



TWININGS

*Transforming Tampa's Tomorrow with
Downtown's First Social Corridor*



Experienced Tampa MOVES Team



Alfredo Cely, PE, PMP
Project Manager



Jorge Pena, PE
Traffic Engineer



Mari Youmans, PMP
Stakeholder Manager



Elie Araj, PE
Drainage / Green
Infrastructure



**100% WMBE and
SLBE Lead**



Complete Streets and Urban Design
Roadway, Traffic and Safety, Roadway
Public Involvement and Inter-Agency Coordination
Cost Estimates and Post-Design



Drainage and Resiliency
Landscape Architecture



Surveying and Subsurface Utility Eng.
Utility Design Services



Cultural Resources
and Studies



Geotechnical
Engineering

Tampa's Downtown Past and Future



1850's

Fort Brooke &
Sacred Heart



1900's

Federal Court &
National Exchange



1950's

Franklin Exchange
Tampa's 1st Tower



2000's

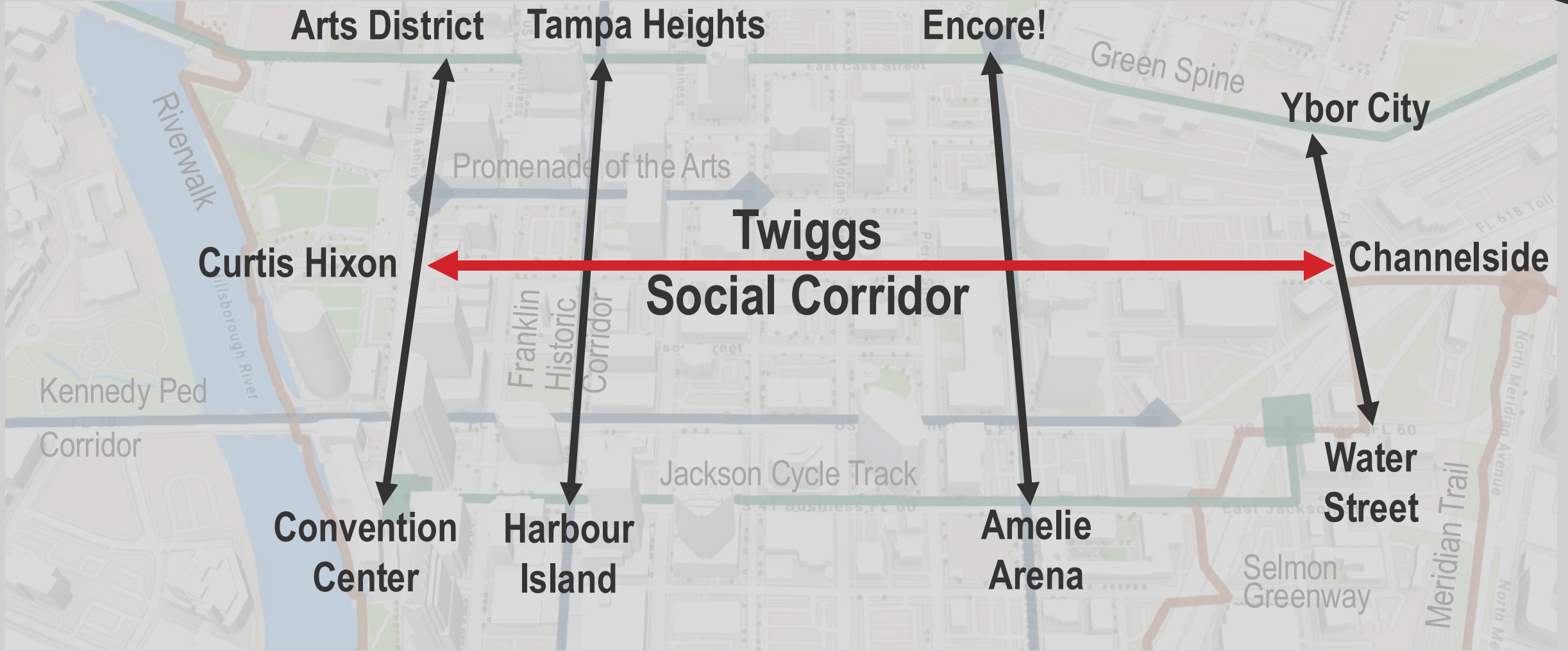
Curtis Hixon
Water Street
Channelside

2050's

Transforming
Tampa's
Tomorrow



Downtown Mobility Network





Existing Condition – 2045 Traffic

Design Speed and Posted Speed 30 MPH

| 3-Lane Facility | | | | 4-Lane Facility | | | | |
|-----------------|------------|------------|------------|-----------------|------------|-------------|-------------|----------|
| Ashley | Tampa | Franklin | Florida | Marion | Morgan | Pierce | Jefferson | Nebraska |
| B | B | A | B | A | B | B | B | D |
| 4,500 AADT | 2,200 AADT | 6,000 AADT | 8,500 AADT | 8,600 AADT | 9,400 AADT | 11,500 AADT | 13,500 AADT | |



