



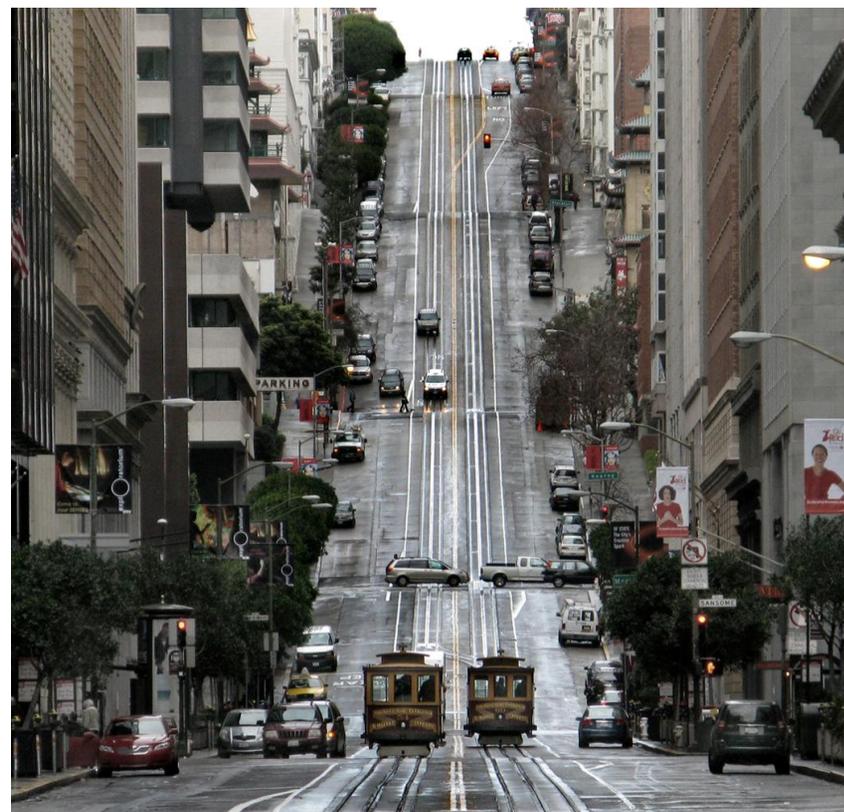
SFMTA
Municipal
Transportation
Agency

Chinatown Safe Routes to School Project

July 12, 2016

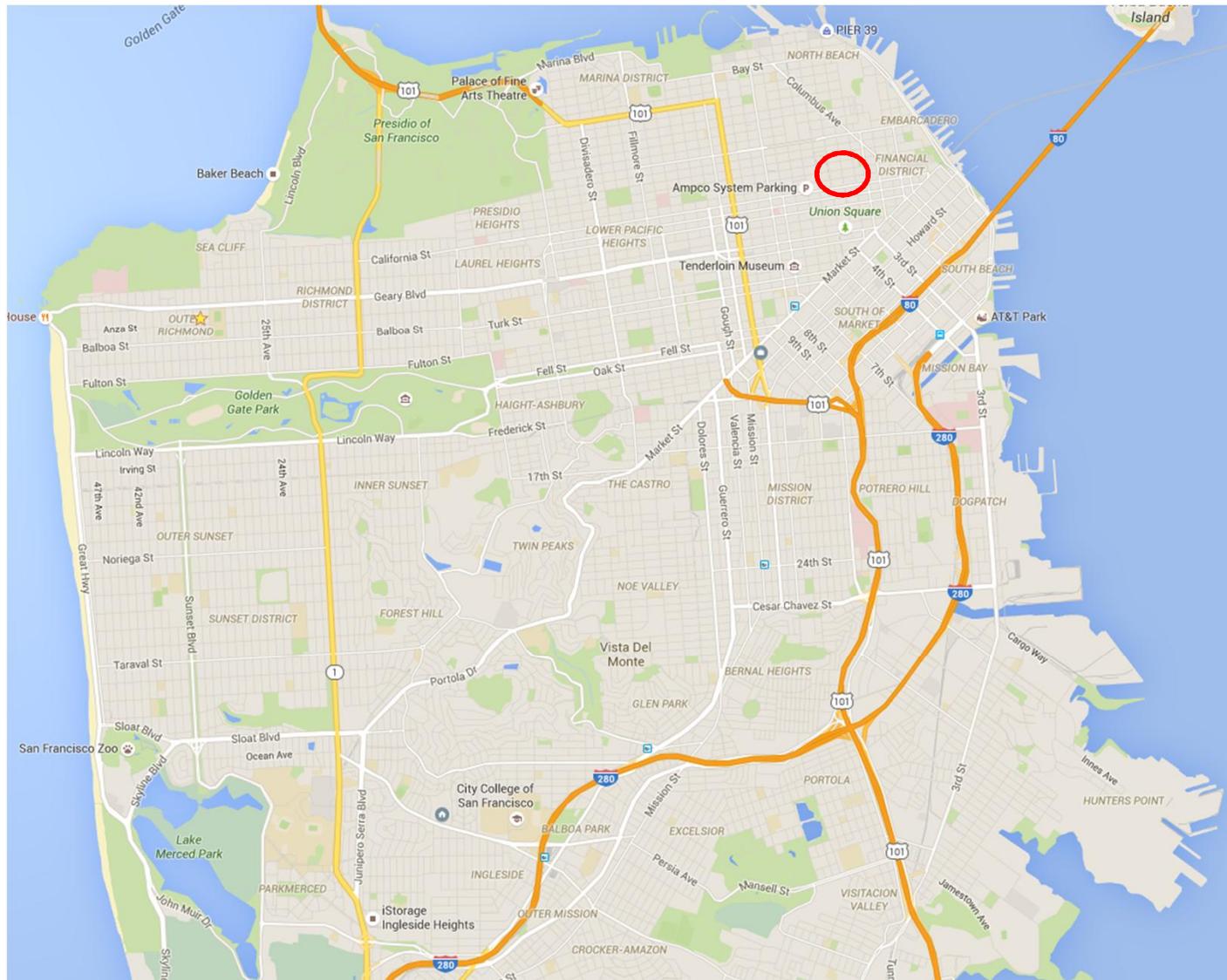
ITE Western District Annual Meeting

Albuquerque, New Mexico

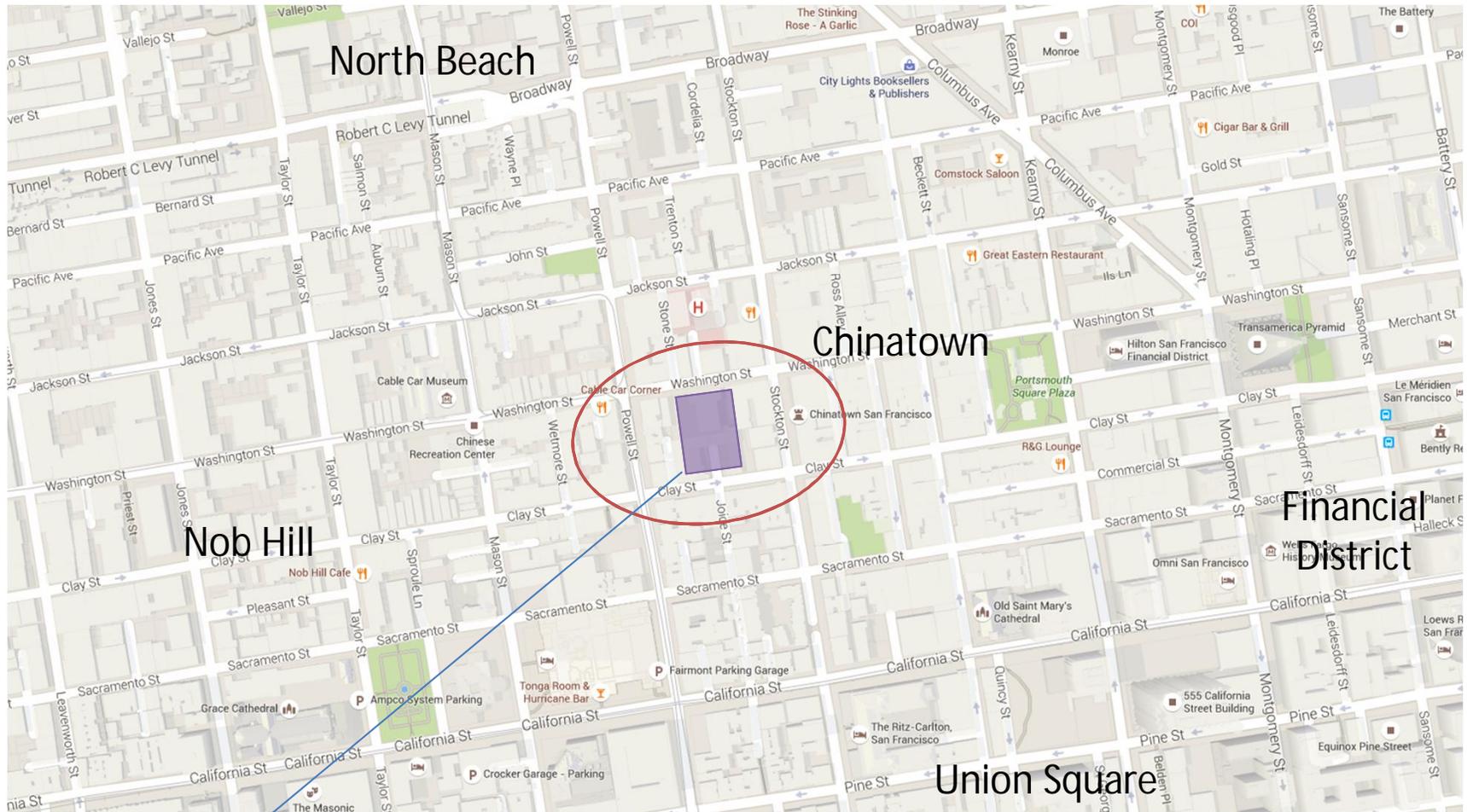




Overview of the City of San Francisco

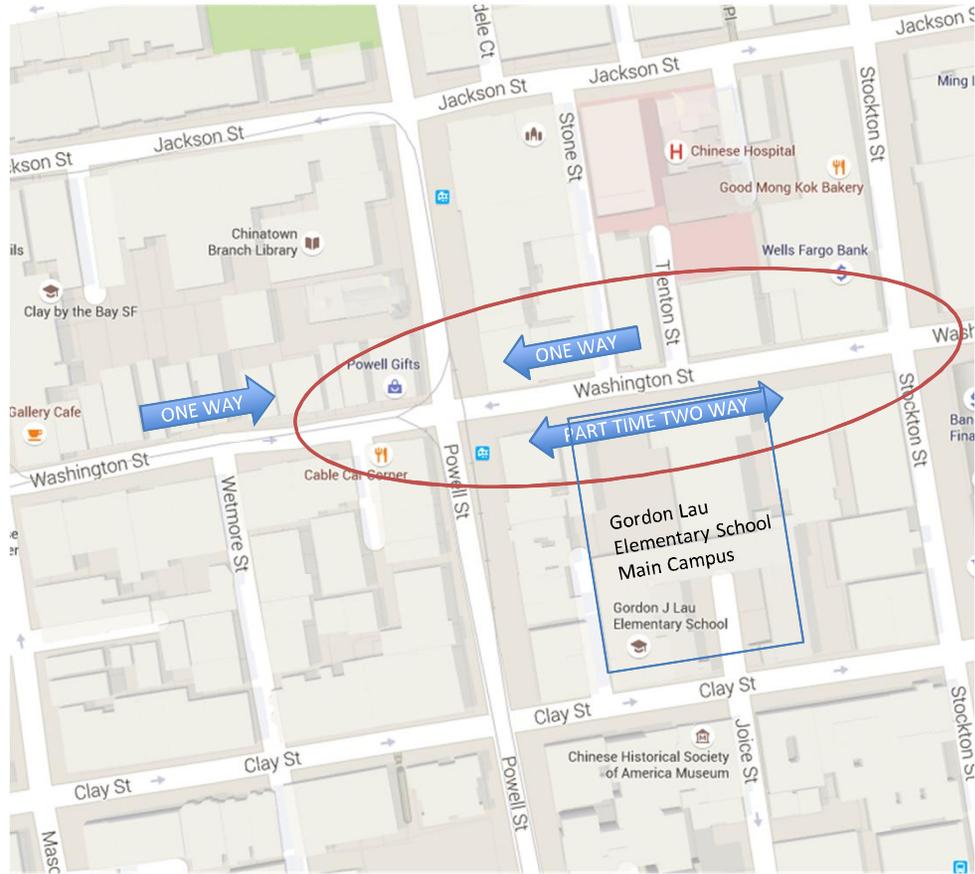


