

South College Avenue
Removal of Medians
Recommended Change

Villa Maria to Carson

City Council Workshop
February 13, 2024

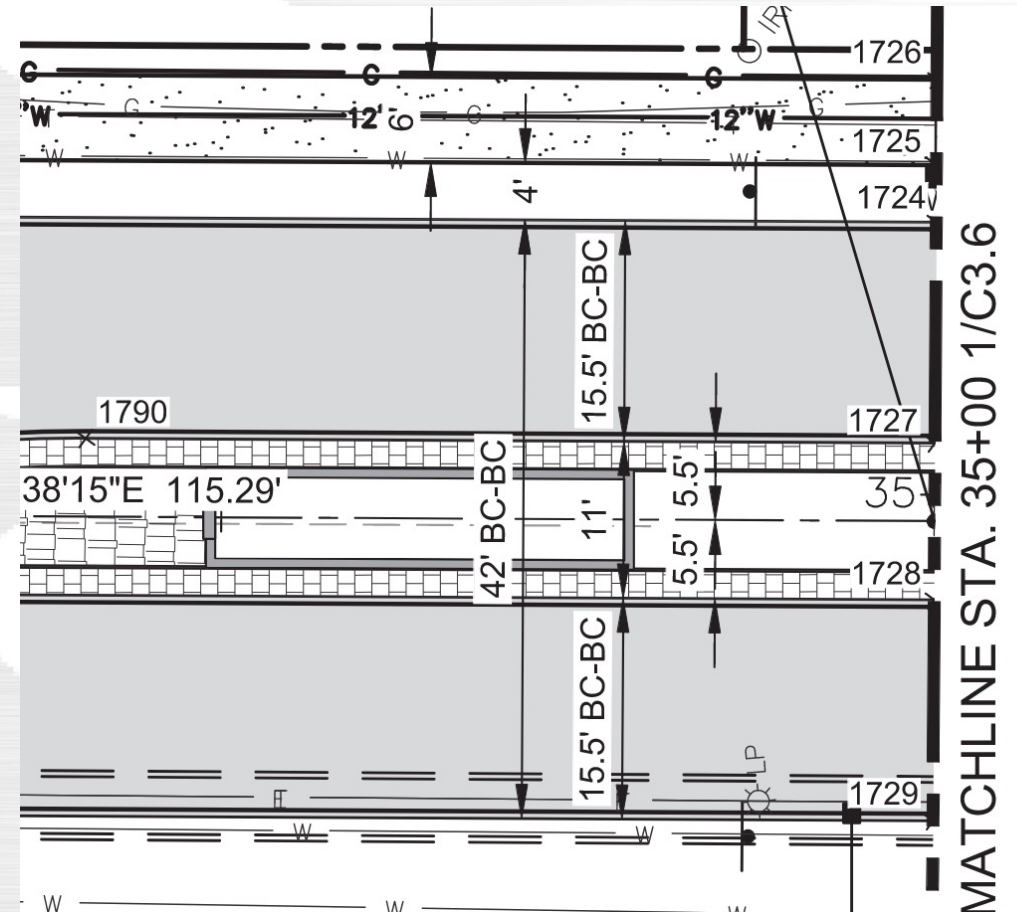
Original Design: 42 foot wide street cross section

- Two 15 1/2'-wide travel lanes
- One 11'-wide landscaped median

PROPOSED SOUTH COLLEGE AVENUE (NARROW)

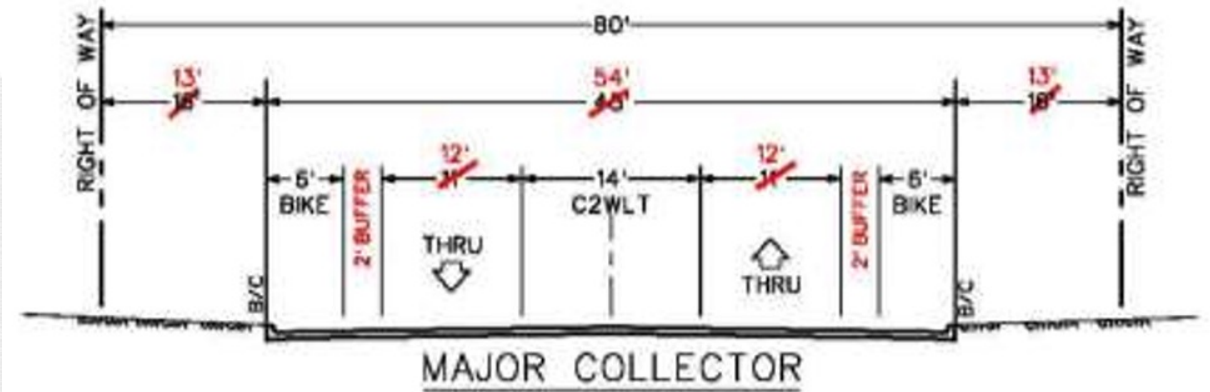


This section is proposed for more narrow lengths of South College Avenue. The median may be inverted to provide for extra stormwater storage at key intervals. Avoiding existing trees and using pedestrian easements to keep continuous sidewalks around existing trees is recommended.



