

MEMORANDUM

DATE: December 16, 2016

TO: Historic Preservation Commission

FROM: Peter Gabancho
Project Manager, San Francisco Municipal Transportation Agency

SUBJECT: Alternative streetlight design for Van Ness Avenue

The existing light and trolley poles on Van Ness Avenue will be removed and replaced as part of the Van Ness Improvement Project. During the Detail Design phase of the project, a modern trolley/light pole was designed and approved for use on Van Ness Avenue by Caltrans, San Francisco Arts Commission and the Historic Preservation Commission (Motion No. 0268).

On September 20, 2016, the San Francisco Board of Supervisors unanimously passed a resolution urging the San Francisco Municipal Transportation Agency to make all efforts to preserve the historic character of the Van Ness Corridor through reuse as well as replication of the Van Ness Avenue streetlamps.

Included below is an overview of the efforts made to date and next steps planned by the Project Sponsor in response to the resolution passed by the San Francisco Board of Supervisors; consideration of the existing trolley/light poles with regard to their history, historic value and existing condition; and design considerations for replacement pole design.

Alternative Trolley/Light Pole Design

To address the resolution, on November 10, 2016, the Project Sponsor presented to Supervisor Aaron Peskin and members of the Coalition to Save the Historic Streetlamps of Van Ness five design options for which the Project Sponsor could develop detail design and a budget. Each of the provided options included estimated impacts to the Project schedule and budget, renderings and a brief feasibility analysis.

Any replica trolley/light pole design will need to meet the following requirements:

- Height and tension load standards for an Overhead Contact System to support the system that powers Muni buses;
- Minimum illumination and structural requirements for a state highway;
- Poles manufactured by a Caltrans-approved facility; and,
- Approval from Caltrans, San Francisco Arts Commission, City Hall Preservation Advisory Commission and Historic Preservation Commission.

The options presented to the supervisor and coalition included the approved modern OCS pole design, pole designs with street and pedestrian lighting using replica features, as well as options with the approved modern OCS poles interspaced with replicas of the existing poles. Supervisor Peskin and the members of the Coalition asked the Project Sponsor to pursue further study of the option referred to as “OCS pole with replica pedestrian and street lamps and brackets” also called “Replica OCS pole” for short.

Now that a design option has been selected, there are three main areas of work in progress: detail design, approvals and funding. The initial detail design work is underway, including identifying a teardrop-shaped light that would sufficiently illuminate the roadway from the taller height required by the Project’s approved design; conducting the necessary lighting calculations to ensure the roadway would be properly illuminated; and finalizing the design details of a replica pole that reflects the existing trolley/light pole design.

The Project Sponsor anticipates being prepared to seek necessary approvals for this alternative design in early 2017. Identifying the additional funding necessary for the alternative design remains outstanding and is estimated to cost an additional \$5.1 million.

Consideration of Existing Trolley/Light Poles

The existing trolley/light poles were first installed on Van Ness Avenue in 1914 to support its first streetcar, which was powered by overhead wires, to serve as transportation between Civic Center and the Panama Pacific Exposition. The poles initially did not include lighting fixtures, but pairs of electric streetlights were added in time for the Exposition’s opening.

The existing light/trolley poles were moved to their current locations in 1936, when Van Ness Avenue was widened for the opening of the Golden Gate Bridge. At this time, the San Francisco Public Utilities Commission replaced the pairs of electric streetlights with a single tear-drop luminaire and a spiraling bracket. When the streetcar tracks were removed from Van Ness Avenue in 1950, the concrete poles were retained and incorporated into Muni’s Overhead Contact System, which powers Muni’s trolley buses on Van Ness Avenue. As specific poles were identified as structurally failing in recent years, they were, and continue to be, replaced on an as-needed basis.