Overview of the Area



Gordon Lau Elementary School

Washington Street



Looking north from main door of school campus toward annex

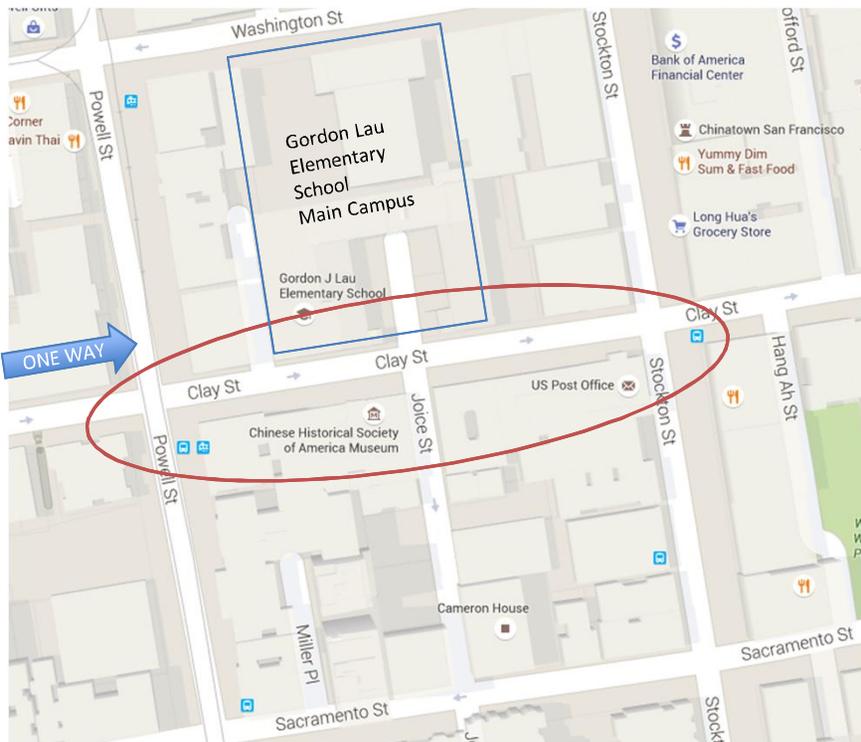


Looking west on Washington Street



Clay Street

Looking east on Clay Street



Looking south on Joice Street



Gordon Lau Elementary School Campus and Annex