Standard Major Collector Cross Section

- Bryan / College Station Design Manual
- Staff considered this design but had the following concerns:
 - the plans for shared use path providing a more comfortable bicycle experience, there is no need for the buffered bicycle lanes shown
 - Preservation of the existing trees are important on the corridor
 - Significant portions of the corridor have direct residential access and the Midtown Area Plan wanted to promote improving the pedestrian and bicyclist experience on the corridor to encourage those uses. The recommended speed limit is 30 mph per a recently completed speed study.
 - Existing thru lanes on South College are 9.5 feet wide and the current 2 way center turn lane is 10.5 feet wide – increasing the lane widths to 12 and 14 foot respectively would not discourage speeding.



12 foot travel lanes are the normal TXDOT width for travel lanes – intended to move vehicles at the highest speed possible.

TXDOT's design manual allows lane widths of 11 feet and recommends that when right of way constraints limit the widths. They even recommend 10 feet in non-industrial areas.

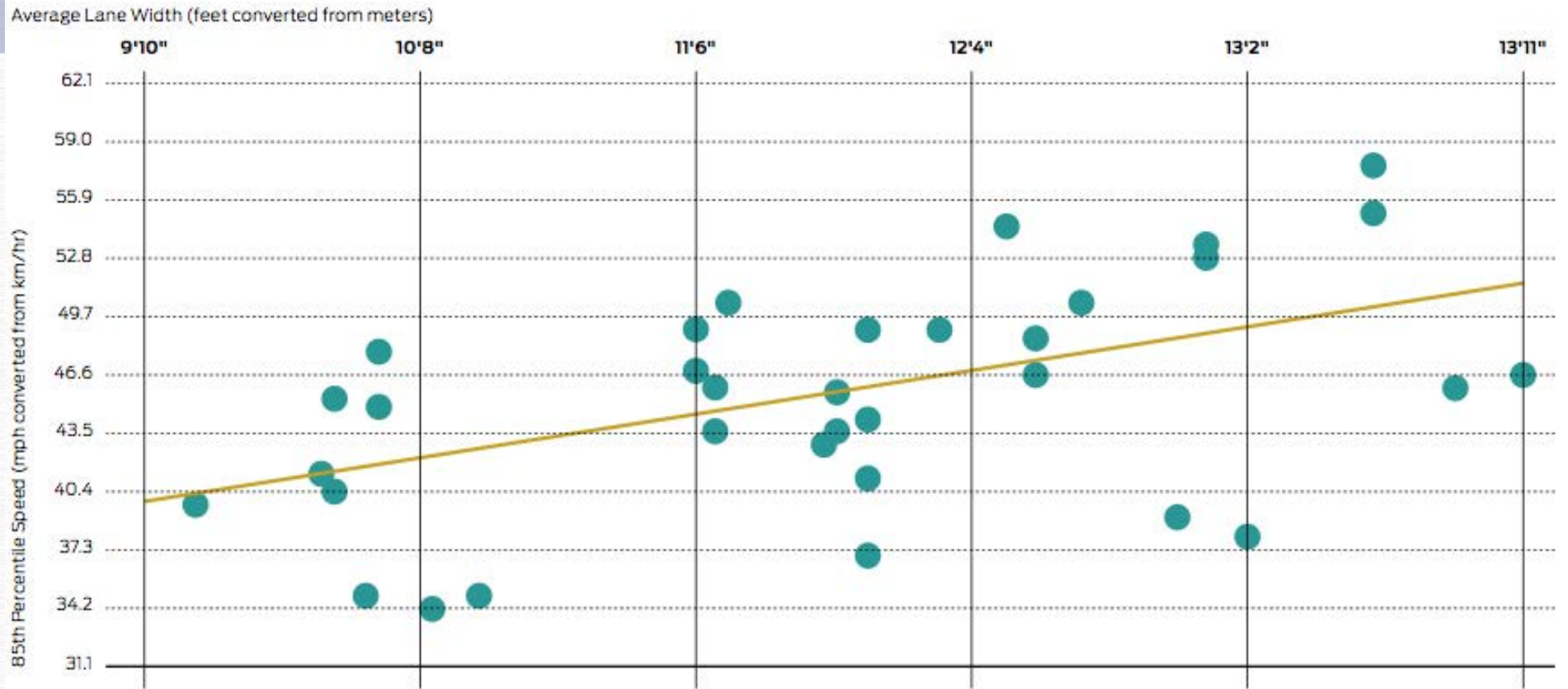
Recommended Road Section without Medians

- The recommended roadway cross section utilizes the same Right-of-Way width and leaves the 10-12 foot wide shared use path and 6 foot wide sidewalk in the same location as the original plan which is an alignment that preserves as many street trees as possible
- 36 foot wide street section (back of curb to back of curb)
 - a. Two 11 foot wide travel lanes (increased from 9.5 foot current)
 - b. One 13 foot wide center two-way left-turn lane (increased from 10.5 foot current)

NACTO

- The National Association of City Transportation Officials (NACTO) provides recommendations on safer streets that intend to serve the needs of all users through their Urban Street Design Guide.
- Keeping the lanes as narrow as possible helps with maintaining lower speeds without purely relying on enforcement.
- Recommends lane widths in urban areas of 10 feet.
- However, bus routes are recommended to have 11 foot lanes

Wider travel lanes are correlated with higher vehicle speeds.



