

# MCKINLEY GRADE SEPARATION PROJECT

STUDY SESSION

NOVEMBER 28, 2017



# JUNE 28, 2017 STUDY SESSION

## Discussed Options for a Grade Separation at the McKinley / BNSF Railroad Crossing

- OPTION 1:** Road Over Tracks
- OPTION 2:** Tracks Over Road
- OPTION 3:** Meet with BNSF to confirm if Option 2 is feasible, and verify costs of both options



# BNSF MEETING: AUGUST 23, 2017

## **Burlington Northern Santa Fe (BNSF) Railroad**

- Walt Smith, General Director Commuter Construction
- Jason Sanchez, Manager Public Projects
- Rich Dennison, General Director Transportation
- Lena Kent, Director Public Affairs

## **Riverside County Transportation Commission (RCTC)**

- Anne Mayer, Executive Director
- Shirley Medina, Planning and Programming Director

## **Caltrans**

- Emad Maker, Project Manager

## **City of Corona**

- Darrell Talbert, City Manager
- Nelson Nelson, Public Works Director

## THIRD-PARTY EXPERTS

### **KZAB Engineers, Inc.**

- Abunnasr S. Husain, PE

### **CNC Engineering**

- Tapas Dutta, PE, QSD, ENV SP

# INDEPENDENT COST ESTIMATES

- **Based on the concepts from the 2011 Project Study Report (PSR)**
- **Cost Estimates prepared for Alternative 2 (Rail over McKinley) and Alternative 4 (McKinley over Rail) from the PSR**
- **Data from the following grade separations in Southern California were reviewed:**
  - Fullerton Road Grade Separation (under construction)
  - Fairway Drive Grade Separation (under construction)
  - Puente Avenue Grade Separation (under construction)
  - Nogales Street Grade Separation
  - Sunset Avenue Grade Separation
  - Brea Canyon Road Grade Separation
  - Seventh Avenue Grade Separation
- **Cost stated in 2017 dollars**

## **ALTERNATIVE 2:**

### **RAIL OVER MCKINLEY**

The following changes to Alternative 2 were incorporated after the June 28, 2017 Study Session:

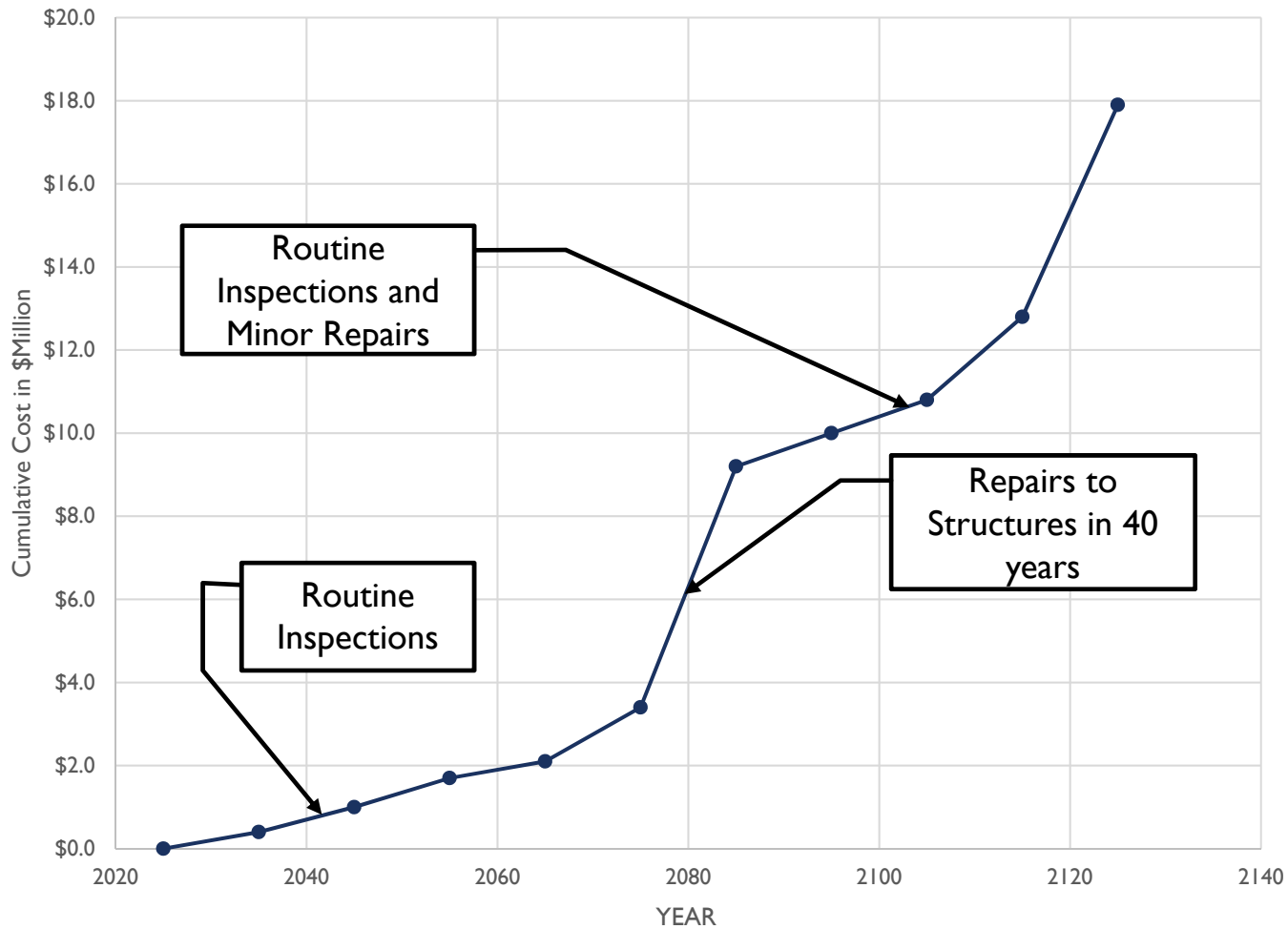
- **Relocation of existing track crossover**
  - Requires long, flat area for switching
  - Significantly increased length of tracks and walls
- **Soundwalls added to retaining walls**
- **A second shoofly track added**
- **Widen McKinley from Magnolia Avenue to SR-91 eastbound ramps (similar to Alternative 4)**
- **Cost of franchised utilities added**
- **Maintenance cost of BNSF structures added**