- Crosswalks too far away from main campus door for most pedestrians
- Closest crosswalk is about 200 feet away.

After school program

People Choose the Fastest Route

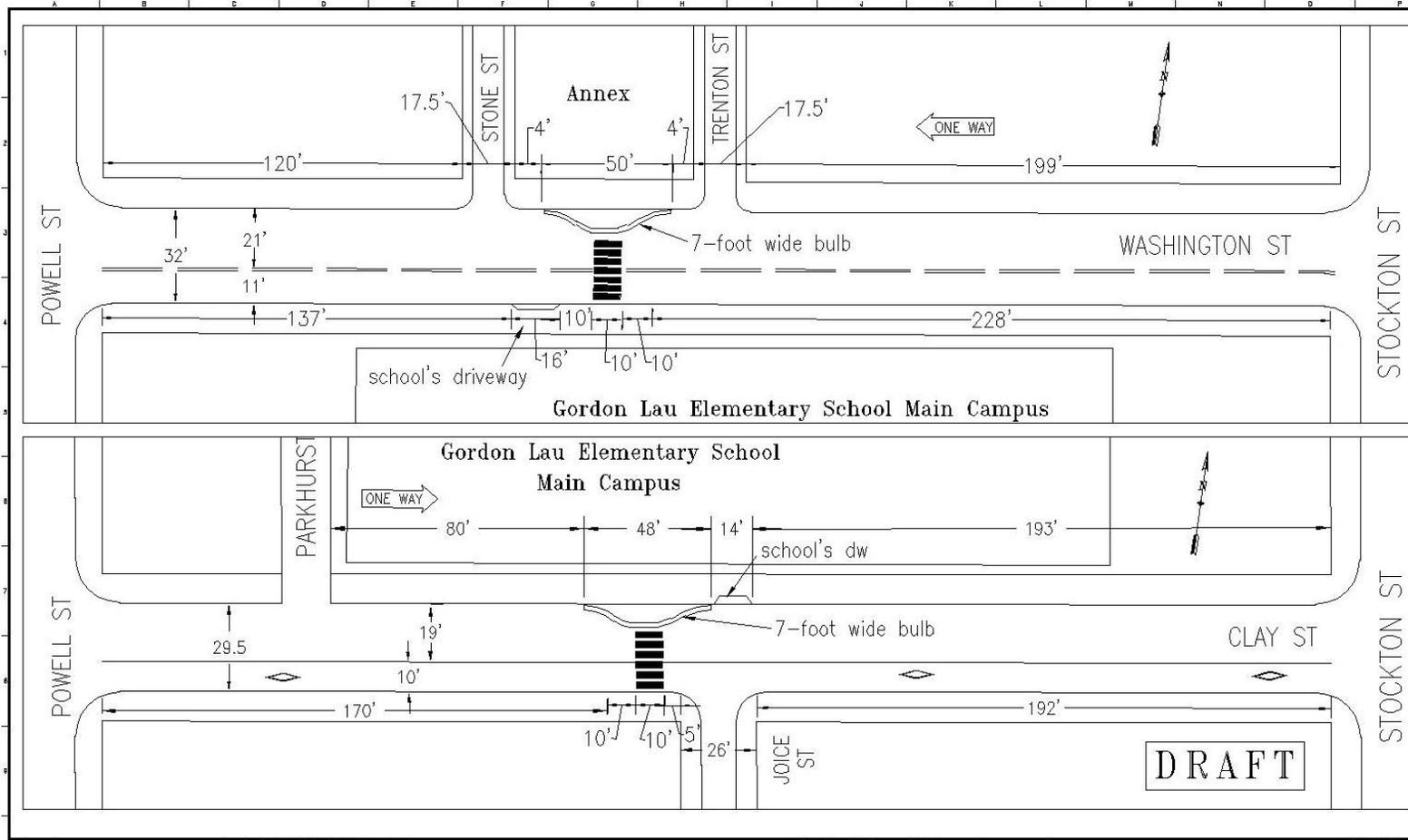


Parents & kids crossing Clay St at Joice St

Parents and kids crossing Washington St between the annex and main campus with the help of crossing guards.



