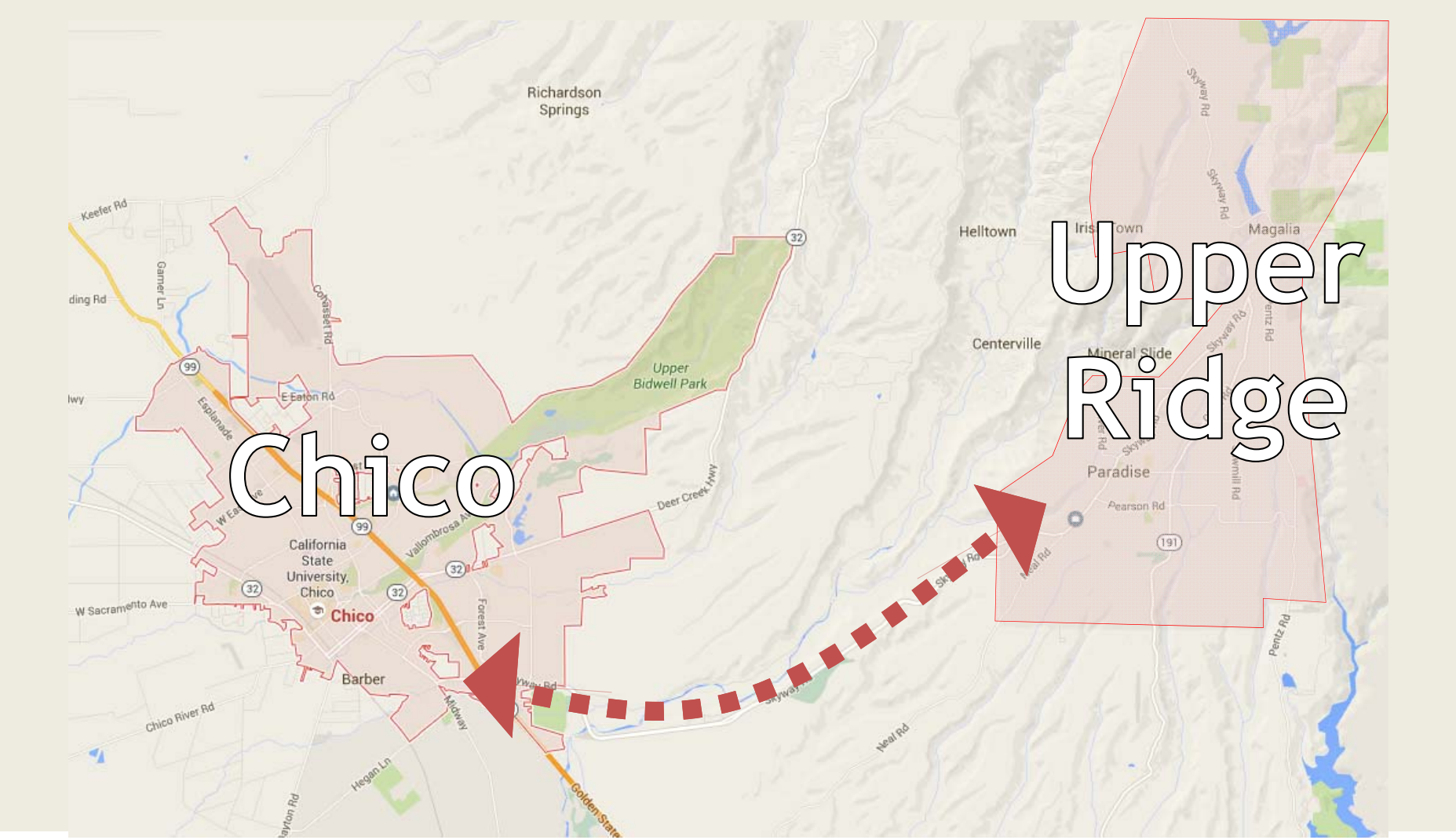
Downtown Paradise Safety Project

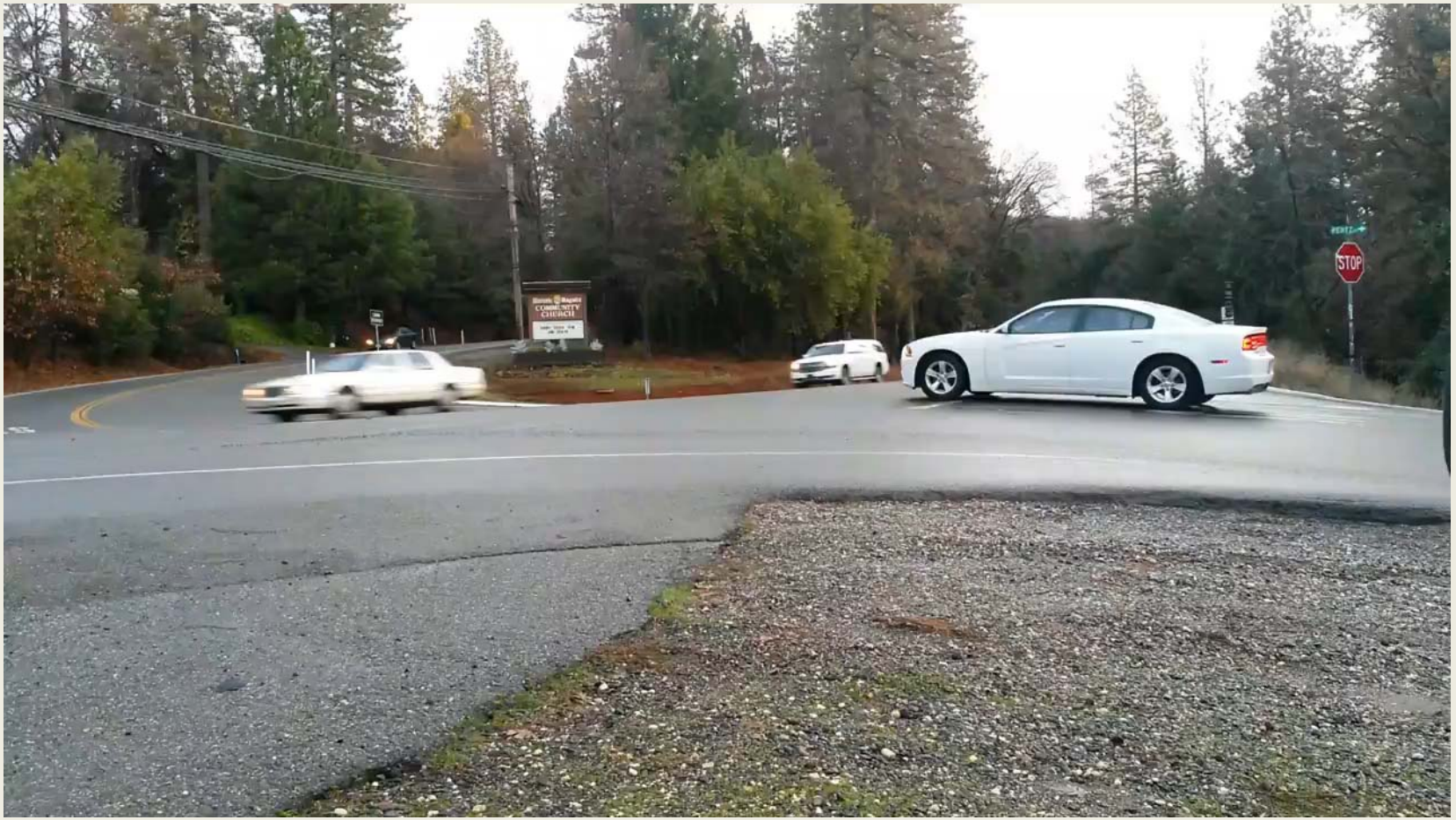
2015
Annual Report

25,000 Vehicles per Day



Skyway at Magalia Dam

Commute Southbound from Magalia



Skyway through Paradise
Town Limits to Bille Road

Skyway through Paradise
Bille Road to Elliott Road

Skyway through Paradise
Elliott Road to Pearson Road

Skyway through Paradise
Pearson Rd to W/O Neal Road

Skyway through Paradise
W/O Neal Road to Crossroads

Skyway between Chico and Paradise

Skyway at Bruce Road (Chico)

Commute Northbound from Chico

"Downtown" Paradise Road Configuration Change

Presentation with videos and commentary may be seen at https://youtu.be/TwryVczSDyk

Project Background

Date	Milestone
2008	Skyway Corridor Study – Stakeholder Interviews
2008	Skyway Corridor Study – Alternatives Analysis Public Workshop
2009	Council adopts Skyway Corridor Study
2012	Awarded Grant for Downtown Paradise Safety Project
September 2013	Pedestrian Safety Workshop (UC Berkeley & Cal. Walks)
January 2014	Presented Transportation and Safety Study to Town Council
February 2014	Business Focused Workshop
February 2014	Council Update
March 2014	Safety Focused Workshop
March 2014	Council Update
April 2014	Council Update
May 2014	Council approved project design, plans and specifications
June 2014	Contract Awarded to George Reed, Inc.
November 2014	Construction Complete
February 2015	Annual Report 1 of 3

Project Objectives

Improve Safety

- Enhance Pedestrian Crosswalks
  - Add flashing beacons
  - Increase visibility
- Coordinate Traffic Signals
  - Maintain capacity
  - Improve timing
- Road Diet
  - Add turn lane
  - Reduce collisions

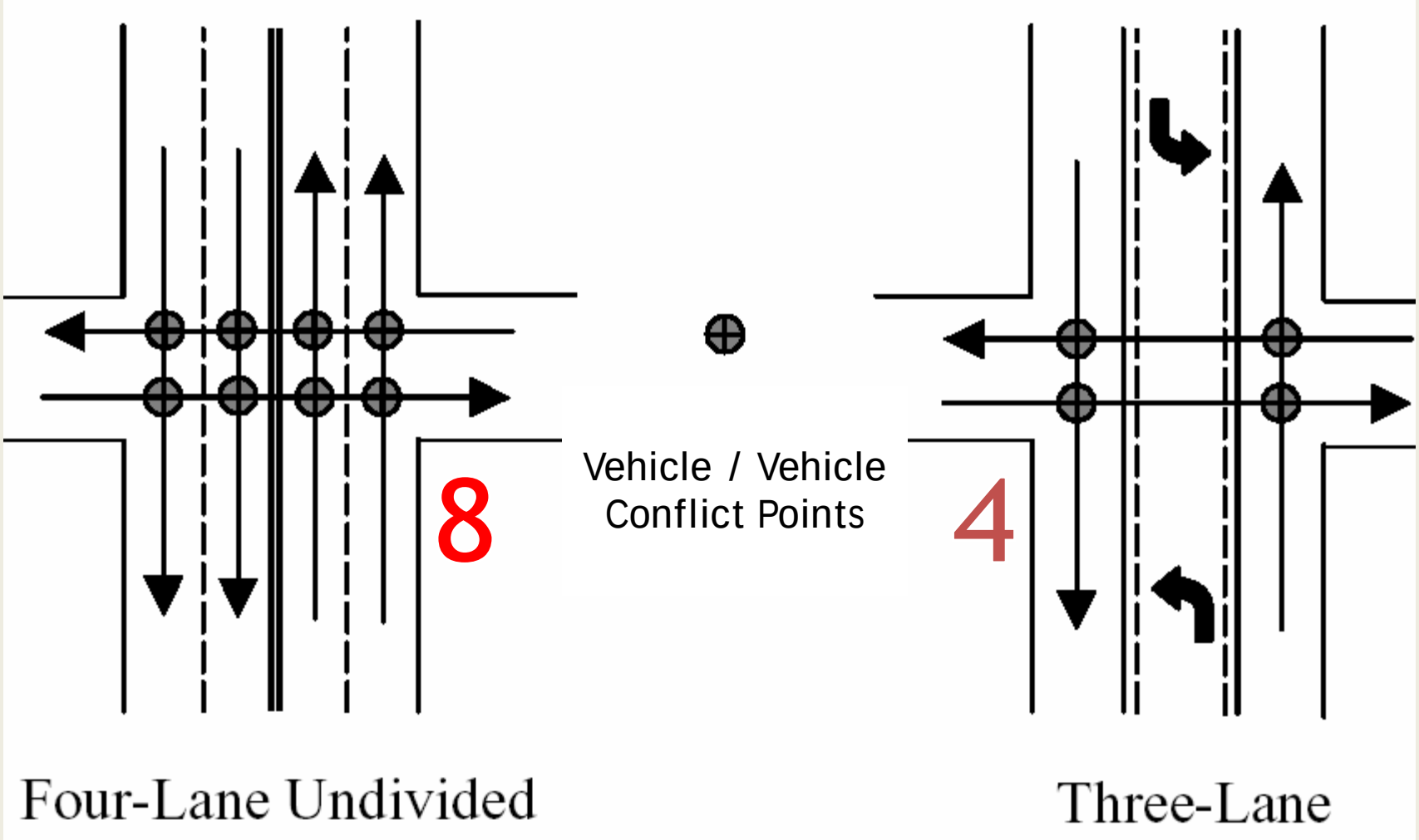
Improved Pedestrian Safety

- 5555 Skyway crosswalk relocated, enhanced
  - Refuge island, flashing beacons
- Downtown crosswalks reduced, enhanced
  - Sidewalk bulb-outs, flashing beacons, dual threat removed
- Improve pedestrian-motorist communication
- Add parking buffer between motorists and downtown patrons
- Upgrade street corners to current ADA standards
- Retrofit existing streetlights to LED
- Install three new streetlights for crosswalk coverage

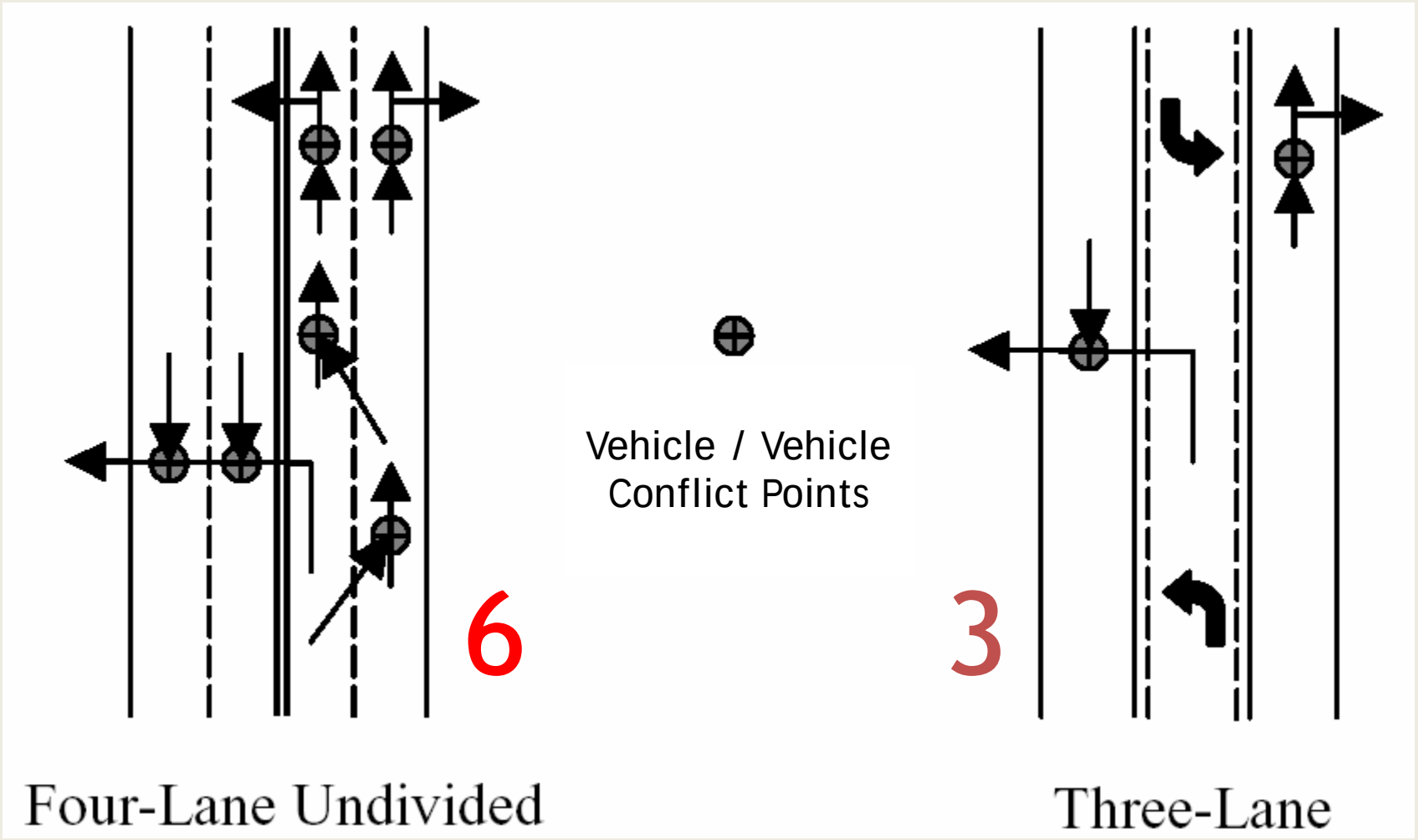
Improved Motorist Safety

- Reduce travel lanes from 4 to 3
  - One lane per direction with two-way center turn lane
  - 30% approved crash reduction factor (Ranges 26-43%)
  - Eliminates left turns from “fast lane”
- Reduces speeds
- Eliminates passing maneuvers
- Modifies traffic signals and flow
  - Optimizes traffic signal timing
  - Coordinates signals during peak hours
  - Off-sets reduction in lanes with added “green” time

Collision Conflicts at Intersections



Collision Conflicts at Mid-block



Other Project Features

- Exchanges “freeway” feel for downtown, pedestrian friendly environment
- Adds on-street parking to areas previously prohibited
- Pavement resurfaced for 10-year life extension
- Provides opportunity for future beautification

Expectations

- Project would slow traffic speeds
- Left turns to and from Skyway would require more time but could be performed in two phases
- Peak commute period will always be challenging

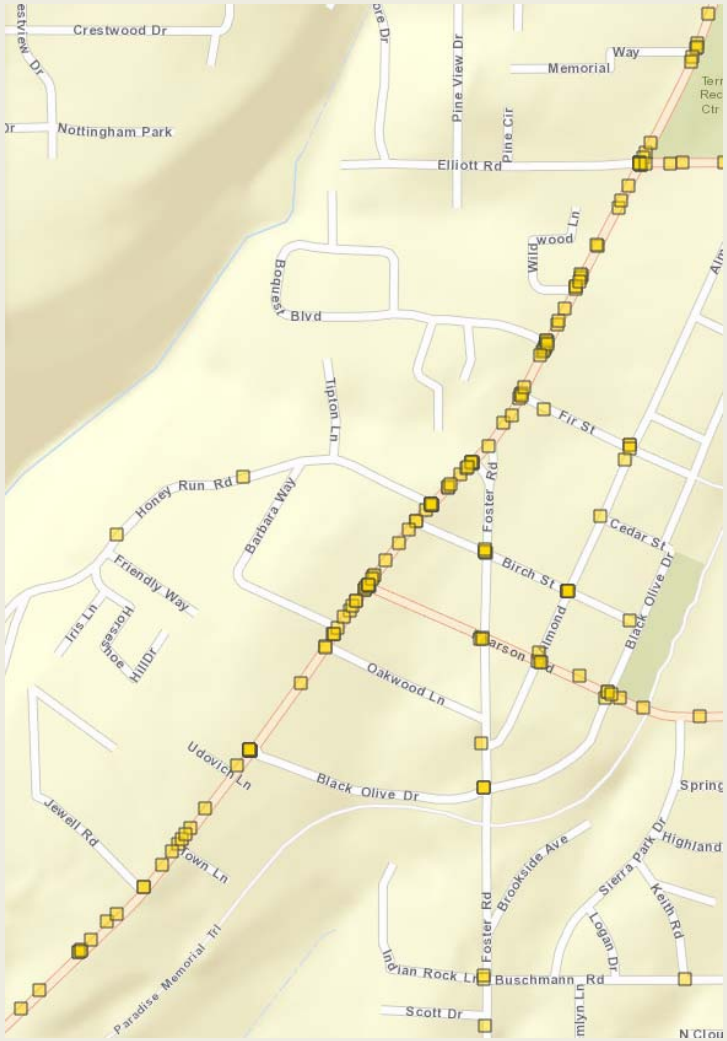
Adjustment to New Road Layout

- Expectation on collision data must consider the first year as the most volatile
- Adjustment period for collision data is needed
  - 6 months for immediate construction impact
  - 2-3 year period for full pre- and post-construction analysis