"As the width of the lane increased, the speed on the roadway increased... When lane widths are 1 m (3.3 ft) greater, speeds are predicted to be 15 km/h (9.4 mph) faster."

Chart source: Fitzpatrick, Kay, Paul Carlson, Marcus Brewer, and Mark Wooldridge. 2000. "Design Factors That Affect Driver Speed on Suburban Streets." *Transportation Research Record* 1751: 18-25.

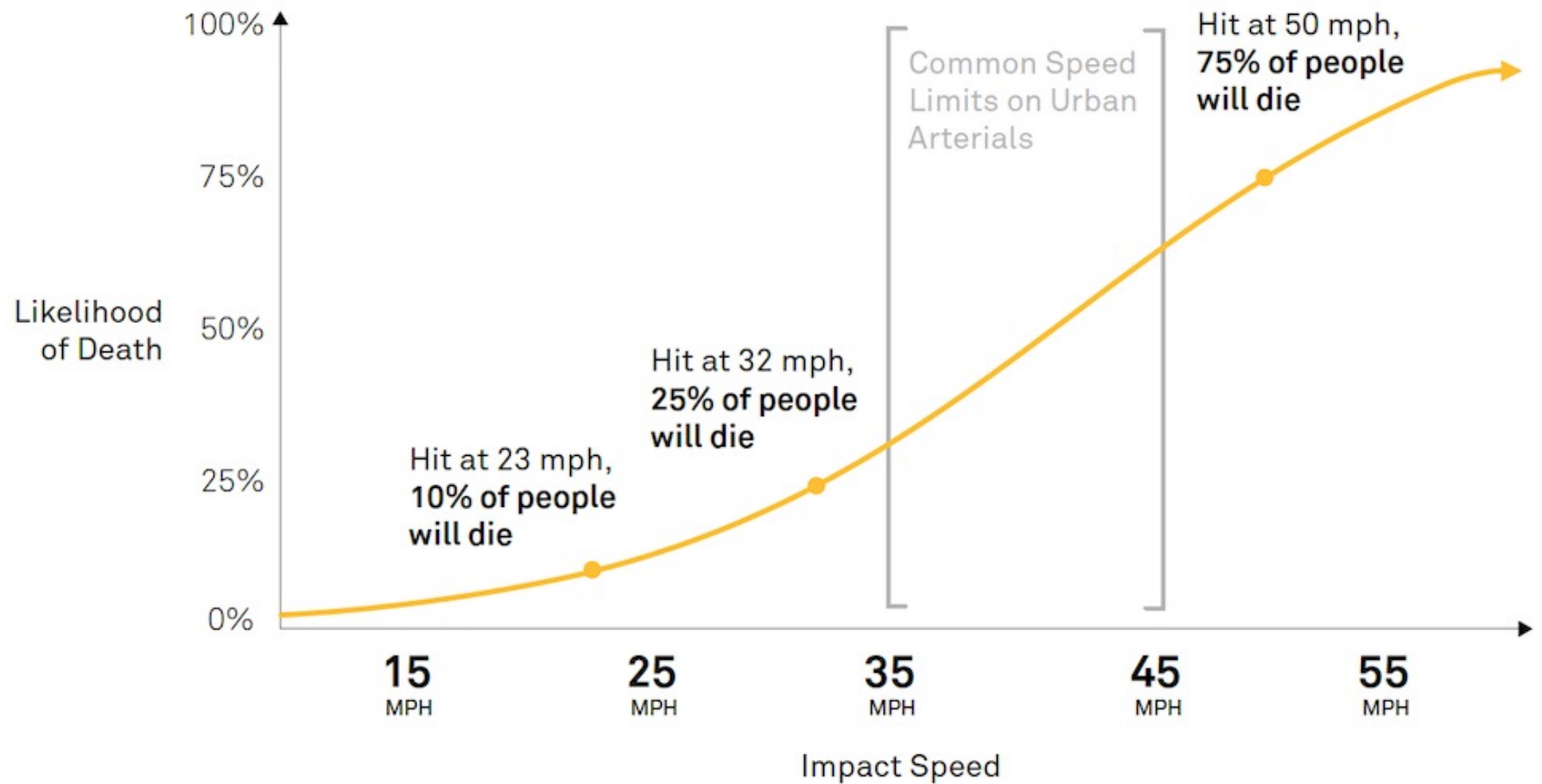


NACTO

Vehicle speed at the time of impact is directly correlated to whether a person will live or die.

A person hit by a car traveling at 35 miles per hour is five times more likely to die than a person hit by a car traveling at 20 miles per hour.

