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MEMORANDUM

TO: Carla Short
Interim Director
SF Public Works

FROM: Raymond Lui, SE 
Section Manager
SF Public Works IDC Bureau of Engineering – Structural Engineering Section

DATE: March 24, 2022

SUBJECT: Cost Estimate of Kearny Street Pedestrian Bridge Demolition and Public Right-of-Way Restoration

Per your request, we have completed an update of the estimated cost of demolition of the Kearny Street Pedestrian Bridge that provides pedestrian access over Kearny Street from Portsmouth Square to the Hilton San Francisco Financial District at 750 Kearny Street in San Francisco, and the restoration of the public right-of-way. The rough-order-of-magnitude budget cost estimate included herein is not based on final, approved design and construction plans. Actual construction and restoration costs may be higher depending on final, approved designs, permit requirements and conditions, and the cost of labor and materials at the time of demolition and construction.

Existing Construction

Constructed circa 1971, the pedestrian bridge was designed by T.Y. Lin, Kulka, Yang & Associates, and the foundation support through the Portsmouth Square Parking Garage was design by H.J. Degenkolb & Associates.

Spanning over four lanes of Kearny Street, the two-span pedestrian bridge measures approximately 28 feet wide and 210 feet long. The structural system of the bridge comprises 6¼-inch thick post-tensioned concrete slab supported by transverse concrete beams that span to two perimeter post-tensioned concrete girders.

On the west end, bridge girders are supported directly on the structural slab of the park upper-level with two concrete encased steel columns that extend through the four level underground garage to a combined concrete spread footing. Near mid-span, the bridge is supported on two tapered concrete columns which in turn are supported by a 5-feet wide by 30-feet long by 3-feet deep concrete footing supported by two cast-in-drilled-hole (CIDH) concrete piles measuring 3-feet diameter by 58-feet deep. On the east end, the bridge is supported by an elevated plaza via seat connections. The plaza, at the bridge support, is supported by two tapered concrete columns which in turn are supported by basement concrete columns.

The elevated plaza comprises 6-inch thick post-tensioned concrete slab supported by tapered cantilevered post-tension concrete beams.

Proposed Demolition

The pedestrian bridge can be demolished from the west end to the east end at the edge of the elevated plaza. The two piers at mid-span will also need to be demolished. The playground clubhouse structure built underneath the western span will also need to be demolished. The elevated plaza/porte cochere at the Hilton could remain but will need to be repaired and new guardrails to be constructed.

We estimate the rough-order-of-magnitude demolition cost to be **\$1.42 million**. We estimate the duration of the demolition work to be on the order of 6 to 10 weeks. Additional 4 to 8 weeks will be required to restore the Hilton elevated plaza/porte cochere.

We anticipate the work to include, at a minimum:

- Erection of falsework over Kearny Street and a portion of Portsmouth Square
- Demolition of existing clubhouse structure
- Demolition of existing pedestrian bridge superstructure with multiple phasing to allow for partial vehicular and pedestrian use of Kearny Street
- Demolition of existing tapered concrete columns
- Off-haul and disposal of debris
- Construction of guardrail at Portsmouth Square
- Reconstruction of plaza/porte cochere at the Hilton
- Removal of temporary falsework and clean-up

Existing footings, CIDH piles, and columns will be abandoned in place. Minor work to repair the sidewalk will be required.

We anticipate that this work will require closure of all traffic lanes and pedestrian sidewalks for a three-day weekend to erect the falsework. We anticipate closure of at least two traffic lanes and a pedestrian sidewalk for the duration of the work. We also anticipate partial closure of the park for the duration of the work. These costs, and any other traffic control costs plus any Muni rerouting costs, have not been included in our budget estimate.

In addition, vehicular egress from the parking garage will be greatly impacted during demolition of the western half of the bridge. Additional traffic control may be required for safe egress. We anticipate a full-time flagger to be posted at the job site to help with traffic control for the duration of the work.

This estimate does not include any soft costs associated with this project such as development of plans and specifications, or community outreach and project management, and other exclusions identified in Exhibit A.



Figure 1: Bird's Eye View of Pedestrian Bridge



Figure 2: View of Pedestrian Bridge Looking North

Exhibit A

Cost Estimates for Kearny Street Pedestrian Bridge Demolition

Please note that these are estimated construction costs only; soft costs for design, permitting, construction support and construction management have not been included.

Trail Steps

Line	Description	Unit		Unit Price		Subtotal
1	Falsework erection and removal	1	LS	\$ 100,000.00	LS	\$ 100,000.00
2	Demolition of clubhouse	2500	s.f.	\$ 18.00	per s.f.	\$ 45,000.00
3	Demolition of bridge superstructure	285	c.y.	\$ 1,200.00	per c.y.	\$ 342,000.00
4	Demolition of concrete piers	20	c.y.	\$ 500.00	per c.y.	\$ 10,000.00
5	Debris off-haul and disposal	400	c.y.	\$ 70.00	per c.y.	\$ 28,000.00
6	Construction of guardrail	1	LS	\$ 80,000.00	LS	\$ 80,000.00
7	Reconstruction of porte cochere	1	LS	\$ 200,000.00	LS	\$ 200,000.00
8	Mobilization	10%				\$ 80,500.00
9	Subtotal					\$ 885,500.00
10	General Contractor markup	15%				\$ 132,825.00
11	Contingency	45%				\$ 398,475.00
12	total					\$ 1,416,800.00

This scope of work does not include traffic control.