

INTERSECTION 37

Crenshaw Boulevard/190th Street Improvement(s)

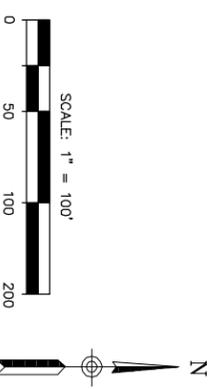
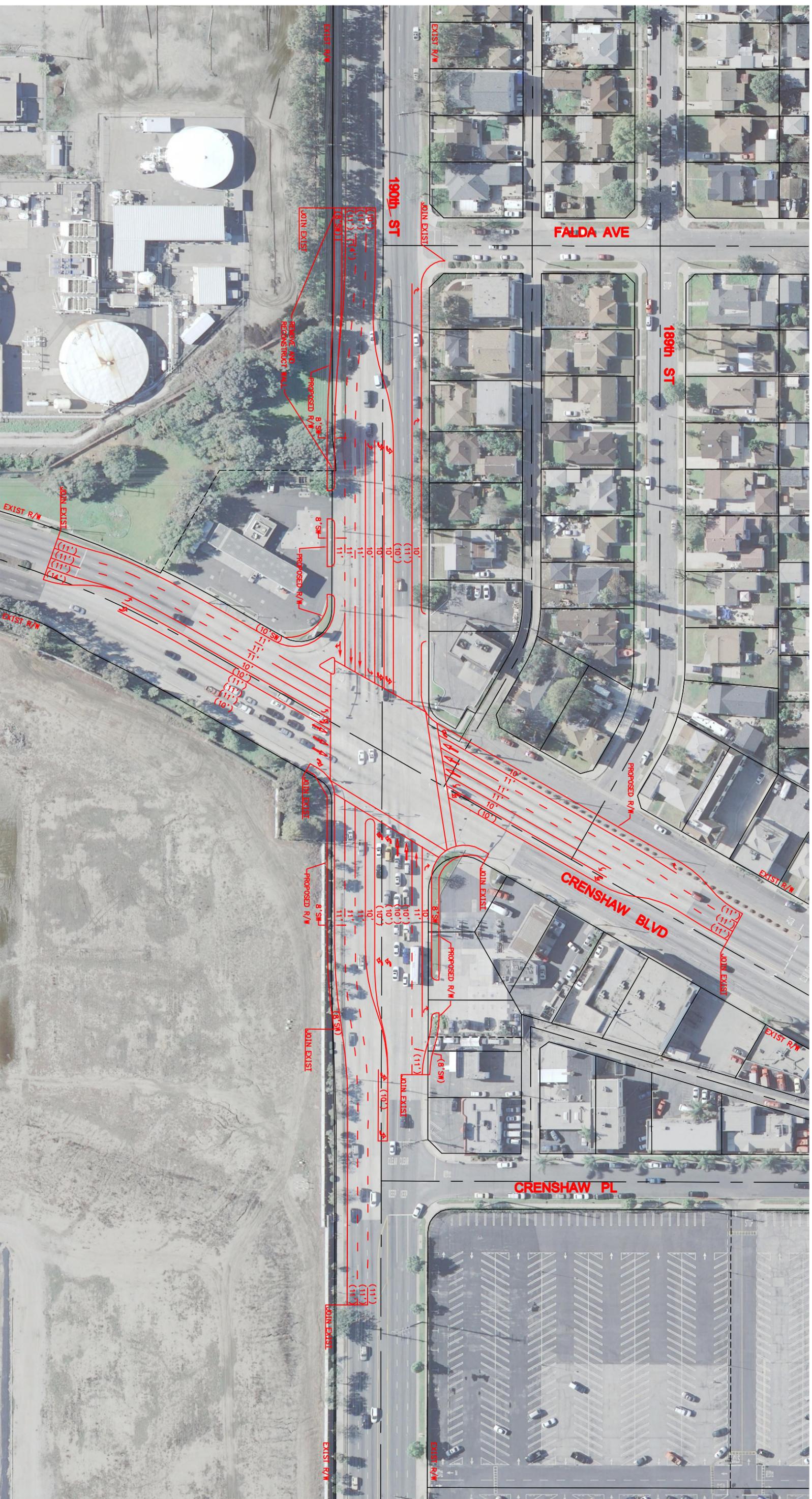
Forecast Near-Term Conditions Intersection LOS Summary

	Weekday AM Peak Hour	Weekday Mid-Day Peak Hour	Weekday PM Peak Hour	Weekend Mid-Day Peak Hour
Without Improvement(s)	50.8 – D	34.5 – C	<i>100.9 – F</i>	43.1 – D
With Improvement(s)	37.3 – D	30.3 – C	45.4 – D	34.2 – C

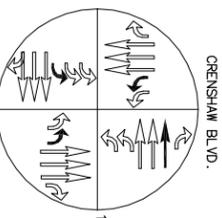
Note: Delay shown in seconds per vehicle; Deficient intersection operation shown in ***bold italics***.

