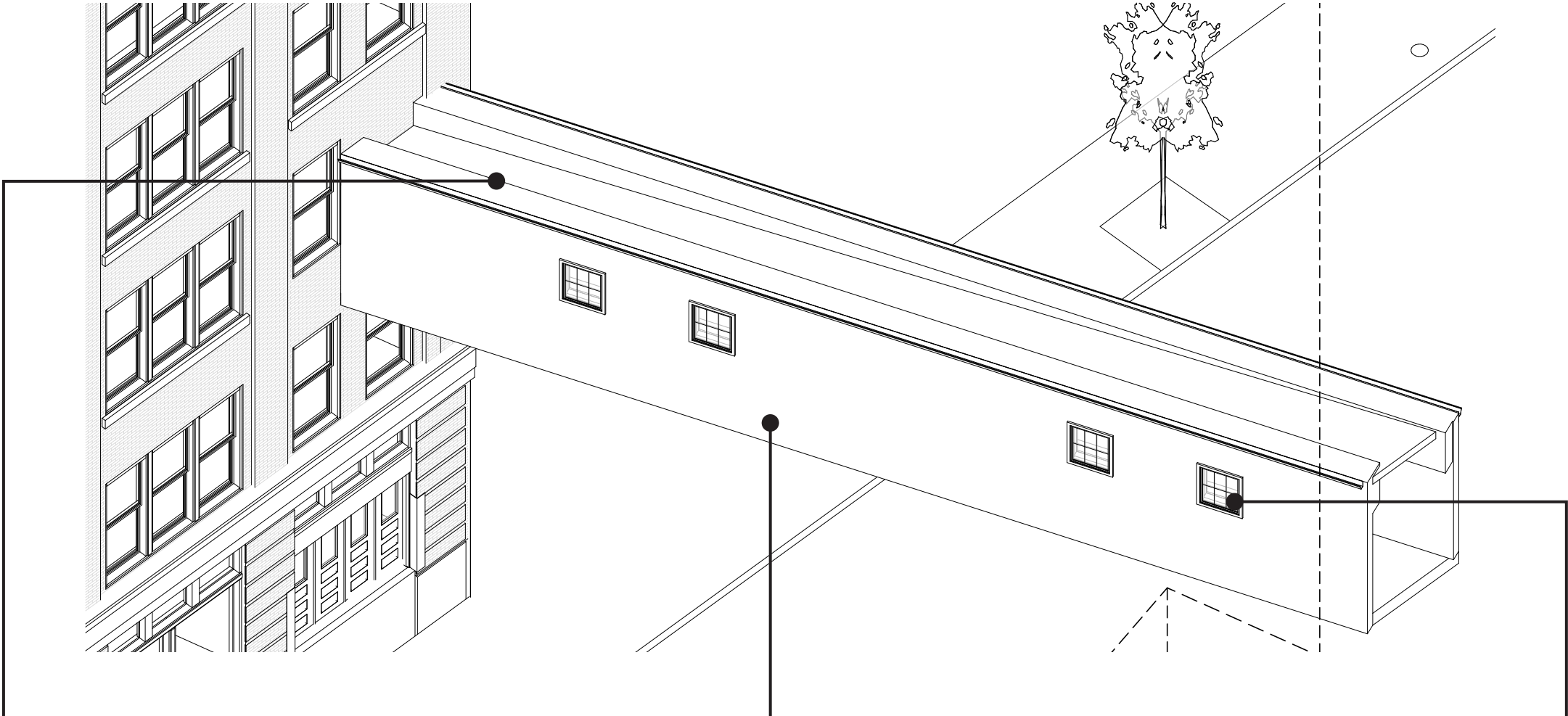
- 01 Context & Existing Conditions
- 02 Roof Repair
- 03 Stucco Repair
- 04 Window Repair
- 05 Questions