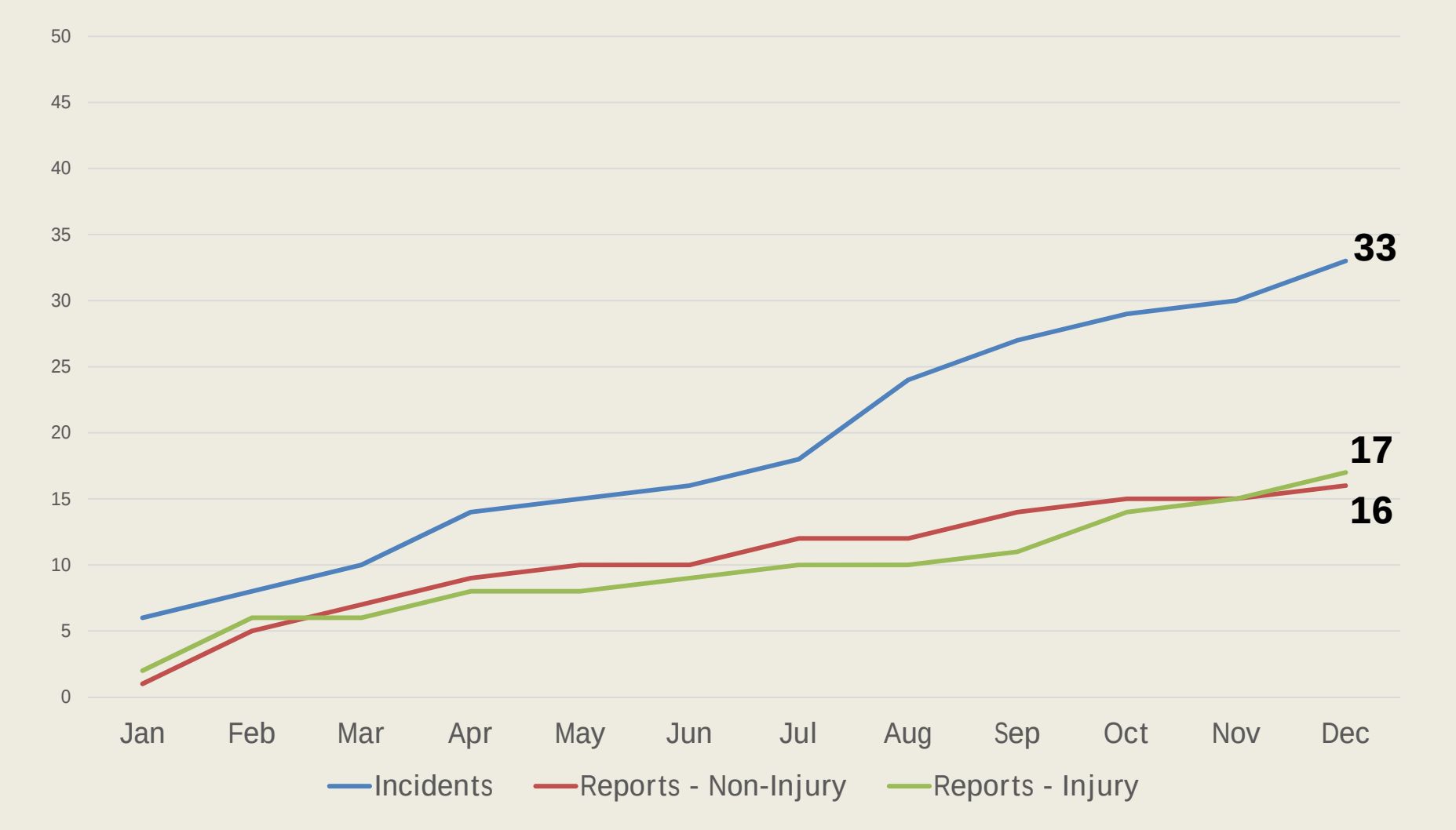
Part 1
Collision Data

Collison Data Set

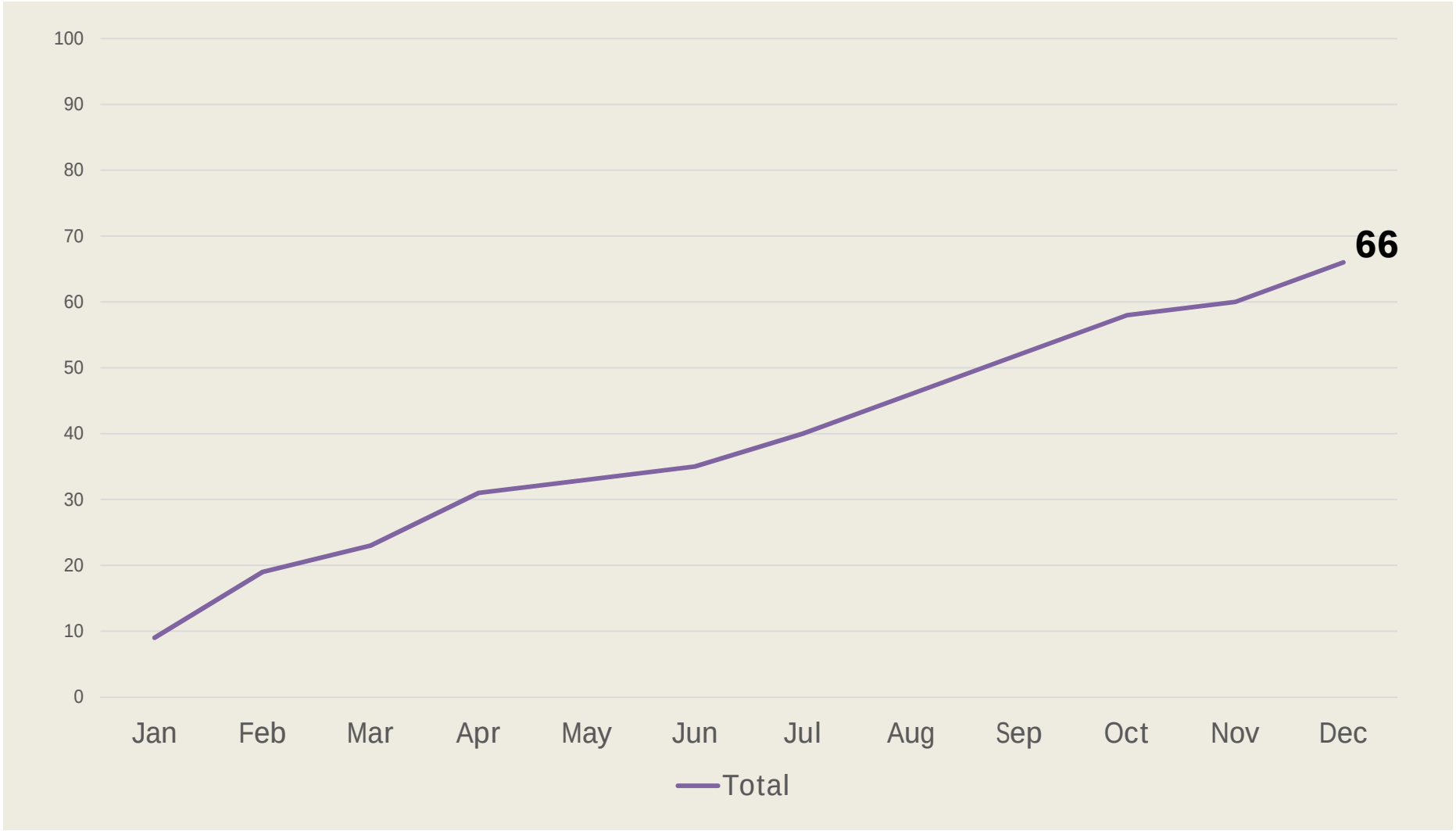
- Vista Way to Memorial Way
- Separated into three categories
  - Incidents – Lowest Level (No Injuries, No Tow, No Report)
  - Reports – Non-Injury
  - Reports - Injury
- Cases with reports have detailed information and are uploaded into the statewide reporting system
- Review of several reports revealed common threads of distracted driving



2015 Cumulative Timeline by Type



2015 Cumulative Timeline
Total Collisions



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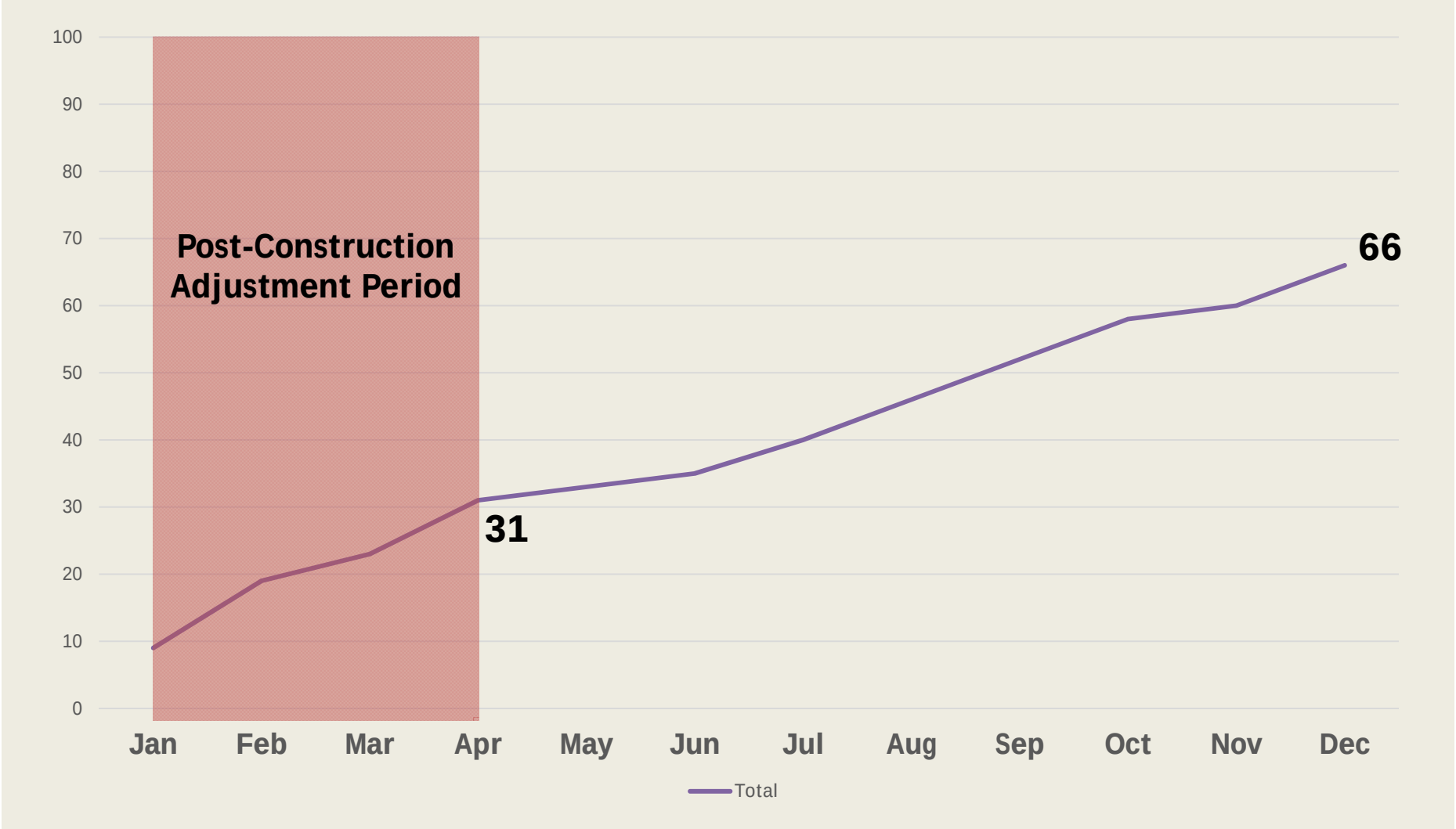
Total Collisions



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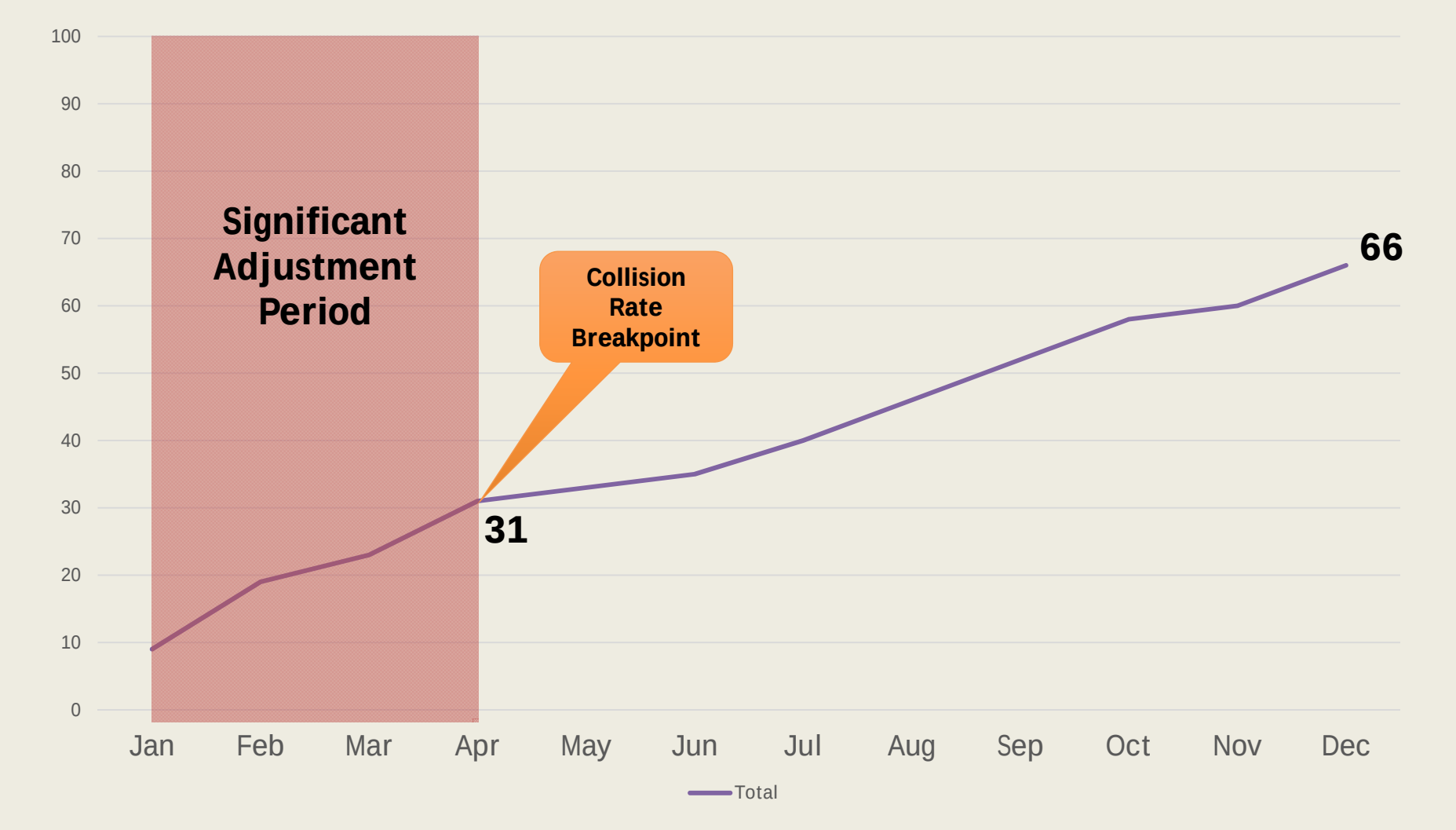

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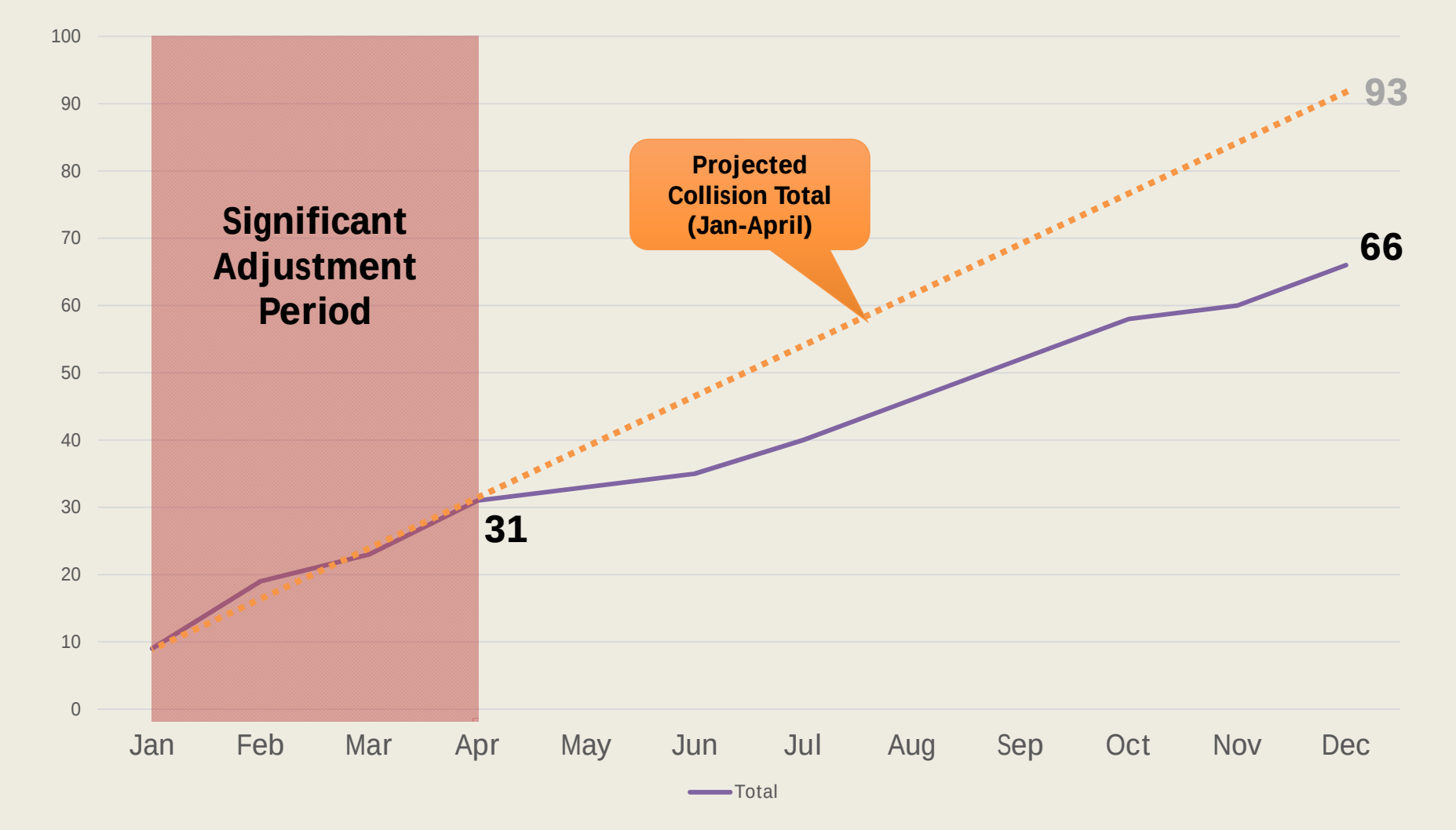

