SR 227 Operations Study

Public Workshop 3
Sept. 15, 2016
Los Ranchos Elementary

San Luis Obispo Council of Governments

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What the study addresses

Source: SLO Tribune

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- Congestion
- Side street access
- Safety
- Multimodal access

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Date	Activity
June 2015	Public comments expressed concerns about safety, access and other factors; Board authorized study
September	Kickoff East Airport Business Alliance presentation
November	Public Workshop 1 @ Los Ranchos Elementary
Jan-Feb 2016	Traffic counts
Jan-Apr	Travel time data collection
Feb-May	Traffic assessments and other analyses
May	Public Workshop 2 @ Los Ranchos Elementary
June	First (admin) draft
July-Aug	Stakeholder review
Aug-Sept	Second draft (public review)
September	**Public Workshop 3 @ Los Ranchos Elementary**

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Date	Activity
September	**Public Workshop 3 @ Los Ranchos Elementary**
September 28	Advisory committee review
October 12	Board reviews draft, releases for final public comment
November 16	Advisory committee review
December 7	Board consideration of adoption

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What the study measures

- Intersection delay and level of service (LOS)
- Volume/capacity ratio
- Corridor travel times
- Travel time reliability
- Local vs. regional traffic
- Location and type of recent crashes
- Bicycle and pedestrian traffic volumes

- Relinquishment assessment
- Environmental screening technical memo
- Future transit service assessment
- Signal warrant analysis
- Intersection Control Evaluations (ICE)

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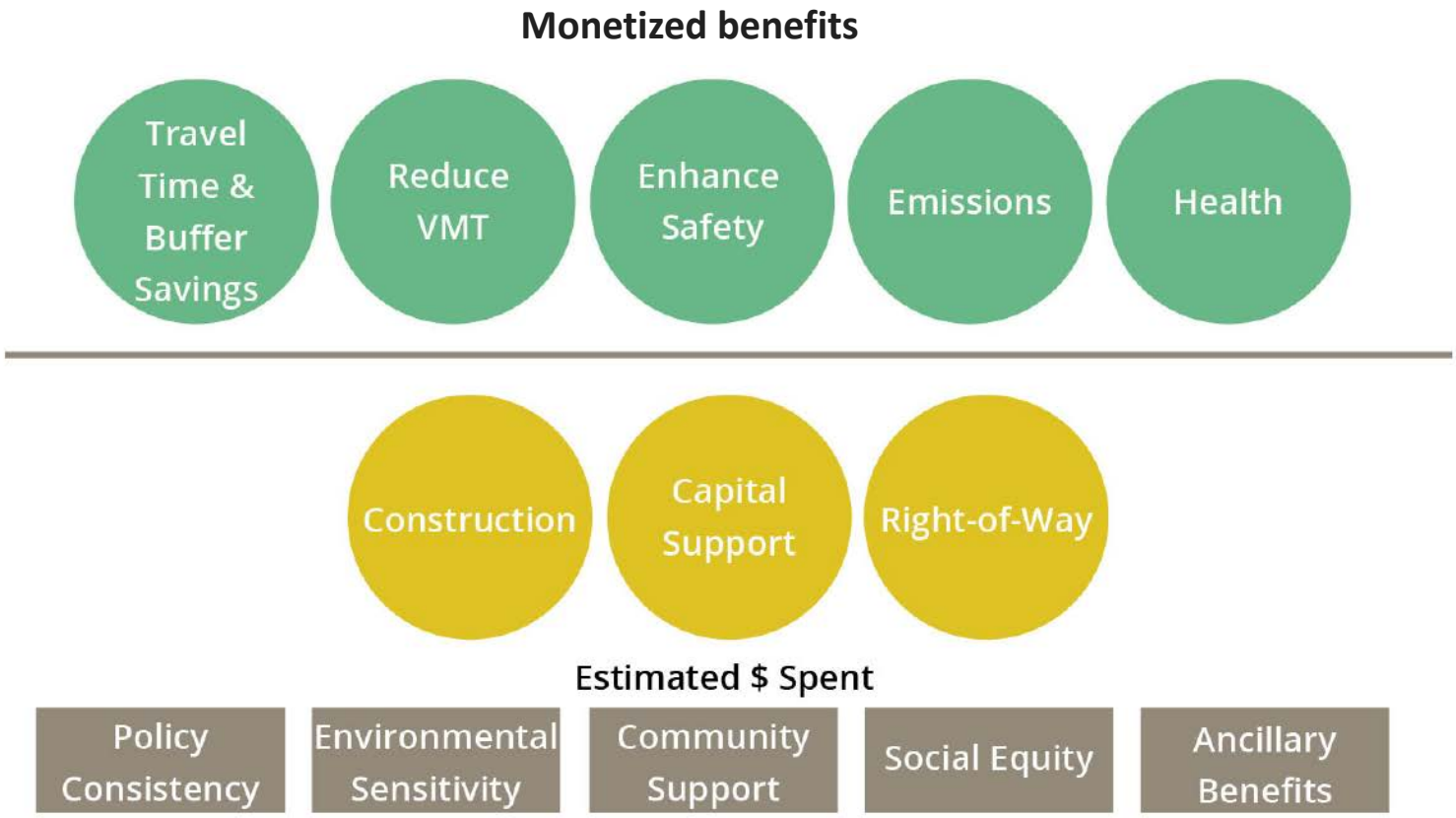
Finding the most cost-effective alternative
Benefit-Cost Analysis