**ALTERNATIVE 2:****RAIL  
OVER  
MCKINLEY****Estimated cost in 2017 dollars:**

<b>Construction</b>	<b>\$151.6 Million</b>
<b>Utilities</b>	<b>\$ 9.1 Million</b>
<b>Right-of-Way</b>	<b>\$ 0.3 Million</b>
<b>Design, Oversight &amp; Construction Management</b>	<b>\$ 34.8 Million</b>
<b>Maintenance of BNSF Structures (100 years)</b>	<b>\$ 17.9 Million</b>
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<b>TOTAL</b>	<b>\$ 213.7 Million</b>

# ALTERNATIVE 2: RAIL OVER MCKINLEY

## Projected BNSF Structures Maintenance cost over 100 years (2017 dollars):



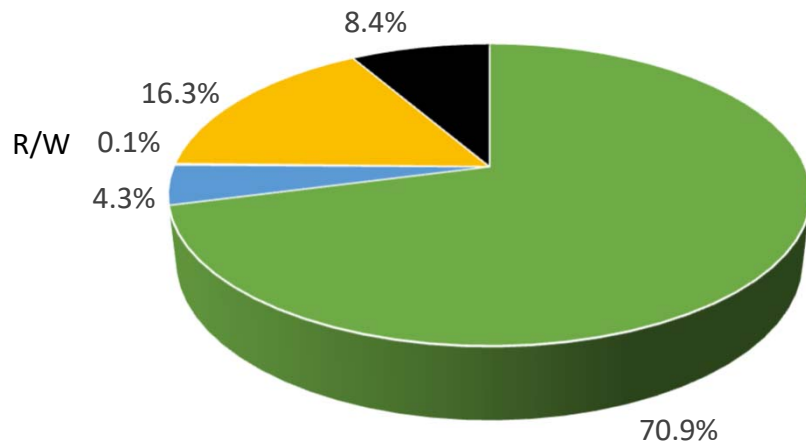


**ALTERNATIVE 4:****MCKINLEY  
OVER  
RAIL****Estimated cost in 2017 dollars:**

Construction	\$37.5 Million
Utilities	\$ 3.6 Million
Right-of-Way	\$24.2 Million
Design, Oversight & Construction Management	\$18.7 Million
Maintenance of BNSF Structures (100 years)	N/A
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<b>TOTAL</b>	<b>\$84.0 Million</b>