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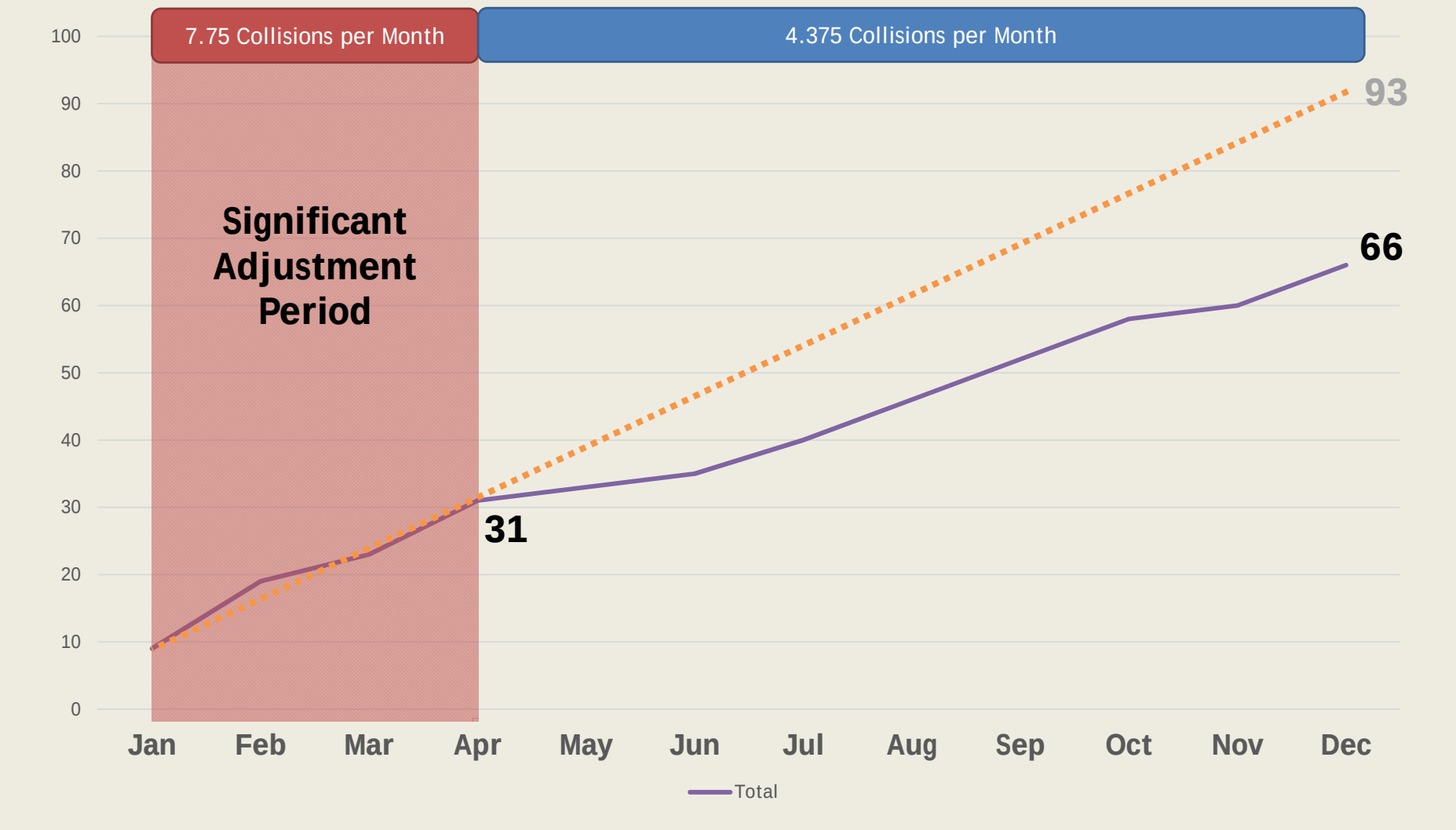
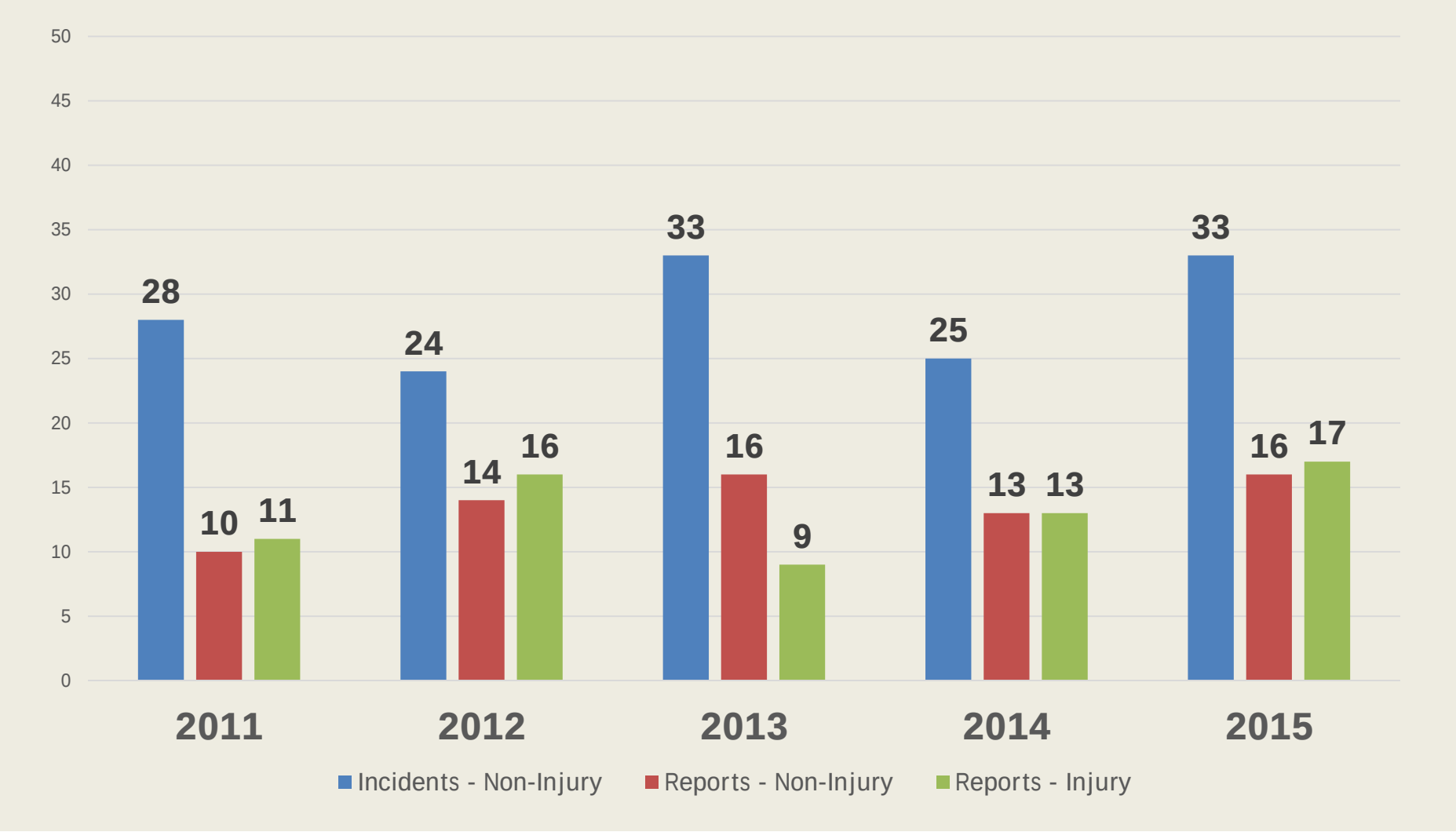


Historical Comparison



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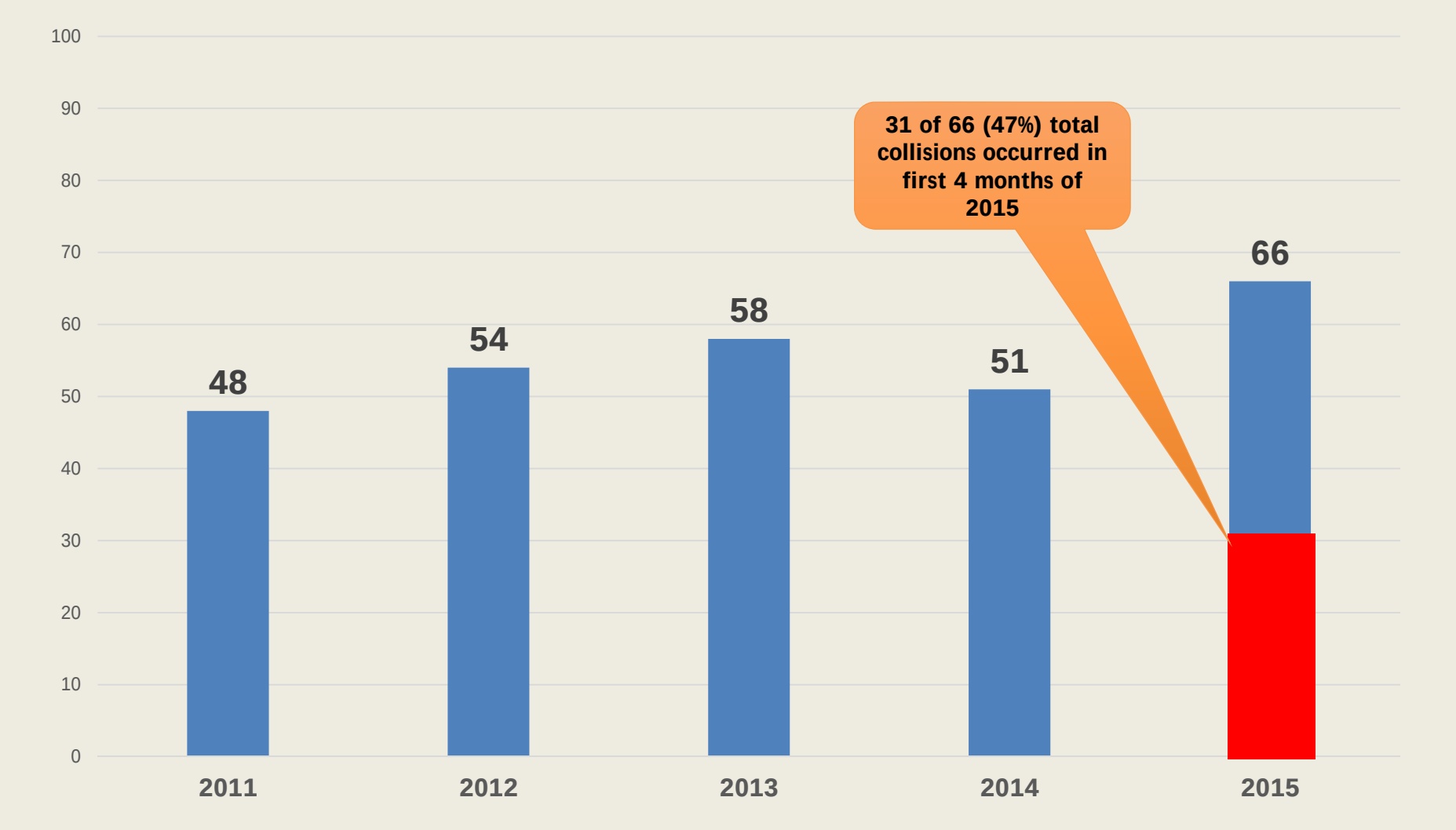
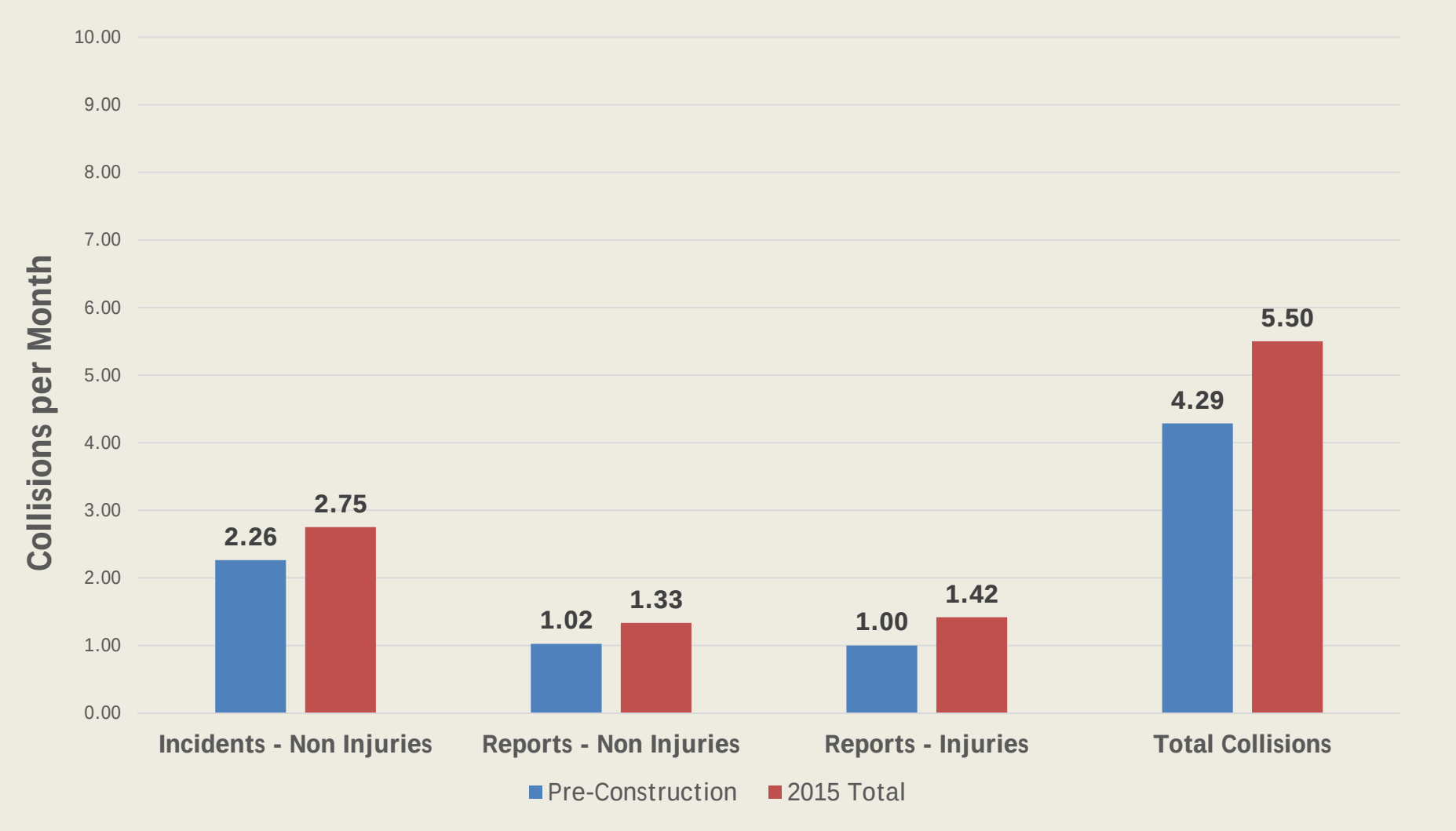
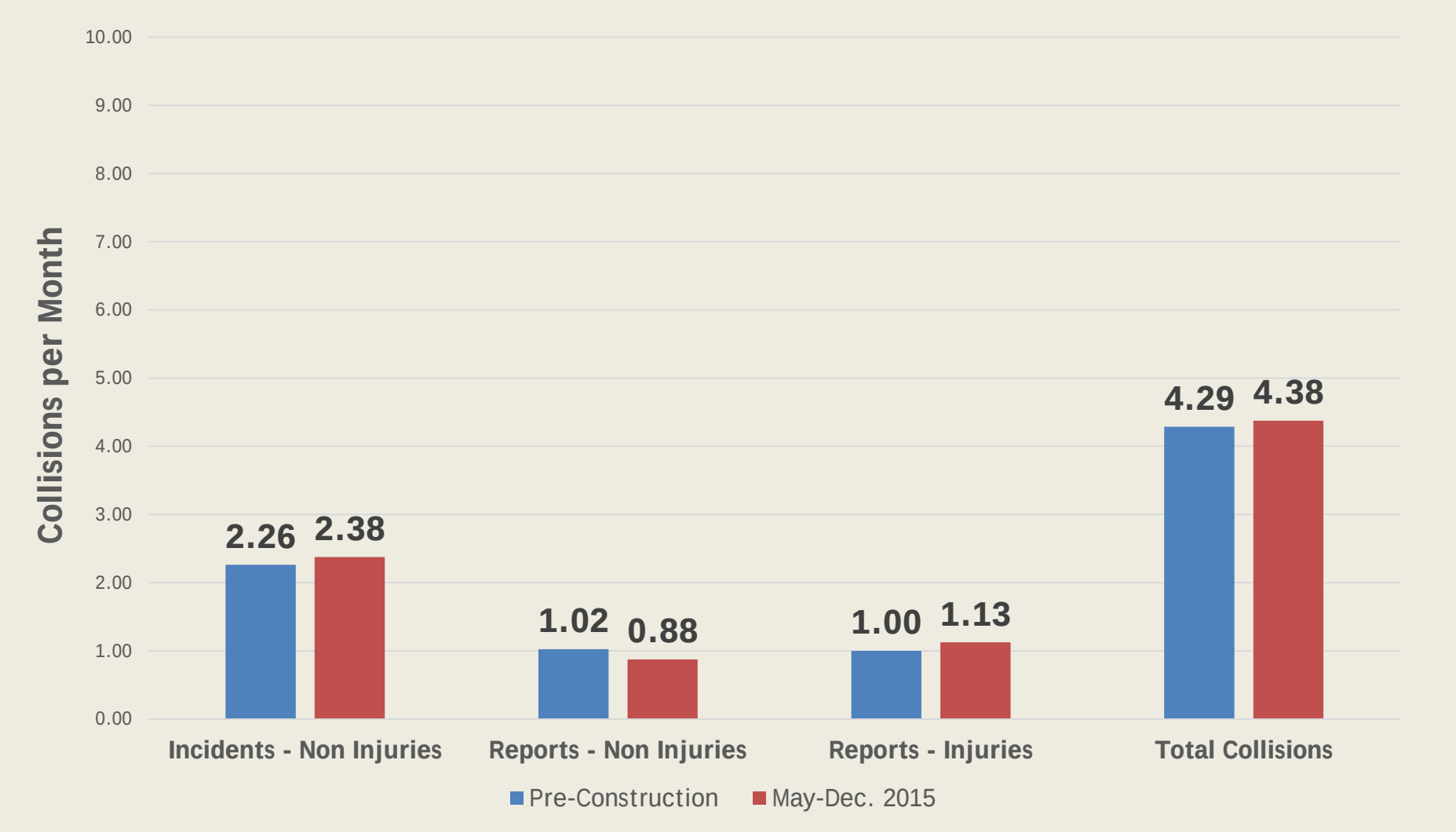


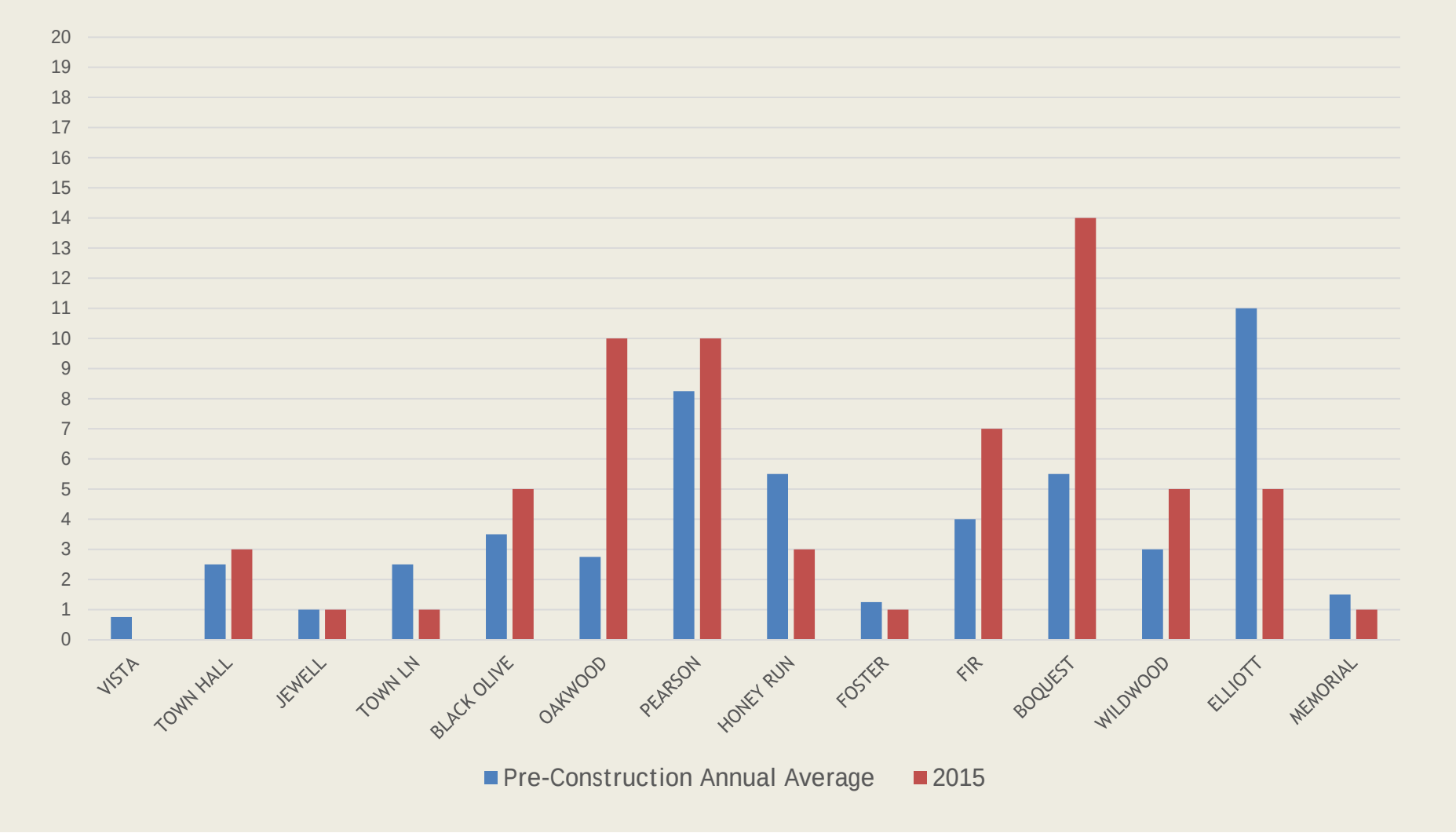
Collision Rate Comparison
Pre-Construction & 2015 Total