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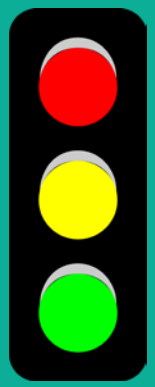
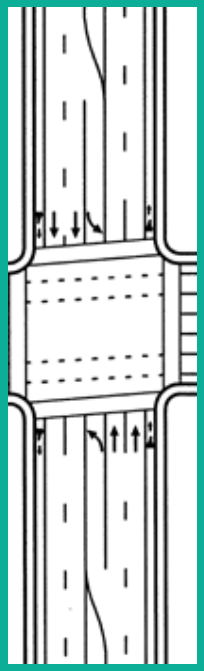
Analysis years

- Existing conditions
- 2025
- 2035

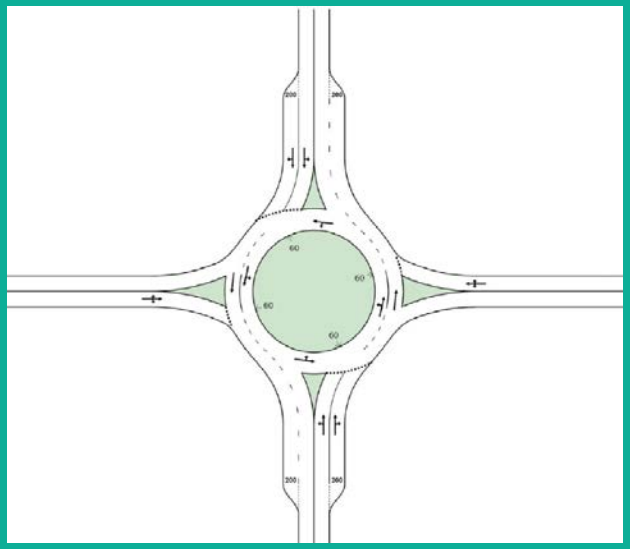
Alternatives evaluated

Widening with Coordinated Adaptive Signal Control





Roundabout Corridor



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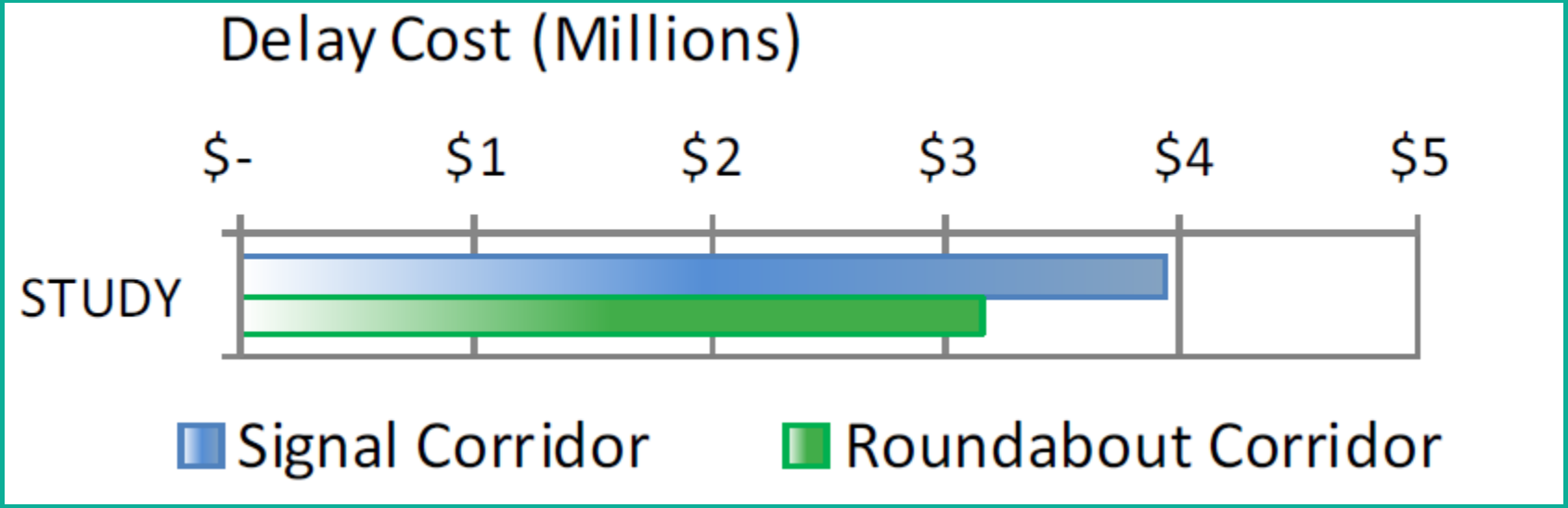
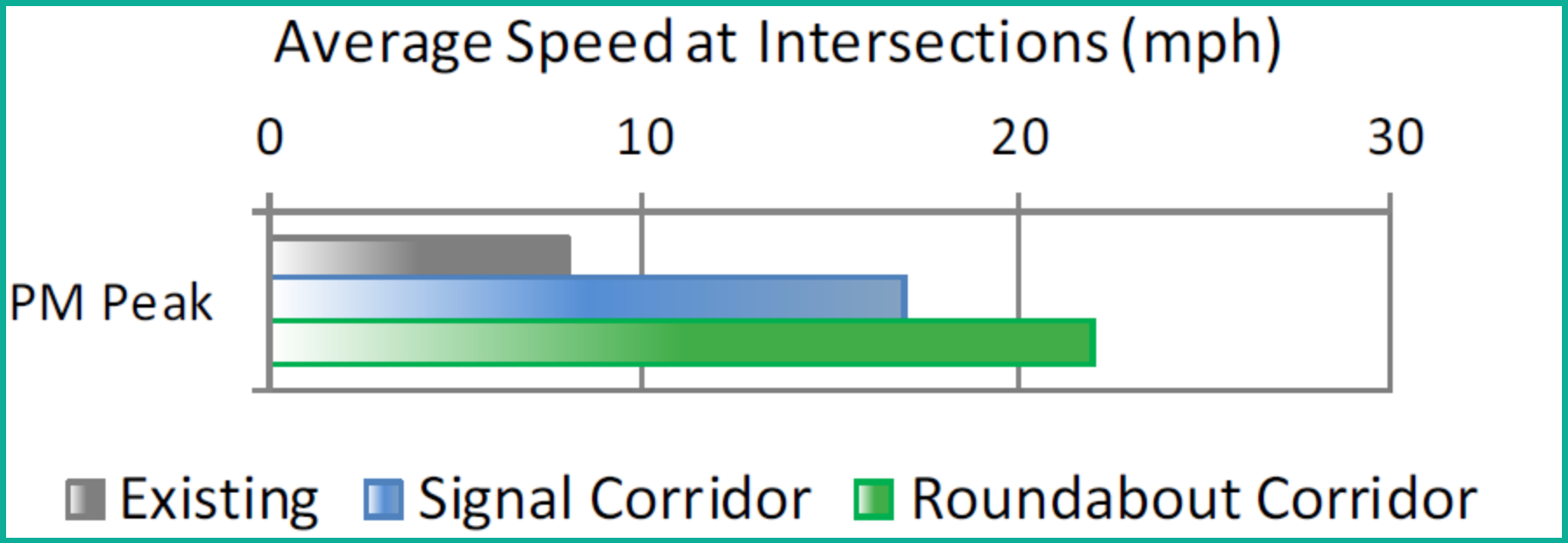
Recommended alternative: Roundabout Corridor Delay



Recommended alternative: Roundabout Corridor

Average speed at intersections, PM peak (mph)



Corridor travel time

Scenario	Corridor Concept	AM peak travel time (min)	PM peak travel time (min)	% change from 2035 "no build"
2015 Existing Conditions	Signals, stop signs	7.9	6.6	
2035 Existing Corridor	Signals, stop signs	8.5	9.0	
2035	Signal Corridor	2.4	2.4	(72%)
2035	Roundabout Corridor	2.2	2.3	(74%)

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What it's like to…
turn left from Crestmont

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What it's like to…
turn left from Crestmont

	AM peak		PM peak	
Scenario	**Delay (sec)**	**LOS**	**Delay (sec)**	**LOS**
Today	>300	F	280	F
2025 (no build	>300	F	>300	F
2035	>300	F	>300	F
2035 Signal Corridor	40.1	D	40.9	D
2035 Roundabout Corridor	**7.4**	**A**	**14.2**	**B**

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What it's like to…
turn left from Los Ranchos

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What it's like to…
turn left from Los Ranchos

	AM peak		PM peak	
Scenario	**Delay (sec)**	**LOS**	**Delay (sec)**	**LOS**
Today	34.7	C	68.5	E
2025 (no build	35.3	D	69.9	E
2035	32.4	C	72.3	E
2035 Signal Corridor	38.9	D	38.7	D
2035 Roundabout Corridor	12.0	B	26.6	D

