



# Glenoaks Boulevard Bicycle Facilities Study

Department of Public Works

Presentation to the Transportation and Parking Commission (TPC)

June 27, 2023

# Presentation Outlines

- Background
- Public Works Efforts
- Aspects of the Study
- Alternatives Considered
- Technical Findings
- Study Recommendations



CITY OF GLENDALE  
BICYCLE TRANSPORTATION PLAN



# Background

- The efforts to address concerns about residential cut-through traffic in the Rossmoyne neighborhood date back to the late 1990s and continue to this day.
- The community has expressed a strong desire to have bicycle facilities implemented on Glenoaks Boulevard through road repurposing.
- Bicycle facilities were recommended in the Glendale Bicycle Transportation Plan of 2012, which includes a road diet (road-repurposing) approach



## Public Works Efforts

- Public Works conducted a thorough assessment of the potential for integrating bicycle facilities;
- Segments of Glenoaks Boulevard between Geneva Street and Central Avenue;
- Enlisted the services of a consultant that undertook a comprehensive study;
- Analysis of Roadway Characteristics in 5 Distinct Segments.



# Aspects of the Study



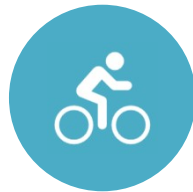
Level of Service  
(LOS)



Vehicle Miles Traveled  
(VMT)



Traffic Diversion



Level of Traffic Stress  
(LTS)



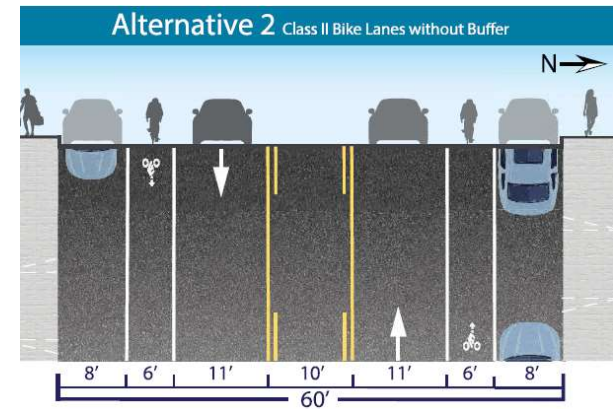
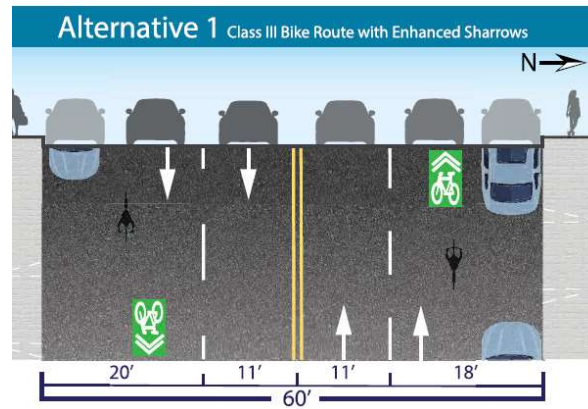
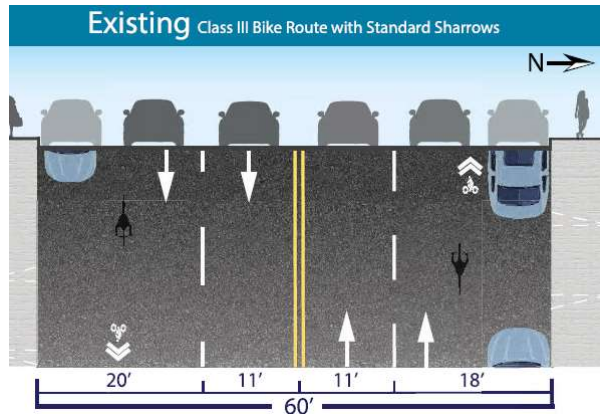
Benefit Cost Ratio (BCR)