1. CONTEXT & EXISTING CONDITIONS



Map tiles by Stamen





BRIDGE AXON



ROOF REPAIR & REPLACEMENT

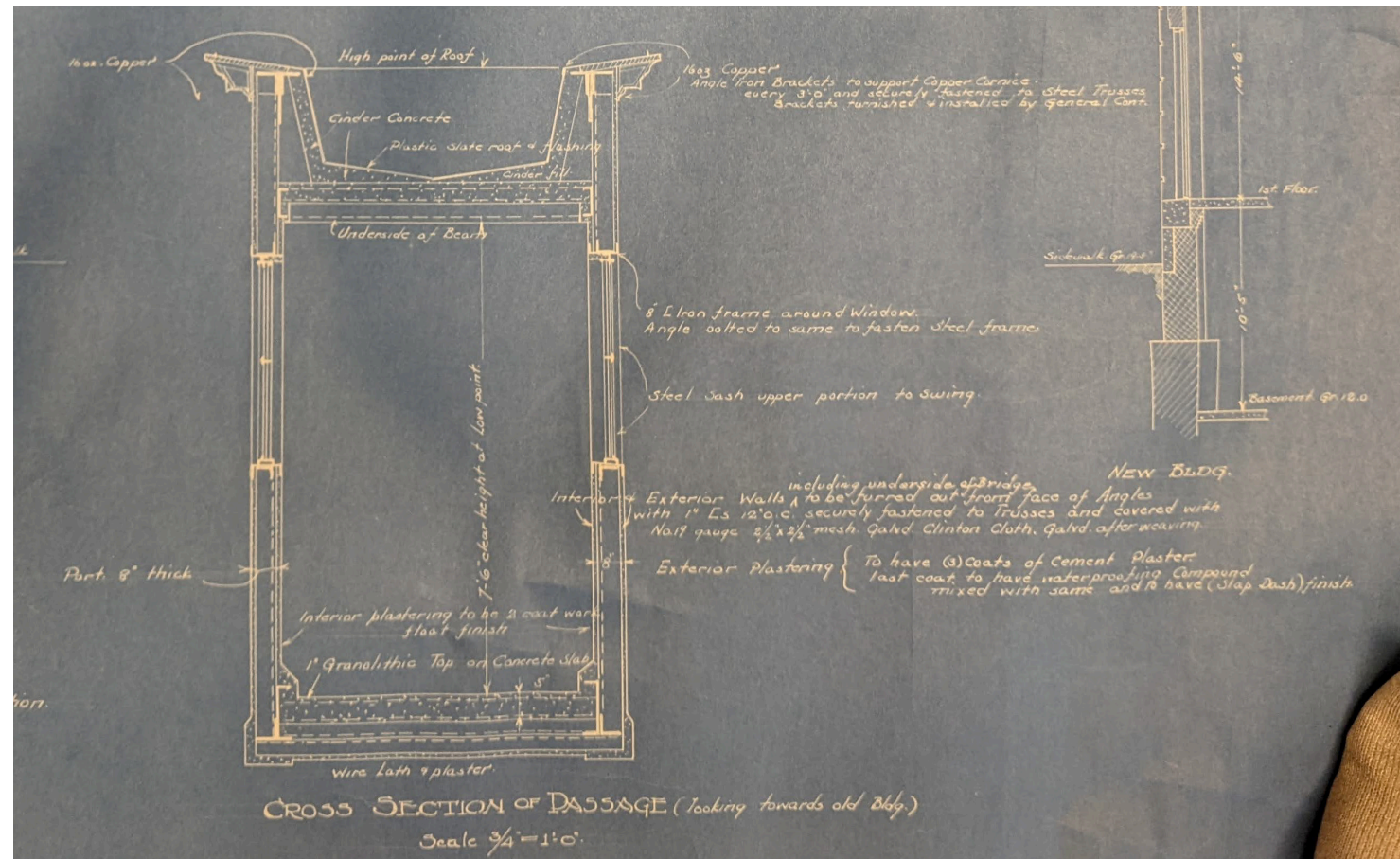


STUCCO REPAIR & REPAINTING

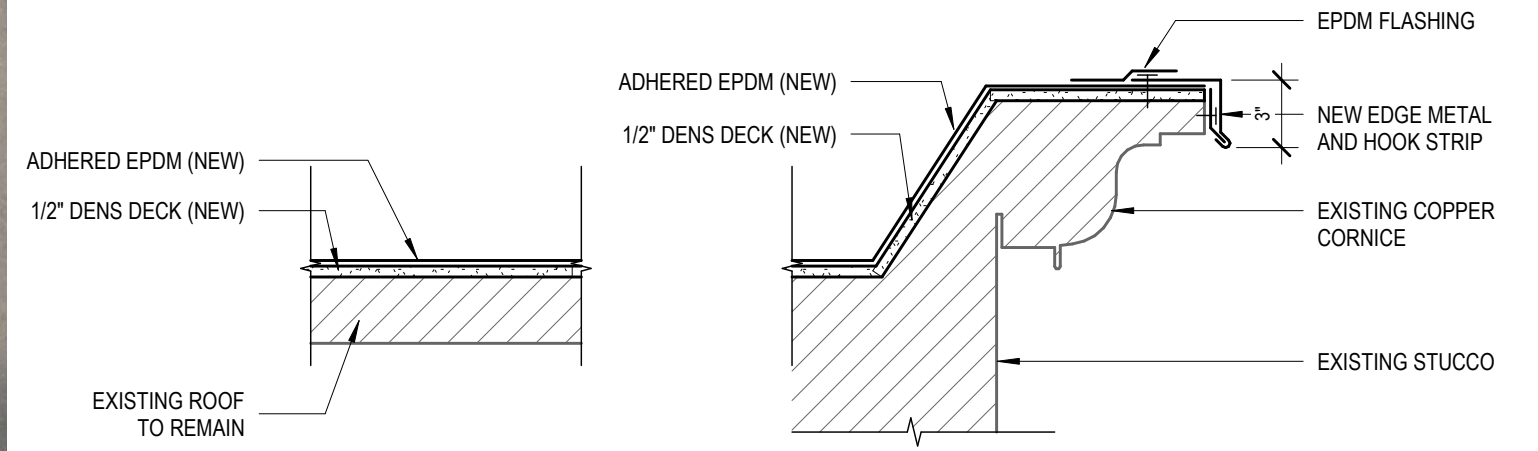


WINDOW REPLACEMENT

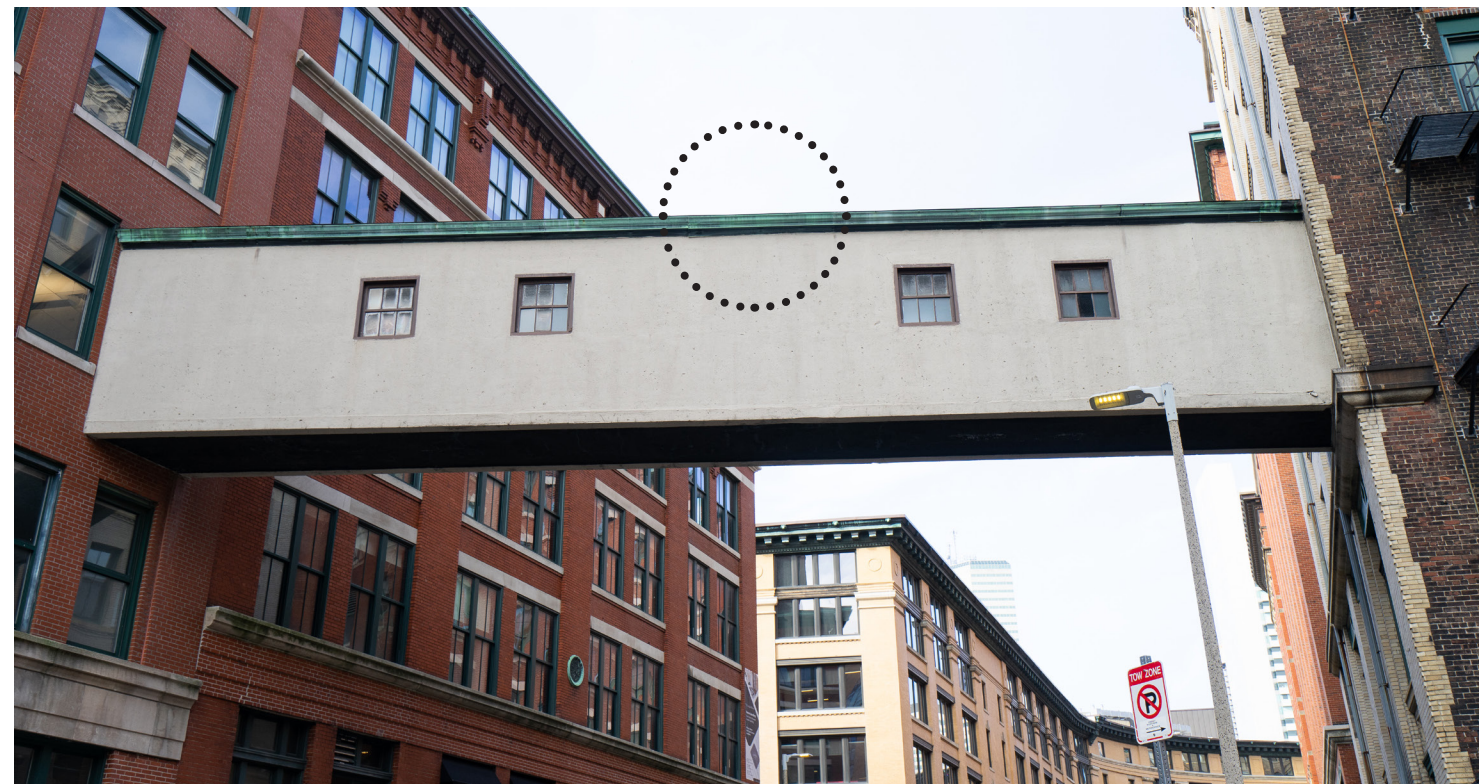
2. ROOF REPAIR



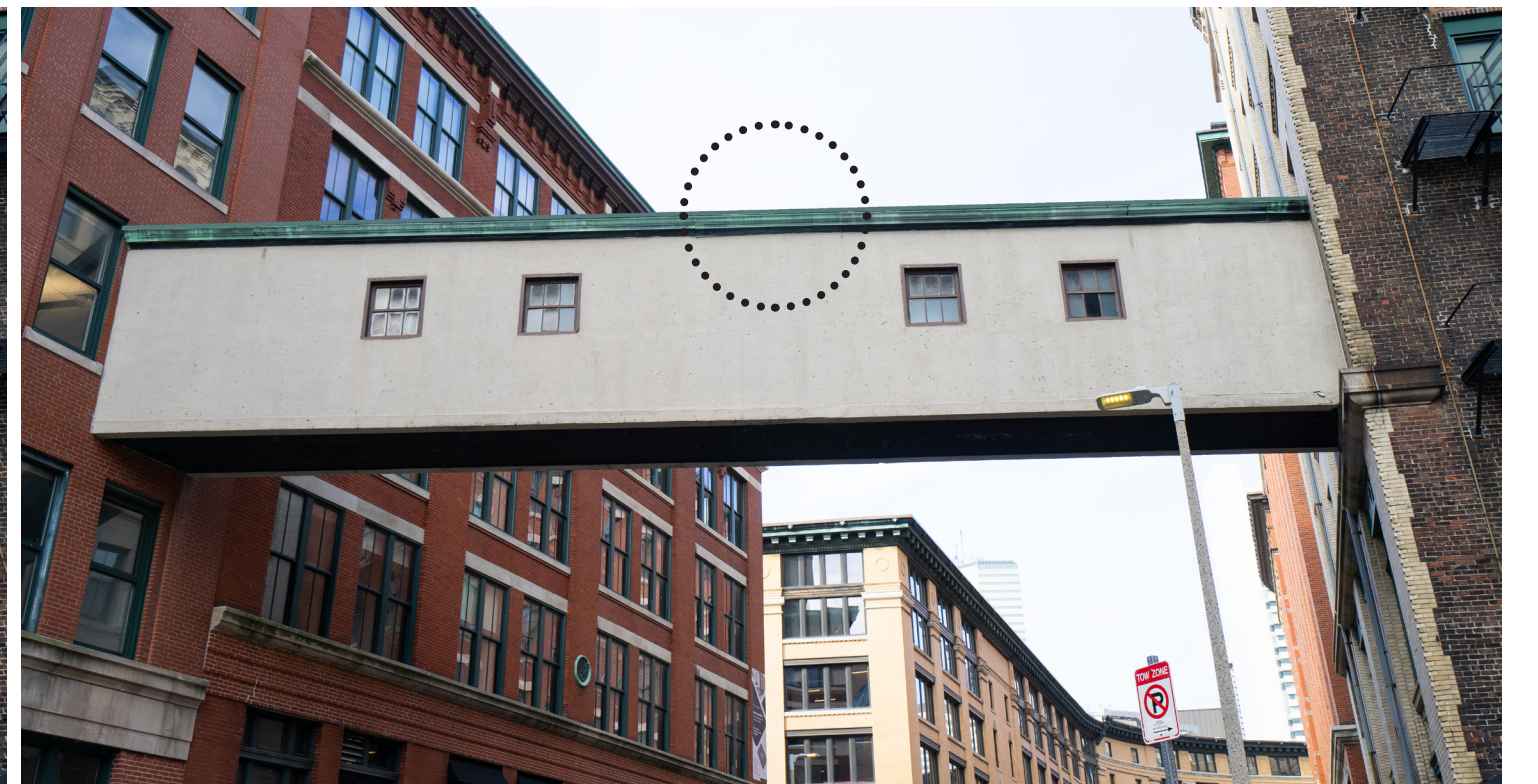
ORIGINAL CROSS SECTION



NEW ROOF DETAIL



EXISTING BRIDGE ROOF



PROPOSED BRIDGE ROOF

EXPERIENCE THE CARLISLE DIFFERENCE



Sure-Seal EPDM

Dusted Non-Reinforced Membranes

For Design B: Ballasted Roofing System

Insulation is loose-laid over the roof deck. Membrane is loose-laid over the insulation and secured with a minimum 10 lbs (4.5 kg) of ballast per square foot. Design C is a similar system with the insulation installed on top of the membrane. To complete seams between two adjoining membrane panels, apply primer to the splice area in conjunction with Carlisle's Factory-Applied Tape. As an alternative, Carlisle's hand-applied SecurTAPE may be used.