THE LIKELIHOOD OF FATALITY INCREASES EXPONENTIALLY WITH VEHICLE SPEED³²



USDOT – Federal Highway Administration

The slower the speed of the motor vehicle, the greater the chances are for survival for the pedestrian.

If struck by a motor vehicle travelling at a speed of 20 miles per hour or less, a pedestrian is typically not permanently injured. If struck by a motor vehicle travelling at a speed of 36 miles per hour or more, a pedestrian is usually fatally injured (see Figure 2.1).

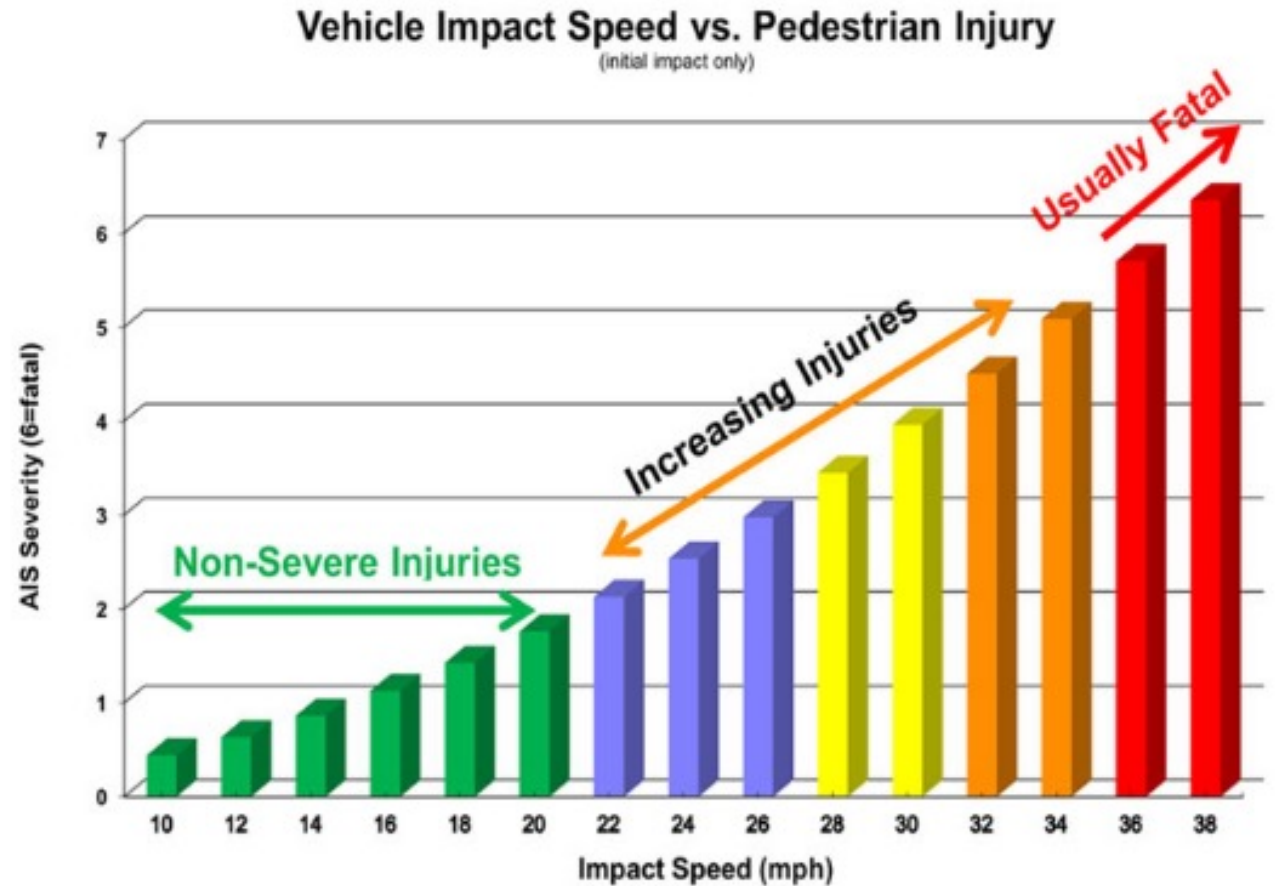
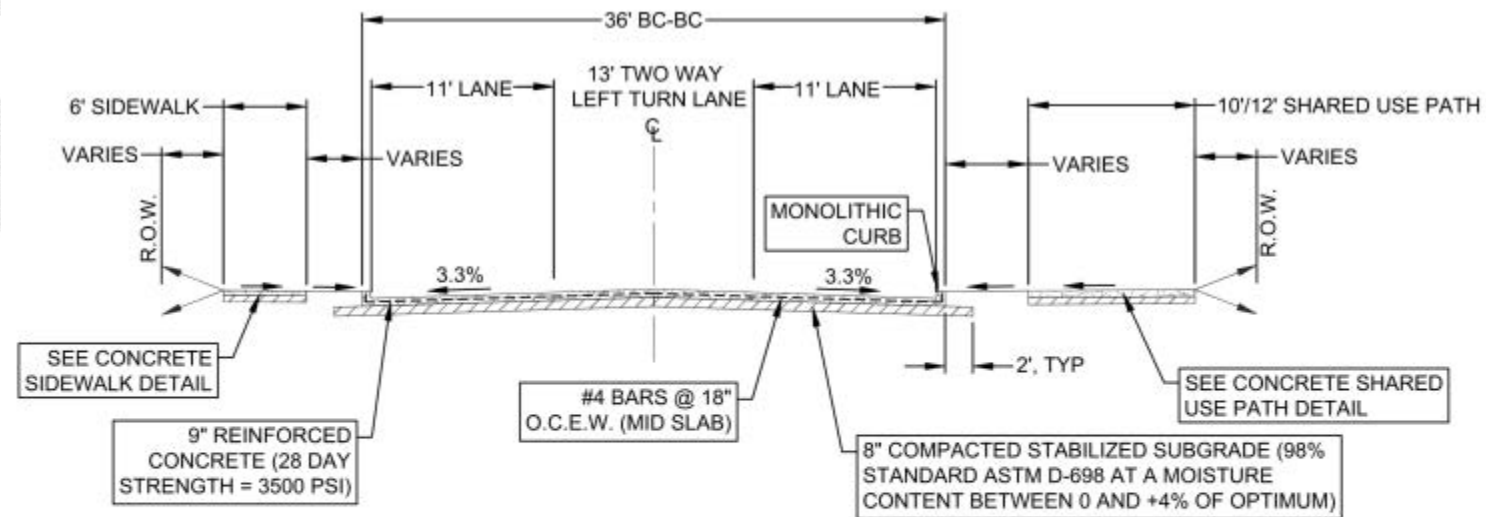