Proposed Condition – 2045 Traffic

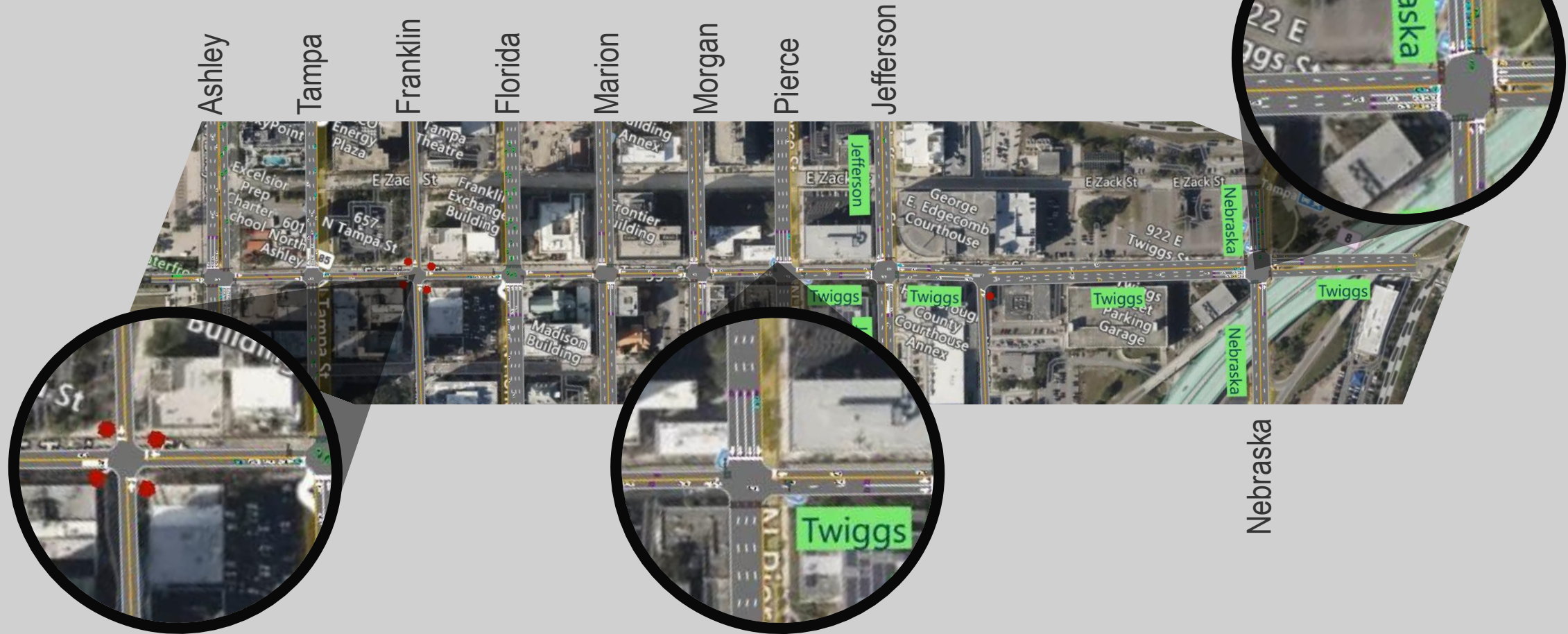
Target Speed 25 MPH

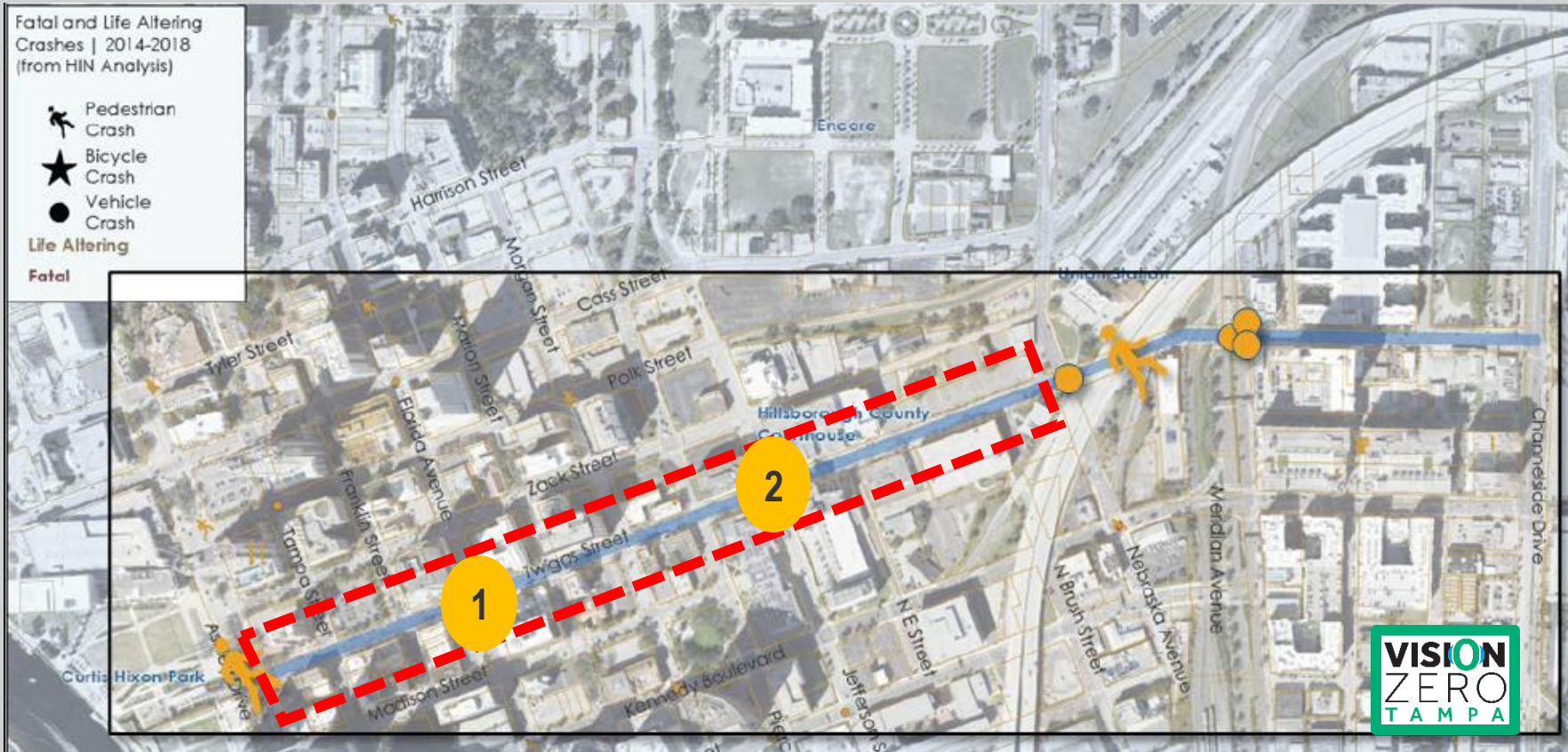
| 2-Lanes | | | | | | 3-Lanes | 4-Lanes | 5-Lanes |
|------------|------------|------------|------------|------------|------------|-------------|-------------|----------|
| Ashley | Tampa | Franklin | Florida | Marion | Morgan | Pierce | Jefferson | Nebraska |
| B | B | A | B | A | B | B | B | B |
| 4,500 AADT | 2,200 AADT | 6,000 AADT | 8,500 AADT | 8,600 AADT | 9,400 AADT | 11,500 AADT | 13,500 AADT | |

No Impact to Level of Service
Level of Service at Nebraska Intersection improves from a D to a B