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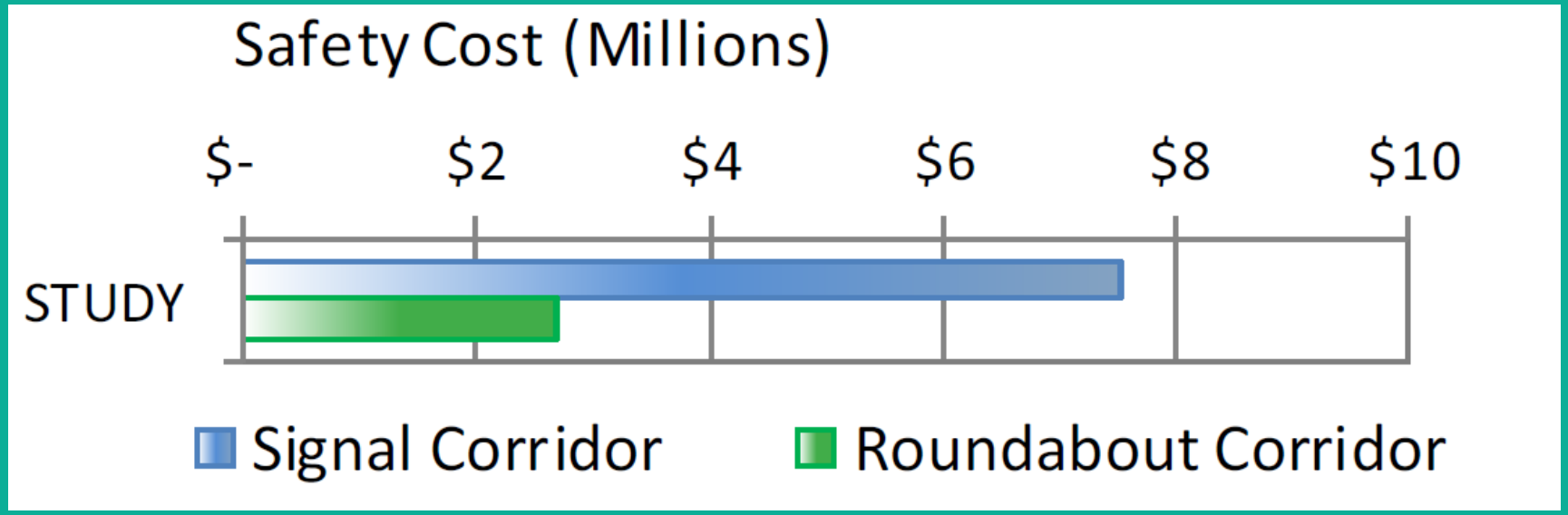
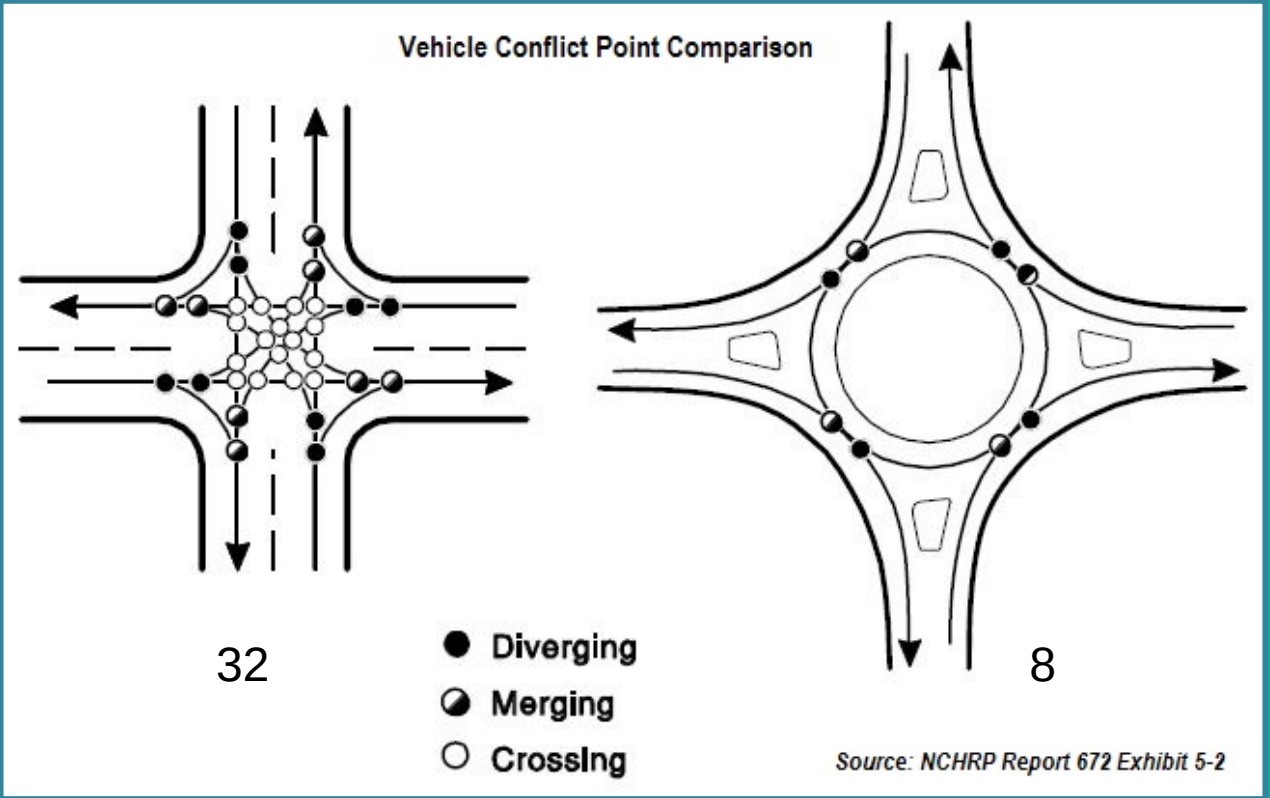
Recommended alternative: Roundabout Corridor Safety