## Alternatives Considered

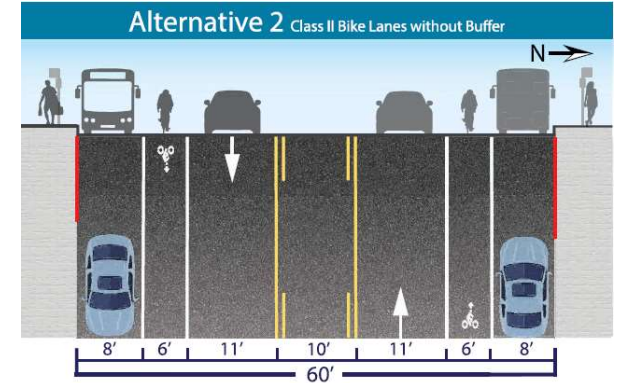
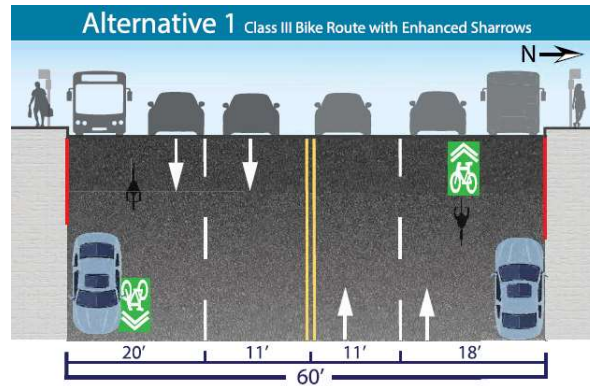
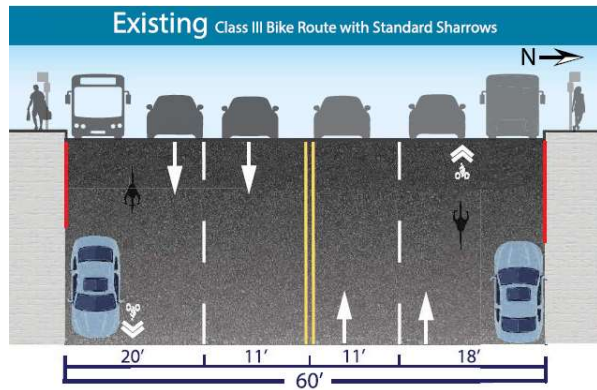
- Enhanced Sharrow (B-Type Sharrow)
- Class II Bike Lane
- Class IV Bike Lane (Separated Bike Lane)