Proposed Traffic Simulation







Incapacitating Injuries

- 1** Rear-end at 25mph at Florida Ave
- 2** Running red light at Jefferson at 30mph



Possible to No-Injury

 Turning conflict at intersection

 Pedestrian at Crosswalk, low signal visibility

 Scooter conflicts at Twiggs Garage

Utility Coordination and Engineering



23 Utility Agency Owners

Congested Utility Corridor

Knowledge of Utilities

1949 Vitrified Clay Pipe, relined in 2015

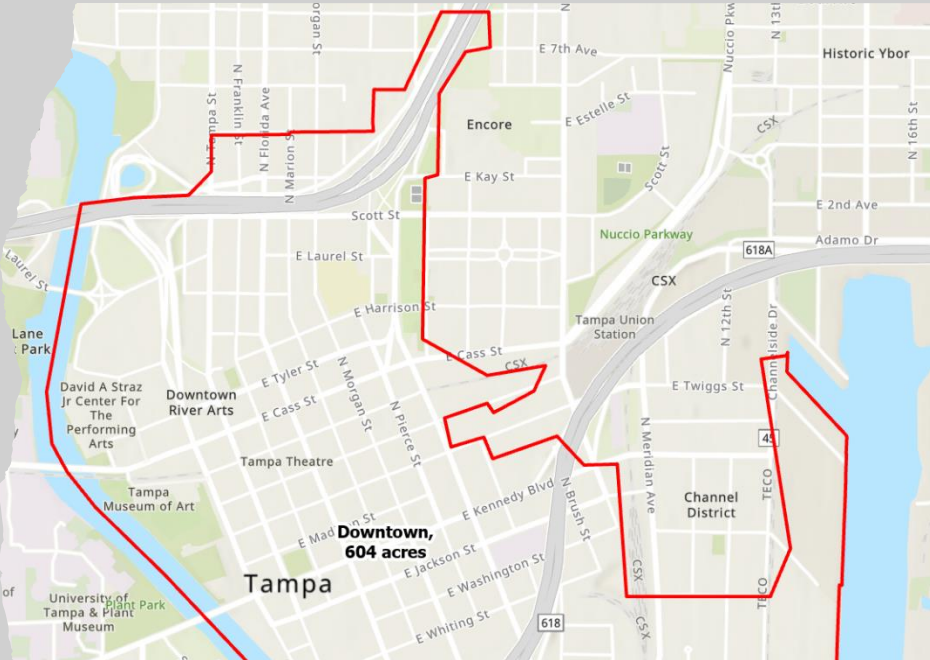
Experienced Utility Coordinator

Cindy Rullan, PMP

FDOT D7 Approved Utility Coordinator

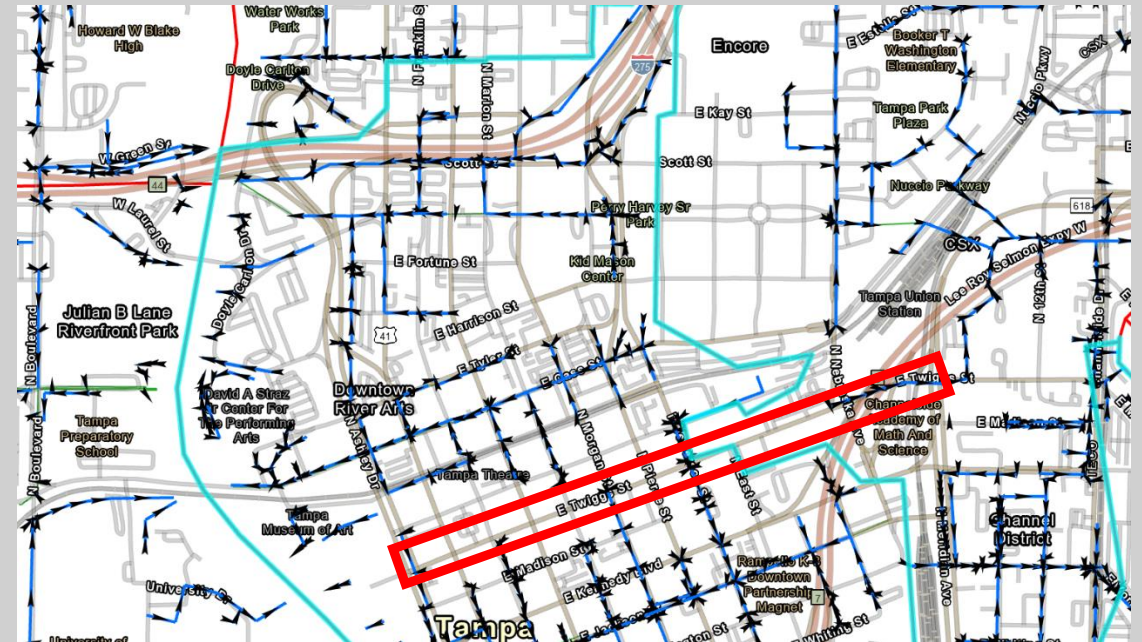
Drainage Review

Basin Map



Downtown Basin: 604 Acres

Drainage Network



Poor Longitudinal Profile Grades (Water Ponding)