Roundabouts

Proven safety countermeasure

- Reduce intersection vehicle and pedestrian conflict points
- Reduce intersection speeds
- Reduce overall crashes
- Reduce severity of crashes
- Reduce road widths



Source: FHWA, NCHRP

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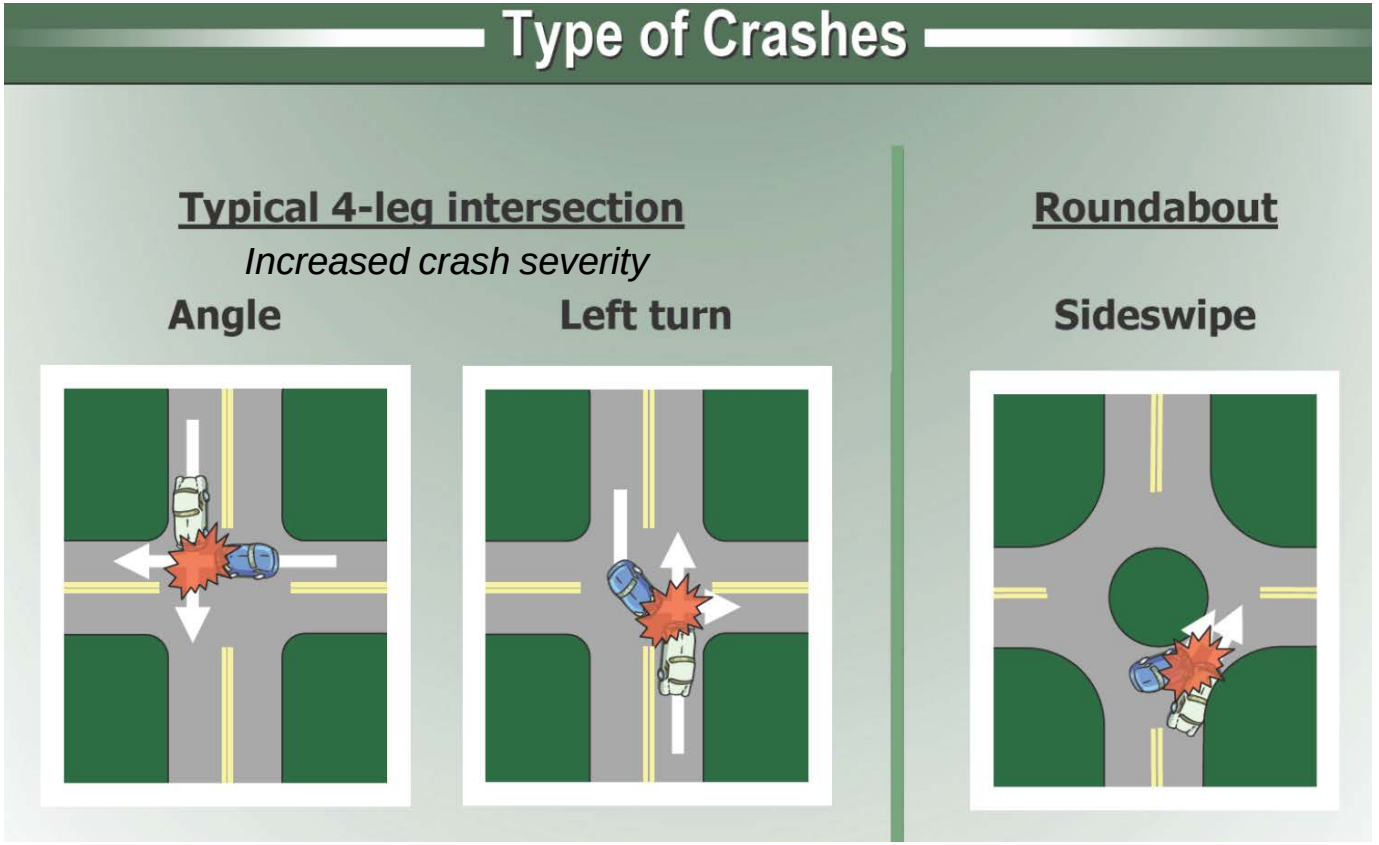
Roundabout Characteristics