Follow these steps for splicing in temperatures below 40°F (5°C):

1. Heat the primed area of the bottom membrane with a hot-air gun as the top sheet with Factory-Applied Tape is applied and pressed into place.
2. Prior to rolling the splice area with a 2"-wide steel hand roller, apply heat to the top side of the membrane with a hot-air gun. The heated surface should be hot to the touch. Be careful not to burn or blister the membrane.

Review Carlisle specifications and details for complete installation information.

Precautions

- » Use proper stacking procedures to ensure sufficient stability of the materials.
- » Exercise caution when walking on wet membrane. Membranes are slippery when wet.
- » Membranes with Factory-Applied Tape should not be exposed to prolonged jobsite storage temperatures in excess of 90°F (32°C), otherwise the shelf life of the tape may be affected.
- » When membranes with Factory-Applied Tape are used in warm, sunny weather, shade the tape end of the rolls until ready to use.
- » Carlisle Factory-Applied Tape has a shelf life of one year.

LEED® Information

Pre-consumer Recycled Content	5%
Post-consumer Recycled Content	0%
Manufacturing Locations	Carlisle, PA Greenville, IL
Solar Reflectance Index	9

Typical Properties and Characteristics

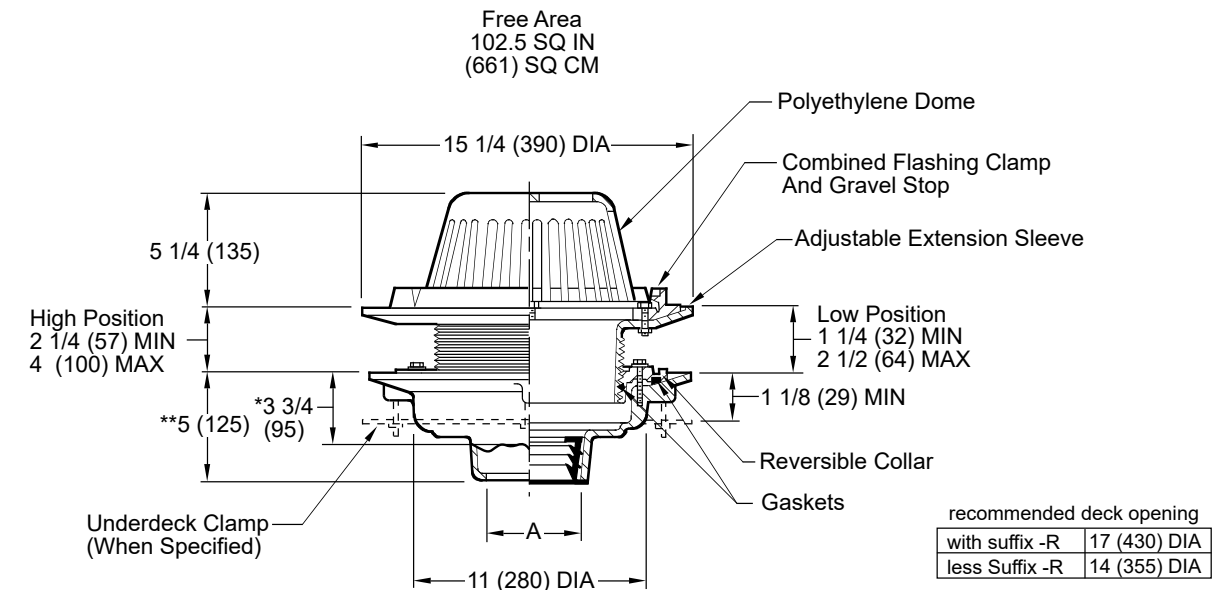
Physical Property	Test Method	SPEC. (PASS)	Typical	
			45-mil	60-mil
Tolerance on Nominal Thickness, %	ASTM D412	±10	±10	±10
Weight, lbm/ft ² (kg/m ²)			0.29 (1.4)	0.39 (1.9)
Tensile Strength, min, psi (MPa)	ASTM D412	1305 (9)	1600 (11.0)	1600 (11.0)
Elongation, Ultimate, min, %	ASTM D412	300	480	465
Tear Strength, min, lbf/in (kN/m)	ASTM D624 (Die C)	150 (26.3)	200 (35.0)	200 (35.0)
Factory Seam Strength, min	Modified ASTM D816	Membrane Rupture	Membrane Rupture	Membrane Rupture
Resistance to Heat Aging* Properties after 28 days @ 240°F (116°C)	ASTM D573			
Tensile Strength, min, psi (MPa)	ASTM D412	1205 (8.3)	1500 (10.3)	1450 (10.0)
Elongation, Ultimate, min, %	ASTM D412	200	225	280
Tear Strength, min, lbf/in (kN/m)	ASTM D624	125 (21.9)	215 (37.6)	215 (37.6)