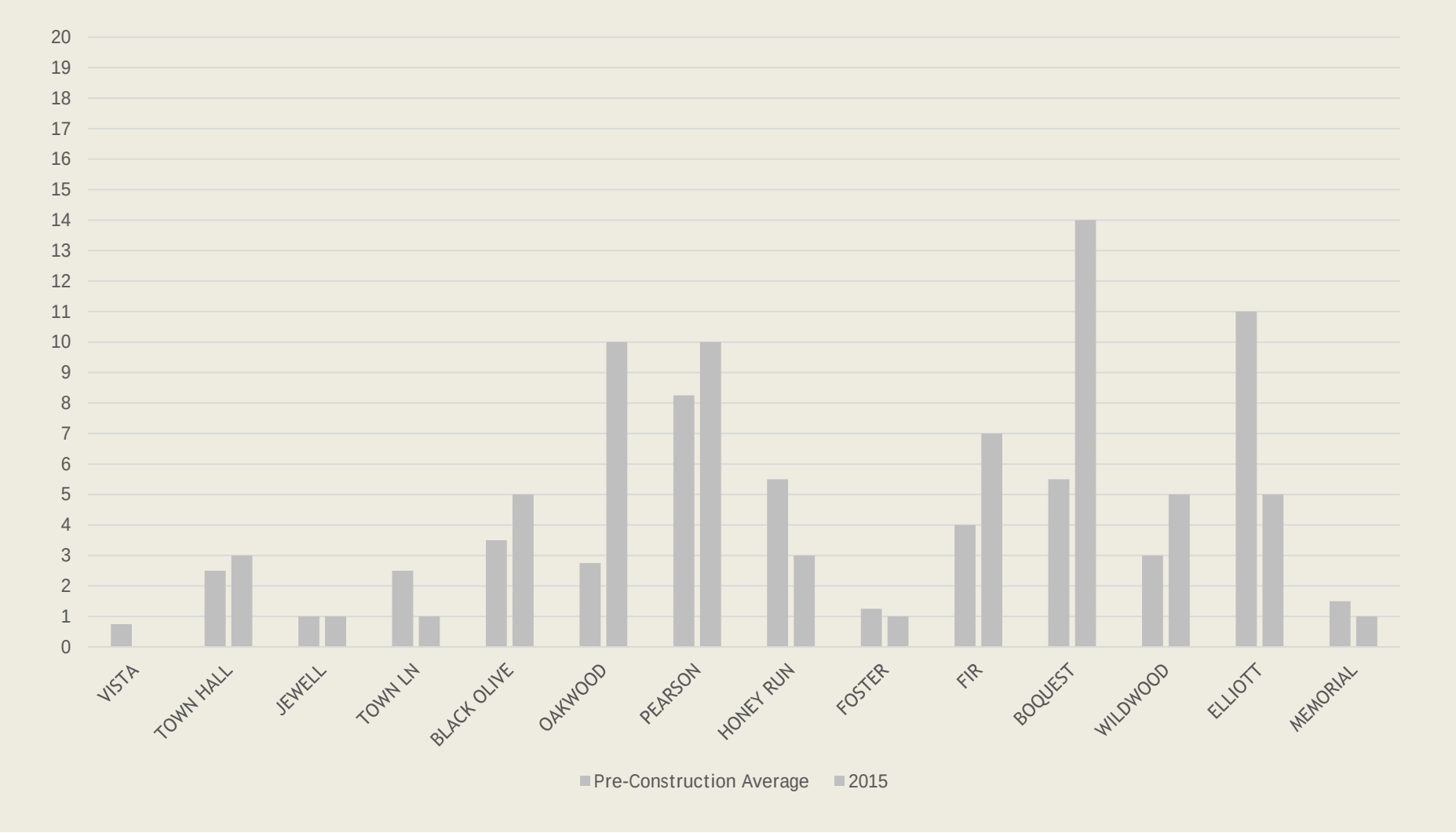
Collision Rate Comparison Pre-Construction & May-Dec 2015



Collision Location Analysis



Collision Location Analysis Increases Over Average



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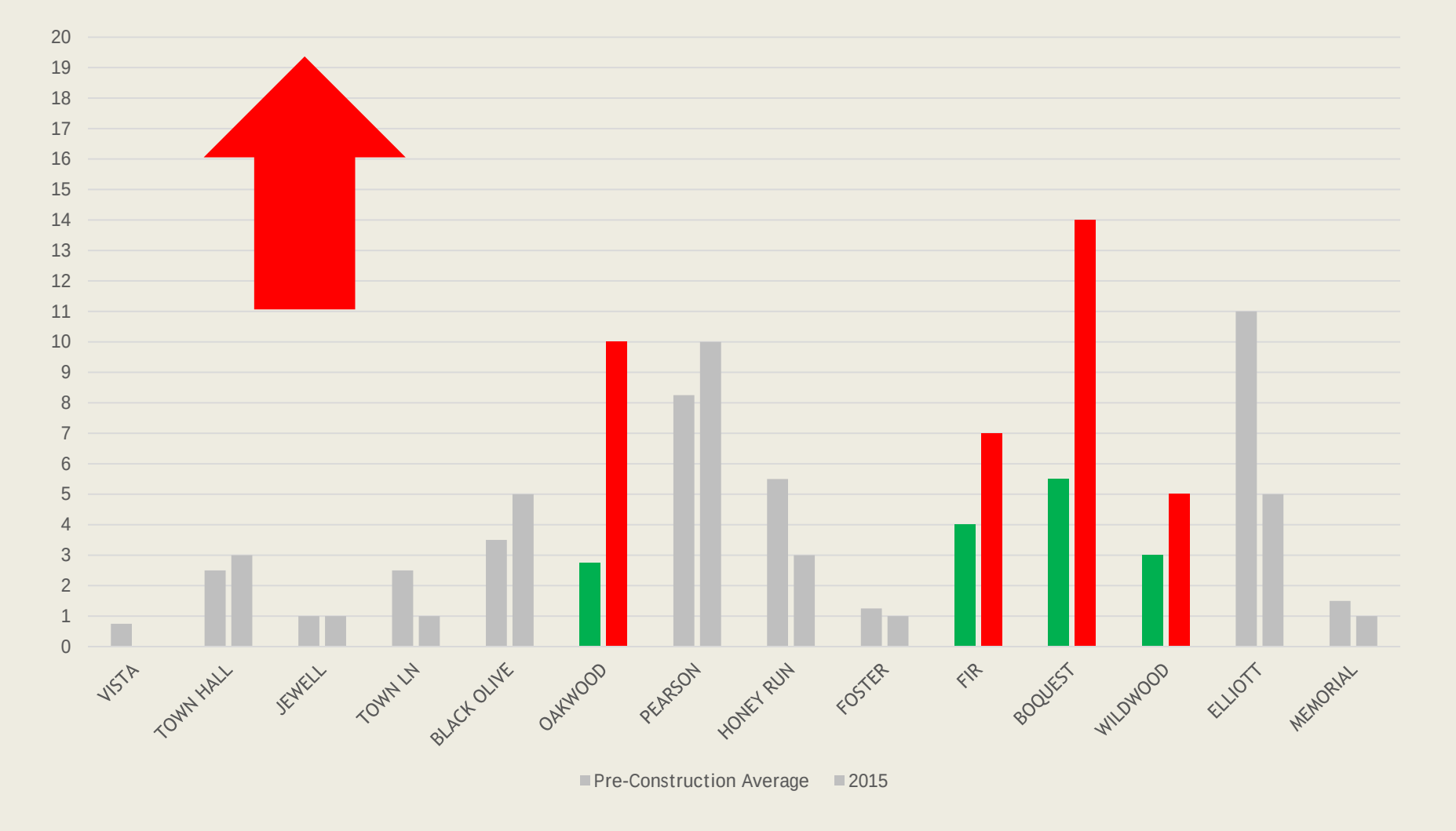
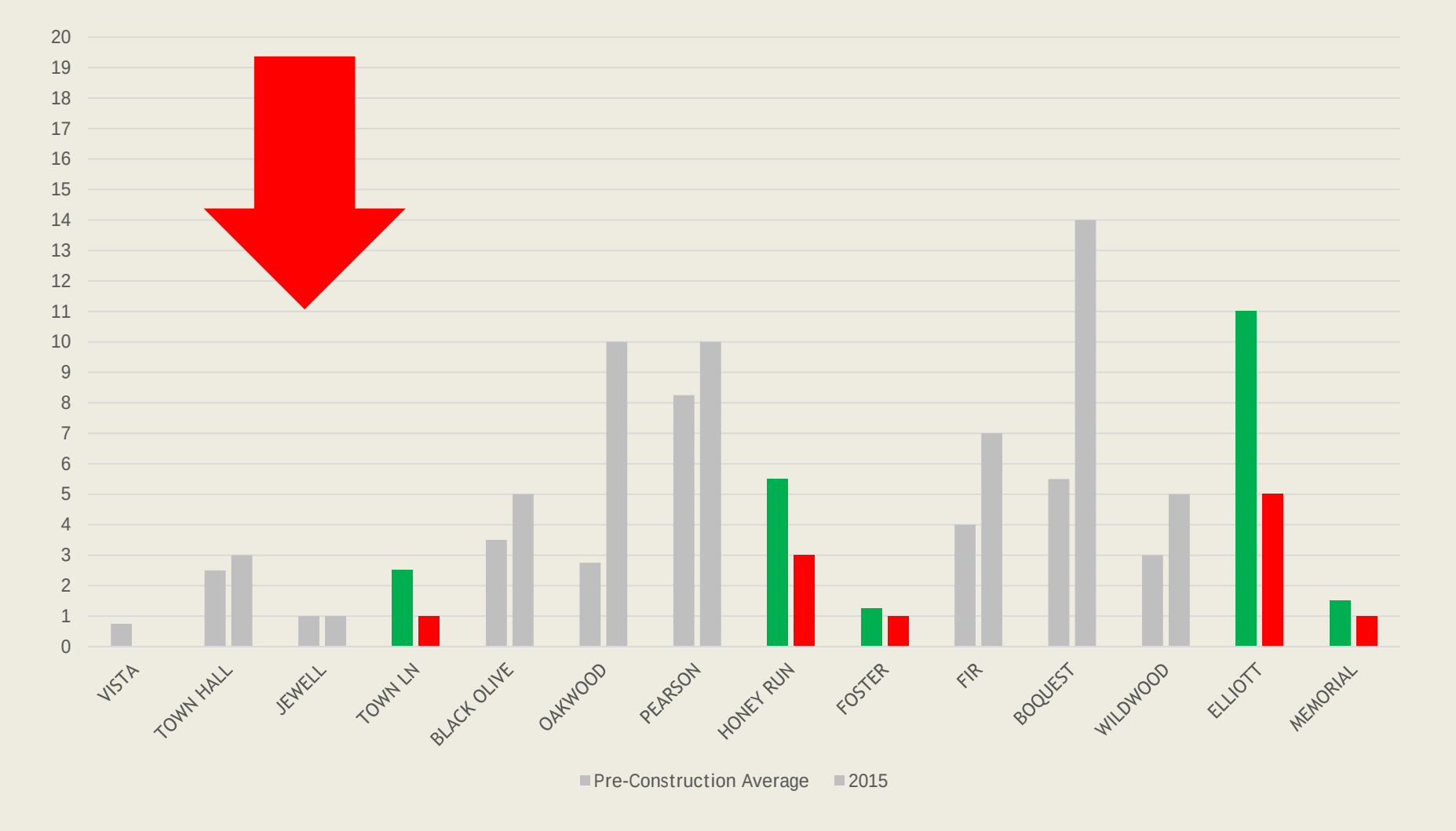
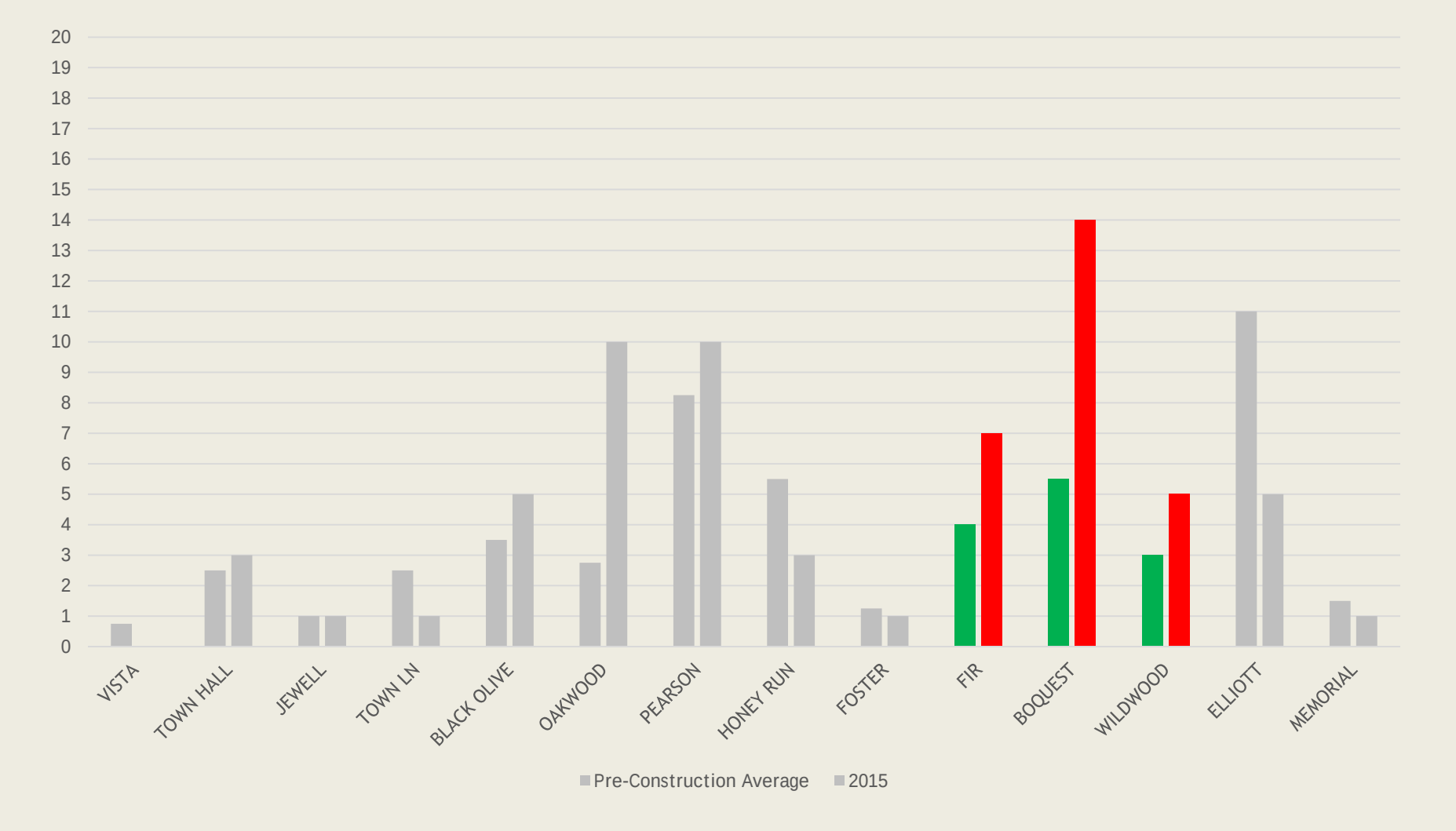


