

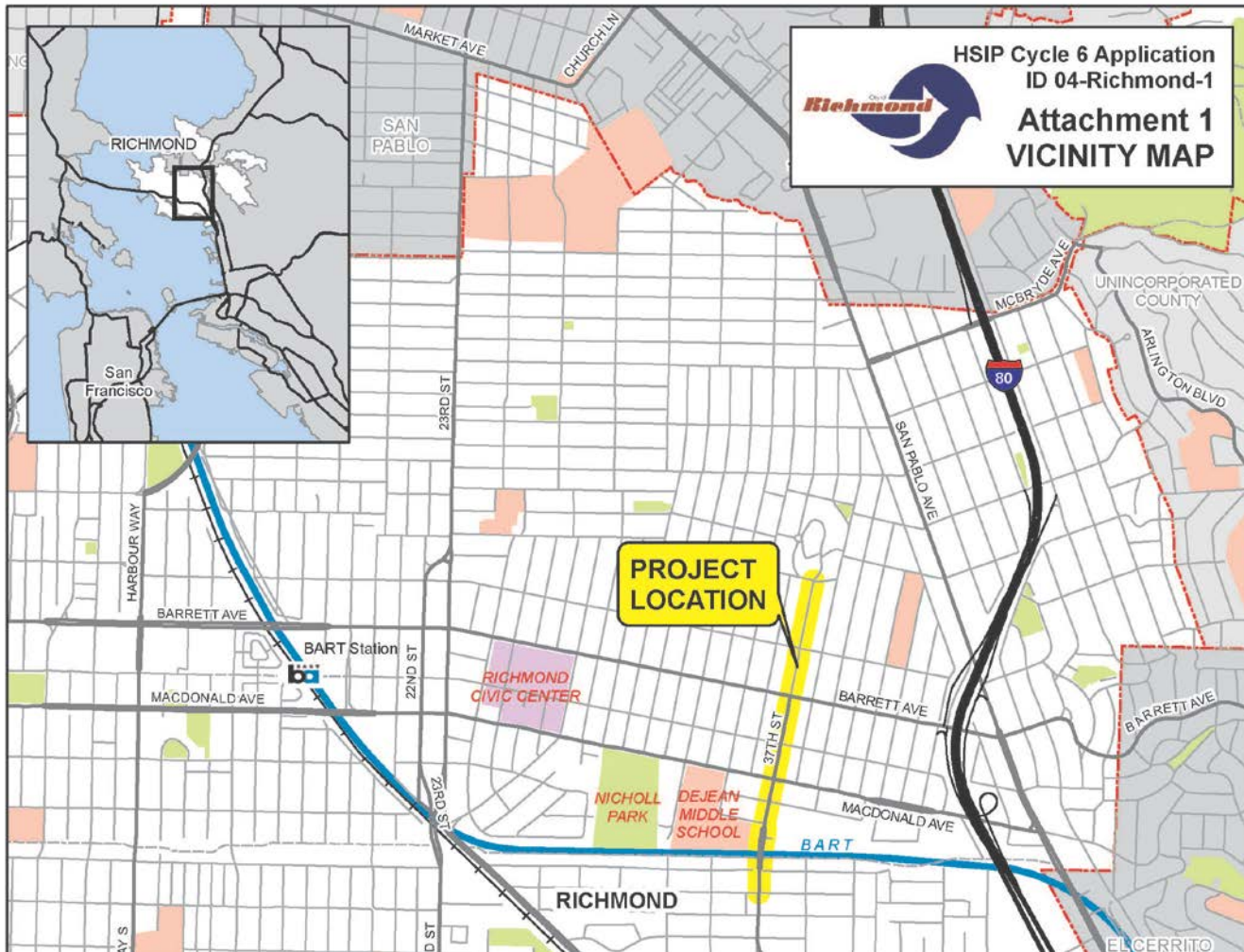


37th Street Bicycle & Pedestrian Improvements Project

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City of Richmond

Air Quality Conformity Task Force Meeting
June 22, 2017

Project Location



View of 37th Street Facing North From MacDonalad Avenue



View of 37th Street Facing South Just North of Nevin Avenue



View of 37th Street Facing South From Barrett Avenue



Project Purpose

- Complete Streets
- Safety improvements for bicyclists, pedestrians, and vehicles along the 37th Street corridor
- Install bicycle facilities in accordance with the City's Bicycle Master Plan
- Facilitate increased bicycling, walking, and transit use to schools, work, BART stations in accordance with City's Health in All Policies paradigm

Project Description

- 37th Street in Richmond, between Center Street and Cerrito Avenue
- Length is about 0.7 miles
- ADA compliant curb ramps
- Improved crosswalks
- Bicycle Facilities
- Pedestrian safety modifications at traffic signals

Project Need

- Residential areas
- John F. Kennedy High School, Lovonya DeJean Middle School , King Elementary School
- Target Store and commercial area
- Richmond Civic Center
- Richmond Multimodal Station (BART, Amtrak, AC transit, other transit operators)
- Existing bicycle network
- AC Transit lines

