CAROLAN AVENUE

"COMPLETE STREETS" IMPROVEMENT PROJECT

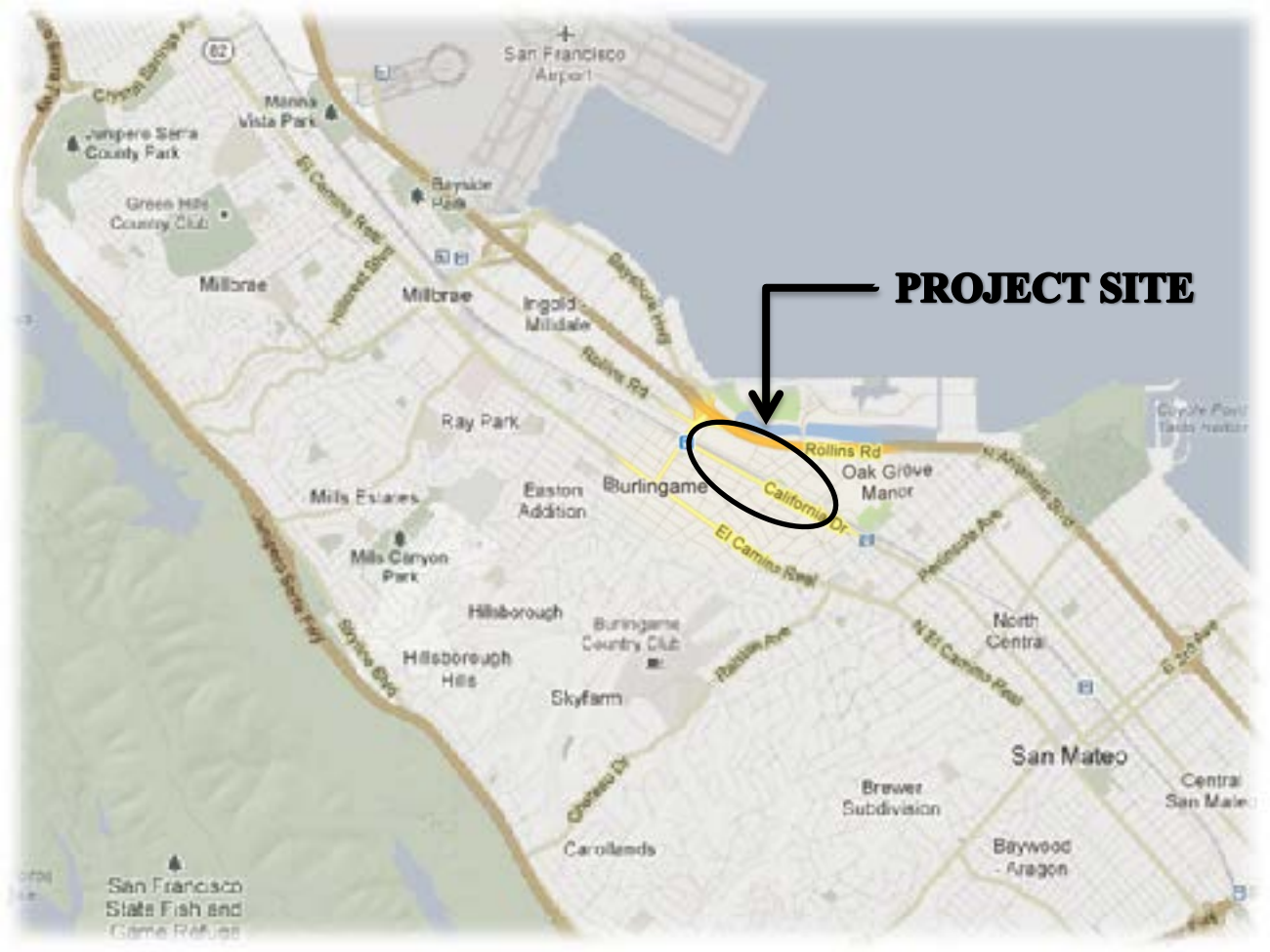
AIR QUALITY CONFORMITY TASK FORCE

Presented by

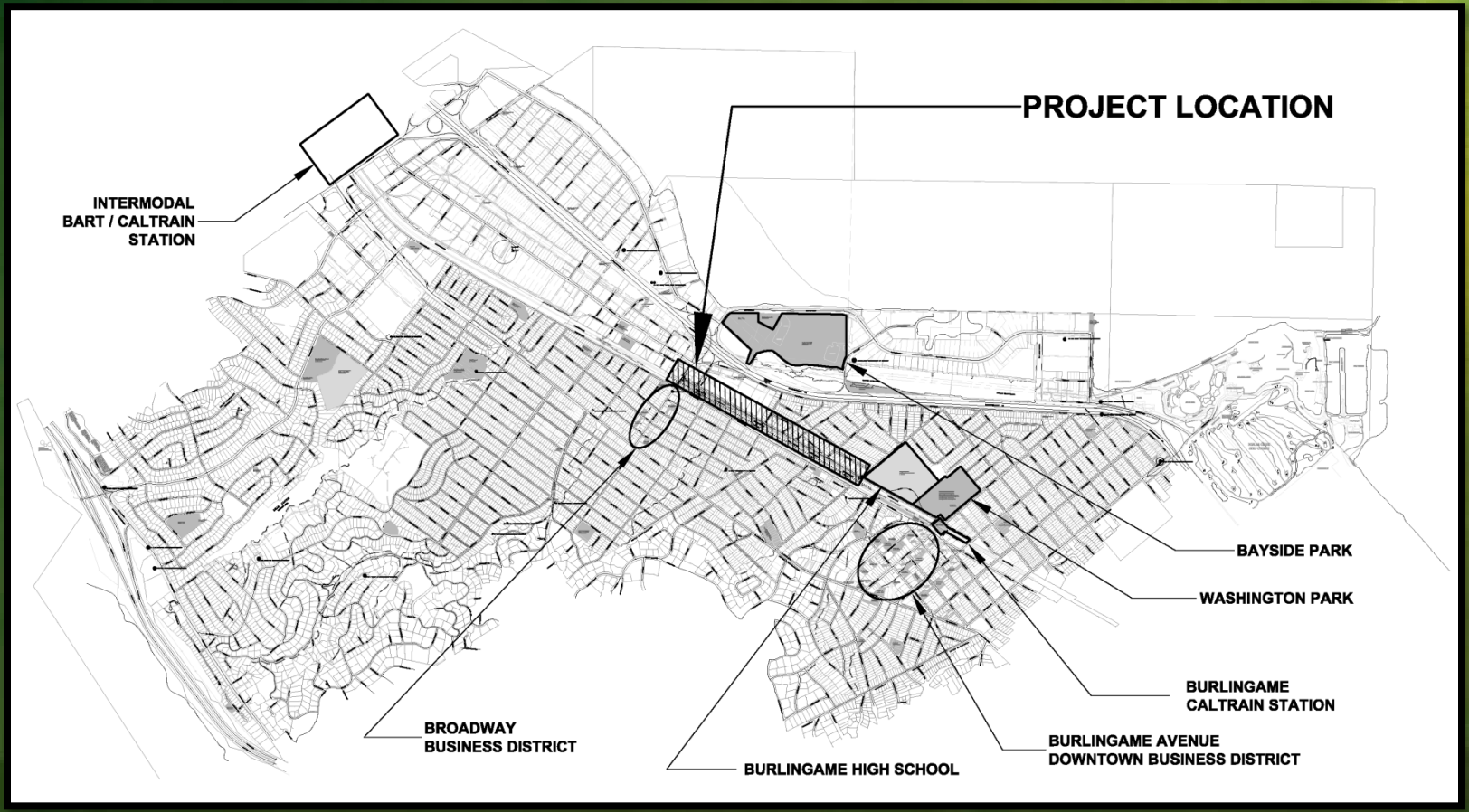
City of Burlingame, Public Works Department

December 3, 2015

PROJECT LOCATION



TRANSIT/EMPLOYMENT/ COMMERCIAL/HOUSING PROXIMITY



PROJECT DESCRIPTION

The project in on Carolan Avenue in Burlingame, between Broadway and Oak Grove Avenue. The project length is approximately ¾ mile long. It is located directly adjacent, and parallel, to the Caltrain railroad corridor. The Broadway Caltrain Station is situated at the project's northern limit, with the Burlingame Avenue Caltrain Station one block south of the project's southern limit.

The project entails modification of Carolan Avenue through "Complete Streets" standards and "road diet" concepts. The work involves conversion of the 4-lane roadway (2-lanes in each direction) with Class III bike routes into a 2-lane roadway with a third, center turn lane, and new Class II dedicated bicycle lanes for each travel-way direction.

All existing handicap access ramps will be updated, and new ramps will be constructed where none were before. The project will also update and further enhance the safety factor of the marked pedestrian crosswalk at Carolan Avenue and Morrell Avenue. This crosswalk is currently used by pedestrians to access California Drive, on the other side of the Caltrain railroad tracks. This crosswalk makes pedestrian access possible over the only Caltrain pedestrian-only crossing within the peninsula railway corridor.

The project will also construct bulb-out curbs at each intersection along Carolan Avenue, with proper and appropriate storm drainage facilities at each bulb-out location. National Pollutant Discharge Elimination System (NPDES) best-practice features, such as "rain garden" landscaped bulb-out areas, will be incorporated to reduce overflow storm runoff along the curb areas. The bulb-out landscaping will utilize sustainable green landscape concepts, such as use of native plants and bio-swales.

