

To: Pioneer Square Preservation Board

From: Kit Loo, PE (SDOT)

Date: March 13, 2026

Re: (DONH-COA 02067) 617 1st Ave Areaway Repair: frame design and color

Project Summary

On May 20, 2026, the Pioneer Square Preservation Board issued the Certificate of Approval (COA) for the repair and reconstruction of the sidewalk and areaway that was damaged by a vehicle driving over the areaway on May 13, 2025. As part of the COA, final decision on the supporting frame for the new grating panels was postponed pending additional information on the material color and frame design, as depicted by the “red” lines on the following picture:



During the presentation, it was noted in discussion with the fabricator that the frame supporting the cast iron grating panels would be fabricated from stainless steel instead of cast iron to improve long term durability of the frame due to the frames contact with concrete and direct exposure to the weather. Pictures of the existing condition of the frame show that overtime contact with water and the concrete has caused significant section loss of the structural members due to corrosion.



The PSPB committee members did not have issue with the change in material type for the frames, but had concerns related to the natural appearance of stainless-steel distracted from the appearance of cast iron grating. Committed members asked the project team to follow up with the following items regarding the frame:

1. Can the top flange of the frame be reduced to a provide an almost edge-less appearance, similar to a cast iron panel located at 301 1st Ave S:



2. Provide a sample of the proposed color of the frame.

Responses

1. **Can the top flange of the frame be reduced to provide an almost edge-less appearance, similar to a cast iron panel located at 301 1st Ave S:**

The project team evaluated the initial inquiry regarding whether the top flange of the frame could be reduced to create an almost edge-less appearance, in consultation with both the fabricator and the engineer. The engineer indicated that the top flange is essential for providing structural support to the skylight assembly. As these skylight assemblies constitute new construction, they are required to meet current load standards, necessitating an increase in assembly depth compared to the original design. To preserve the existing sidewalk elevation and avoid any alteration to the crown of the masonry arch

ceiling, the available space between these two constraints does not allow the frame to sit directly on top of the arch without altering either the ceiling or the sidewalk. Consequently, the top flange must serve as the structural support for the assembly, as no other feasible solution exists without major alterations.

2. Provide a sample of the proposed color of the frame.

The proposed surface finish for the stainless steel is a scuffed finish, which will produce a dull, more matte appearance. Although this finish will reduce reflectivity, the stainless steel will still remain somewhat more reflective than the existing cast-iron frame. Color application to the stainless steel was also evaluated. Epoxy-based paint and powder coating were considered; however, due to long-term maintenance concerns and the slip hazard associated with the smooth texture these coatings create, they were not deemed preferred options. Given the field conditions and the desire to minimize maintenance requirements, chemical etching was identified as the most suitable solution. Below are samples showing the stainless steel in its untreated state and after chemical etching, placed adjacent to the existing cast-iron frame. The chemical etching creates an appearance that closely resembles a raw carbon steel plate.



Untouched Stainless Steel Plate



Etched Stainless Steel Plate



Carbon Steel Plate



Etched Stainless Steel