Collision Location Analysis Decreases Below Average



Further Analysis Warranted for Increase of Collisions

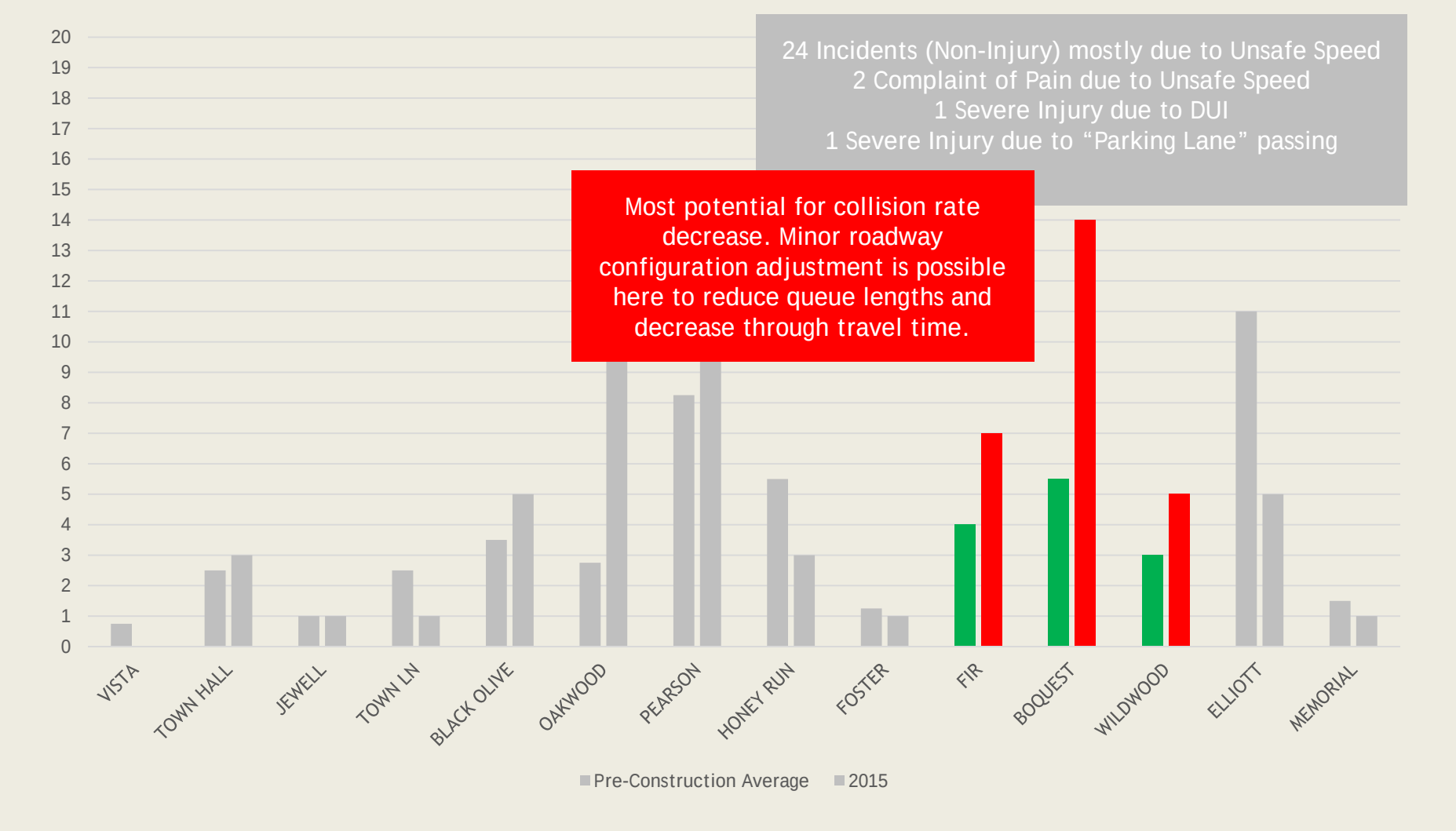


SKYWAY

COLLISIONS BETWEEN FIR AND WILDWOOD

Northbound Skyway Leading to Elliott

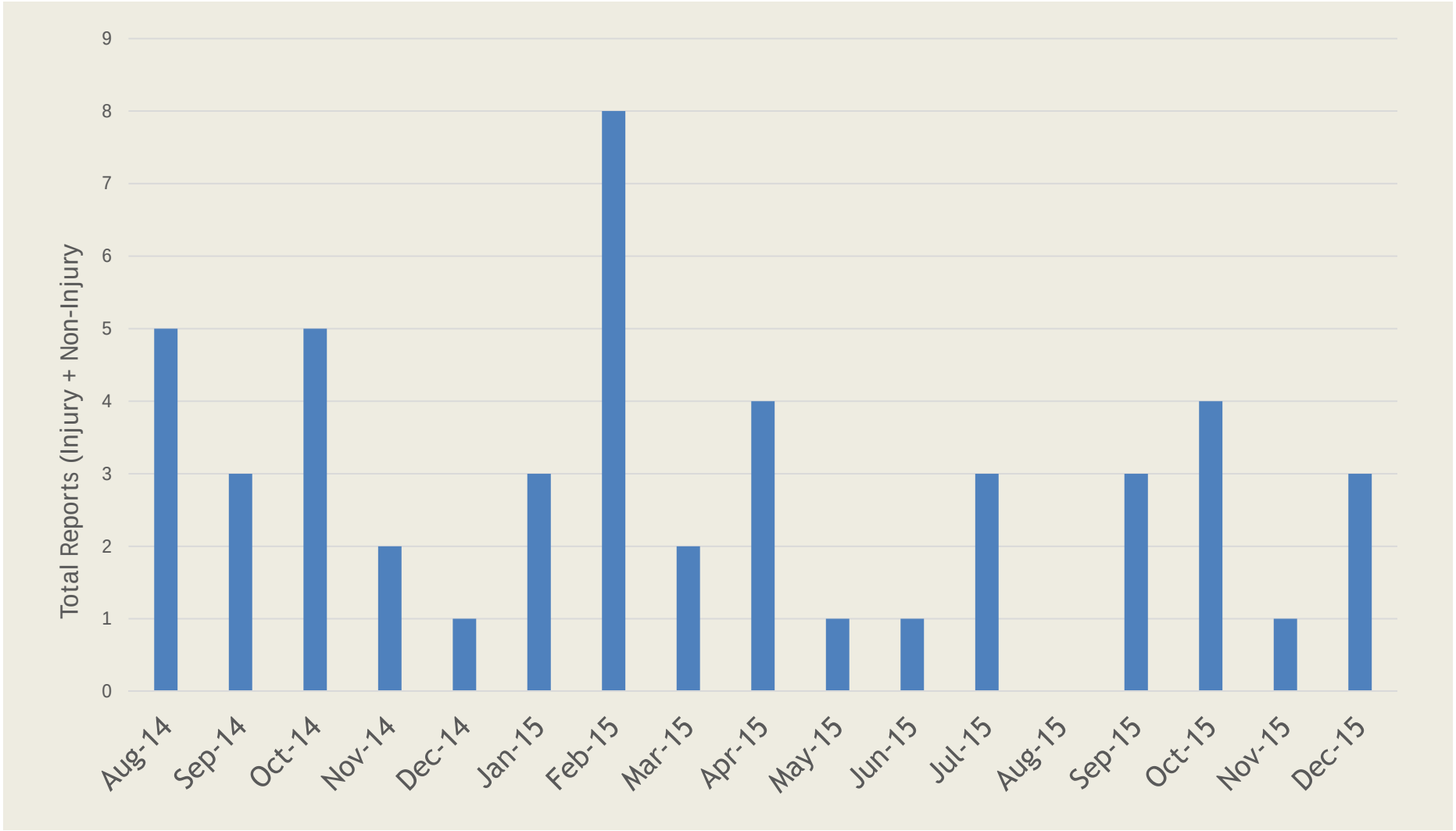
Northbound Skyway Leading to Elliott



Collisions with Reports

Injury +
Non-Injury

Project Timeline
Collisions with Reports



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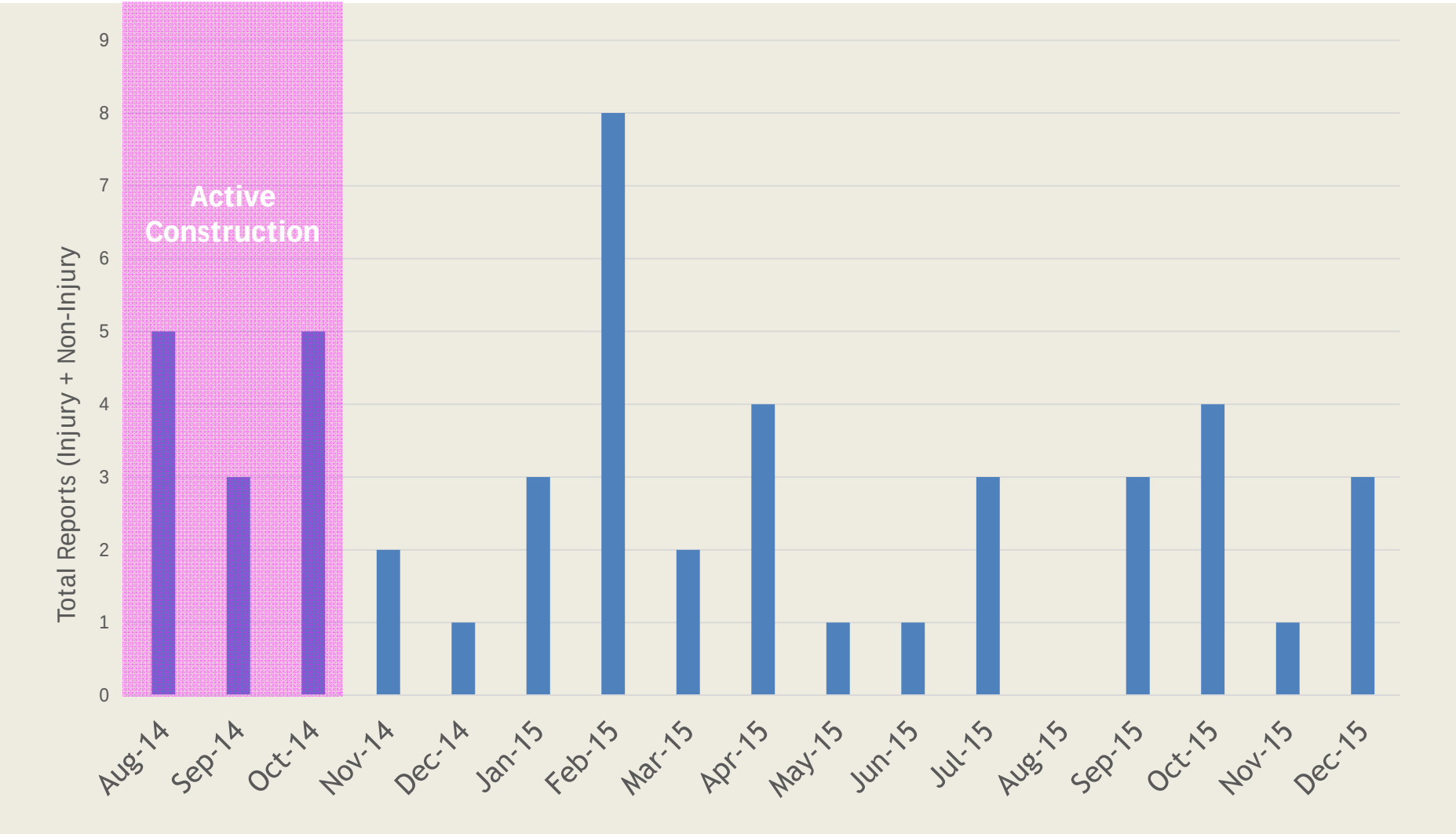

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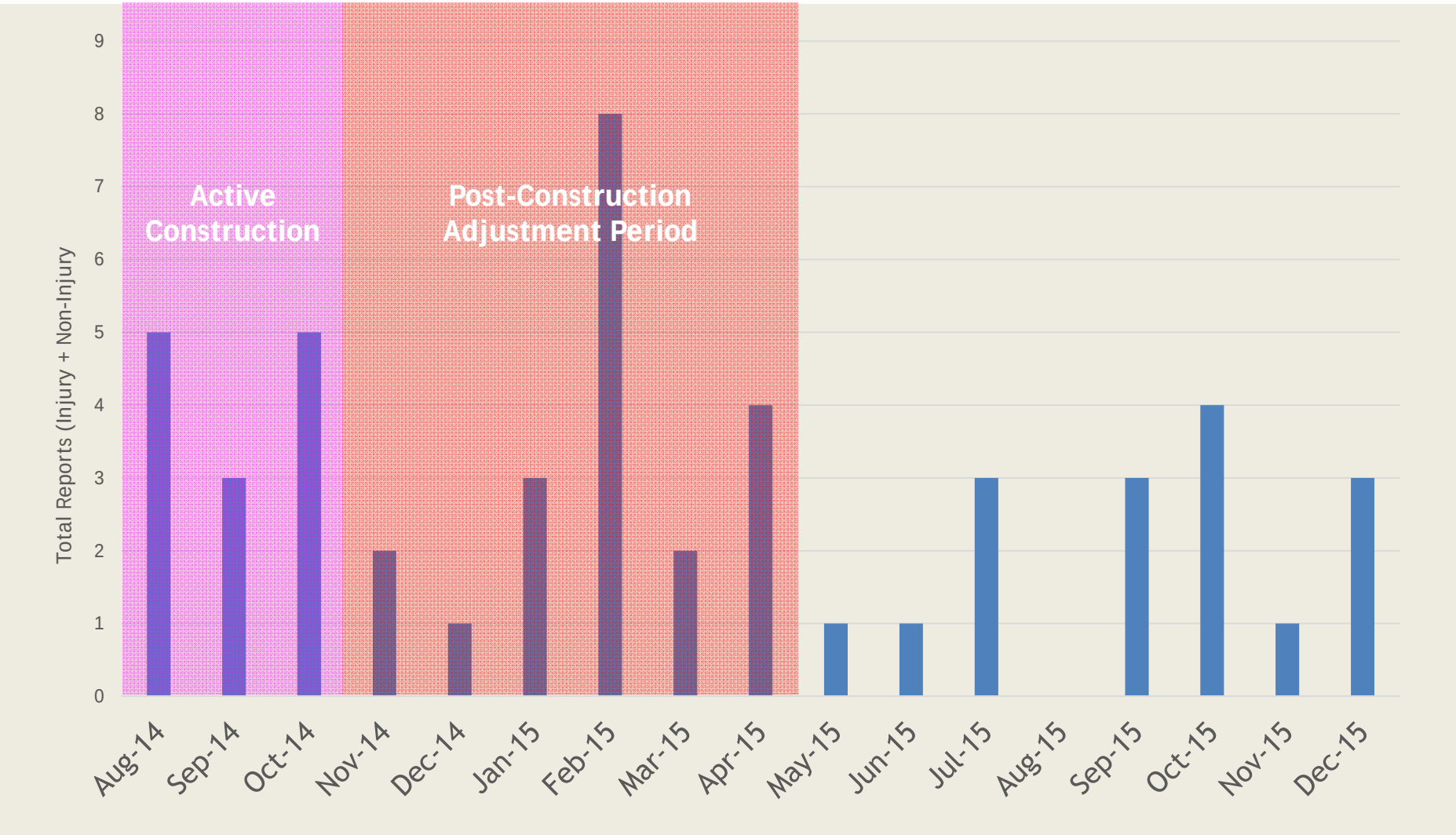

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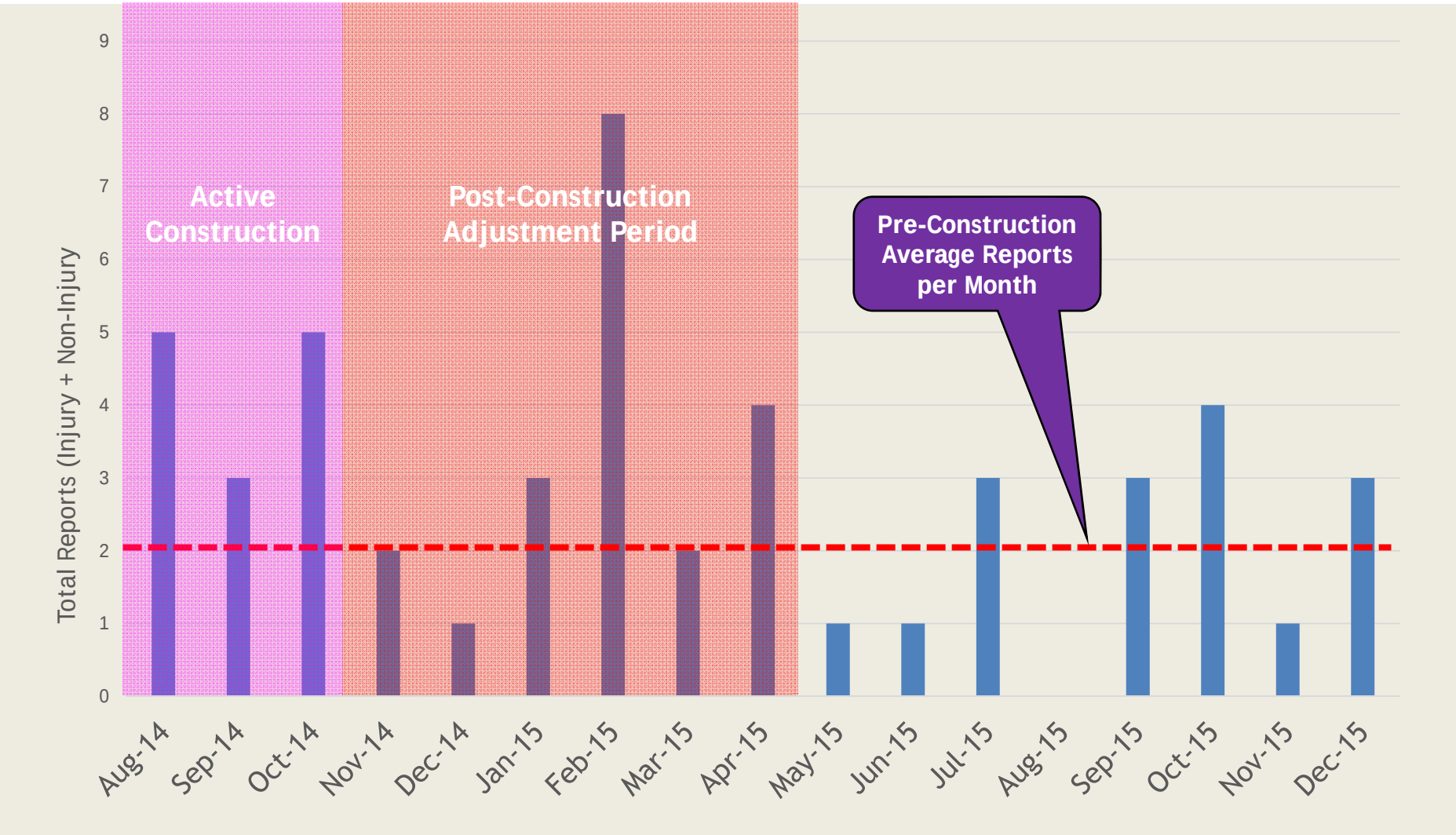
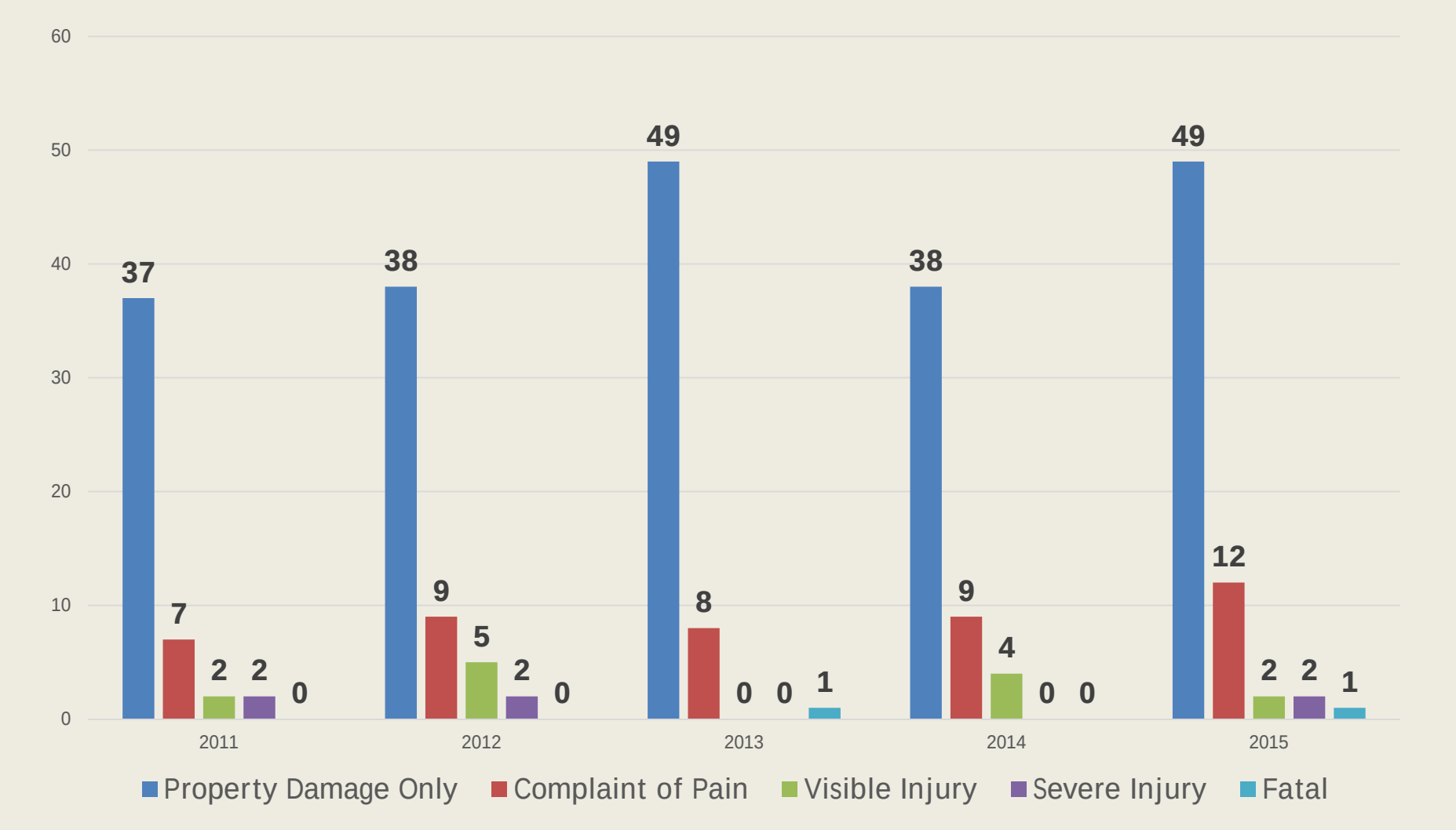
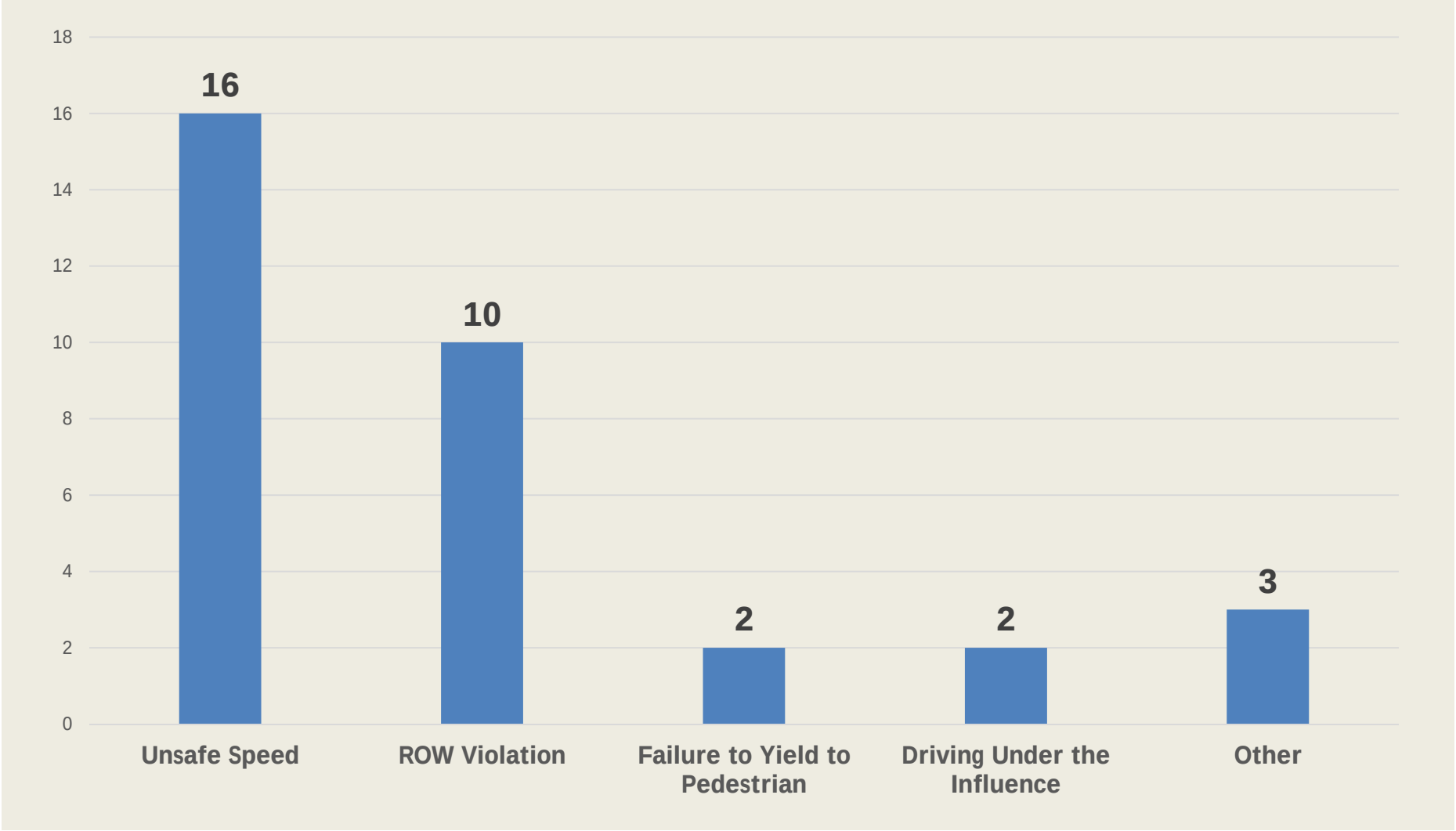


Injury Severity for Collisions with Reports



Primary Collision Factor
2015 Collisions with Reports



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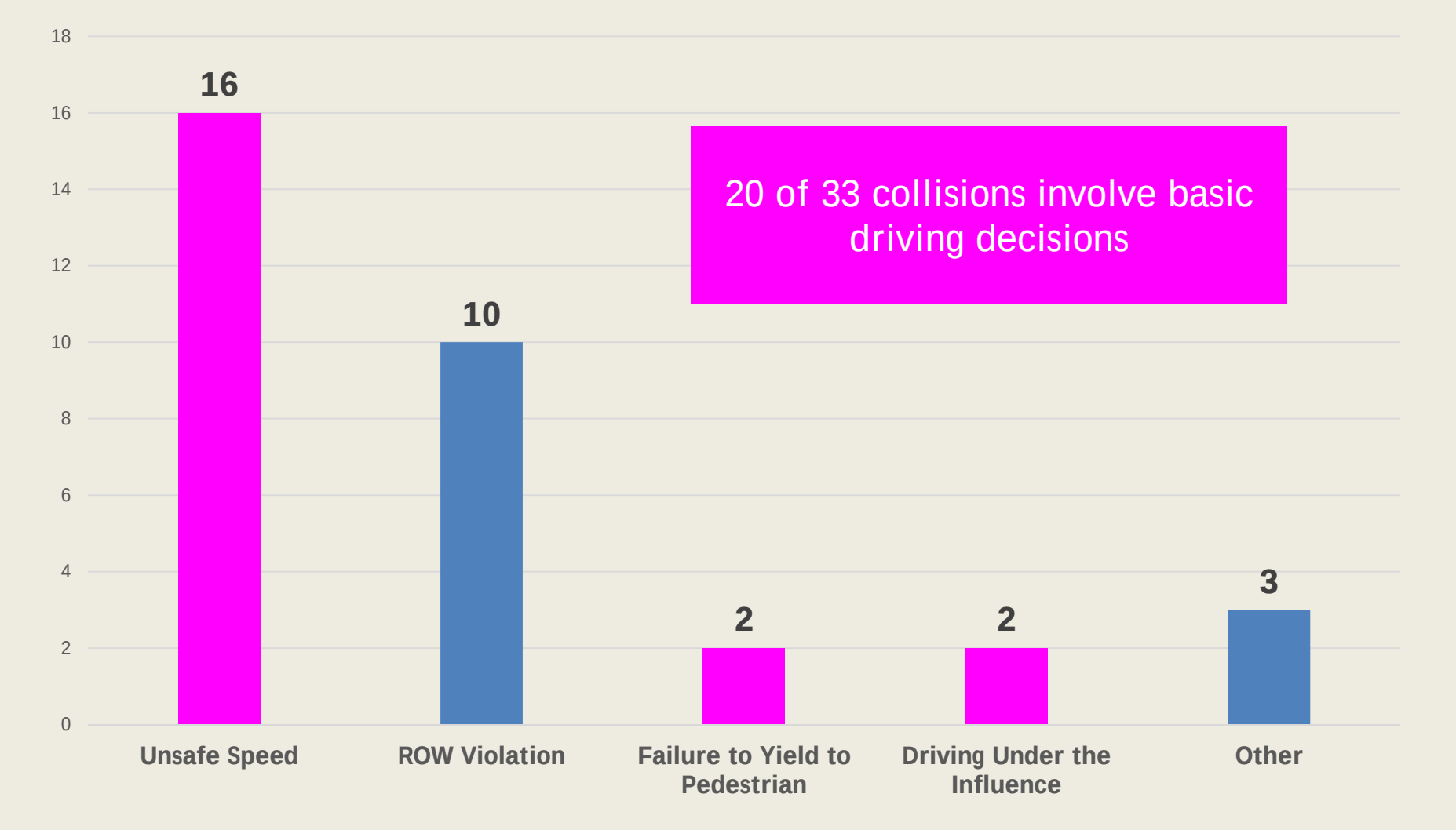