Gaps between inlets of 980 to 500 feet along corridor

Drainage Review



Reprofile roadway to provide positive drainage
Add inlets within gaps



Pervious pavers for on-street parking (Scott Street)
Low impact development features at bulb-outs

Public Involvement Summary



Hillsborough Transportation Planning Organization (TPO)



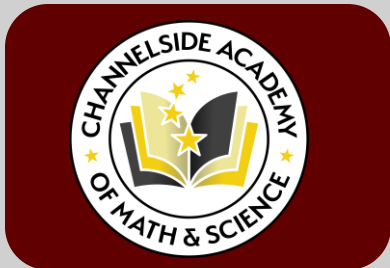
Tampa Hillsborough Expressway Authority (THEA)



Hillsborough County City-County Planning Department



Hillsborough County Facilities Management & Real Estate Services



Channelside Academy of Math and Science (Channelside Academy)



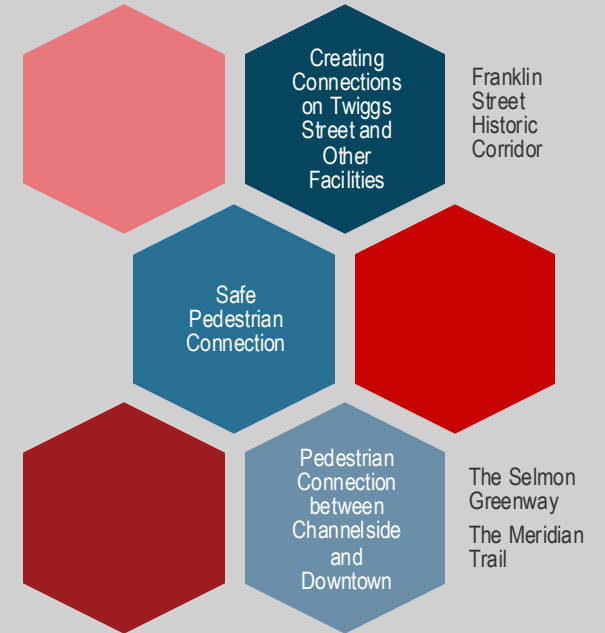
Tampa Downtown Community Redevelopment Area (CRA)