Road Diet

- From Macdonald Avenue to Barrett Avenue only (2 blocks)
- About 0.2 miles of road diet
- Reduce four lane road with two travel lanes in each direction into a three lane road with one travel lane in each direction, one center turn lane, and one Class II bike lane in each direction

Opening Year (2017) Intersection Levels of Service

TABLE 1: OPENING YEAR (YEAR 2017) PEAK HOUR INTERSECTION OPERATIONS

Intersection		Intersection Control	Peak Hour ¹	Opening Year No Build Conditions		Opening Year Build Conditions	
				Delay ²	LOS ³	Delay ²	LOS ³
1	Barrett Avenue/ 37 th Street	Signalized	AM	11.9	B	19.7	B
			PM	14.9	B	23.8	C
2	Nevin Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	1.6 (15.3)	A (C)	1.9 (19.6)	A (C)
			PM	1.3 (15.4)	A (C)	1.4 (18.2)	A (C)
3	MacDonald Avenue/ 37 th Street	Signalized	AM	12.8	B	16.0	B
			PM	13.0	B	18.0	B
4	Bissell Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	2.6 (35.0)	A (E)	3.1 (47.2)	A (E)
			PM	5.7 (50.4)	A (F)	8.6 (77.6)	A (F)
5	Chanslor Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	0.5 (15.7)	A (C)	0.5 (16.6)	A (C)
			PM	0.3 (16.2)	A (C)	0.3 (14.9)	A (B)
6	Center Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	4.2 (47.0)	A (E)	4.2 (47.0)	A (E)
			PM	2.8 (38.9)	A (E)	2.8 (38.9)	A (E)

Notes:

1. AM = morning peak hour, PM = evening peak hour
2. Whole intersection average delay in seconds presented for signalized intersections. Whole intersection delay in seconds (worst approach delay in seconds) reported for side-street stop-controlled intersections. Delays calculated per *2010 Highway Capacity Manual* methodologies.
3. LOS per *2010 Highway Capacity Manual* definitions.

Bold indicates unacceptable operations (below LOS D standard)

Source: Fehr & Peers, June 2017

RTP Horizon Year (2040) Peak Hour Intersections Operations

TABLE 3: RTP HORIZON YEAR (YEAR 2040) PEAK HOUR INTERSECTIONS OPERATIONS

Intersection		Intersection Control	Peak Hour ¹	Horizon Year No Build Conditions		Horizon Year Build Conditions	
				Delay ²	LOS ³	Delay ²	LOS ³
1	Barrett Avenue/ 37 th Street	Signalized	AM	22.1	C	69.9	E
			PM	31.7	C	66.9	E
2	Nevin Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	2.6 (23.1)	A (C)	3.3 (34.1)	A (D)
			PM	2.4 (26.4)	A (D)	2.9 (34.7)	A (D)
3	MacDonald Avenue/ 37 th Street	Signalized	AM	15.5	B	18.5	B
			PM	19.2	B	28.7	C
4	Bissell Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	6.8 (94.9)	A (F)	12.7 (>120)	A (F)
			PM	32.5 (>120)	D (F)	50.3 (>120)	E (F)
5	Chanslor Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	0.9 (21.2)	A (C)	0.8 (19.8)	A (C)
			PM	0.4 (17.2)	A (C)	0.4 (17.1)	A (C)
6	Center Avenue/ 37 th Street	Side-Street Stop- Controlled	AM	13.2 (>120)	B (F)	13.2 (>120)	B (F)
			PM	11.0 (>120)	B (F)	11.0 (>120)	B (F)

Notes:

1. AM = morning peak hour, PM = evening peak hour

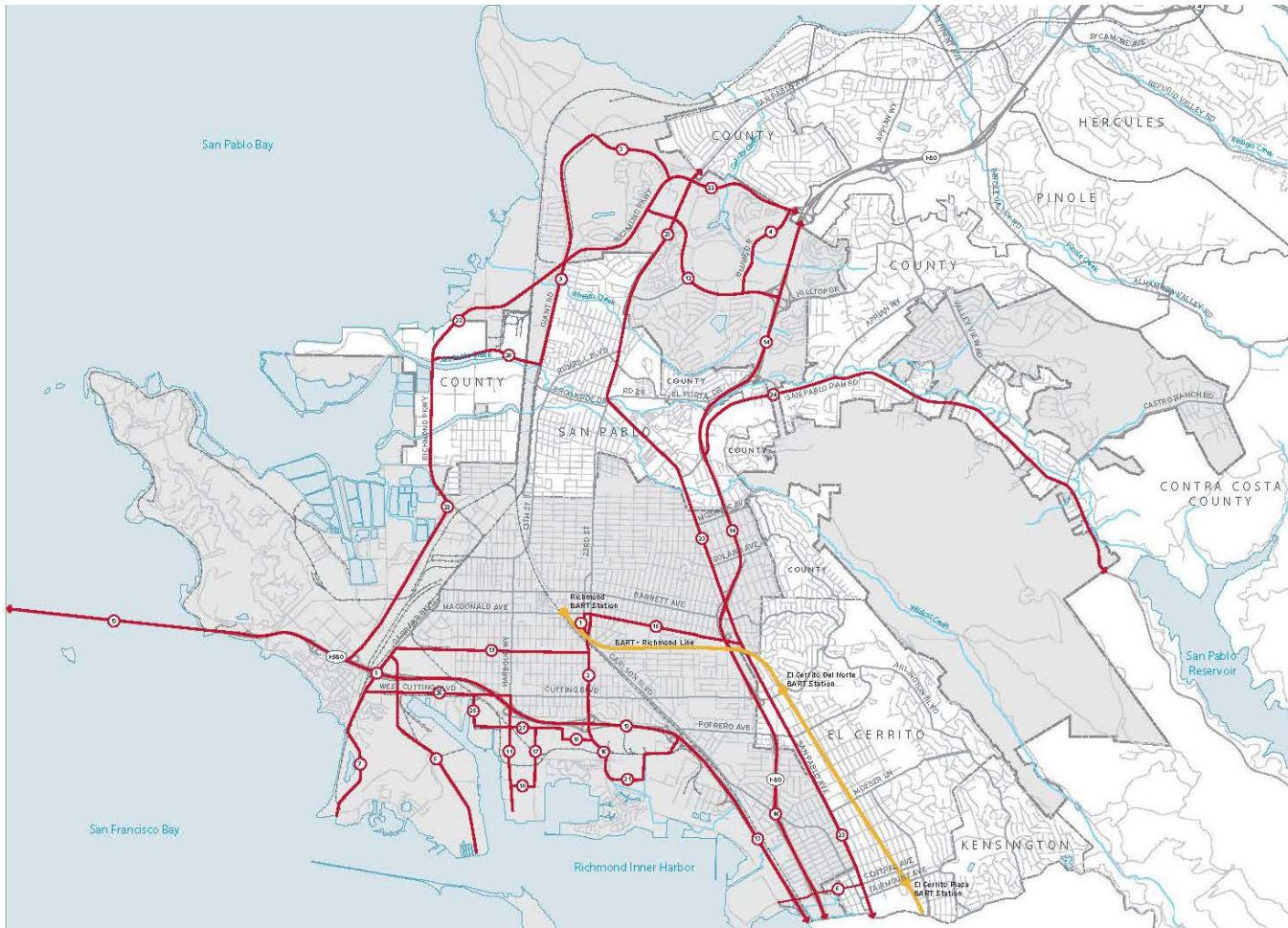
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Bold indicates unacceptable operations (below LOS D standard)

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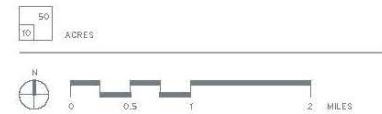
City of Richmond Truck Route Map



Map 4.4
Existing Truck Routes

- | | | | |
|----|-----------------|----|-------------------|
| 1 | 22nd St. | 16 | Marina Bay Pkwy. |
| 2 | 23rd St. | 17 | Marina Way So. |
| 3 | Atlas Rd. | 18 | Meeker Ave. |
| 4 | Blume Dr. | 19 | Ohio Ave. |
| 5 | Canal Blvd. | 20 | Parr Blvd. |
| 6 | Central Ave. | 21 | Regatta Blvd. |
| 7 | Dornan Dr. | 22 | Richmond Pkwy. |
| 8 | Garrard Blvd. | 23 | San Pablo Ave. |
| 9 | Giant Hwy. | 24 | San Pablo Dam Rd. |
| 10 | Hall Ave. | 25 | So. 4th St. |
| 11 | Harbour Wy. So. | 26 | W. Cutting Blvd. |
| 12 | Hilltop Dr. | 27 | Wright Ave. |
| 13 | I-580 | | |
| 14 | I-80 | | |
| 15 | Maconald Ave. | | |

Note: This map is provided for informational purposes only. It may be periodically updated by the City of Richmond Engineering Services Department.



Opening Year ADT, % Trucks and Truck ADT

Segment	ADT				
	No Build		Build		Truck increase: Build over No Build
	Total	Trucks (2.49%)	Total	Trucks (2.49%)	
37th Street between Center Street and Chanslor Avenue (BART undercrossing segment)	12,220	310	12,220	310	No Change

Source: Fehr & Peers, June 2017

RTP Horizon Year (2040) ADT, % Trucks, and Truck ADT

Segment	ADT				
	No Build		Build		Truck increase: Build over No Build
	Total	Trucks (2.49%)	Total	Trucks (2.49%)	
37th Street between Center Street and Chanslor Avenue (BART undercrossing segment)	15,100	380	15,100	380	No Change

Source: Fehr & Peers, June 2017

Not a Project of Air Quality Concern

- Project will encourage active modes of travel and will improve safety
- 2.5% truck vehicle use
- Project has no direct impact on volumes of truck traffic
- Traffic Study by Fehr & Peers concludes the corridor is anticipated to operate at an acceptable level of service