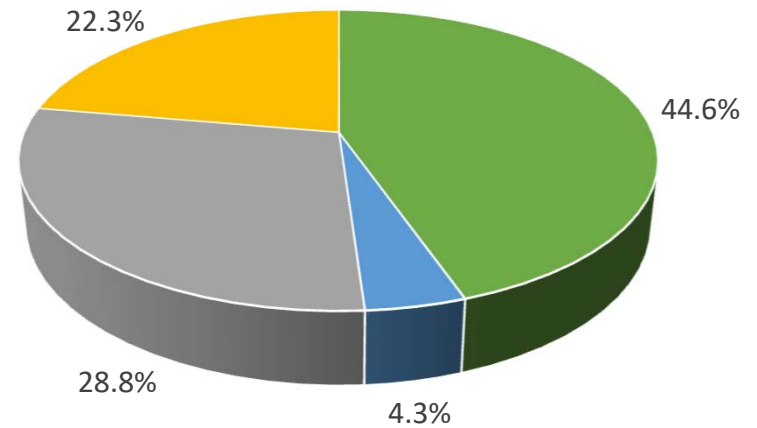
# COMPARISON OF COSTS

**ALTERNATIVE 2: Rail over McKinley**

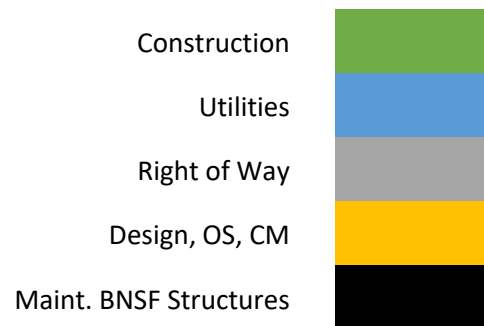


**\$213.7 million**

**ALTERNATIVE 4: McKinley over Rail**



**\$ 84.0 million**



## MCKINLEY: ONE OF THE STATE'S TOP PRIORITIES

- Section 2452 of the California Streets and Highways Code requires the California Public Utilities Commission (CPUC) to establish the Grade Separation Program Priority List for qualified projects and furnish it to the California Transportation Commission by July 1 of each year.
- The Priority List uses factors such as Accident History, Vehicle Speed Limit, Crossing Delay, Rail Speed limit, and Crossing Geometrics to determine the Priority Index associated with each grade crossing.
- **McKinley is No. 6 out of 56 grade crossings, according to this criteria,** in the California Grade Separation Program Priority List for the 2015-2016 Fiscal Year. The CPUC determines the order of priority as the most urgently in need of grade separation, alteration, or reconstruction to meet the program goals of eliminating hazardous railroad crossings.

# MCKINLEY / BNSF CROSSING

## Train Volumes

	<u>Freight</u>	<u>Metrolink</u> *	<u>Amtrak</u>	<u>Total</u>
<b>2011</b>	42 **	23	3	68
<b>2035</b> (Projected)	91	42	4	137

\* Includes 91/Perris Valley and Inland Empire-Orange County Lines (normal operating schedule)

\*\* Year 2011 freight train volume was factored up by 2.71% consistent with SCAG growth factors

## Train Length & Speed

	<u>Freight</u>	<u>Metrolink</u>	<u>Amtrak</u>
<b>Train Length - 2011</b>	5,000 ft	500 ft	1,000 ft
<b>Train Length - 2035</b> (Projected)	6,500 ft	700 ft	1,000 ft
<b>Train Speed</b>	40 mph	55 mph	55 mph



# MCKINLEY / BNSF CROSSING

## Vehicle Delay & Gate-Down

	Vehicle Delays Per Day (hours)	Gate-Down Time Per Day (minutes)
<b>2010</b>	56.72	105.35
<b>2035</b> (Projected)	322.63 ←	261.45 ←



# MCKINLEY / BNSF CROSSING

## McKinley Railroad Crossing Accidents Record \*

	<u>Accident Type</u>	<u>Position</u>	<u>User Condition</u>
9/20/2016	Pedestrian vs Train	Stopped on crossing	<b>Fatality</b>
1/22/2016	Pedestrian vs Train	Moving over crossing	<b>Fatality</b>
8/3/2005	Bicycle vs Train	Moving over crossing	<b>Fatality</b>
12/4/2001	Auto vs Train	Stopped on crossing	<b>Fatality</b>
5/16/2001	Truck vs Train	Moving over crossing	Vehicle Damage only
2/24/2001	Truck vs Train	Stopped on crossing	Vehicle Damage only
2/15/2000	Pedestrian vs Train	Stopped on crossing	<b>Fatality</b>
8/13/1983	Pedestrian vs Train	Moving over crossing	<b>Injured</b>

\* Federal Railroad Administration

# GRADE-SEPARATED INTERSECTIONS

- **Increase capacity** and **uninterrupted flow** by avoiding collisions and avoiding congestion delays
- **Reduce noise** disturbances generated by train horns and automatic warning device
- **Eliminate vehicle-train conflict** and delay
- **Increase Safety**
- **Improve emergency response times**



# PROJECT COST AND FUNDING

## Current Cost Estimate

- McKinley Street over Railroad Tracks: \$ 84,000,000
- Railroad Tracks over McKinley Street: \$213,700,000

## Current Funding Sources

- ~~☑ \$ 400,000 Projects of National & Regional Significance  
Federal Funds (De-obligated August 2017)~~
- ☑ \$ 2,000,000 Transportation Development Act State Funds
- ☑ \$ 1,400,000 TUMF
- ☑ \$84,450,000 SB 132 – Funds available for encumbrance and liquidation until June 30, 2023



# COUNCIL DIRECTION

## OPTION 1: Road Over Tracks

- **The design of the bridge would be developed with input from the community, County of Riverside, Caltrans, BNSF, and City Council**
  - Input would be limited to the look and aesthetic details of the bridge
- **The City must complete design and procure necessary right-of-way within 1½ years**

## OPTION 2: Tracks Over Road

- **Insufficient funding to proceed at this time - SB 132 funds require completion of project by June 2023**
- **BNSF must approve the proposed design to ensure conformance with operation and safety regulations/standards**

## OPTION 3: Do nothing or seek other alternatives

- **Forfeit \$84.4 million in SB 132 funds**