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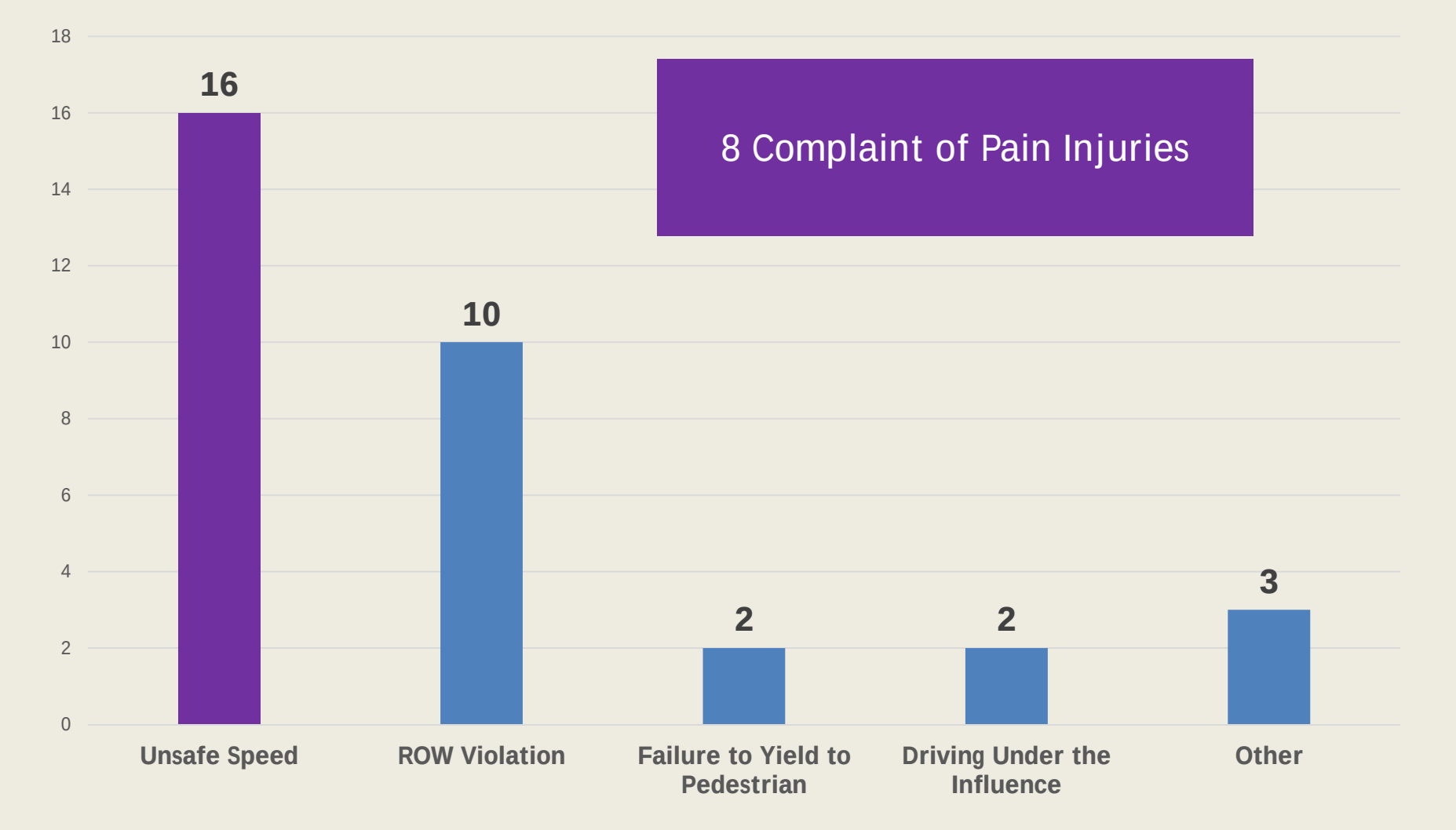

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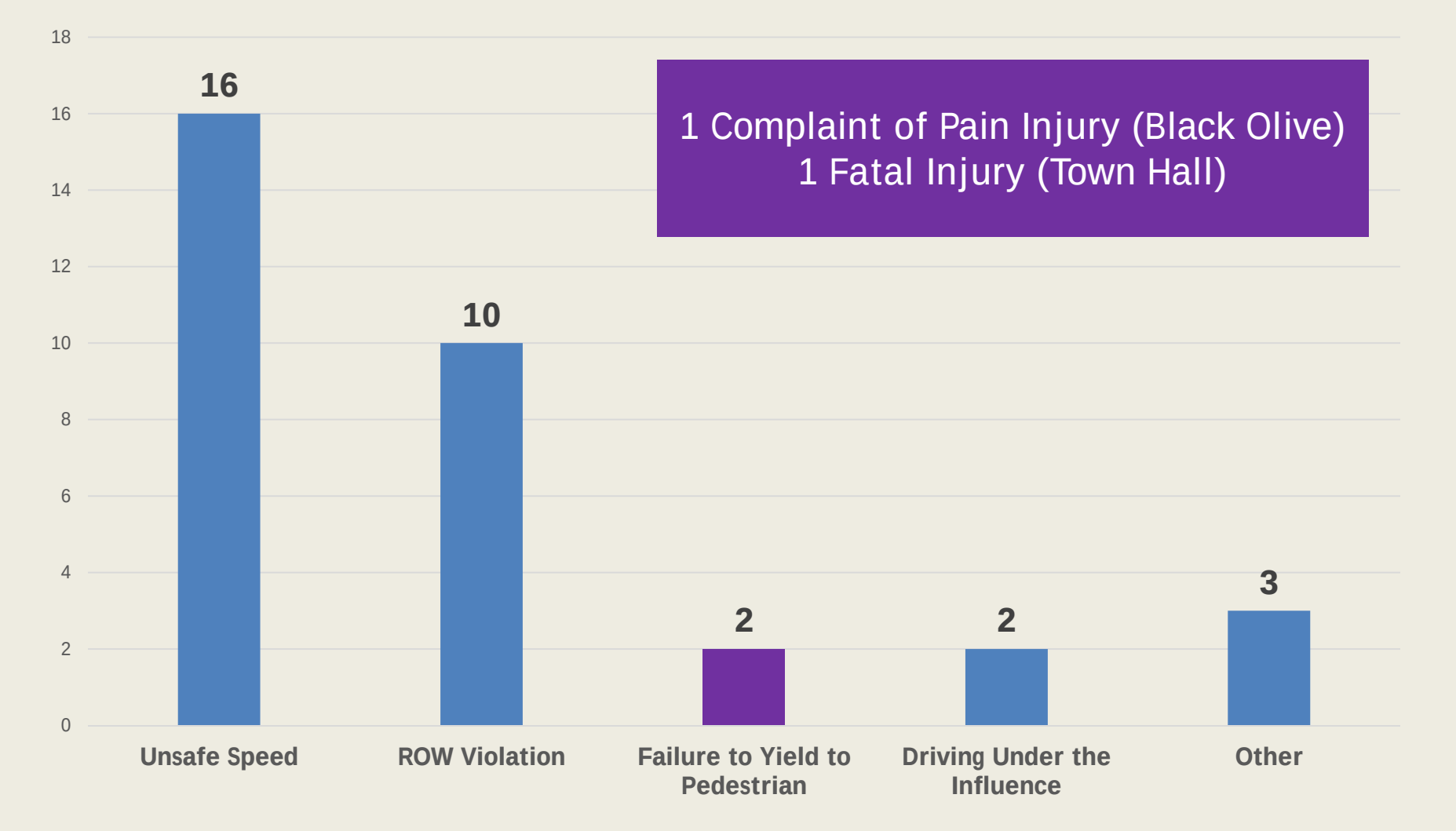

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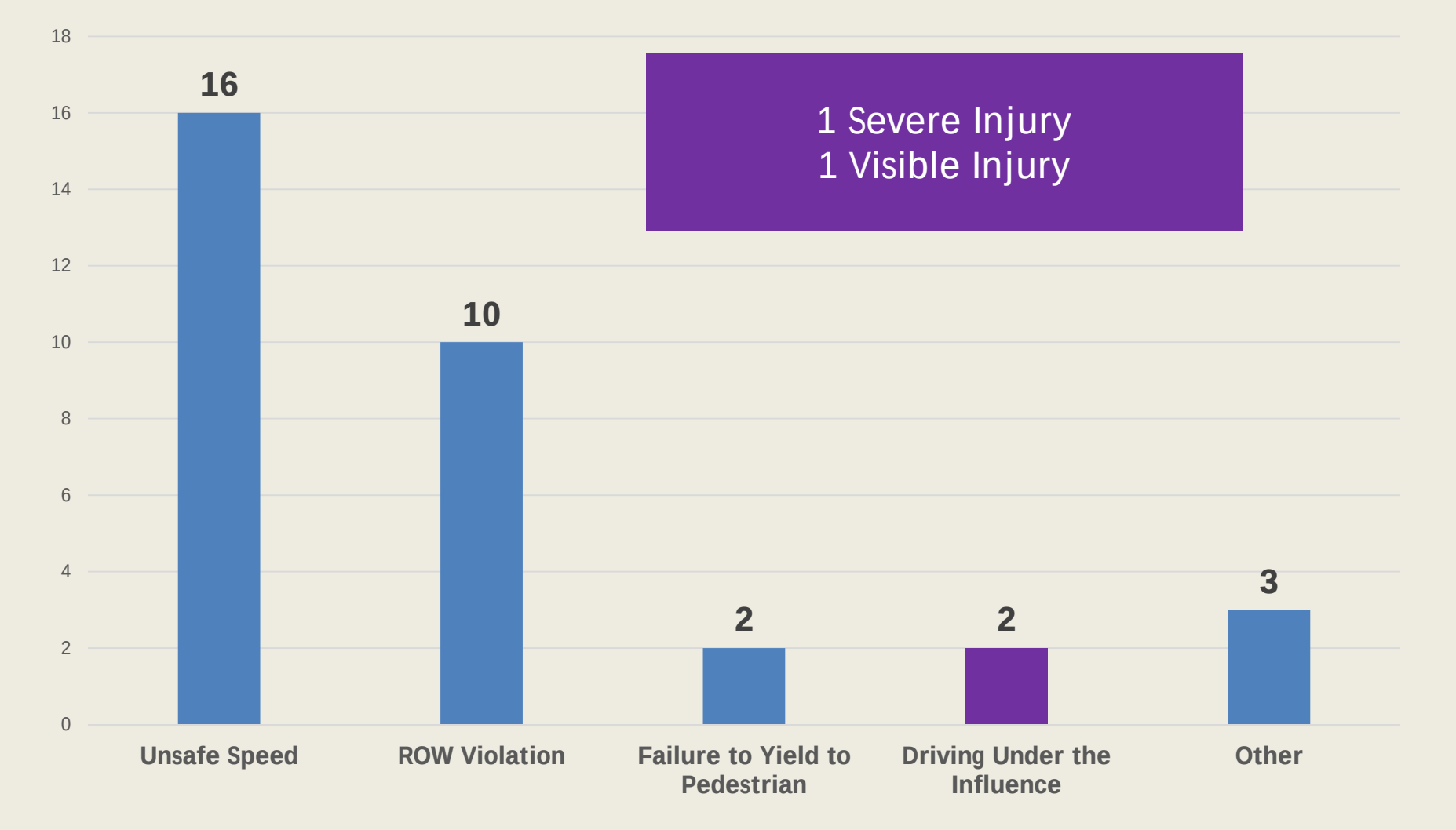

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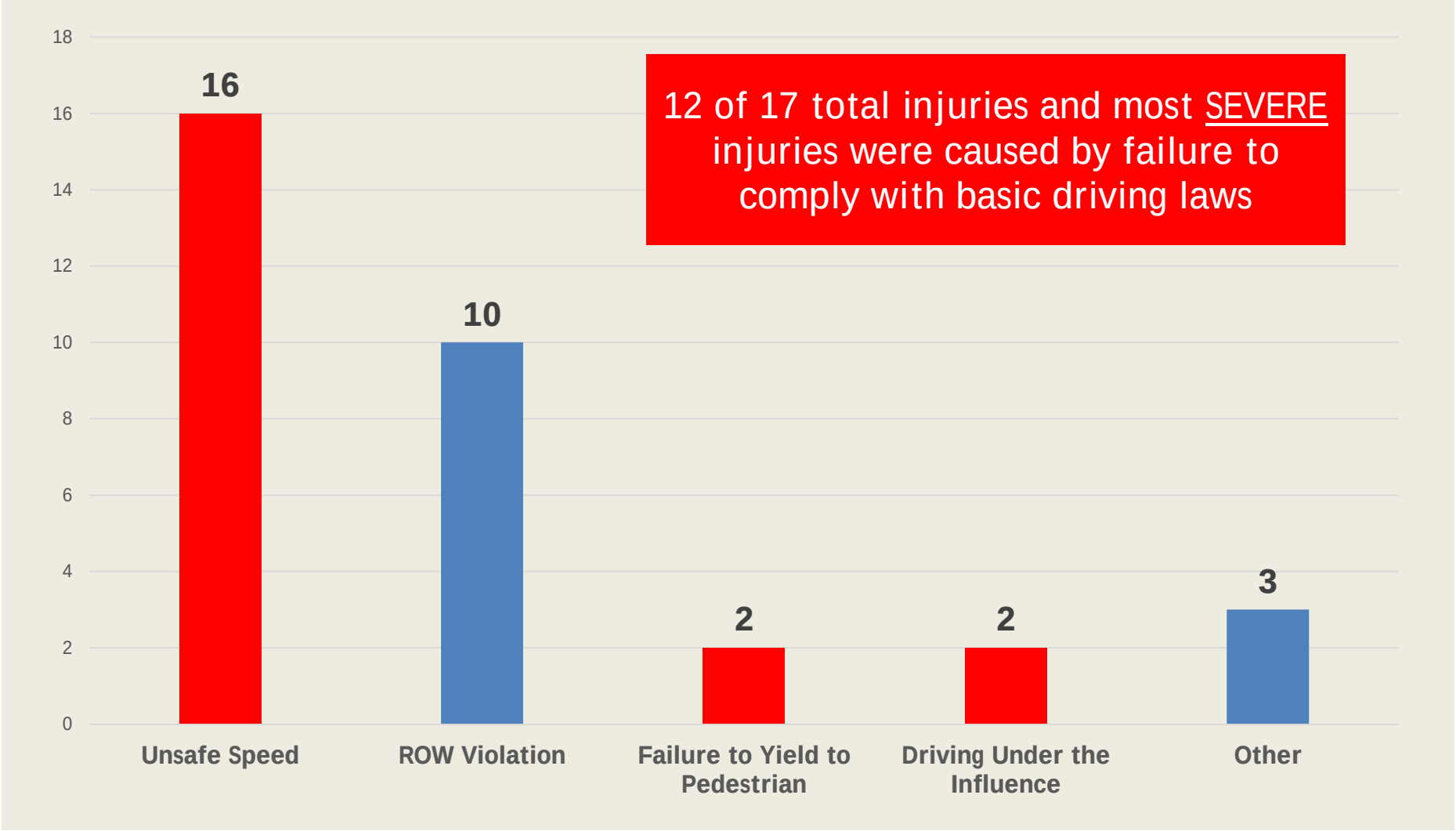
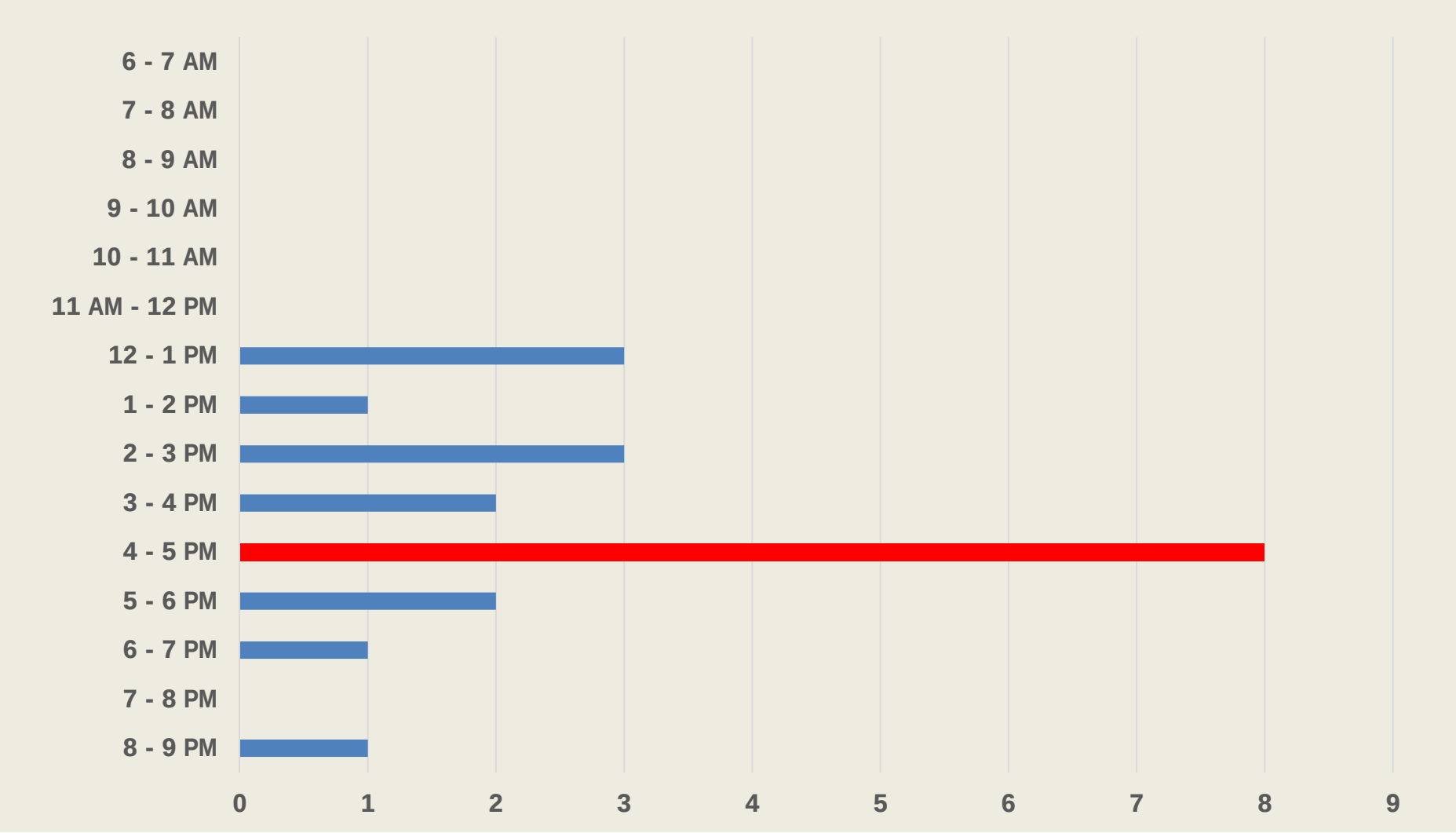


Time of Day Analysis
2015 Collisions with Reports



Part 2
Travel Time

Left Turn Delays

Presentation with videos and commentary may be seen at https://youtu.be/TwryVczSDyk