Figure 2.1. Speed/Pedestrian Injury Severity Correlation

(Source: C. E. "Rick" Chellman)

Recommended 36 foot wide street cross section

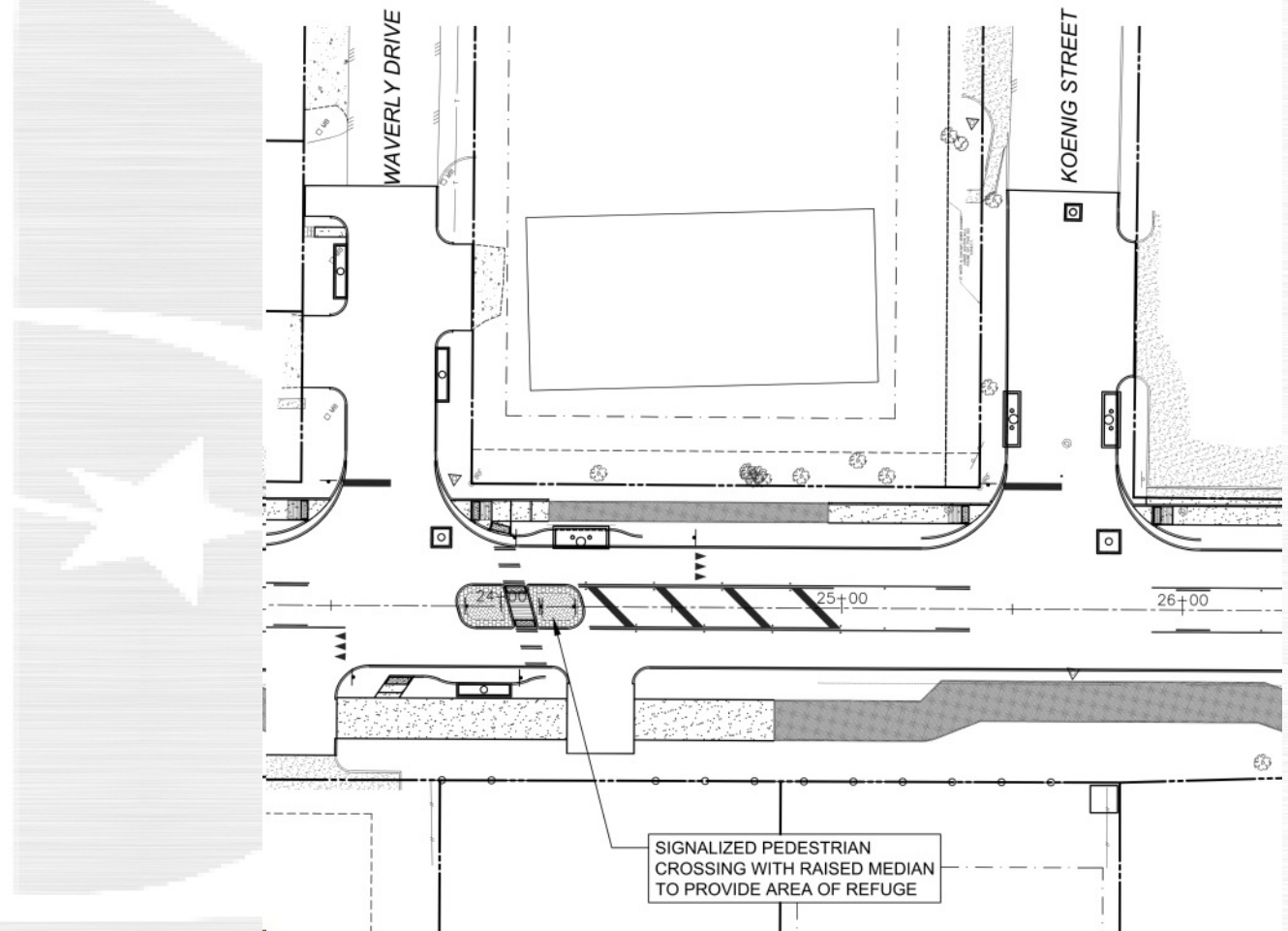
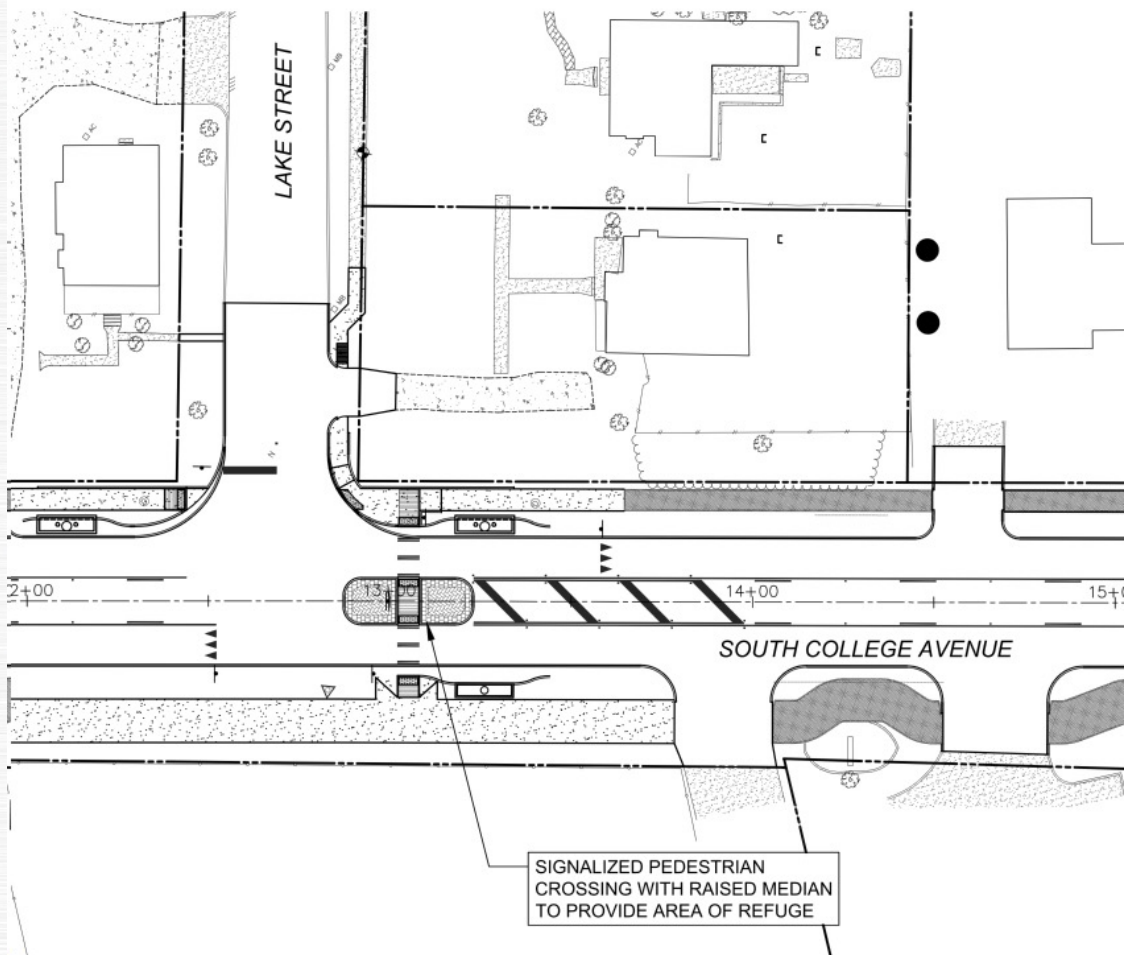
- Two 11 ft wide travel lanes
- One 13 ft wide center two-way left-turn lane
- Benefits:
 - Cost savings
 - Green space (buffer) increases between sidewalk and back of curb on both sides
 - Storm Sewer piping can remain in same location just modify curb inlets
- Cost change (Approx. \$583,500 deduction)
 - Re-Design (Approximately 4 weeks from date of approval) \$78,000 addition
 - Construction (Detailed change order with precise quantities will follow re-design) \$650,000 estimated deduction
 - Due to delays to project, contractor will be asking for compensation for incurred costs



- Construction has been delayed over the course of all requested design changes and the exact time/cost impact is still to be determined with the contractor.
- There likely will be an increase to the timeline as the contractor awaits official direction (change order).
- There likely will be additional costs in the form of extension of bonds and material supply pricing that could affect unit pricing.
- Those costs will be known when the official change order is brought before Council in March or April.