Recommended Improvements:

- Widen the northbound Crenshaw Boulevard approach from one left-turn lane, three through lanes, and one right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane.
- Widen the southbound Crenshaw Boulevard approach from one left-turn lane, three through lanes, and one right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane.
- Widen the eastbound 190th Street approach from two left-turn lanes, two through lanes, and one shared through/right-turn lane to consist of three left-turn lanes, two through lanes, and one shared through/right-turn lane.
- Widen the westbound 190th Street approach from two left-turn lanes, two through lanes, and one right-turn lane to consist of two left-turn lanes, three through lanes, and one right-turn lane.
- Implementation of the improvements identified at the Crenshaw Boulevard/190th Street intersection will require City acquisition of approximately 24-feet of right-of-way on the east-west approaches and departures and City acquisition of approximately 12-feet of right-of-way on the north-south approaches and departures to provide adequate alignment of modified approaches.



MITIGATIONS:
 NB - ADD LEFT TURN
 SB - ADD LEFT TURN
 WB - ADD THRU LANE



LEGEND:
 ↔ EXISTING LANE
 ↔ NEW IMPROVEMENT

INTERSECTION 37
CRENSHAW BLVD/190th ST
 CITYWIDE TRAFFIC ANALYSIS MITIGATION MEASURES

PBF CONSULTING
 PLANNING ■ DESIGN ■ CONSTRUCTION
 14725 ALTON PARKWAY
 IRVINE, CALIFORNIA 92618-2027
 949.472.3505 • FAX 949.837.8007 • www.pbf.com

REV.	DATE	DESCRIPTION	BY	CHECKED

CITY OF TORRANCE
PUBLIC WORKS DEPARTMENT

DRAWN: D. CHANLEY
 DESIGNED: D. CHANLEY
 PROJECT ENGINEER: _____

APPROVED: _____
 SCALE: AS SHOWN SHEET 1 OF 1
 PLAN NO. _____

**CITY OF TORRANCE CITYWIDE TRAFFIC ANALYSIS MITIGATION MEASURES
PRELIMINARY COST ESTIMATES**

Location: Intersection 37: Crenshaw Blvd/190th St

Date: 2/22/2008

Mitigation: Widen the NB Crenshaw Boulevard approach to consist of two left-turn lanes, three through lanes, and on right-turn lane. Widen the SB Crenshaw Boulevard approach to consist of two left-turn lanes, three through lanes, and one right-turn lane. Widen the EB 190th Street approach to consist of three left-turn lanes, two through lanes, and one shared through/right-turn lane. Widen the WB 190th Street approach to consist of two left-turn lanes, three through lanes, and one right-turn lane.