# Existing Condition and Proposed Alternatives

Glenoaks Blvd between Geneva St and Howard St



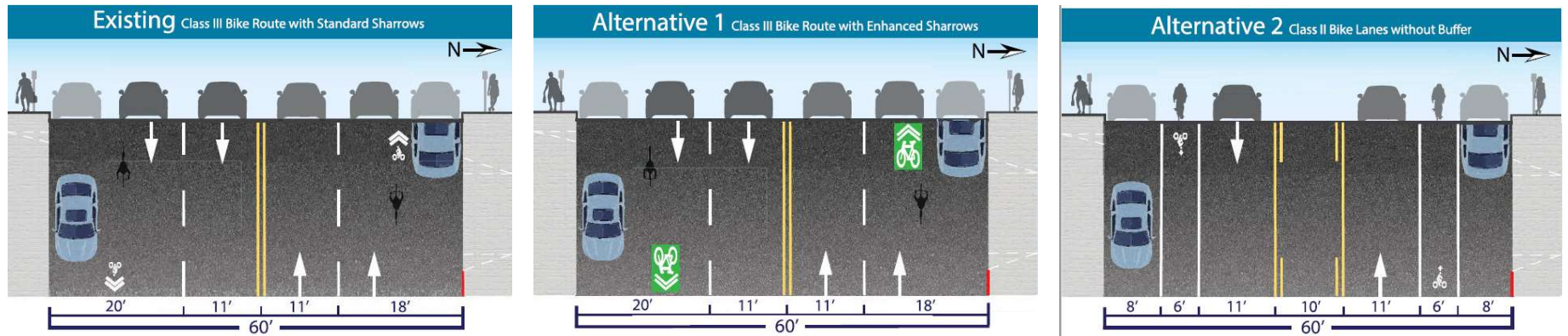


## Existing Condition and Proposed Alternatives

Glenoaks Blvd between Howard St and Jackson St



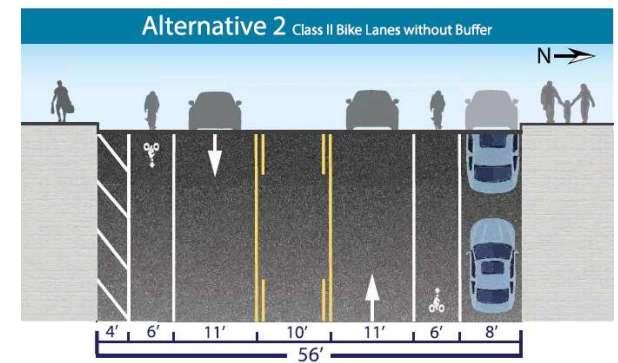
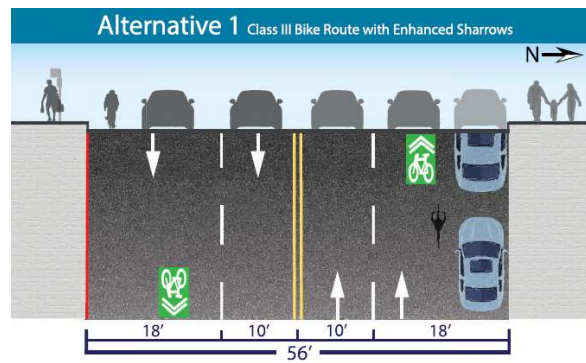
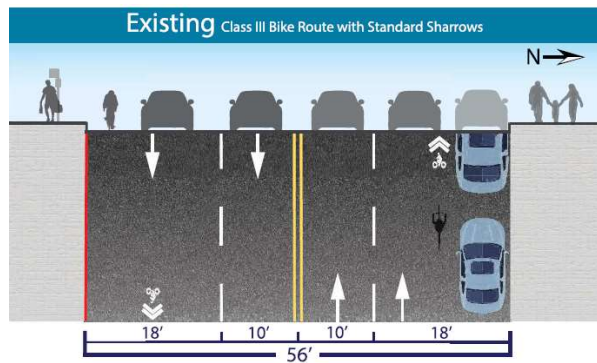




## Existing Condition and Proposed Alternatives

Glenoaks Blvd between Jackson St and Louise St

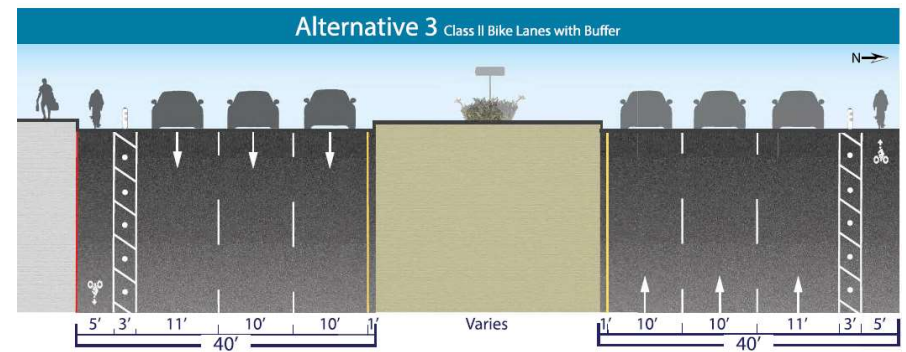
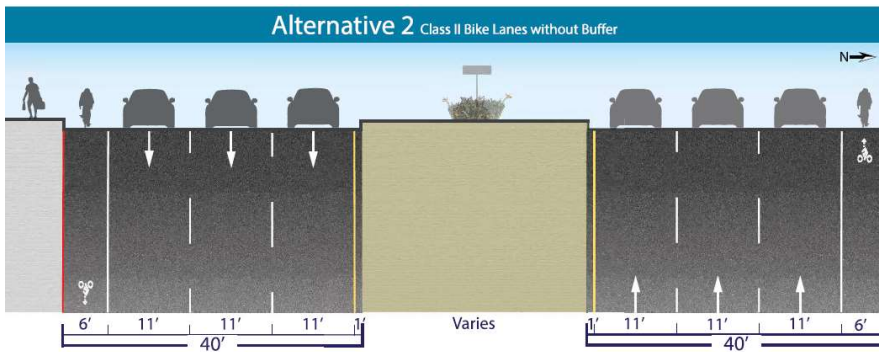
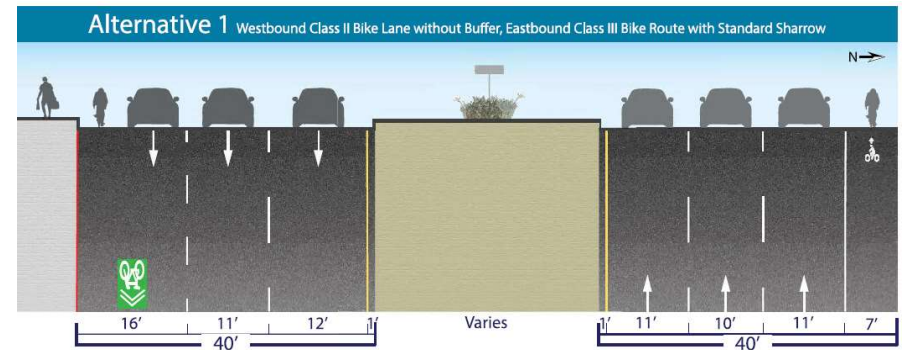
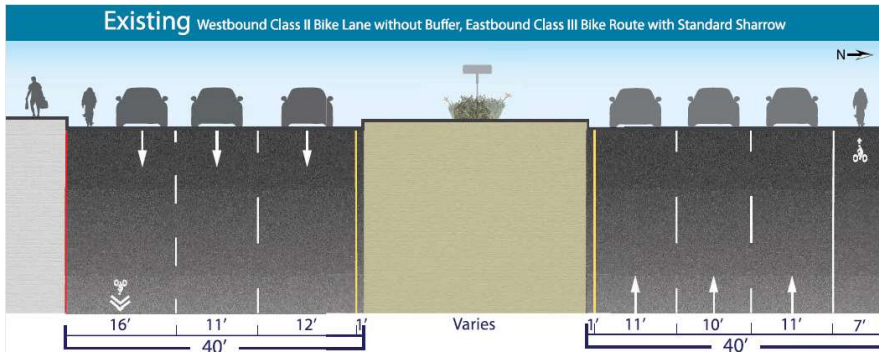