Linear Dimensional Change, max, %	ASTM D1204	±1.0	-0.4	-0.50
Ozone Resistance* Condition after exposure to 100 ppm Ozone in air for 168 hours @ 104°F (40°C) Specimen is at 50% strain	ASTM D1149	No Cracks	No Cracks	No Cracks
Brittleness Temp., max, °F (°C)*	ASTM D746	-49 (-45)	-49 (-45)	-49 (-45)
Resistance to Water Absorption* After 7 days immersion @ 158°F (70°C) Change in mass, max, %	ASTM D471	+8, -2	+2.0	+2.0
Water Vapor Permeance* Max, perms	ASTM E96 (Proc. B or BW)	0.10	0.05	0.03
Flexibility/Torsion DMA	ASTM D5279-08	N/A	225 MPa @ -40°F	225 MPa @ -40°F
Fungi Resistance	ASTM G21	N/A	0 (No Growth)	0 (No Growth)
Resistance to Outdoor (Ultraviolet) Weathering* Xenon-Arc, total radiant exposure at 0.70 W/m ² irradiance, 80°C black panel temperature	ASTM G155	No Cracks No Cracking	No Cracks No Cracking	No Cracks No Cracking
		7,560 kJ/m ² 3,000 hrs	41,580 kJ/m ² 16,500 hrs	41,580 kJ/m ² 16,500 hrs
At 0.35 W/m ² irradiance, 80°C black panel temperature		6,000 hrs	33,000 hrs	33,000 hrs