In 2009, a Conceptual Engineering Report prepared by San Francisco’s Department of Public Works Bureau of Engineering provided a structural evaluation of the existing poles and lighting elements and served as a basis for the Project’s design phase. The report found that the existing poles:

- Do not meet SFMTA standards for gravity and tension loads;
- Do not meet SFMTA service requirements as they are not tall enough;
- Are beginning to fail; more than half of the poles are visibly showing signs of compromised structural integrity;
- Have a lighting conduit that has been installed on exterior faces of the poles, which is not in compliance with modern code requirements, due to their solid concrete design that cannot accommodate an internal conduit;

- Do not meet San Francisco Public Utilities Commission standards for electrical system specifications, resulting in gradually increasing electrical failures and higher maintenance and operating costs;
- Do not meet Illuminating Engineering Society RP-08 minimum illumination level for safe roadway lighting on a major arterial/state highway such as Van Ness Avenue; and,
- Have nonstandard foundations that, in combination with the above deterioration, result in a safety hazard.

Based on these conditions, the existing light/trolley poles on Van Ness Avenue must be replaced.

A Historic Resources Inventory and Evaluation Report in 2009 also evaluated the existing poles and found that while spiraling brackets remain, nearly all of the pendant lights are replacements from the modern period. The bases are a mixture of original cast iron and replacement fiberglass castings dating to 1997 that replicate the original. On the original bases, one side consists of a removable cast iron door stamped “Joshua Hendy Iron Works S.F. CA” allowing access to mechanical equipment. Replacement doors are stamped “Steiger and Kerr Stove and Foundry Company S.F. CAL” and fiberglass bases do not include these doors. While more than half of the bases are the fiber glass replacements, both the original cast iron and modern fiberglass bases are highly damaged and deteriorated. Many of the shafts are spalling and deteriorated. More than 33 of the original poles have been removed. Modern street poles have been introduced to support the Muni wires, traffic signals and other infrastructural elements have diminished the aesthetic of a visual network.

A Historic Resources Inventory and Evaluation Report concluded that the poles are not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. The poles had not, at the time of the report, previously been identified on a City historic register. Due to the conditions cited above, the trolley/light poles were found to lack the integrity to convey their historical significance.

In addition, the Historic Resources Inventory and Evaluation Report concluded, and State Historic Preservation Officer concurred, that the poles are not a contributory feature to the Civic Center Historic District, a San Francisco Landmark District that is listed in the National Register of Historic Places and designated as a National Historic Landmark. Their design and installation were not elements of the Civic Center Plan, which had its own distinctive lighting design and streetscape features. The trolley/light poles cross through the district, but run the length of Van Ness Avenue as part of a longer trolley system built for the Pan-Pacific International Exposition, and had no specific treatments in the district. The Historic Resources Inventory and Evaluation Report concluded that “although [Van Ness Avenue] and the trolley poles pass through the Civic Center, neither it nor its basic streetscape features are a significant design element of the Civic Center Plan.”

Subsequent to Historic Resources Inventory and Evaluation Report, the Planning Department’s June 2015 Civic Center Historic District Cultural Landscape Inventory recommended updating the documentation for the Civic Center Historic District to include “single pendant light poles on Van Ness Avenue” for “Criterion C (Design): City Beautiful/Beaux Arts Era” (p.89). However, the same document also deferred to the finding of the Project’s EIS/EIR and included the poles in the District’s Landscape Inventory only because the Project had not yet been implemented at the time of the inventory, noting, “The Van Ness Single Pendant Street Lights were also studied as part of the Van Ness Bus Rapid Transit Project in 2012. An Environmental Impact Report was prepared which

supported the removal of these lights and replacement with modern fixtures. However, since the lights were still in existence when the existing conditions were inventoried for this report, they are included in this CLI” (p. 8).

With these evaluations of historic value in hand, the Project Sponsor began the detail design phase of the Project.

Design Considerations

On [May 18, 2015](#), the San Francisco Arts Commission gave the Project Phase II approval at its Civic Design Review Committee. As a part of the discussion, there was general agreement that a modern lighting fixture that would fade into the background and not clash with the historic architecture along the corridor would be ideal.

Commissioners at the [November 18, 2015](#), meeting of the Historic Preservation Commission recommended further exploration to retain some poles (Motion No. 0268). Those ideas included retaining a number of poles in place, relocating some poles as artifacts or reusing some poles or their parts in public art displays. There was no request by the Commissioners to study replacement of the poles with new replicas.