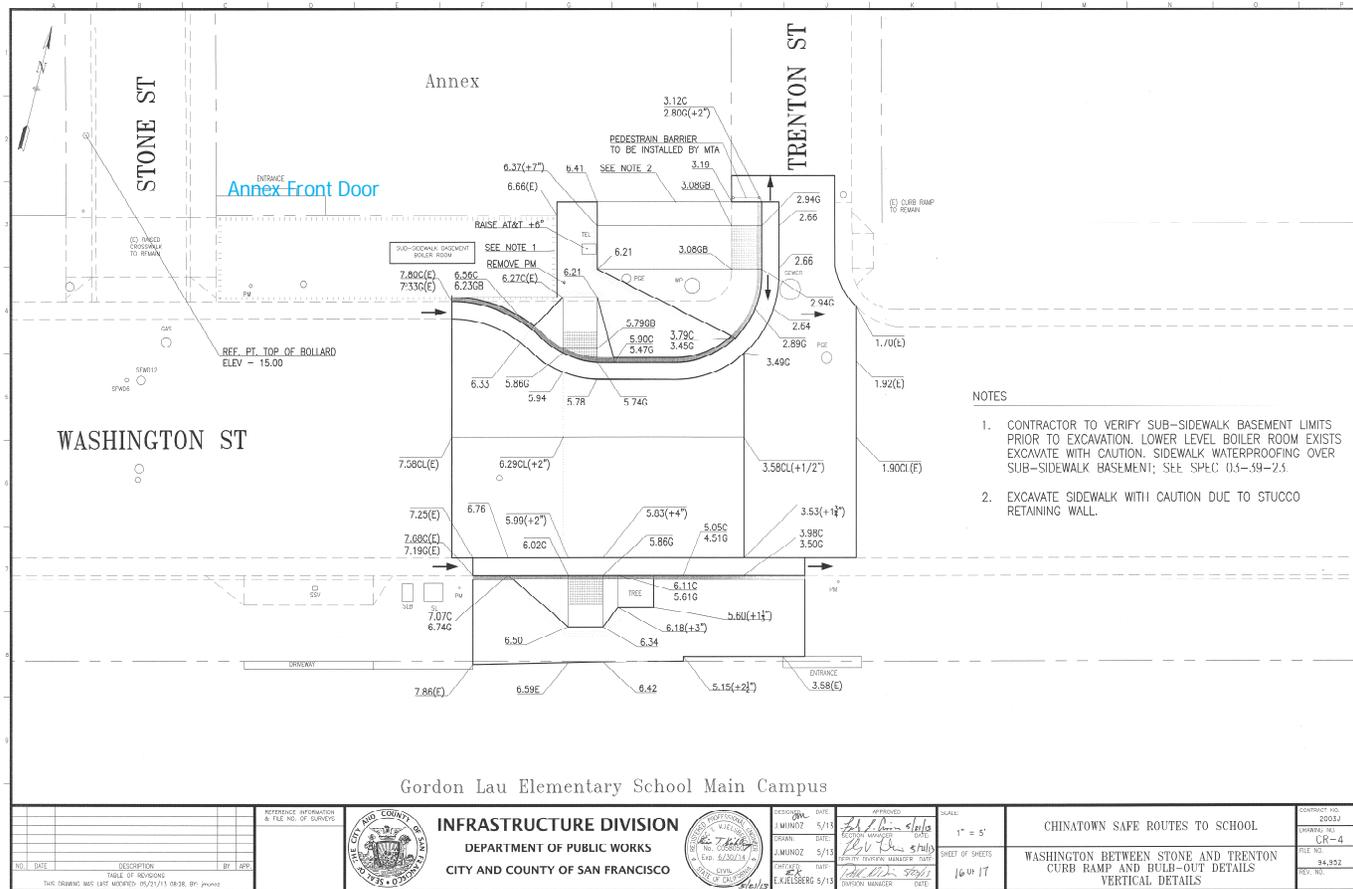
Original Proposed Plan



Original Bulb-out Plan:

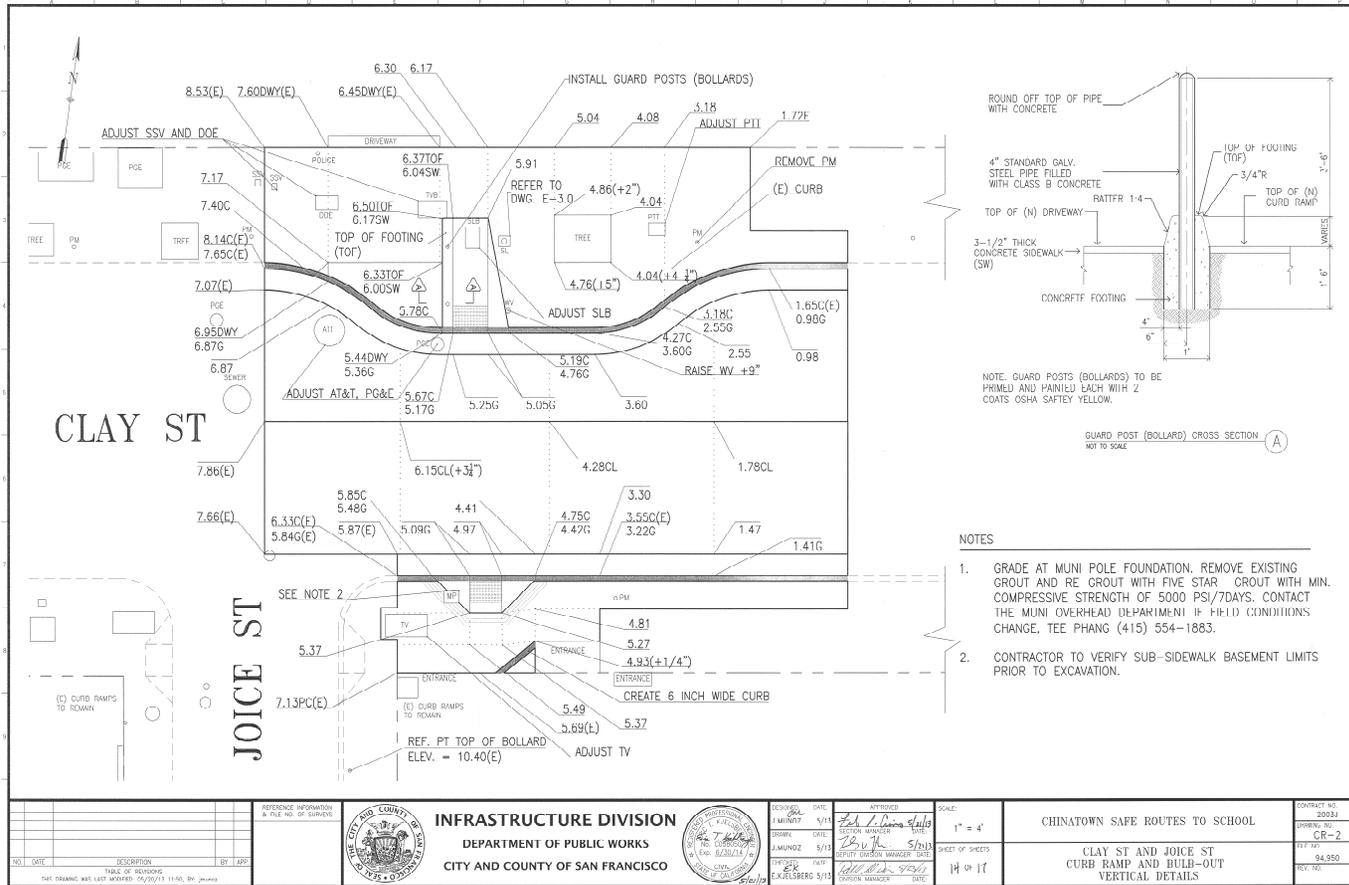
- Washington Street bulb-out was in middle of Trenton-Stone block (top drawing)
- Clay Street bulb-out was west of Joice Street (bottom drawing)

Final Washington Street Bulb-out Design



Final design moved bulb-out towards Trenton Street to preserve parking in front of the annex doors for pick-up and drop-off

Final Clay Street Bulb-out Design



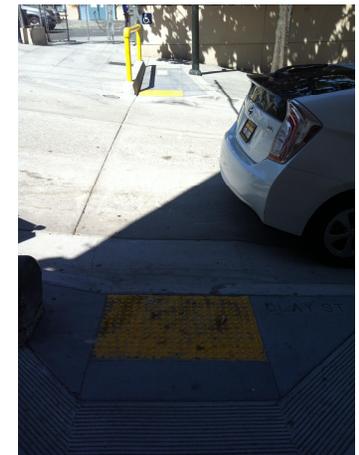
Final design move the bulb-out to the east side of the intersection next to the driveway. To separate the curb ramp and the driveway, a barrier and curb were installed between them.

Clay/Joice Before and After Installation

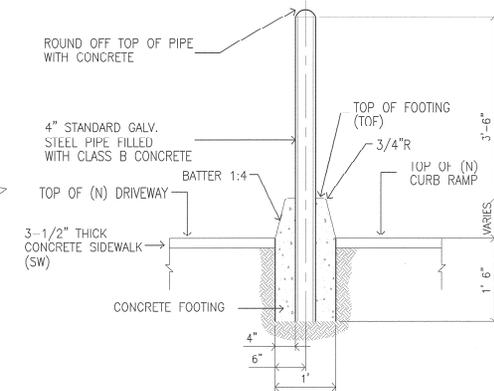
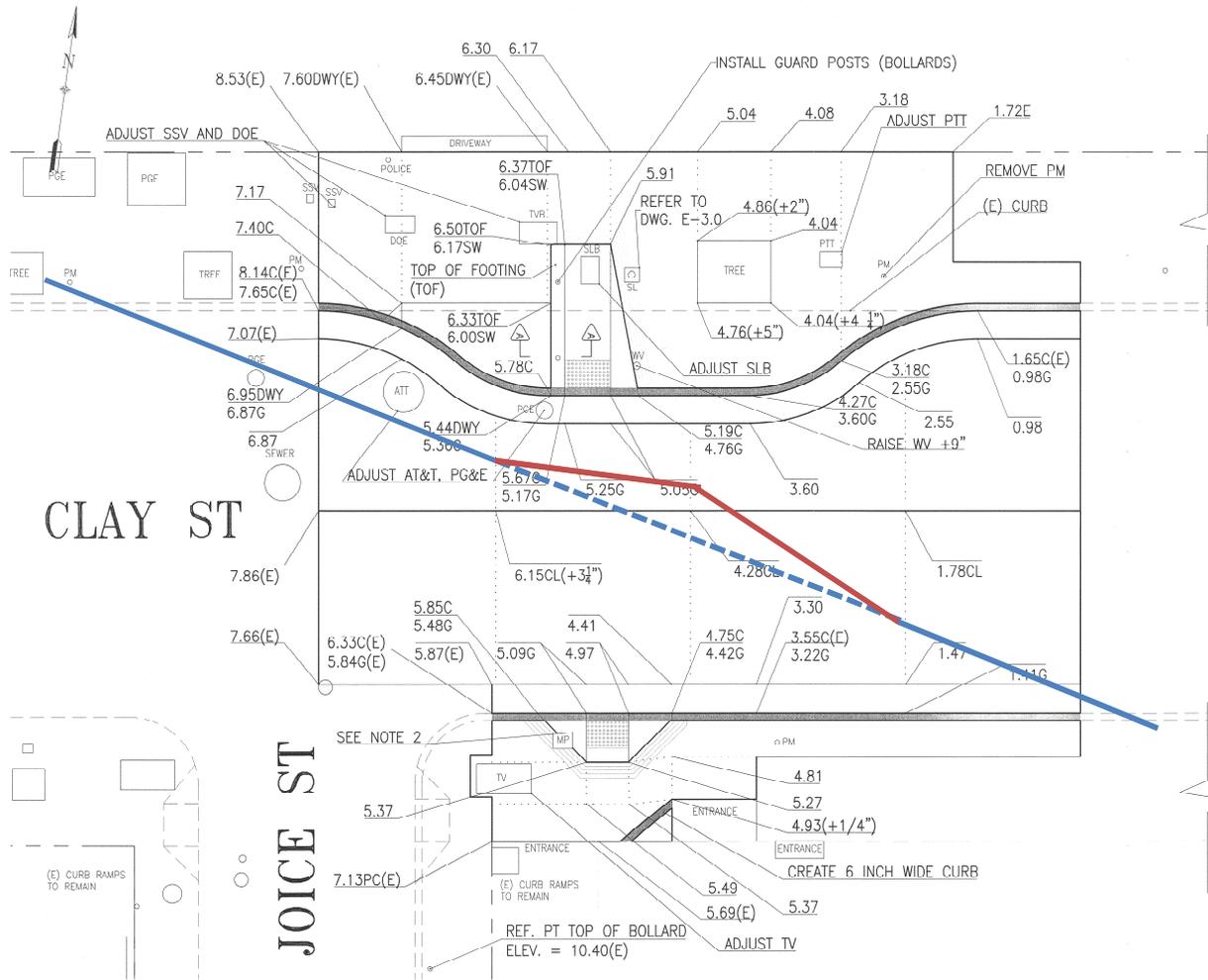