Travel Time Evaluation

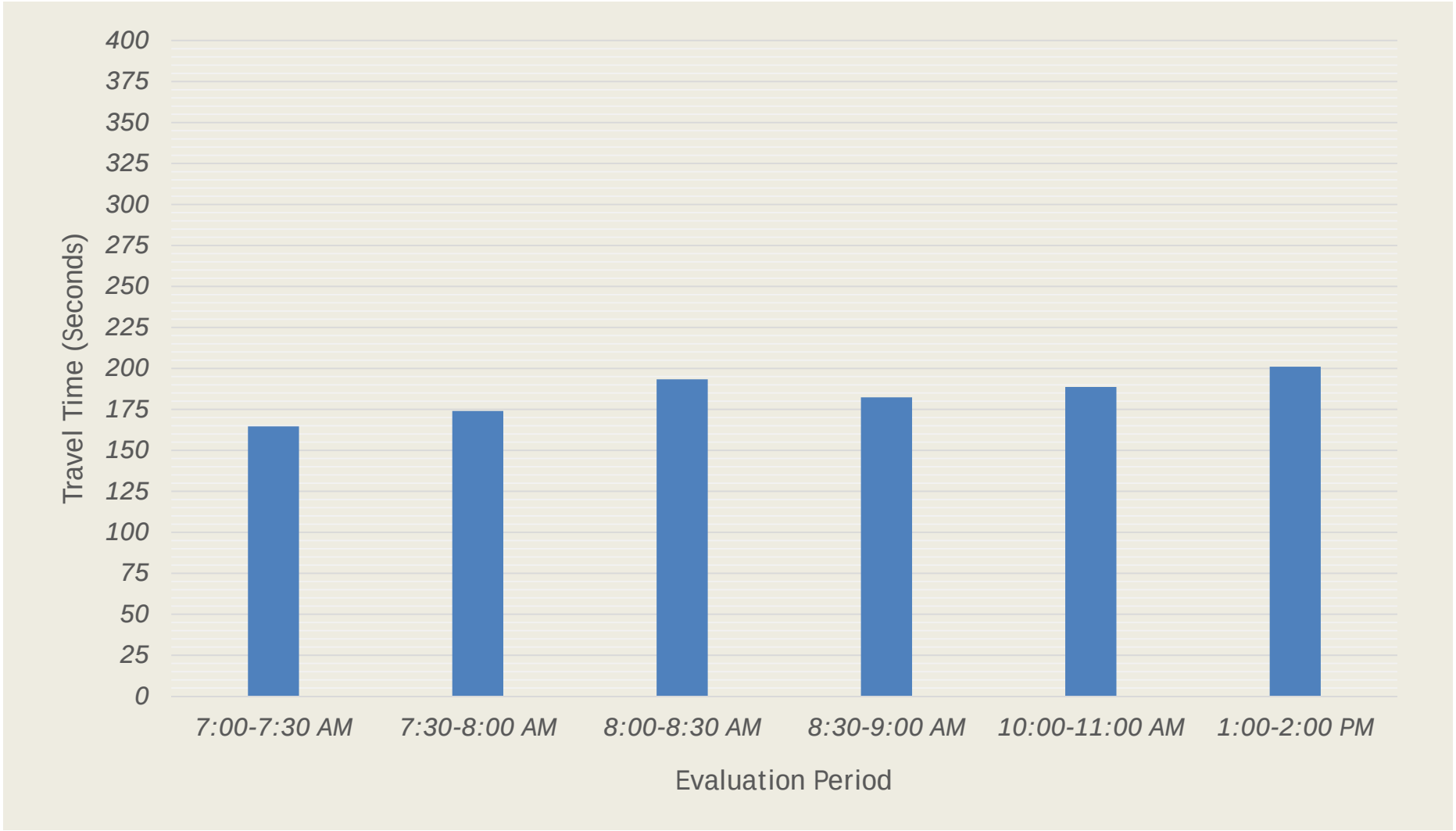
Southbound
Memorial to Longview

7:00 AM to 7:30 AM
7:30 AM to 8:00 AM
8:00 AM to 8:30 AM
8:30 AM to 9:00 AM
10:00 AM to 11:00 AM
1:00 PM to 2:00 PM

Northbound
Longview to Memorial

10:00 AM to 11:00 AM
1:00 PM to 2:00 PM
4:00 PM to 4:30 PM
4:30 PM to 5:00 PM
5:00 PM to 5:30 PM
5:30 PM to 6:00 PM

Pre-Construction // Southbound Memorial to Longview



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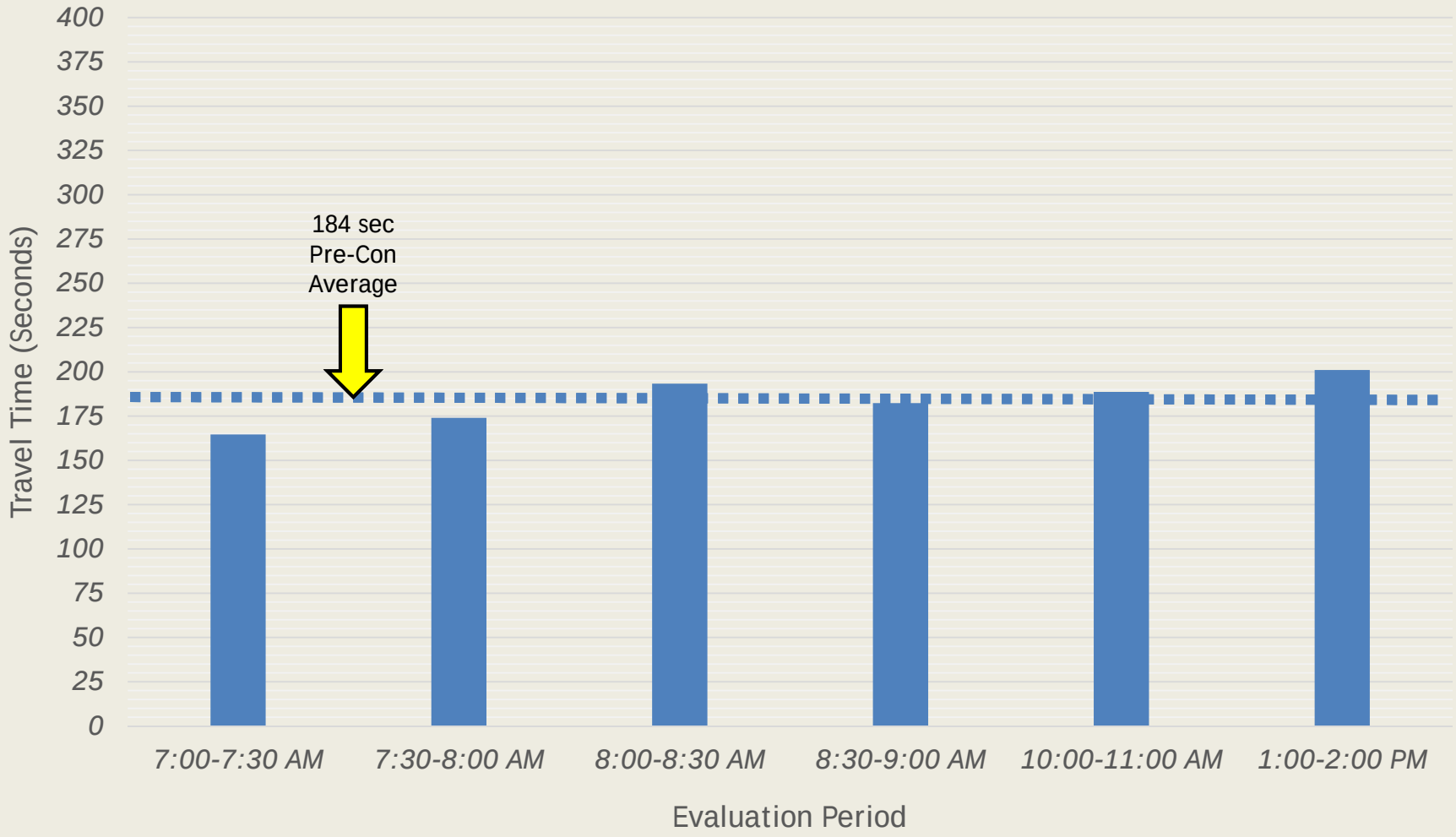
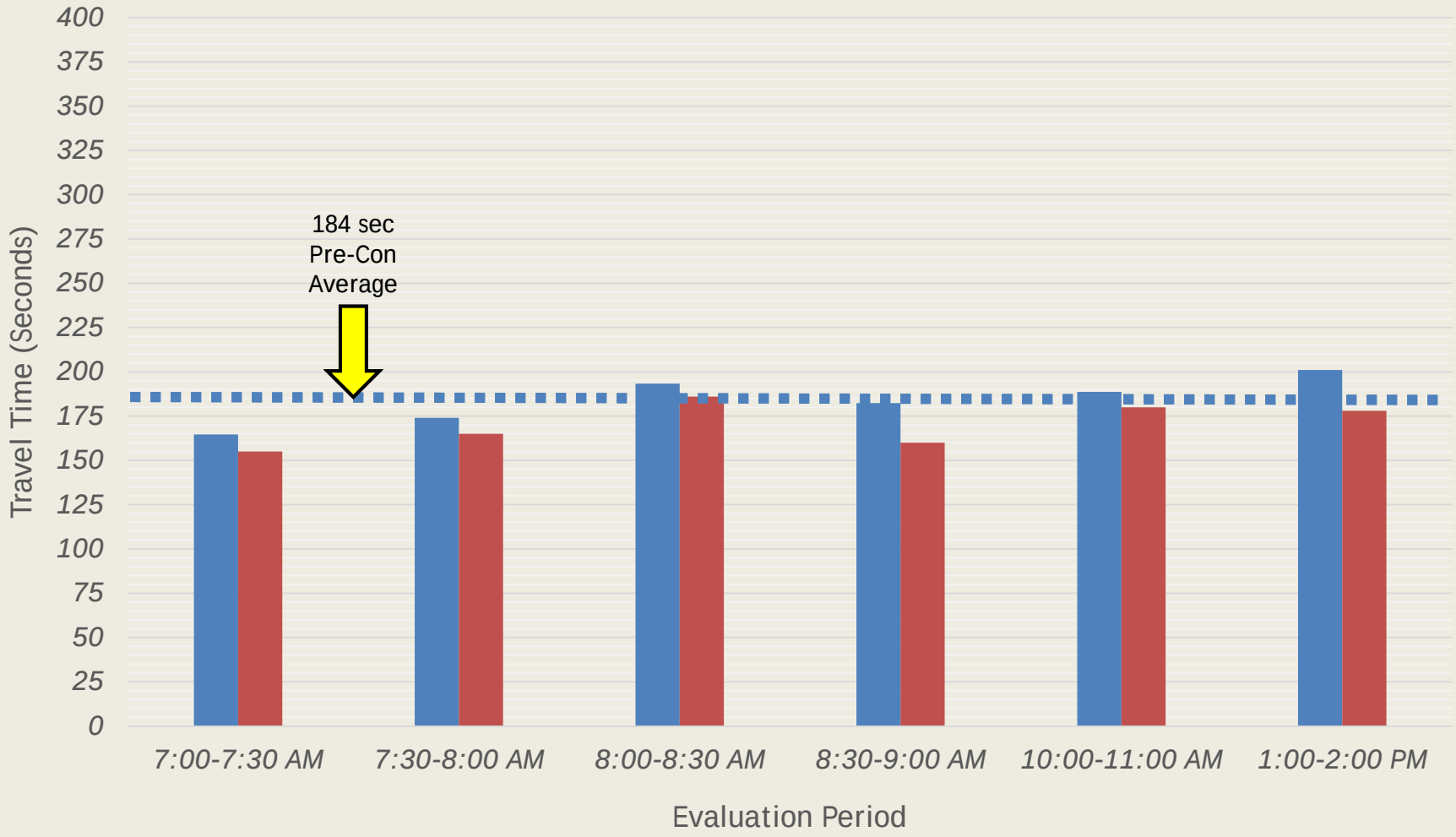


POST-Construction // Southbound Memorial to Longview



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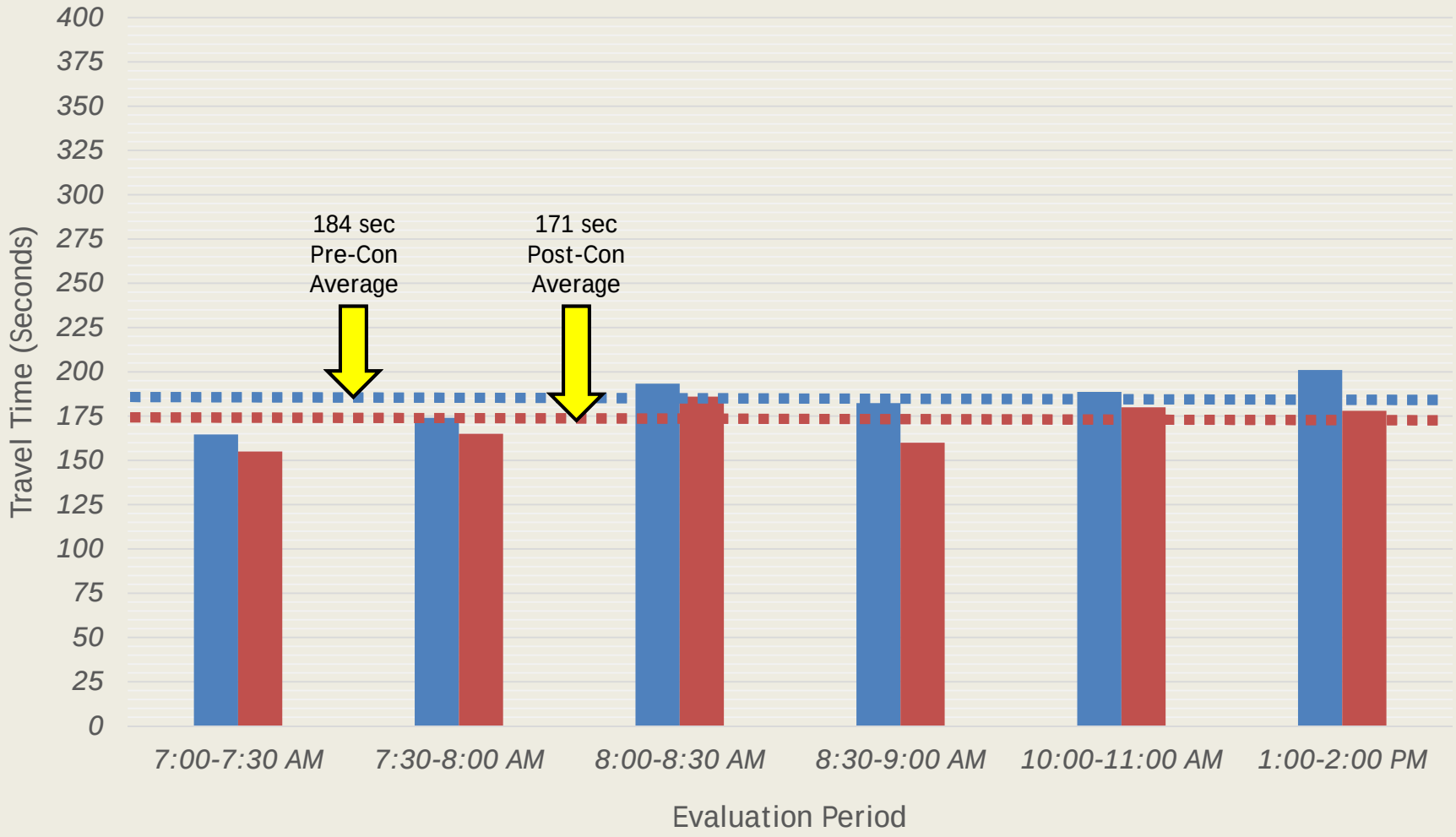
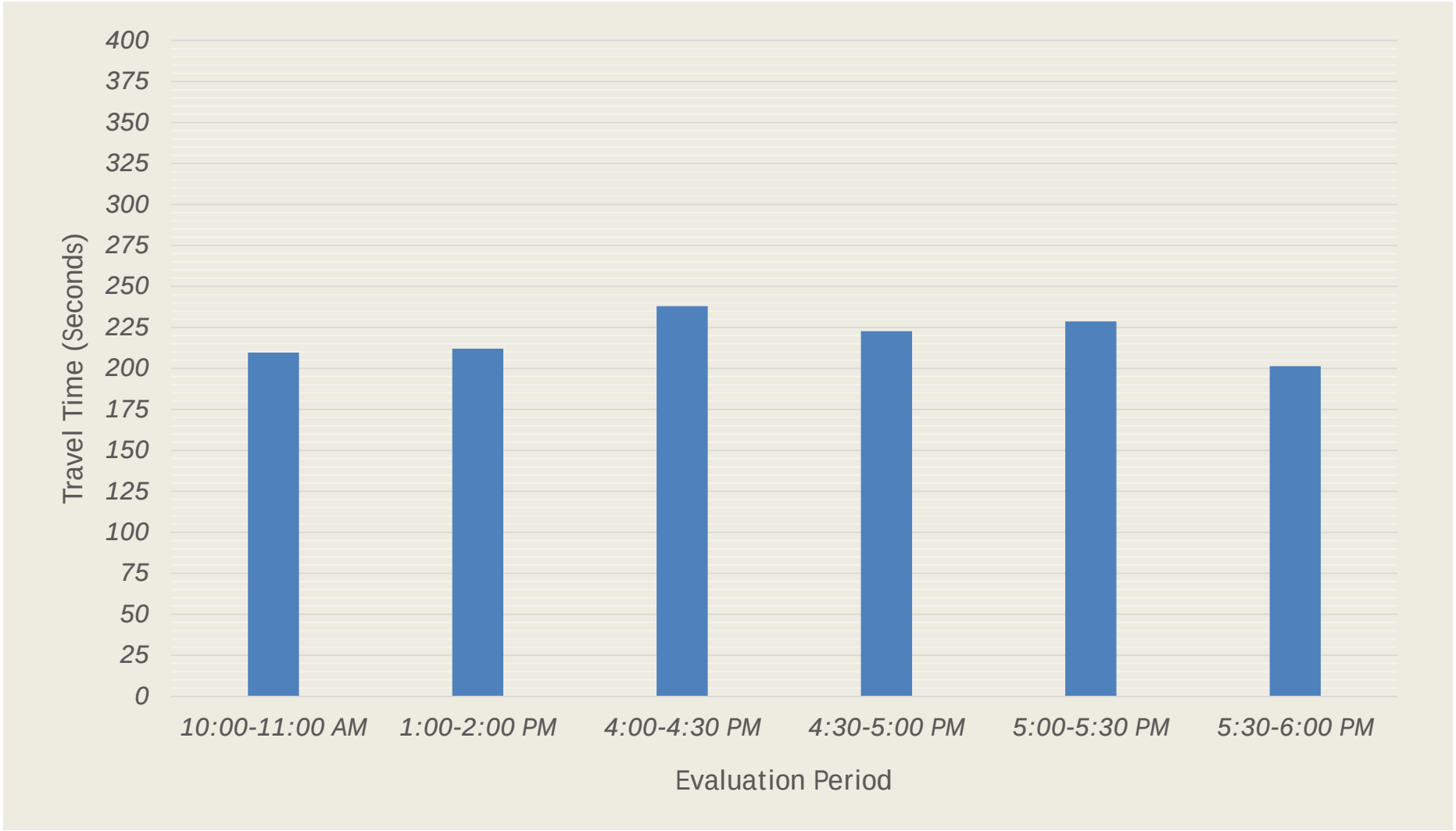
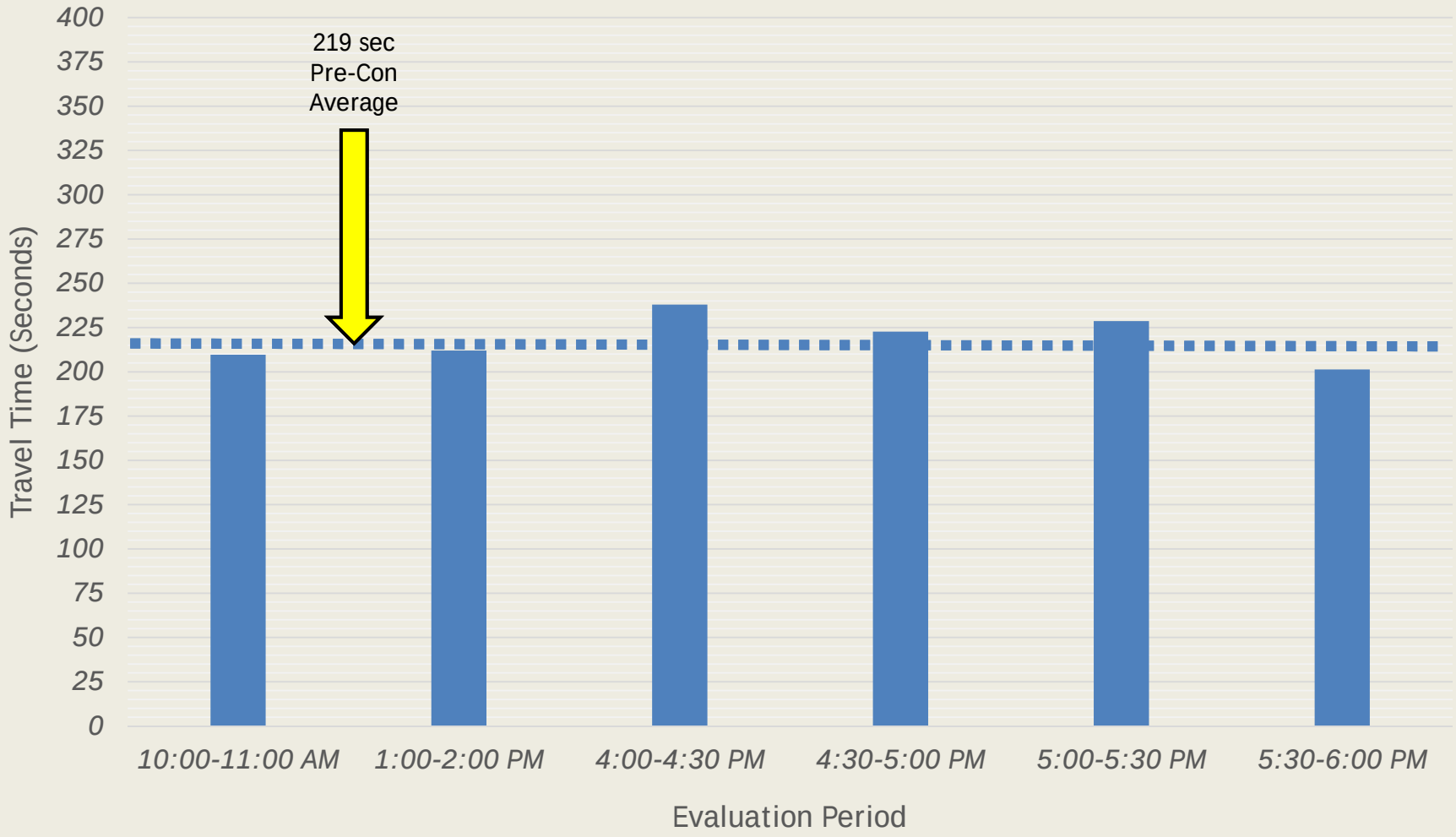