*Not a quality control test due to the time required for the test or the complexity of the test. However, all tests are run on a statistical basis to ensure overall long-term performance of the sheeting.

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

Note: Sure-Seal Dusted Non-Reinforced EPDM membrane meets or exceeds the minimum requirements set forth by ASTM D4637 for Type I non-reinforced EPDM single-ply roofing membranes.

DRAW: A
 SCALE: NONE
 DATE: 12-19-84
 APPROVED BY: JD
 CHECKED BY: VGD
 WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR V-CHANGE WITHOUT NOTICE

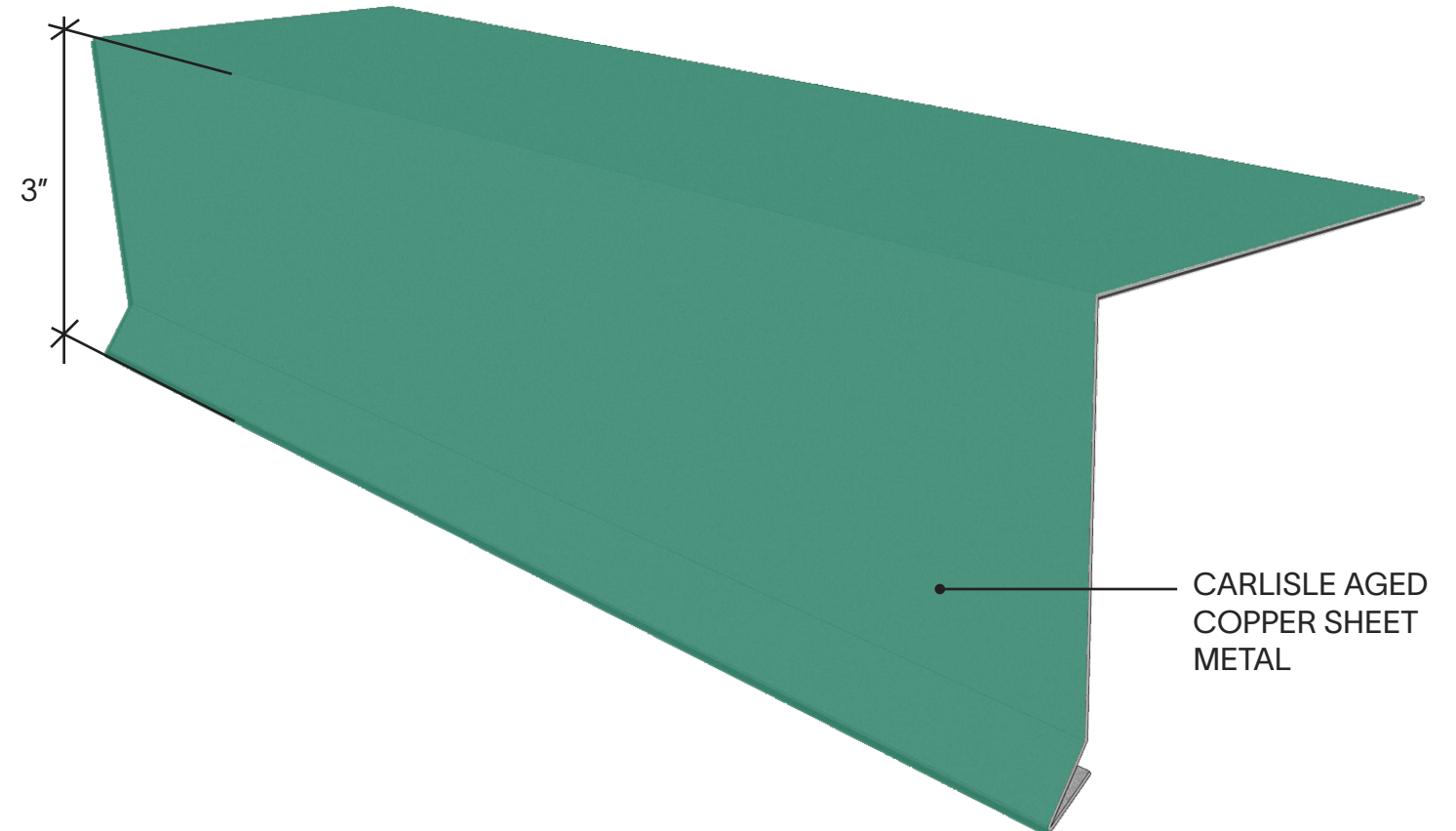


*This dimension to internal stop of Speedi-Set® Gasket
 **Same for Caulk, NO-HUB and Speedi-Set®, 3 3/4 (95) for Threaded

Fig. 1015C CAULK OUTLET
 Fig. 1015Y NO-HUB OUTLET

recommended deck opening with suffix -R	17 (430) DIA
less Suffix -R	14 (355) DIA

NEW DRAIN PRODUCT DATA



NEW EDGE METAL FLASHING

3. STUCCO REPAIR



EXISTING STUCCO



PROPOSED STUCCO



EXISTING STUCCO



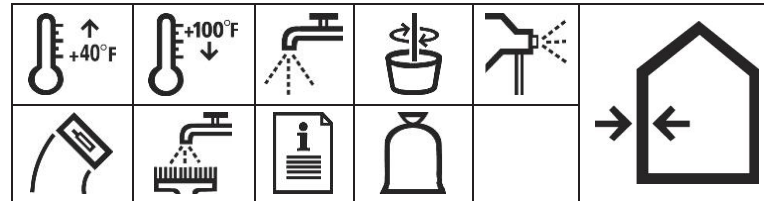
PROPOSED STUCCO



Product Bulletin

StoPowerwall® Stucco

80103 StoPowerwall® Stucco



Technical Data

StoPowerwall Stucco Blend	Mix Ratio: Water/Concentrate/Sand ¹	Mix Times (min)	Yield ² in ft ² at thickness of:		Compliance ³	
			3/4 in	7/8 in	ASTM C 926	Evaluation Report No.
StoPowerwall by Sto Corp.	4-6 gal / 80 lbs. / 200 lbs.	3 – 5	30-40	27-37	Yes ⁴	ICC ESR-2323
StoPowerwall by Amerimix	4-6 gal / 80 lbs. / 180 – 240 lbs. (2.5-3 cu. ft.)	3 – 5	35-40	30-37	Yes	N/A
StoPowerwall by Western	4 gal / 80 lbs. / 200 lbs.	5	30-40	25-35	Yes ⁴	IAPMO ER 382

- Sand added at job site: use washed plaster sand in conformance with ASTM C 897 or C 144. Water must be clean and potable.
- Yield will vary with application technique, surface conditions, substrate variances from required tolerance, and other variables that may exist.
- Portland cement in mix complies with ASTM C 150.
- Mix complies with C 926 mix ratio requirements. Installation and other aspects of C 926 such as stucco thickness must be followed for full compliance.
- ICC Evaluation Service, Inc. Acceptance Criteria for Cementitious Exterior Wall Coatings. Refer to evaluation report for detailed information on fire resistance rated assemblies, use on noncombustible type construction, wind load resistance, and other information on use and limitations of product.

Features	Benefits
1 Fiber-reinforced	Resists cracking; high flexural strength
2 Can be installed in thin sections	Reduces labor costs, can reduce structural requirements compared to conventional stucco
3 Stucco concentrate	Facilitates mixing, reduces labor costs, enables use of local raw materials (sand) for LEED credit eligibility

Surface Preparation

Concrete and masonry surfaces:
Substrates must be absorbent, slightly scarified and free of all bond-inhibiting materials, including dirt, efflorescence, form oil and other foreign matter. Loose, weak or damaged substrates must be removed and repaired. Dampen highly absorbent substrates prior to application of stucco. Verify bond of StoPowerwall Stucco to properly prepared concrete or concrete masonry, as specified by design professional, at minimum 28 day age of stucco.

Wood or metal frame construction:
Self-furring or furred galvanized diamond mesh metal lath or welded wire or fabric lath must be in conformance with and be installed in compliance with the applicable building code.

Refer to ASTM C 926 for complete details on preparation and required condition of surfaces to receive Portland cement stucco and recommended construction practices when installing stucco.

Mixing

Use prescribed amounts of clean water and washed plaster sand meeting ASTM C897 or ASTM C144 with each 80 lb. (36 kg) bag of StoPowerwall Stucco. For best results use sand complying with ASTM C897. Add 1/2 to 2/3 of the required water, 1/2 of the sand, and one bag of StoPowerwall Stucco in a paddle type mortar mixer. Then add the rest of the sand and sufficient water to achieve a uniform

mix of workable consistency. Mix for prescribed number of minutes after all materials are in the mixer. Keep mix ratio consistent from batch to batch and mix each batch separately. USE ONLY THE AMOUNT OF WATER NECESSARY FOR A WORKABLE MIX. DO NOT EXCEED MAXIMUM AMOUNT OF MIX WATER. USE OF EXCESS WATER IS DETRIMENTAL TO PERFORMANCE. Avoid re-tempering. Discard material that has taken initial set.