## Existing Condition and Proposed Alternatives

Glenoaks Blvd between Louise St and Brand Blvd





# Existing Condition and Proposed Alternatives

Glenoaks Blvd between Brand Bl and Central Ave



Intersection		Peak Hour	ROADWAY REPURPOSING				
			Existing <sup>1</sup>		With Class II and Class IV Protected Bike Lanes <sup>1</sup>		
			Delay (s)	LOS	Delay (s)	LOS	Change (s)
1	Geneva Street/Glenoaks Boulevard	AM	14.0	B	14.0	B	0.0
		PM	15.0	B	15.4	B	0.4
2	Jackson Street/Glenoaks Boulevard	AM	12.5	B	13.9	B	1.4
		PM	13.4	B	16.9	B	3.5
3	Louise Street/Glenoaks Boulevard	AM	9.7	A	10.7	B	1.0
		PM	19.9	B	18.9	B	-1.0
4	Brand Boulevard/Glenoaks Boulevard	AM	30.7	C	30.8	C	0.1
		PM	38.8	D	38.8	D	0.0
5	Central Avenue/Glenoaks Boulevard	AM	24.7	C	24.5	C	-0.2
		PM	28.5	C	28.3	C	-0.2

Notes:

<sup>1</sup> This scenario assumes the installation of Class II bicycles lanes between Geneva Street and Brand Boulevard and Class IV buffered bicycle lanes between Brand Boulevard and Central Avenue.

# Technical Findings

## Level of Service (LOS) Analysis for Intersections\*

\* There have been no significant changes in the Level of Service (LOS) analysis at the intersections. The traffic flow and congestion remain consistent despite the road repurposing efforts.



# Technical Findings

## Level of Service (LOS) Analysis for roadway segment\*

Segment	ADT	Capacity per Lane (veh)	WITHOUT ROAD REPURPOSING				WITH ROAD REPURPOSING			
			No. of Lanes	Total Capacity (veh)	V/C	LOS	No. of Lanes	Total Capacity (veh)	V/C	LOS
Glenoaks Boulevard, east of Louise Street	14,694	9,000	4	36,000	0.408	A	2	18,000	0.816	D

ADT = Average Daily Traffic; V/C = Volume to Capacity; LOS = Level of Service

\* The Level of Service (LOS) will remain at an acceptable LOS D at the roadway segment despite the road repurposing efforts.



# Technical Findings

## Vehicle Miles Traveled (VMT) Analysis\*

	Vehicle Miles Traveled			
	No Build	Build	Change	% Change
Glenoaks Boulevard	16,108	14,672	-1,436	-8.92%
Rossmoyne Neighborhood	29,343	29,549	207	0.70%
Remainder of City of Glendale	3,749,135	3,750,242	1,107	0.03%
<b>Total</b>	<b>3,794,586</b>	<b>3,794,464</b>	<b>-123</b>	<b>0.00%</b>

\* Overall, the project would lead to a net reduction of approximately 123 daily VMT. This indicates that despite the minor increased VMT in certain areas, the overall impact of the project would result in a decrease in VMT, contributing to potential traffic reduction and improved transportation efficiency.





Traffic Diversion\*

# Technical Findings

\*The heat map illustrates that the road repurposing between Geneva Street and Brand Boulevard redirects traffic to potential nearby parallel routes, particularly freeways, thereby reducing the cut through traffic to local streets.