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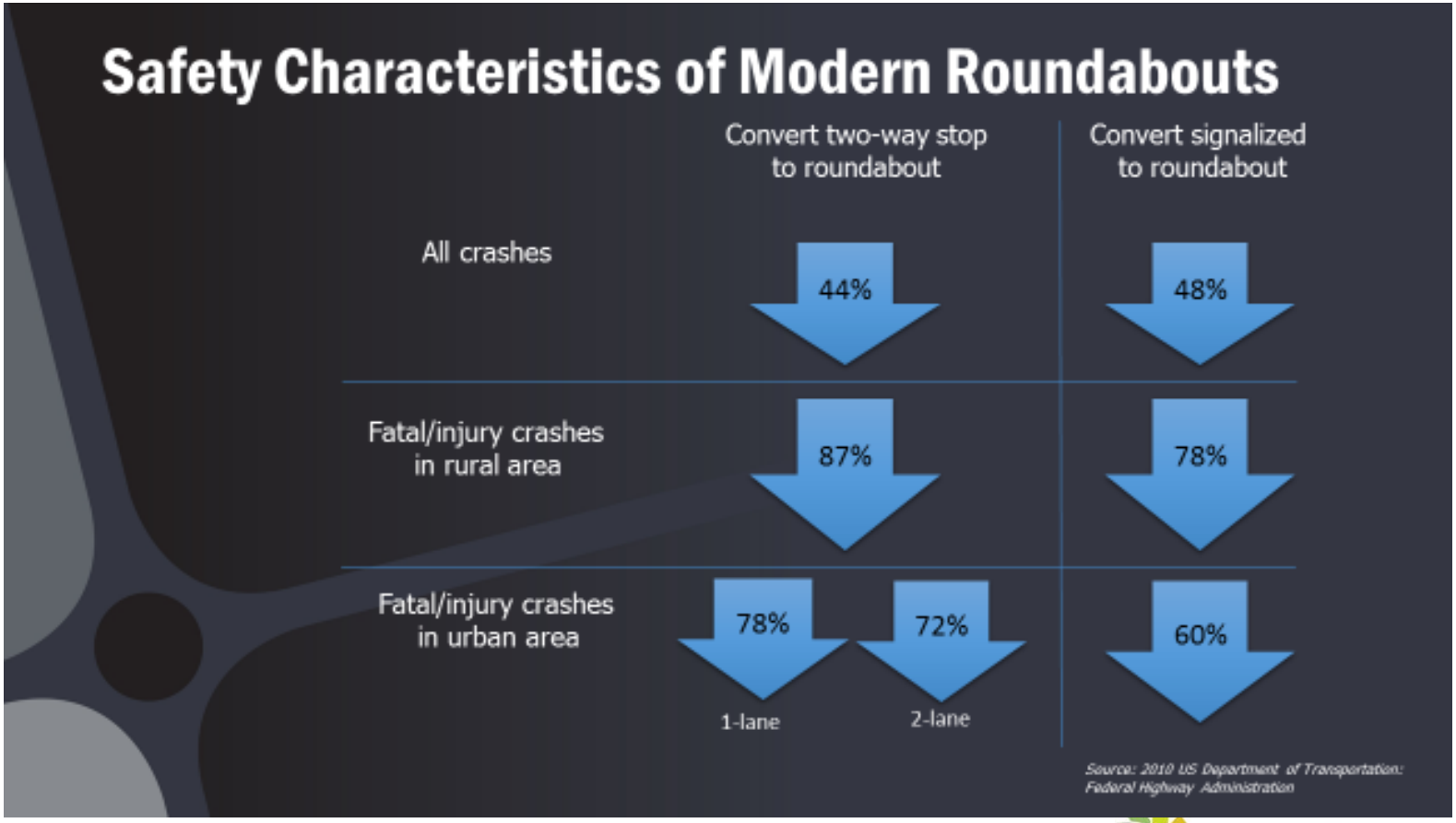
Roundabout Characteristics