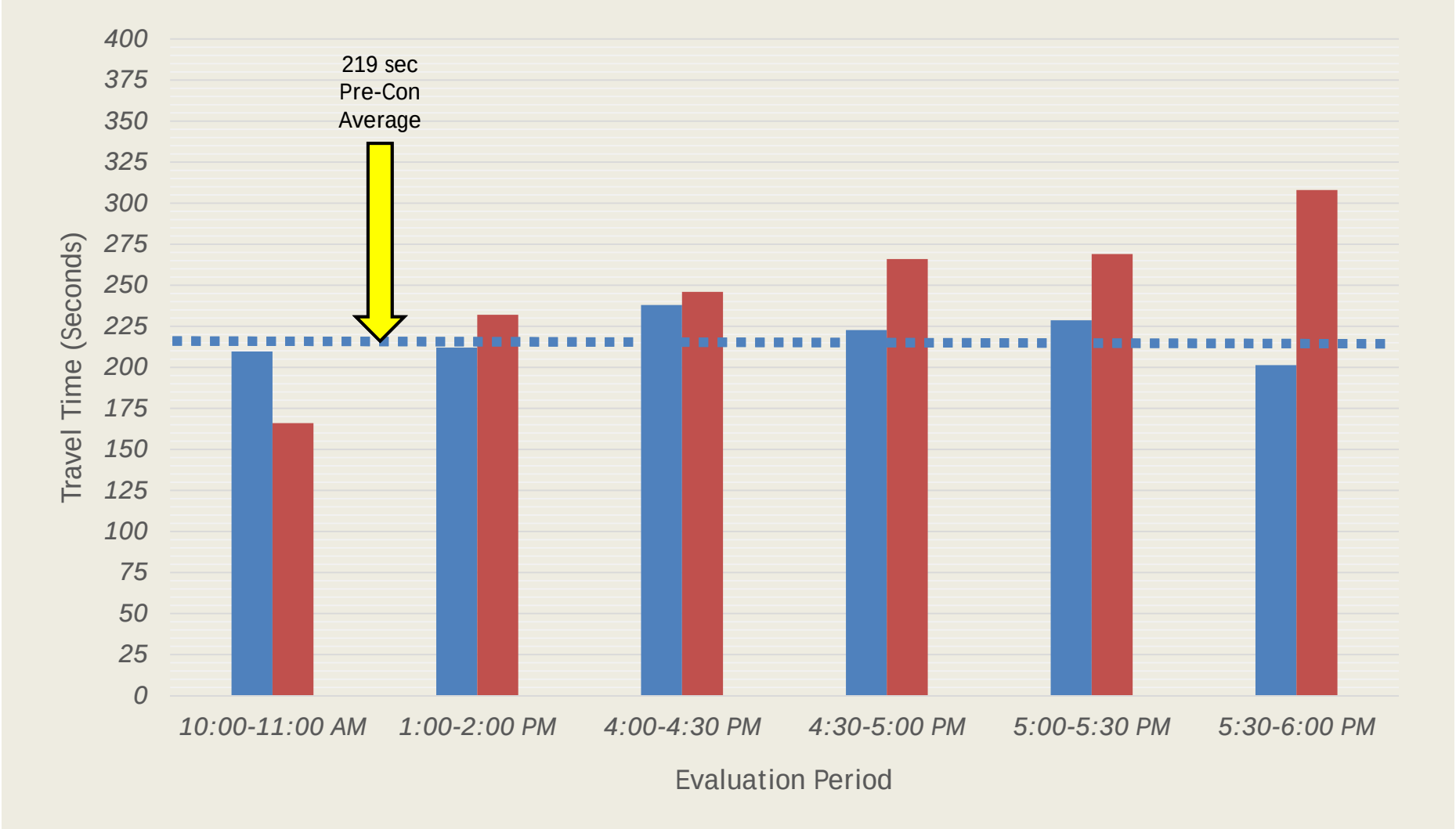
Pre-Construction // Northbound Longview to Memorial



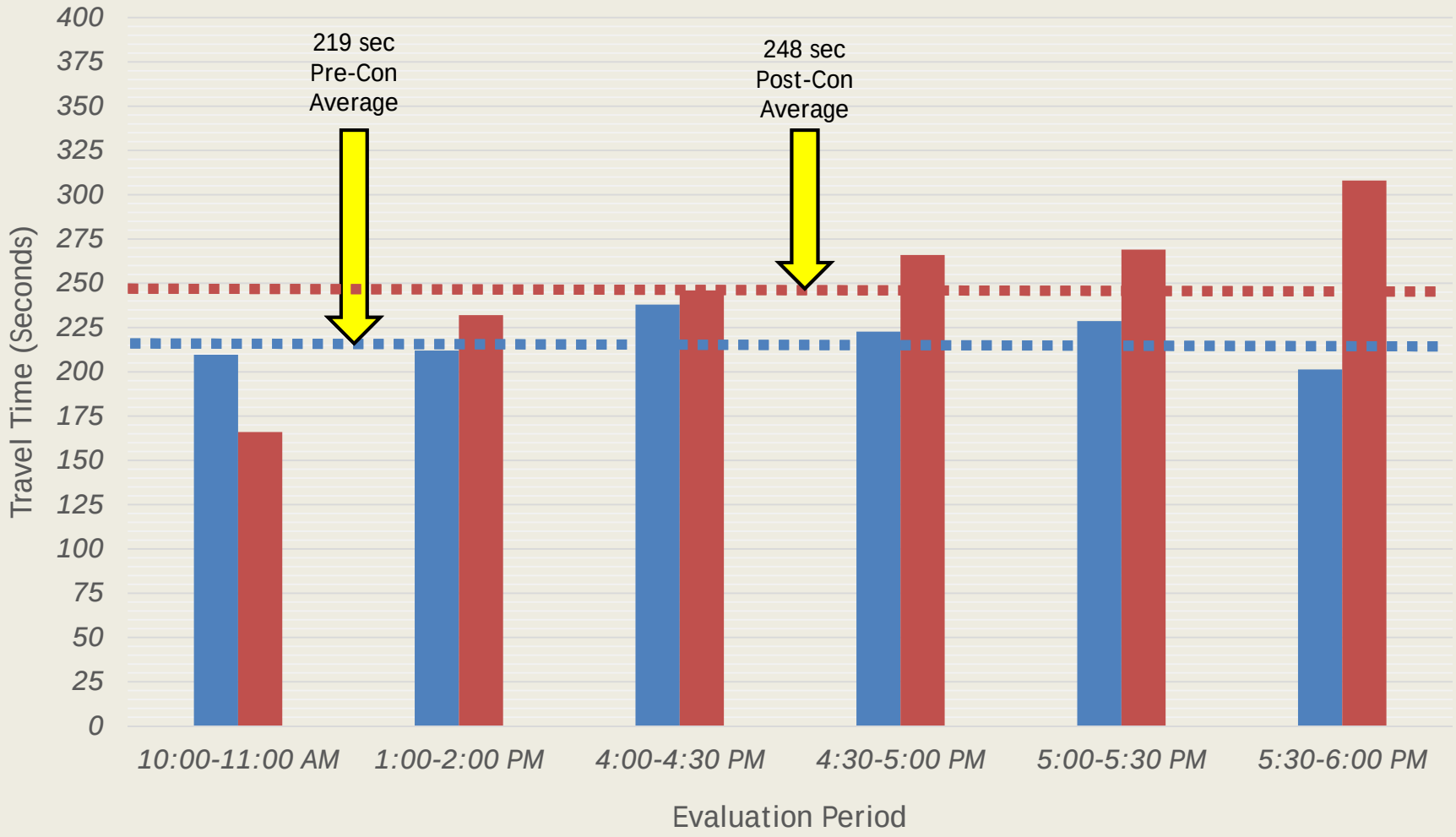
Pre-Construction // Northbound Longview to Memorial



Post-Construction // Northbound Longview to Memorial



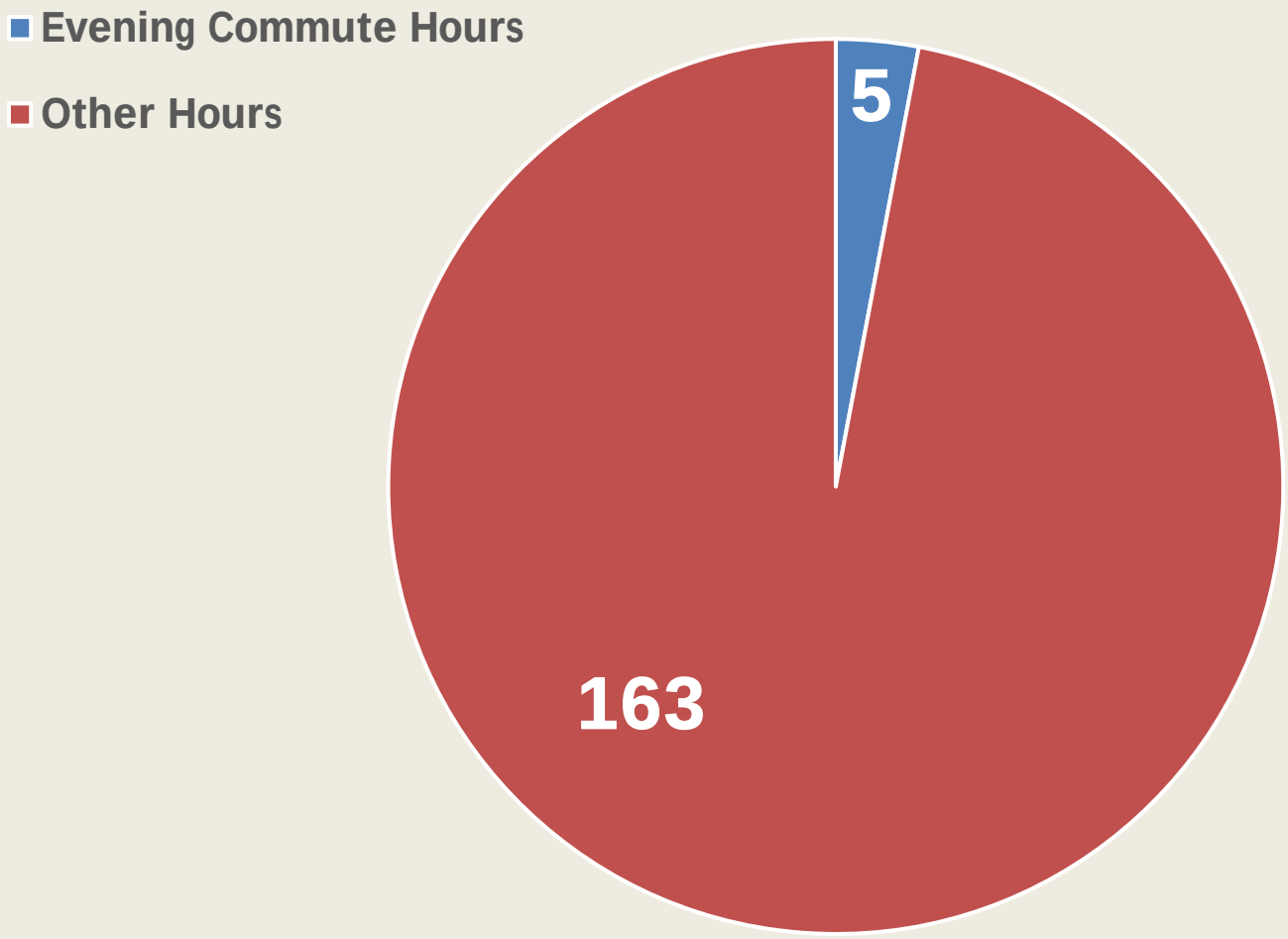
Post-Construction // Northbound Longview to Memorial



Travel Time Evaluation Summary

- Southbound travel times have decreased by an average of 13 seconds
- Northbound travel times have increased by an average of 29 seconds
- Peak hour travel times have increased by an average of 54 seconds (5:00 – 6:00 PM)
- Efforts to optimize commute and timing patterns have continued since project completion
  - Daylight savings change impacts to commute patterns
  - School session peaks
  - Most recent changes in late January 2016

Weekly Operational Split



Part 3
"Downtown" Paradise

Vehicle Parking Improvements

BEFORE: Zero Buffer

AFTER: 4.5 ft buffer

Crosswalk Improvements

Example in visibility...

Pedestrian is stationary, standing in roadway for all photos

WHERE IS THE PEDESTRIAN?

BEFORE

Passenger Position #2 Lane

65ft from Crosswalk

WHERE IS THE PEDESTRIAN?

BEFORE

Passenger Position #2 Lane

65ft from Crosswalk

WHERE IS THE PEDESTRIAN?

BEFORE

Driver Position #2 Lane

65ft from Crosswalk

WHERE IS THE PEDESTRIAN?

BEFORE

Driver Position #2 Lane

65ft from Crosswalk

WHERE IS THE PEDESTRIAN?

BEFORE

Driver Position #2 Lane

65ft from Crosswalk

WHERE IS THE PEDESTRIAN?

BEFORE

Driver Position #2 Lane

65ft from Crosswalk

WHERE IS THE PEDESTRIAN?

BEFORE

Driver Position #2 Lane

65ft from Crosswalk

PEDESTRIAN ENHANCEMENTS

- Constructed “Bulb-Outs”
  - Decreases distance to cross the street
  - Increases visibility of pedestrians to oncoming motorists
- Added Flashing Beacons
  - Improves communication between pedestrians and motorists for “intent” to cross
  - Improves motorist yield rates

SKYWAY AT HONEY RUN ROAD

BEFORE

SKYWAY AT HONEY RUN ROAD

AFTER

SKYWAY AT FOSTER ROAD

BEFORE

SKYWAY AT FOSTER ROAD

AFTER

SKYWAY AT FIR STREET

BEFORE

SKYWAY AT FIR STREET

AFTER

SKYWAY AT WILDWOOD LANE

BEFORE

SKYWAY AT WILDWOOD LANE

AFTER

New Business & Private Investments

Paradise Post -- February 4, 2015

ParadisePost.com
NEWS

News Sports Business Entertainment Lifestyle Obituaries Opinion Special

Home News

New Paradise businesses are on the horizon

Brett Fuller of Conroy Construction works on an ADA compliant ramp for Bobbi's Boutique, a new ladies clothing store scheduled to open in March. Trevor Warner - Paradise Post

By Trevor Warner, *Paradise Post*

"Exciting news is a-brewing for those looking to see Paradise's downtown area be all it can be."

"Construction crews were busy hammering and drilling their way toward a couple of new businesses scheduled to be open within the next couple of months."

Bobbi's

MAXIMUM POTENTIAL
PURPOSE DRIVEN TRAINING

HeavenScent CANDLES & MORE
HeavenScent CANDLES & MORE
HeavenScent CANDLES & MORE
6177
SHOP LOCAL

Paradise
SCRAPBOOK
Boutique
OPEN
6171
Paper Arts • Ribbon • Scrapbooking
Paradise
SCRAPBOOK
Boutique

STEVE'S MUSIC
BUY
STRING
SETS
CBI
CABLES
50%
OFF
OPEN

LIBERTY PLAZA
6400 - 6424
Simplistic Realty
(530)872-9000
Coralie Bokman MS MFT
Licensed Marriage, Family Therapist
Individuals, Couples, Families
6510 Skyway
KaiaFIT
Law Offices
872-2375
Liberty BOXING Club
Space Available
(530) 521-4576

PARADISE BIKES .com
Parts • Sales • Service
6286
6288
6290
OPEN
6282
OPEN
PARADISE BIKES

FIR
Fir Street Gallery & Gift
home furnishings
art gallery-specialty gifts
THE WINE

Beautification Improvements

ROTARY DONATION

- 6 planters
- 2 benches
- 2 waste receptacles

PG&E DONATION

- 36 Planters
- Provided plants for all 42
- Drought tolerant
- Hand watered by local businesses and individuals

BANNER PROGRAM DETAILS

- Gold Nugget Days
- Party in the Park
- Johnny Appleseed Days
- Winter Seasonal / Ice Rink
- 86 Total Banners
- 20 Local Businesses and/or Individuals

Part 4
Conclusion

How do we define success?

Safety
- Reduced Collision Frequency
- Reduced Collision Severity

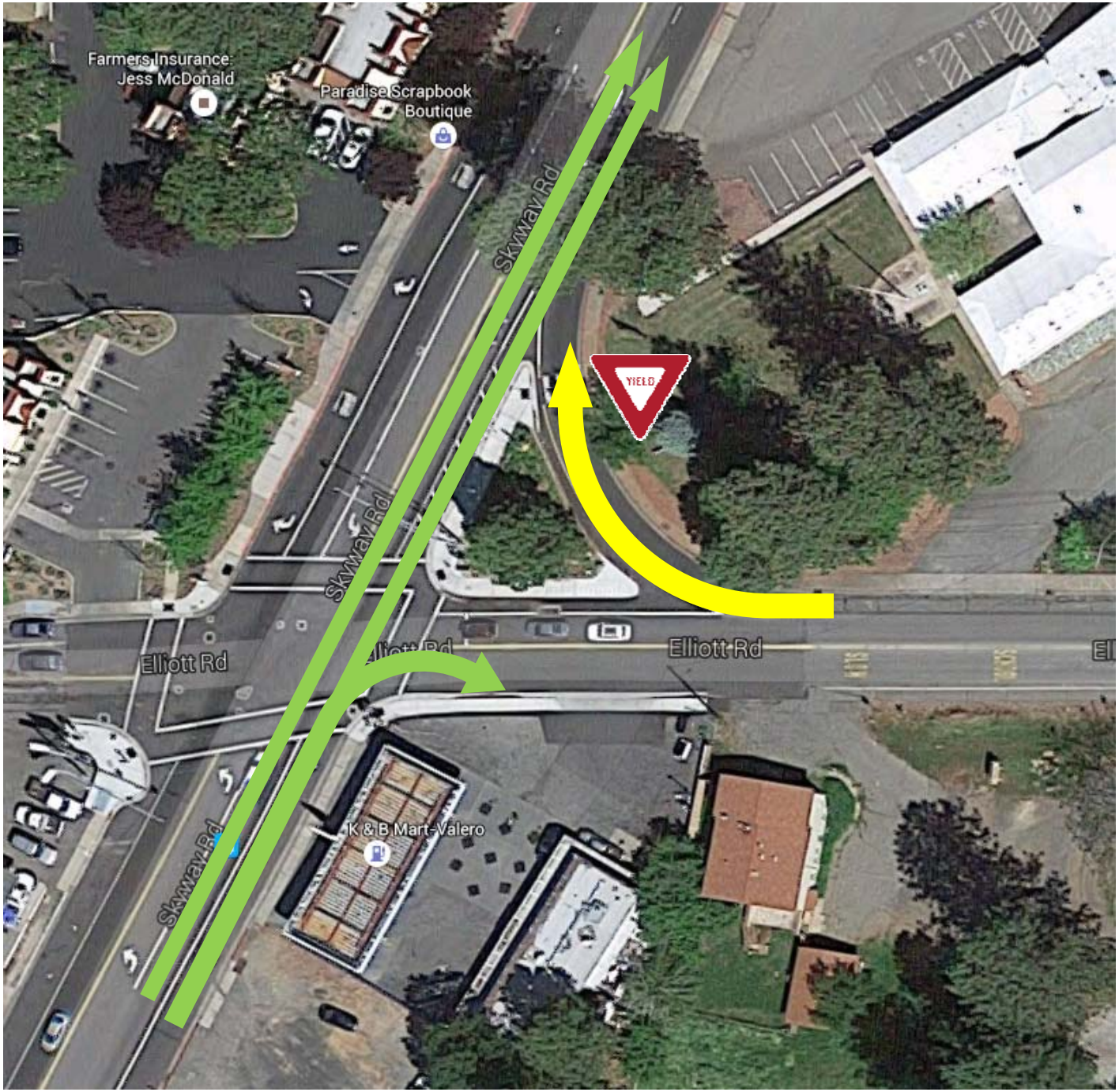
Traffic Operations
- Optimize flow
- Attentive to peak hour commutes
- Allow time for adjustments

Downtown Economic Vitality
- Increased parking
- Access
- Private investment

Potential Roadway Adjustment

- Decrease northbound queue lengths leading to Elliott Road
- Decrease peak hour travel time and congestion

Changes at Elliott Rd Intersection



Changes at Elliott Rd Intersection

Items to Track in 2016

- Grant awarded in November for construction of new traffic signal at Skyway / Black Olive Drive
- Grant awarded in October for replacement of deficient sidewalks and driveways for ADA compliance
- Monitor overall project collision rates
- Consider adjustment to northbound Skyway north of Wildwood to Elliott Rd
- Provide 2 more years before final analysis
- Collision data and video recording of annual report will be posted online tomorrow.

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