Raised Medians for Pedestrian Crossings

Raised islands will remain at both roundabout locations (Hollydale/Williamson Dr. and Carson St.) as well as Lake St. and Waverly St. to provide safe and comfortable pedestrian crossings

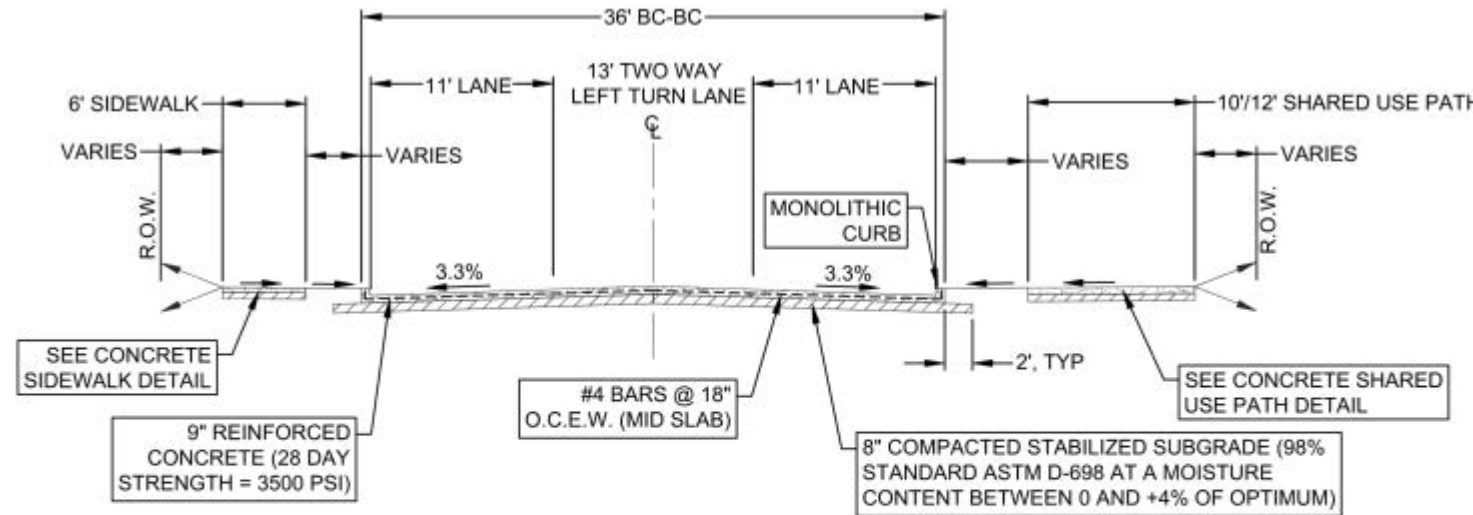


RAISE Grant Application

- Staff is currently preparing an application for the federal RAISE Grant for the remainder of the South College Avenue Corridor to 29th Street in Downtown.
- Keeping the Complete Streets Initiative elements along South College will be important to have our grant application score well. Complete Streets places value on all road users and modes of transportation beyond just vehicles (pedestrians, cyclists, transit riders).
- Additionally our application will be scored on its safety merits & key areas of the National Roadway Safety Strategy referenced by the Grant that the South College Project hits on are:
 1. Safer Streets – pedestrian refuge islands, crosswalk visibility, shared use paths vs. bike lanes
 2. Safer People – driver behavior and narrower lanes help encourage lower speeds
 3. Safer Speeds – 30 mph posted speed limit; decrease from 40 to 30 will reduce risk of pedestrian death by 25%.

Questions & Direction on Cross Section

- Two 11 ft wide travel lanes
- One 13 ft wide center two-way left-turn lane
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A large, light-colored, stylized letter 'S' is centered in the background. Inside the right-hand curve of the 'S', there is a small, white, five-pointed star.

Questions?

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Official Direction on Proposed Cross Section for
South College.

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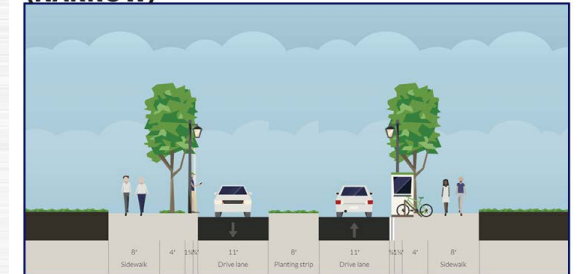
Official Direction on Proposed Cross Section for
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Raised medians along S College Ave

- Originally added to the CIP database in 2008, and recognized in the 2020 Midtown Master Plan as improvements to safety and aesthetics, the schematic design (Villa Maria Road to Downtown) was completed in 2020 and the full design (Villa Maria Road to Carson Street) was completed in 2022
- Public Meetings were held
 - July 8, 2021
 - August 4, 2021
 - January 12, 2022
- Presentations, at the request of City Council regarding medians specifically, were made
 - August 22, 2023
 - September 5, 2023
 - As a result, landscaping was reduced in the medians to facilitate future openings for development, and a left turn was added at Waverly Street
 - January 9, 2024
 - Direction given to staff was to remove medians from the scope and the following slides describe this requested change in greater detail.