Estimated by: D. Alvarado

	DESCRIPTION OF WORK	UNIT PRICE	QUANTITY	COST
1	Mobilization	10.00% (\$2,000 Min)		\$231,000
2	Clear & Grub	\$10,000.00 / AC		\$0
3	Remove Striping	\$10.00 / LF	1,500	\$15,000
4	Remove Curb & Gutter	\$15.00 / LF	2,612	\$39,000
5	Remove Median Curb	\$30.00 / LF	339	\$10,000
6	Remove PCC Sidewalk	\$3.50 / SF	15,377	\$54,000
7	Remove Pavement	\$4.00 / SF	870	\$3,000
8	Remove Wall	\$50.00 / LF	290	\$15,000
9	Remove Channel	\$15.00 / LF		\$0
10	Remove/Replace Chain Link Fence	\$50.00 / LF		\$0
11	Remove/Replace Wrought Iron Fence	\$10.00 / LF		\$0
12	Remove/Replace Survey Monument	\$800.00 / EA		\$0
13	Reconstruct Metal Beam Guard Rail	\$70.00 / LF		\$0
14	Remove & Relocate Tree	\$3,000.00 / EA	9	\$27,000
15	Sawcut	\$1.00 / LF	2,673	\$2,700
16	Relocate Street Light	\$7,500.00 / EA	2	\$15,000
17	Relocate Traffic Signal System	\$300,000.00 / EA	1.0	\$300,000
18	Signal Phase Modification	\$10,000.00 EA		\$0
19	Relocate Freeway Sign (2 post)	\$1,000.00 / EA		\$0
20	Relocate Sign (1 Post)	\$300.00 / EA	15	\$4,500
21	Reconstruct Overhead Sign	\$50,000.00 / EA		\$0
22	Relocate Call Box	\$2,000.00 / EA		\$0
23	Relocate Power Pole	\$25,000.00 / EA	17	\$425,000
24	Relocate Catch Basin	\$9,000.00 / EA	7	\$63,000
25	Relocate Fire Hydrant	\$2,500.00 / EA	5	\$12,500
26	Relocate Bus Shelter	\$2,000.00 / EA		\$0
27	Relocate Bus Bench	\$600.00 / EA	3	\$2,000
28	Relocate Monument Sign	\$5,000.00 / EA	1	\$5,000
29	Relocate Utility Boxes	\$500.00 / EA		\$0
30	Relocate Main Water Valve	\$10,000.00 / EA	1	\$10,000
31	Relocate Utility Vault	\$3,000.00 / EA	15	\$45,000
32	Adjust Manhole to Grade	\$1,000.00 / EA	5	\$5,000
33	Adjust Water Meter	\$2,000.00 / EA	12	\$24,000
34	Adjust Water Valve	\$500.00 / EA		\$0
35	Adjust Minor Above Ground Utilities	\$500.00 / EA	5	\$3,000
36	Modify Driveway	\$5,000.00 / EA	4	\$20,000
37	Earthwork	\$40.00 / CY	2,709	\$108,000
38	Construct PCC Pavement	\$15.00 / SF		\$0
39	Construct AC Pavement	\$14.00 / SF	14,627	\$205,000
40	Construct AC Overlay	\$3.00 / SF		\$0
41	Construct Slurry Seal	\$0.25 / SF		\$0
42	Construct Striping & Marking	\$4.00 / LF	1,500	\$6,000
43	Construct AC Dike	\$7.00 / LF		\$0
44	Construct Curb & Gutter	\$40.00 / LF	2,470	\$99,000
45	Construct Concrete Barrier	\$50.00 / LF		\$0
46	Construct Median Curb	\$20.00 / LF		\$0
47	Construct Median Concrete	\$10.00 / SF		\$0
48	Construct Median/Parkway Landscaping	\$10.00 / SF		\$0
49	Construct PCC Sidewalk	\$10.00 / SF	9,108	\$91,000
50	Construct Access Ramp	\$5,000.00 / EA	5	\$25,000
51	Construct Retaining Wall	\$50.00 / SF		\$0
52	Construct Storm Drain Main	\$100.00 / LF		\$0
53	Construct RCB	\$1,000.00 / LF		\$0
54	Construct Headwall	\$5,000.00 / EA		\$0
55	Construct Concrete V-Ditch	\$15.00 / LF		\$0
56	Construct Bridge Widening	\$500.00 / SF		\$0
57	Construct Wall	\$70.00 / LF	290	\$20,000
58	Building/Structure Demolition (X-Story Bldg)	\$10.00 / SF		\$0
59	Traffic Control (\$5,000 min)	8%	1	\$132,000
60	Drainage Items	10%	1	\$179,000
61	SWPPP Plan and Implementation	6%	1	\$117,000
CONSTRUCTION SUBTOTAL				\$2,312,700
	Right-of-Way	100 / SF	5,311	\$531,000
	Right-of-Way Management	5 / %		\$27,000
RIGHT-OF-WAY SUBTOTAL				\$558,000
TOTAL CONSTRUCTION & RIGHT-OF-WAY COST				\$2,871,000
Preliminary Project Development (10% of total Construction/RW cost)				\$288,000
Design Engineering/Administration Costs (15% of total Construction/RW cost) (\$10,000 min)				\$431,000
Construction Engineering Costs/Administration (10% of total Construction/RW cost) (\$5,000 min)				\$288,000
Contingency (20% of Total Construction/RW cost) (\$5,000 min)				\$575,000
TOTAL PROJECT COSTS				\$4,453,000