StoPowerwall® Stucco is a controlled blend of Portland cement, fibers, and chemical additives. StoPowerwall® Stucco, when combined with sand and water at the jobsite, performs like traditional stucco. StoPowerwall® Stucco is suitable for use in residential and commercial wall construction over properly prepared concrete and concrete masonry, or metal plaster bases.

Packaging
80 lb. bag (36 kg).

Shelf Life
12 months, if properly stored and protected from moisture.

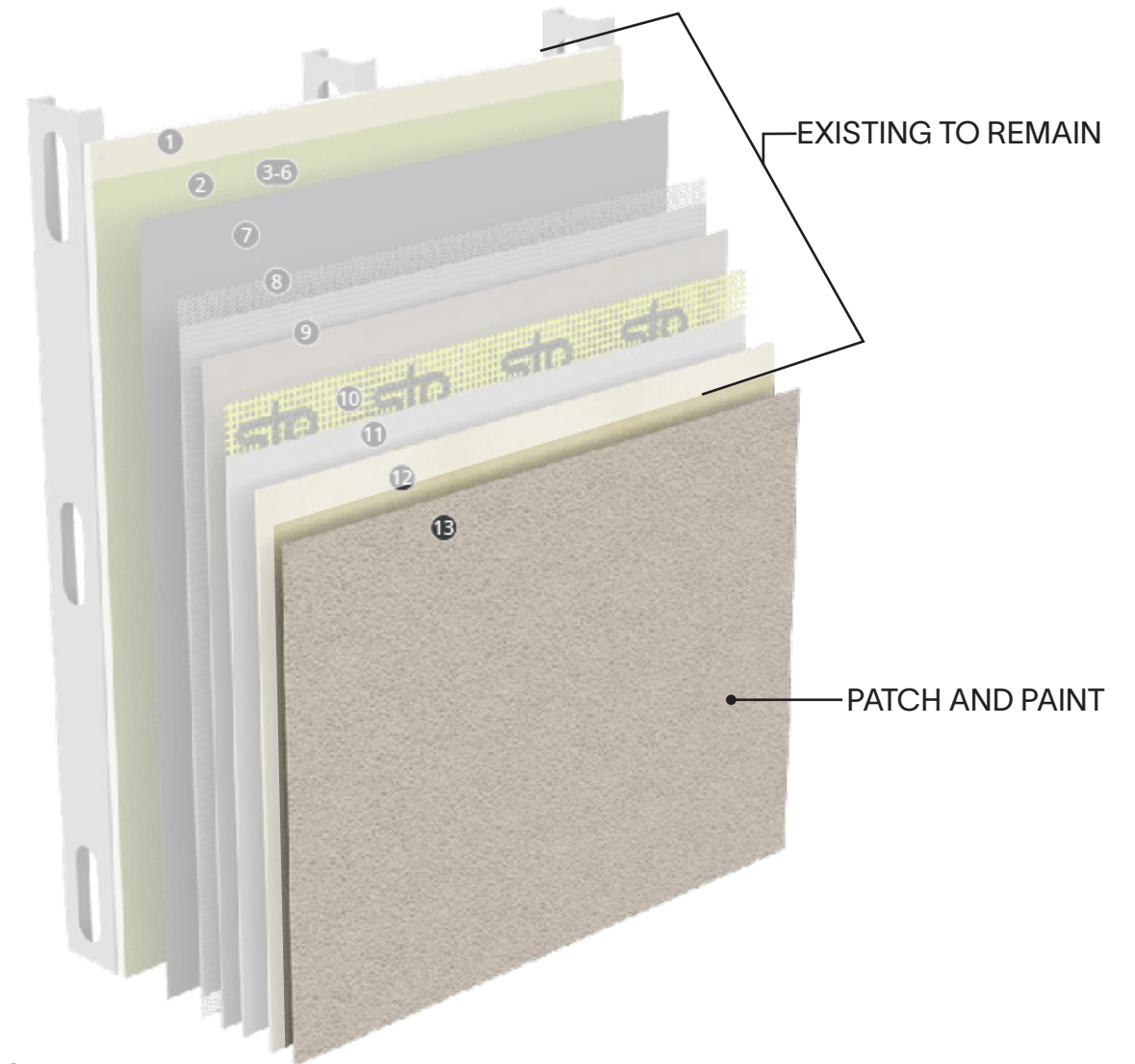
Storage
Store off the ground in a dry area. Protect from extreme heat [90°F (32°C)], moisture, direct sunlight and freezing.