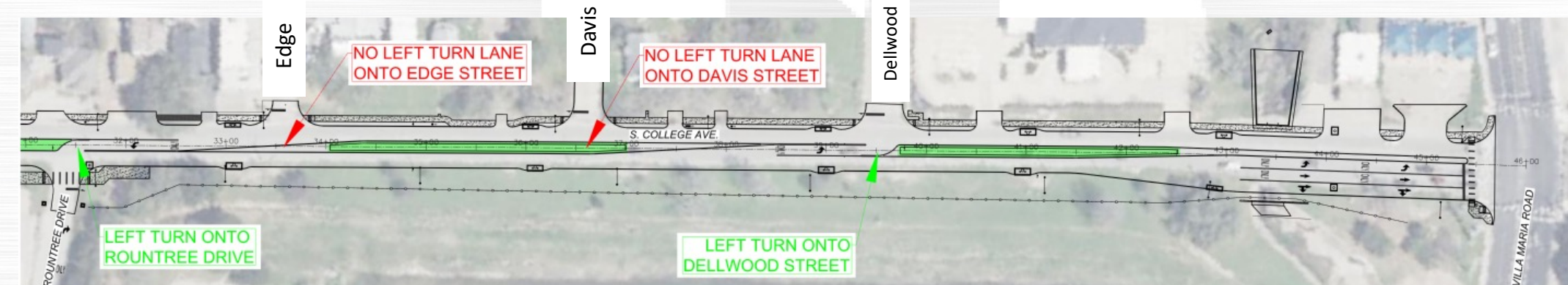
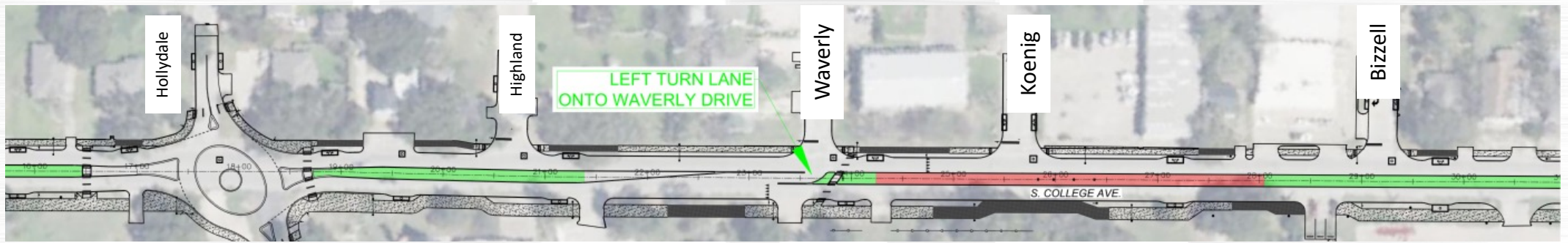
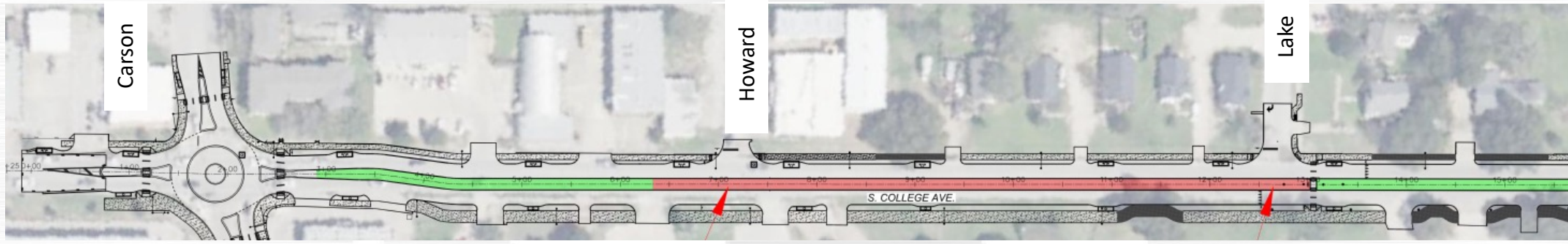
PROPOSED SOUTH COLLEGE AVENUE (NARROW)



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Revised Median Changes from Fall 2023



Revised Median Changes from Fall 2023

- Grass is proposed where “Partial Landscaping” (red) is shown on the previous plan sheets



- Low plantings and non-canopy trees are proposed where “Full Landscaping” (green) is shown on the previous plan sheets