As a result of the comments made by Commissioners, the Project design team, in cooperation with San Francisco Planning Department staff, the Project Sponsor explored possible options to retain elements of the existing trolley poles. The primary cause of damage to the existing poles is the result of water infiltration and corrosion that caused expansion of the steel reinforcement within the concrete, resulting in concrete spalling. It is not possible to ascertain the condition of the steel reinforcement without removing the concrete. It also is not possible to predict when delamination or spalling will occur in the future.

The San Francisco Planning Department retained Architectural Resources Group to conduct a survey of the existing concrete trolley and light poles on Van Ness Avenue. A detailed survey was done of four poles – two in front of City Hall and two in front of War Memorial Plaza – to assess existing conditions and identify long-term treatment options on July 26, 2016. This report was delivered to the Project Sponsor on October 24, 2016.

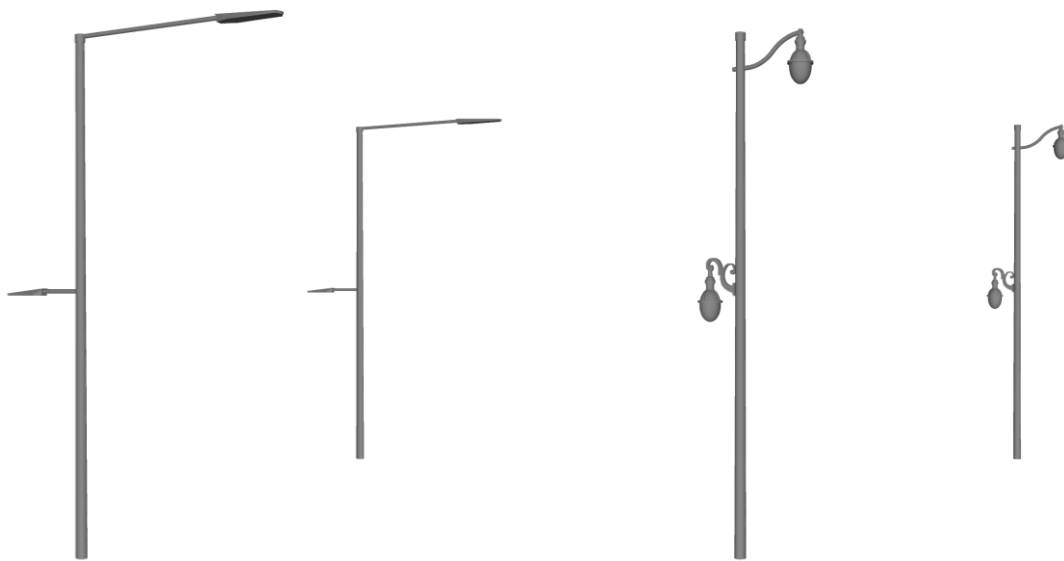
One of the options explored, “Fabrication of New Concrete Poles,” calls for the fabrication of replicas to match the existing original design and include an internal wiring pathway to illuminate the lights. If the Historic Preservation Commission so motions this long-term treatment, these four poles would serve as a monument to the existing poles once they are replaced and would no longer serve the SFMTA’s Overhead Contact System (OCS) that powers the trolley buses, nor meet SFPUC standards for adequate street lighting.

At a City Hall Preservation Commission hearing November 3, 2016, Commissioners reaffirmed their position that there be no long-term treatment of the existing trolley/light poles in order to achieve the greatest visibility of the original Arthur Brown designed torchiere lights, stated in their letter to the San Francisco Historic Preservation Commission dated November 13, 2015.

The Project's mitigation measure M-AE-2 states that the portion of the OCS support pole/streetlight network in the Civic Center Historic District will be reviewed and approved by the HPC and the City Hall Preservation Committee, and ultimately approved by the HPC (4.4-35).

Once the Historic Preservation Commission makes a determination for any long term treatment plan for the four trolley/light poles in front of City Hall and the War Memorial, and detail design of the OCS pole with replica pedestrian and street lamps and brackets is completed, the Project Sponsor will return to the Historic Preservation Commission for its consideration of an alternative trolley/light pole to the approved design for the Van Ness Avenue corridor.

Renderings of Trolley/Light Pole Options



Left: OCS pole as approved. Right: Alternative OCS pole with replica pedestrian and street lamps and brackets.