PROJECT PURPOSE

Improve bicycle and pedestrian access and safety by:

- Providing dedicated Class II bike lanes along both sides of Carolan Avenue from Broadway to Oak Grove Avenue.
- Implement a "road diet" by reducing total lane numbers on the roadway, thereby reduce vehicle speeding.
- Construct new cub/sidewalk bulb-outs at intersection corners to facilitate better visibility for both pedestrians and drivers at corners.
- Upgrade an existing pedestrian crossing with a high-visibility pedestrian crosswalk across Carolan Avenue at Morrell Avenue.

PROJECT NEED

The project is needed because Carolan Avenue links the following :

- Residential areas
- Burlingame Caltrain station,
- Burlingame Downtown Business District,
- Burlingame High School,
- Washington City Park (all to the south)

with the Bayfront recreational facilities and commercial/service/hotel business across US101 (to the north and east).

This link is further highlighted by the fact that Carolan Avenue is currently an identified bike route that serves as the main connector to the areas cited above.

IMPROVEMENTS & BENEFITS

- Complete street reconfiguration
  - Reduce from 4-lanes to 2-lanes
  - Add a single Left-Turn lane
  - New asphalt concrete
  - New Class II and lane striping

- New Class II Bike Lanes
  - Broadway to Oak Grove Avenue
  - Both directions
  - 5-ft. & 6-ft. lanes
  - Increase bicyclists confidence & usage

IMPROVEMENTS & BENEFITS

- Pedestrian Safety
  - Bulb-out curbs – reduce pedestrian exposure to traffic
  - Updated ADA access ramps
  - Crosswalk improvements to Caltrain pedestrian crossing (Carolan & Morrell)

- Sustainable "Green" Landscaping
  - NPDES best-practice features
    - Rain-garden landscape
    - Improve storm water run-off

TRAFFIC ANALYSIS

Year	Build				
	Corridor LOS	ADT	%Trucks	#Trucks	Truck ADT
2016	B	9,100	0	0	0
2020	D	10,100	0	0	0
Year	**No-Build**				
	Corridor LOS	ADT	%Trucks	#Trucks	Truck ADT
2016	A	9,100	0	0	0
2020	B	10,100	0	0	0

The HCM 2000's V/C approach was used to obtain a corridor-level LOS. Current and projected volumes were derived from true 2015 volume counts, the Carolan Ave and Rollins Road Residential Development Project TIA Report, and the Peninsula Corridor Electrification Project (PCEP) Environment Impact Report (EIR).

2020 PROJECTED ADT

	WB		
	TIME	2015 Totals	**2020 Projected**
8.6% Growth	0:00	18	**20**
	1:00	2	**2**
	2:00	8	**9**
	3:00	13	**14**
	4:00	32	**35**
	5:00	84	**91**
	6:00	197	**214**
	7:00	444	**482**
	8:00	458	**497**
	9:00	321	**348**
	10:00	274	**297**
	11:00	252	**273**
13.0% Growth	12:00	255	**277**
	13:00	303	**342**
	14:00	339	**383**
	15:00	372	**420**
	16:00	304	**344**
	17:00	363	**410**
	18:00	255	**288**
	19:00	212	**240**
	20:00	186	**210**
	21:00	136	**154**
	22:00	79	**89**
	23:00	35	**40**
		4942	**5478**

	EB		
	TIME	2015 Totals	**2020 Projected**
8.6% Growth	0:00	4	**4**
	1:00	5	**5**
	2:00	3	**3**
	3:00	2	**2**
	4:00	2	**2**
	5:00	31	**34**
	6:00	70	**76**
	7:00	284	**308**
	8:00	234	**254**
	9:00	240	**260**
	10:00	220	**239**
	11:00	211	**229**
13.0% Growth	12:00	211	**229**
	13:00	270	**305**
	14:00	252	**285**
	15:00	320	**362**
	16:00	373	**421**
	17:00	419	**473**
	18:00	382	**432**
	19:00	221	**250**
	20:00	152	**172**
	21:00	117	**132**
	22:00	77	**87**
	23:00	36	**41**
		4136	**4605**

Projected 2020 ADT :

5,478 + 4,605 = 10,100

If standard 2% growth rate used instead:

2015	9,100
2016	9,282
2017	9,468
2018	9,657
2019	9,850
2020	**10,047**

ADT by 2% growth is comparable, but using 8.6% and 13.0% for AM/PM, respectively, from Summerhill TIA, gives a more accurate representation of 2020 volumes.

THANK YOU

For Your Evaluation

CAROLAN AVENUE

"COMPLETE STREETS" IMPROVEMENT PROJECT

Existing

Proposed Project