Above:
Before photo. Note the west leg of the intersection is less challenging to build due to the driveway.

Top Right and Right:
After photos. Driveway and curb ramp next to each other led to a unique design.



Final Clay Street Bulb-out Design



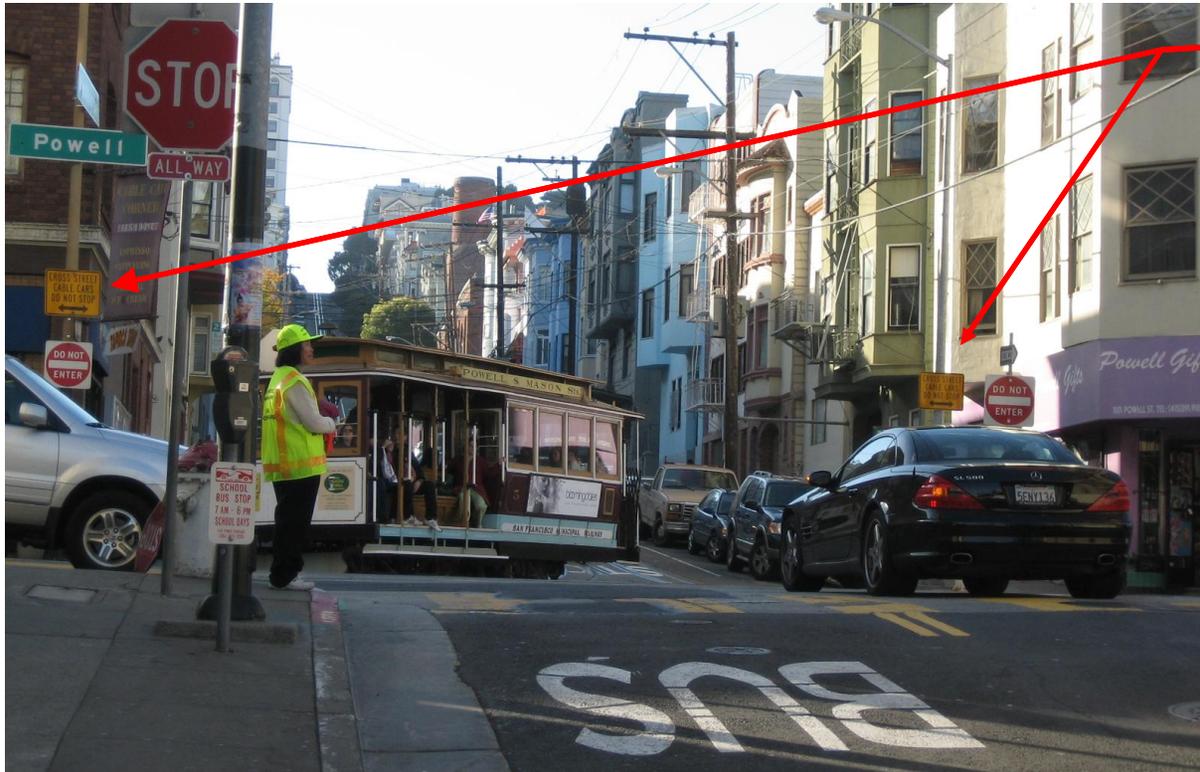
NOTE: GUARD POSTS (BOLLARDS) TO BE PRIMED AND PAINTED EACH WITH 2 COATS OSHA SAFETY YELLOW.

GUARD POST (BOLLARD) CROSS SECTION (A)
NOT TO SCALE

To the left:

- Blue line was the general slope profile of Clay St.
- Dashed blue line was the original slope.
- Red line is the new slope profile. (Lines are exaggerated)

Powell and Washington Streets



- Intersection with many forms of transportation from cars to pedestrians to cable cars.
- Unconventional traffic controls due to cable cars
- Cable cars cannot stop at the intersection

Cable Car Operation



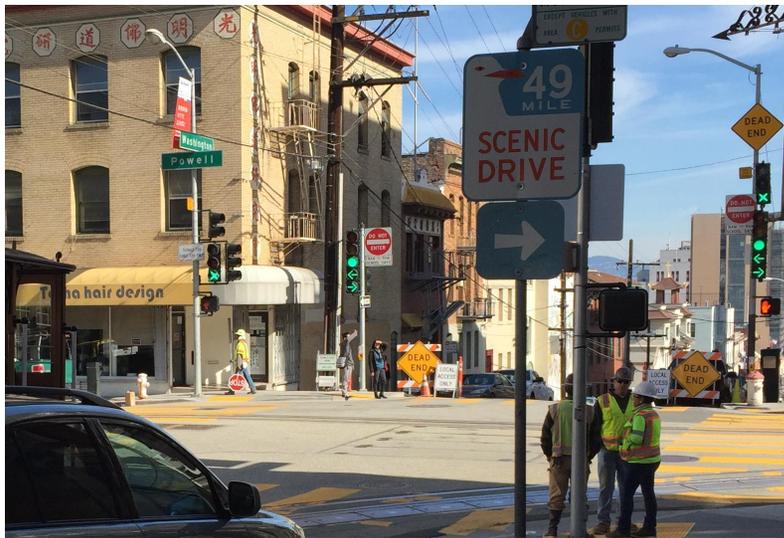
Cable cars must stop farther upstream from the intersection to pick up speed coming down the hill on eastbound Washington Street to get up the hill on Powell Street.