Level of Traffic Stress	Description
LTS 1	Suitable for almost all ages and bicycling abilities
LTS 2	Suitable for most adults
LTS 3	Suitable for more skilled and confident bicyclists
LTS 4	Not suitable for most bicyclists
LTS 5	Suitable for only very few riders

## Level of Traffic Stress (LTS)

# Technical Findings

	Level of Traffic Stress (LTS)			
	Geneva St to Jackson St	Jackson St to Louise St	Louise St to Brand Blvd	Brand Blvd to Central Ave
No Build Alternative	LTS 4	LTS 4	LTS 4	LTS 4
Alternative 1: Enhanced Sharrows	LTS 3	LTS 3	LTS 3	LTS 4
Alternative 2: Class II Bicycle Lanes	LTS 2	LTS 2	LTS 2	LTS 3
Alternative 3: Class IV Buffered Bicycle Lanes	LTS 2	LTS 2	LTS 2	LTS 2





# Technical Findings

## Benefit Cost Ratio (BCR) Analysis\*

### ALTERNATIVE 2: CLASS II BICYCLE LANES

ID	Location	Location Type	CM #	5 Year Collision Costs						CRF <sup>1</sup>	Avoided Collision Benefit		Cost Estimate	BCR
				Fatality	Severe Injury	Visible	COP	PDO	Total		Annual	Lifetime (20-Year)		
1	Glenoaks Boulevard from Brand Blvd to Geneva Street	Roadway	R14	\$ -	\$ -	\$ 799,500	\$ 272,700	\$ 149,000	\$ 1,221,200	0.30	\$ 73,272	\$ 1,465,440	\$ 140,000	10.47
2	Glenoaks Boulevard from Central Ave to Brand Blvd	Roadway	R33PB	\$ -	\$ -	\$ -	\$ 90,900	\$ -	\$ 90,900	0.35	\$ 6,363	\$ 127,260	\$ 55,000	2.31
<b>TOTAL</b>				<b>\$ -</b>	<b>\$ -</b>	<b>\$799,500</b>	<b>\$363,600</b>	<b>\$149,000</b>	<b>\$1,312,100</b>		<b>\$ 79,635</b>	<b>\$ 1,592,700</b>	<b>\$ 195,000</b>	<b>8.17</b>

Notes:

<sup>1</sup> Crash Reduction Factors (CRFs) are the percent reduction collisions due to the installation of the proposed improvements along the segment. CRFs from the Caltrans *Local Roadway Safety Manual*.

### ALTERNATIVE 3: CLASS IV PROTECTED BICYCLE LANES

ID	Location	Location Type	CM #	5 Year Collision Costs						CRF <sup>1</sup>	Avoided Collision Benefit		Cost Estimate	BCR
				Fatality	Severe Injury	Visible	COP	PDO	Total		Annual	Lifetime (20-Year)		
1	Glenoaks Boulevard from Brand Blvd to Geneva Street	Roadway	R14	\$ -	\$ -	\$ 799,500	\$ 272,700	\$ 149,000	\$ 1,221,200	0.30	\$ 73,272	\$ 1,465,440	\$ 140,000	10.47
2	Glenoaks Boulevard from Central Ave to Brand Blvd	Roadway	R33PB	\$ -	\$ -	\$ -	\$ 90,900	\$ -	\$ 90,900	0.45	\$ 8,181	\$ 163,620	\$ 95,000	1.72
<b>TOTAL</b>				<b>\$ -</b>	<b>\$ -</b>	<b>\$799,500</b>	<b>\$363,600</b>	<b>\$149,000</b>	<b>\$1,312,100</b>		<b>\$ 81,453</b>	<b>\$ 1,629,060</b>	<b>\$235,000</b>	<b>6.93</b>

Notes:

<sup>1</sup> Crash Reduction Factors (CRFs) are the percent reduction collisions due to the installation of the proposed improvements along the segment. CRFs from the Caltrans *Local Roadway Safety Manual*.

\*The BCR (Benefit-Cost Ratio) analysis demonstrates the favorable cost-effectiveness of both Class II and Class IV bike lane alternatives. The analysis confirms that the combined Class II and Class IV alternatives offer cost-effective solutions with increased safety benefits, amounting to approximately \$1.5-\$1.6 million over a 20-year lifetime period.





# Study Recommendations

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The implementation of bicycle facilities along Glenoaks Boulevard would be feasible and cost effective along all segments between Geneva Street and Central Avenue.

## Alternative #3

- **Geneva Street to Brand Boulevard:**  
Installation Class II bike lane with road-repurposing
- **Brand Boulevard to Central Avenue:**  
Installation of Class IV Bike lane  
(separated bike lane) on each direction.



*#MyGlendale*