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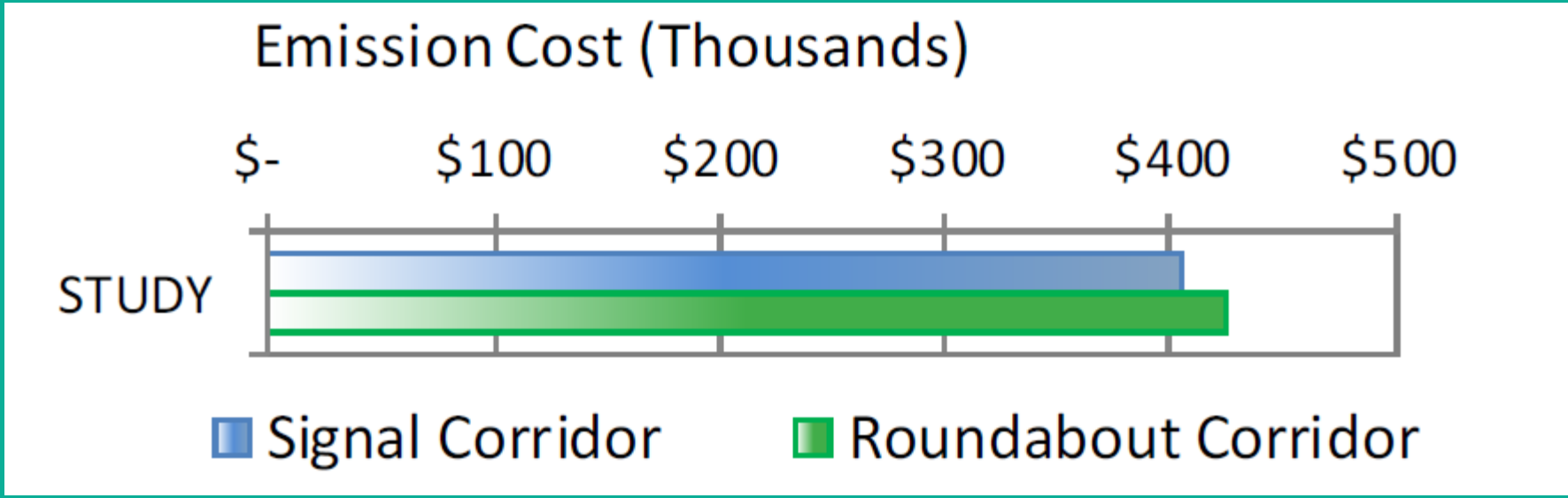
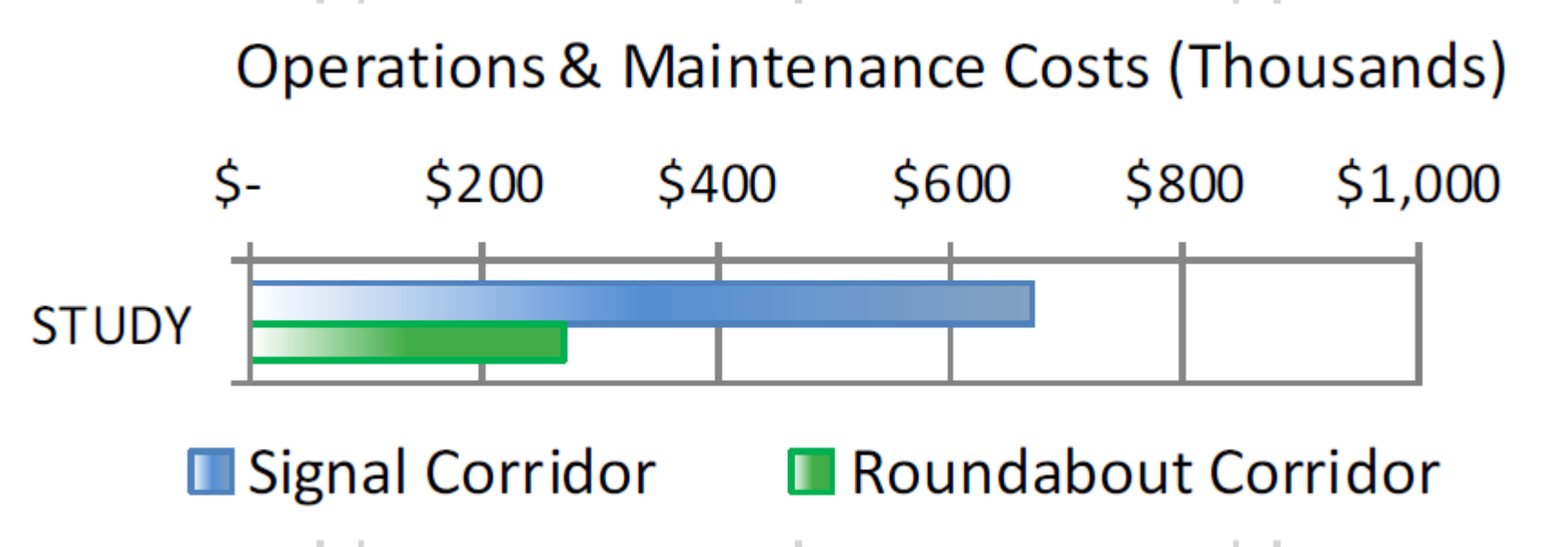
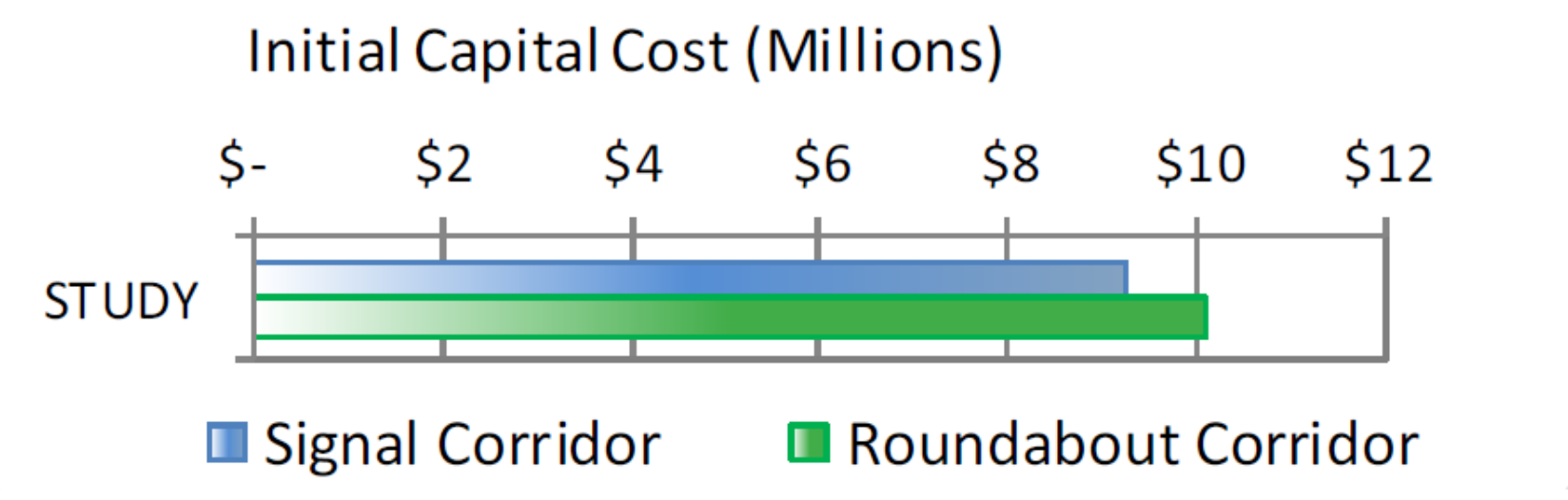
Recommended alternative: Roundabout Corridor Emissions