If they don't pick up speed, they must be pushed up the hill by a "pusher" truck.



Traffic Signal Placement Issues

- Original design for Powell St before signal turn on. Note the left signals are stacked.
- Final design and current configuration has the left signals side-by-side.
- Why? Because...



Traffic Signal Visibility



Cable car grip-people usually stand up while controlling cable cars.

Note in pictures:

- The grip-person is several feet back from the front.
- The roof and front top windshield is quite low.



Traffic Signal Visibility



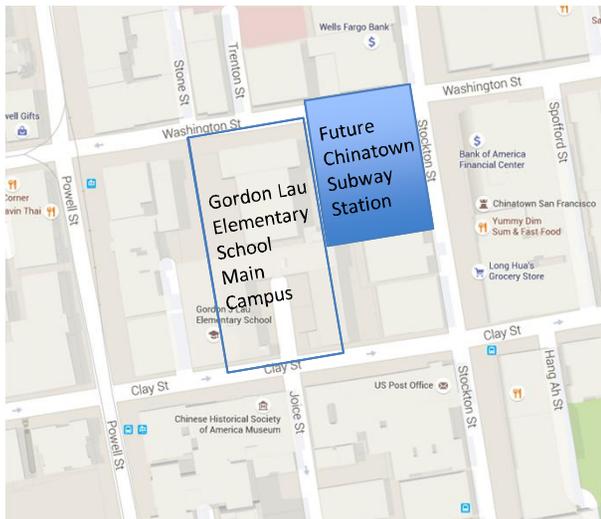
Due to the cable car design, one of the two traffic signals on Powell Street were lowered.

However, even after the signal placement modifications, the cable car gripperson still have to squat down to see the cable car signal.

Central Subway Project Coordination



- \$1.6 billion subway project construction started before we could begin.
- Construction closed Washington Street to all vehicle and pedestrian traffic.
- Building bulb-out would have a major conflict with trucks entering and exiting subway project area.
- Funding was expiring so it will be constructed as part of a separate project.

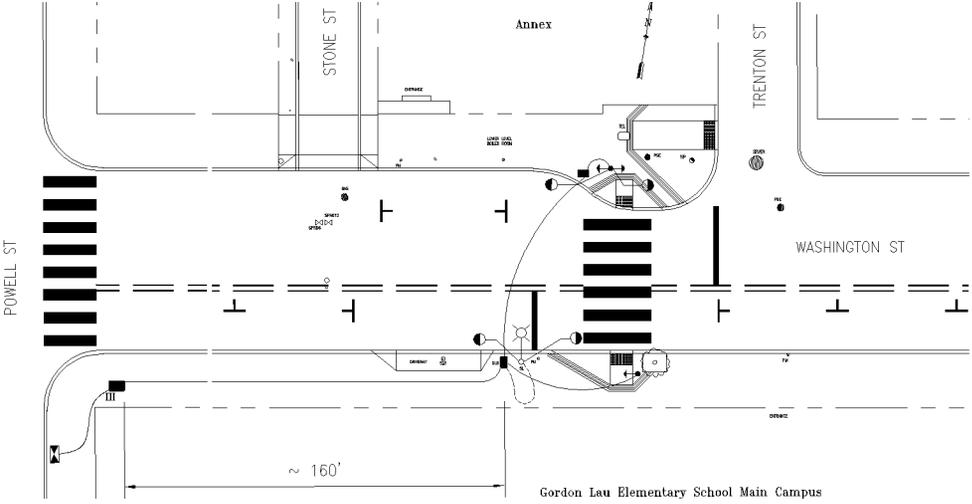




“Building Canyon” Effect for Solar Devices

- Shadows on both streets during most hours of the day meant that batteries on solar powered flashing beacons may not fully recharge.
- Manufacturer agreed.
- Cost of beacons decreased, but overall costs increased due to new conduit and pullboxes required.