STOPOWERWALL ASSEMBLY



STUCCO COLOR TO BE PAINTED TO MATCH AS CLOSE AS POSSIBLE TO EXISTING

STUCCO



EXISTING TO REMAIN

PATCH AND PAINT

4. WINDOW REPAIR



EXISTING WINDOWS



PROPOSED WINDOWS



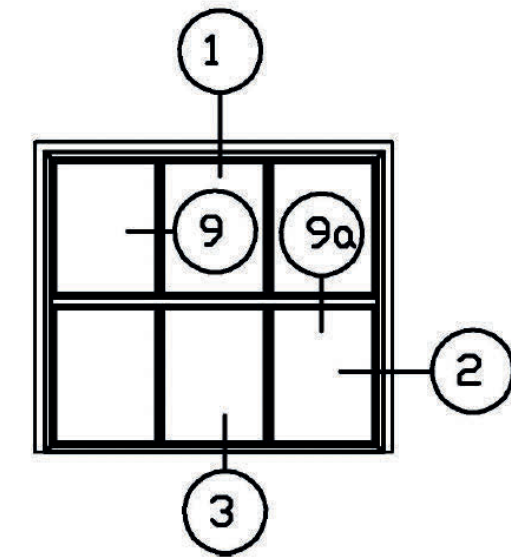
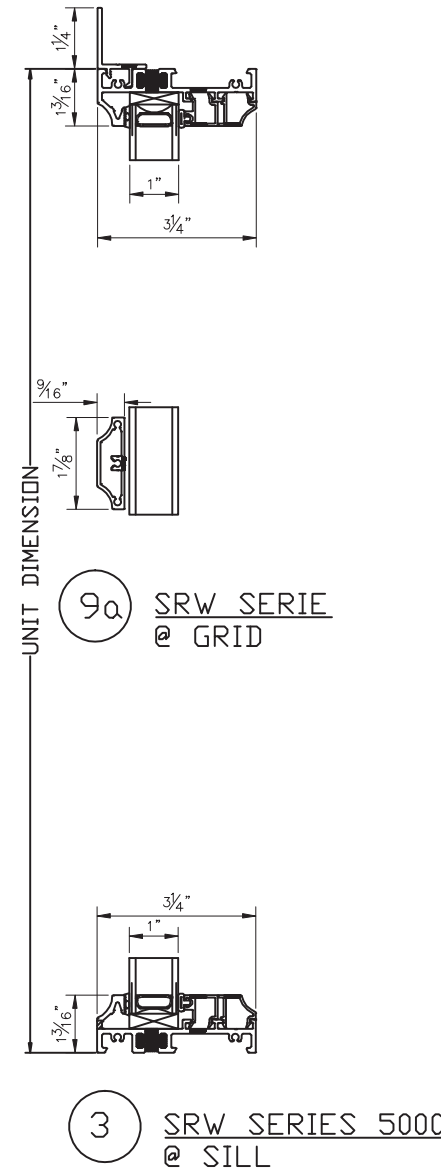
EXISTING WINDOWS



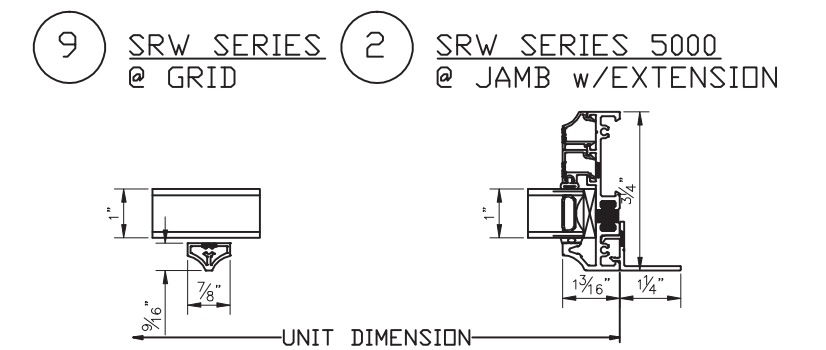
PROPOSED WINDOWS



EXISTING WINDOW



FX
5100 w/EXTs.



PROPOSED SHOP DRAWING - DIAMOND WINDOWS AND DOORS MFG.



PAINT SPEC - SW
ROYCROFT BOTTLE GREEN



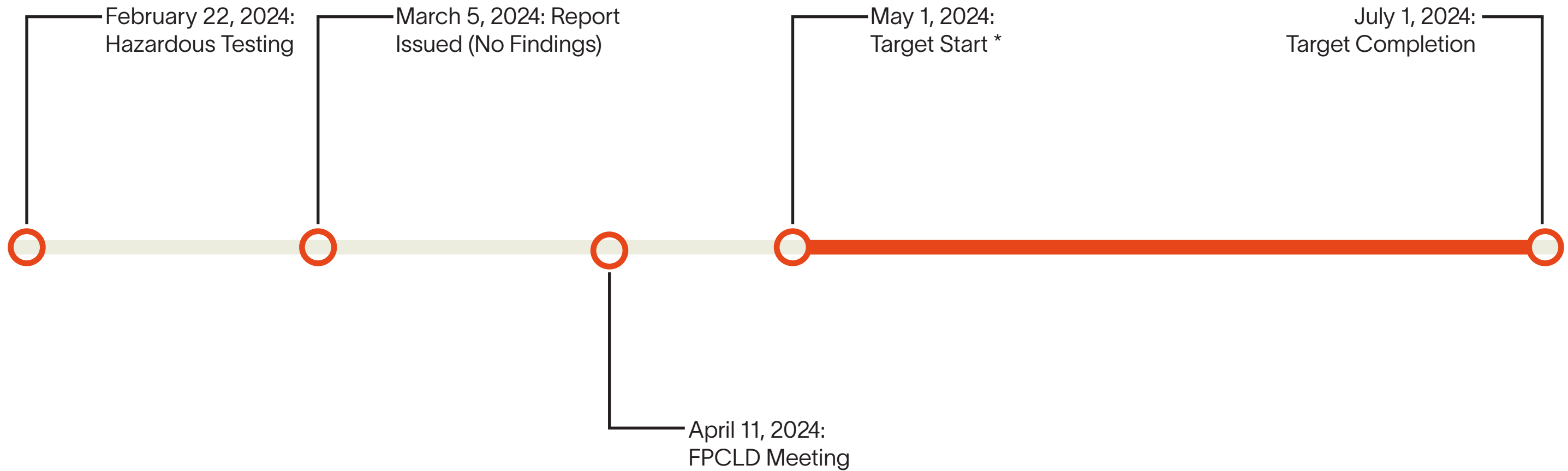
GLASS SPEC - STANDARD IGU
(SOLARBEN 60) - CLEAR/CLEAR



GLASS SPEC ALT - WIRED GLASS
TO MATCH

QUESTIONS OR COMMENTS?





* Team will submit a work plan to Boston Transportation who will issue permits and dictate working days/times.

*Proponent will communicate through existing channels as information becomes available.