Recommended alternative: Roundabout Corridor Operations and Maintenance Costs



Recommended alternative: Roundabout Corridor Initial Capital Costs



- Total initial costs
  - Signal Corridor: $11.3 million
  - Roundabout Corridor: $10.8 million

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Total costs

Item	Signal Corridor	Roundabout Corridor
Total initial cost	11,300,000	10,800,000
Operations and maintenance (over 20 years) – intersections	650,000	250,000
Maintenance (over 20 years) – segments	>2,400,000	2,400,000
Total	**>14,350,000**	**13,450,000**

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Recommended alternative: Roundabout Corridor Footprint

- Signal Corridor
  - Add channelization (turn lanes) at all four intersections
  - Given 45-55 mph design speeds, widening to four lanes is required
- Roundabout Corridor
  - 200 ft. taper at intersection approaches
  - Between intersections, maintain two-lane road

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Funding scenarios

- Existing funding: $1,750,000 (at risk of being reallocated)
- Projected funding: Best case: $3,000,000 total
- Supplemental funding: **Measure J**: $1,750,000 + **$8,000,000** = $9,750,000

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Improvement phasing: Short term (0-5 yrs)

- **Begin preliminary engineering** for Los Ranchos and Buckley roundabouts; build Los Ranchos roundabout, subject to Caltrans process
- **Begin coordination** on Rolling Hills secondary access
- Interim channelization improvements at Crestmont Dr. (assess / install?)
- Rehabilitate pathway from Los Ranchos to Crestmont to become part of the Edna-Price Canyon Trail, extend trail on west side of road from Crestmont to Tank Farm (**begin preliminary engineering**)
- Re-align Airport Dr. with Farmhouse
- Widen northbound 227 to four through lanes from Farmhouse to just south of Kendall
- Right-in/right-out/left-in at Kendall (left-outs at Farmhouse)
- Install rumble strips from Airport Dr. to Los Ranchos

Bold text = immediate action (0-1 yrs)

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Improvement phasing: Mid term (0-10 yrs)

- Build Buckley Rd. roundabout
- Construct secondary access connecting Rolling Hills to Buckley Rd.
  - With traffic calming treatments to reduce speeds and discourage cut-through traffic

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Improvement phasing: Long term (10-20 yrs)

- Build Crestmont Dr. roundabout
- Build Farmhouse Ln. roundabout

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CONTACT INFORMATION

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