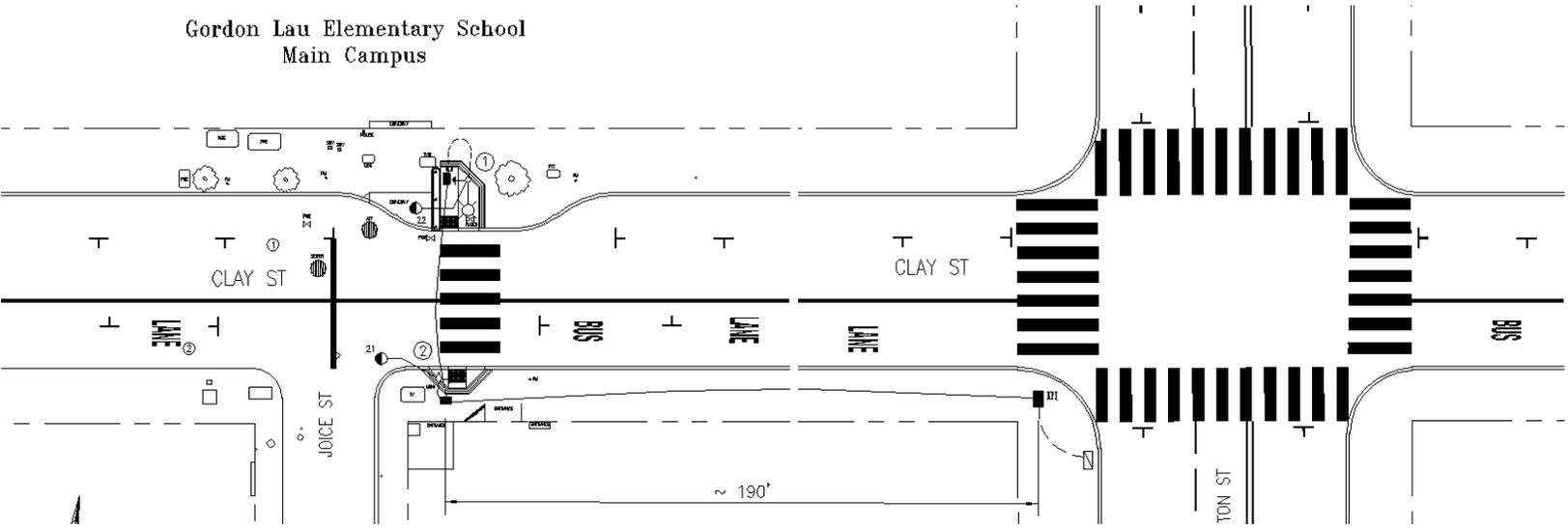
Final Design: Hard-wired Beacons



Flashing beacons on Washington Street are now hard wired to the new Powell-Washington signal.

Flashing beacons on Clay Street are now hard wired to the existing Clay-Stockton signal.

Gordon Lau Elementary School Main Campus



Construction Contractor Issues

- Good economy results in fewer bidders for city projects.
- Only two contractors bid on project.
- Awarded to lower bidder.
- Notice-to-Proceed date was 11/13/2013.
- Substantial completion on 3/31/2015.

City and County of San Francisco Department of Public Works TABULATION OF BIDS	
ID No:	FCE12090
CONTRACT No:	2003J
TITLE:	Chinatown Safe Routes to School [Federal Aid Project No. SRTC004-0065]
BIDS RECEIVED:	June 26, 2013
BIDDERS (in the order received & opened):	<u>Total Bid Price</u>
Bay Area Lightworks, Inc.	430,565.00
Phoenix Electric Company	347,880.00
	Average Bid: 389,222.50
	Engineer's Estimate: 373,530.00
	% of Engineer's Estimate: 104%
	% of Engineer's Estimate on Low Bid: 93%

☐ Indicates a correction of the bid price after review.

City and County of San Francisco
San Francisco Department of Public Works
Office of the Deputy Director for Financial Management and Administration
Division of Contract Administration
155 Market Street, 4th Floor
San Francisco, CA 94103
(415) 551-4885 | www.sfpd.org

Ernie M. Lee, Mayor
Mohammed Nura, Director

Stacey Camillo, Division Manager

NOTICE TO PROCEED

Contractor: Phoenix Electric Company
130 Van Dyke Avenue
San Francisco, CA 94133

Project: FCE12090 SRCT - Chinatown Safe Routes to School [Federal Aid Project No. SRTC004-0065]

Documents Posted: November 13, 2013

Document No.: ENEN14000025 - 01

Payment Subject to Final Control Agent? No

DPW Award No.: 181,539

Start Date: November 18, 2013

Time Allowed for Substantial Completion: 120 Consecutive Calendar Days

Substantial Completion Date: March 17, 2014

Time Allowed for Final Completion: 14 Consecutive Calendar Days

Final Completion Date: March 31, 2014

The City hereby notifies the Contractor that, under San Francisco Administrative Code section 4.21(b), proof of workman's compensation insurance coverage for the Contractor and all its subcontractors is required prior to the commencement of work. Failure to provide the required proof of insurance may prevent the contractor or its subcontractor(s) from mobilizing onto the project site or performing any work on the Project. In such event, the contractor shall be held fully responsible for any resulting delay in the completion of the Project and the City may assess liquidated damages under the Contract Documents.

Mohammed Nura
Director of Public Works

Stacey Camillo
Division of Contract Administration
November 13, 2013

cc: Steven Lee, Benjie Tse, Allison Klein

San Francisco Department of Public Works
Making San Francisco a beautiful, livable, vibrant, and sustainable city.

Blake M. Lee, Mayor
Mohammed Nura, Director

John Thomas
Division Manager
Project Management and Construction

480 Mission St.
San Francisco, CA 94103
415-454-8400

PublicWorks.org
facebook.com/publicworks
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FINAL REPORT

SPEC NO. 2003J

DOCUMENT NO. ENEN14000025

CONTRACT TITLE Chinatown Safe Routes to School

CONTRACTOR Phoenix Electric Company

RESIDENT ENGINEER Robin Park

PROJECT CHRONOLOGY

Official Starting Date (NTP)	11/18/2013
Original Substantial Completion Date	3/17/2014
Actual Substantial Completion Date	3/31/2015
Contract Time Plus Extensions	443
Time Used	443
Over-run(Under-run)	0
Actual Final Completion Date	3/31/2015
Over-run(Under-run)	0

PROJECT ACCOUNTING

Original Contract Amount	\$347,880.00
Quantity Changes	0
Change Orders	\$26,262.50
Liquidated Damages	\$0.00
Total Net Cost	\$374,262.50

SUBMITTED: Resident Engineer 12/3/15 Date

REVIEWED: Construction Manager 12/11/15 Date

TO: OFFMA - Contract Administration
OFFMA - Financial Mgmt. & Budget

1. Please close out the contract and process the Final Payment Authorization.
2. Please close out the Construction engineering account.

APPROVED: Section Manager 12/10/15 Date

Making San Francisco a beautiful, livable, vibrant, and sustainable city.

Lessons Learned

- When dealing with groups/schools/etc, be aware of staff changes.
- Good communications and support are always a plus. (especially when things change)
- Be careful of mid-block crosswalks on hills. It looks simple but can get complex.
- When using solar powered devices, check shadows during the day.
- Cable cars are unique.
- Having a good economy is not always a good thing for construction projects (though this current economic cycle is unusually extreme).
- Large construction projects will have higher priority than smaller projects.

Questions?

- **Contact information:**
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 - San Francisco Municipal Transportation Agency
 - 1 South Van Ness Avenue – 7th Floor
 - San Francisco, CA 94103
- **Phone: (415) 701-4464**
- **Email: philip.louie@sfmta.com**