Tampa Downtown Partnership

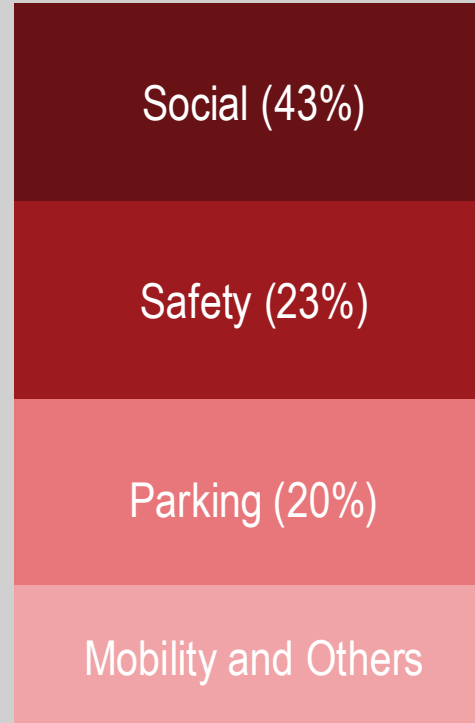
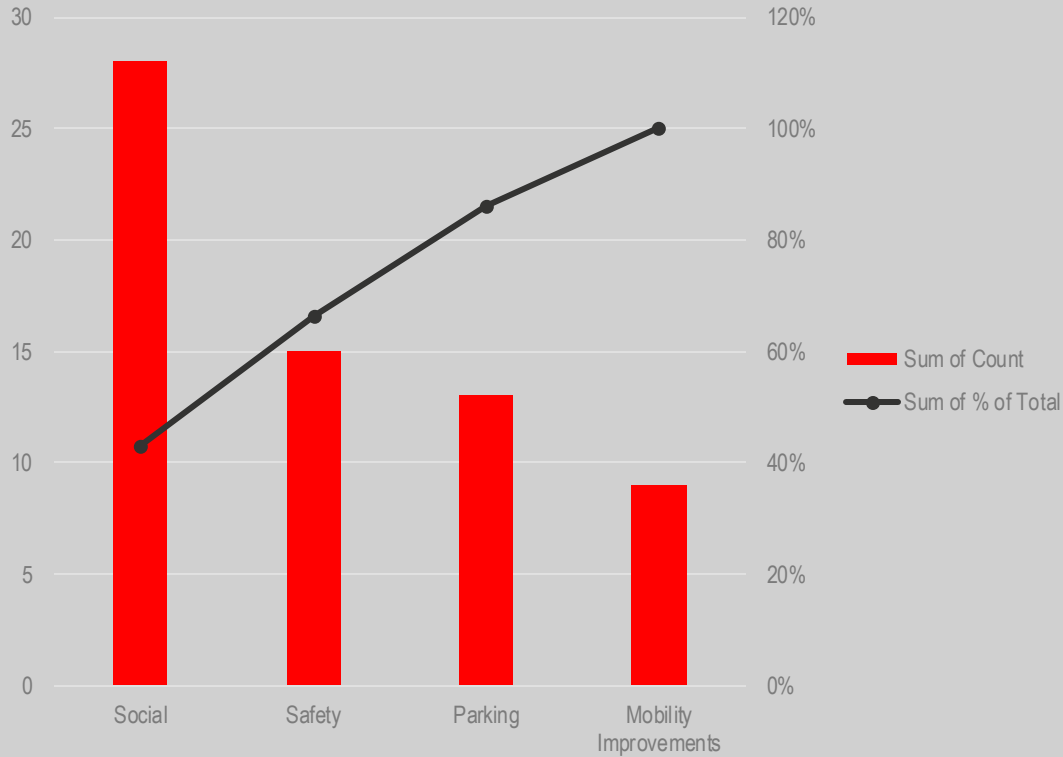


Tampa Electric Company (TECO)





Public Input Cluster Analysis



Root Cause Analysis:

1. Provide a safe pedestrian connector for:
 - Channelside to Downtown
 - Across North-South Facilities
2. Access businesses within the Corridor with On-street parking.



Tampa MOVES Approach

Community Focused Design

Connected corridor at the pedestrian level
Create opportunities for social interaction

Priority to pedestrians = Wide Walkways

Data Based Design

Traffic can operate with 2-lane facility
Pedestrian and micromobility crashes

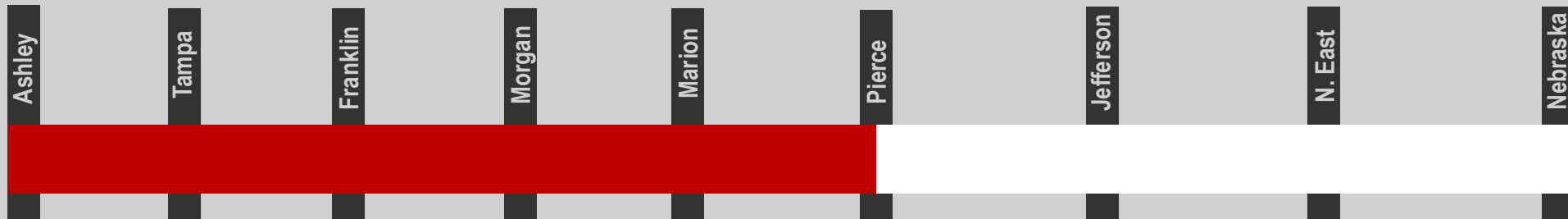
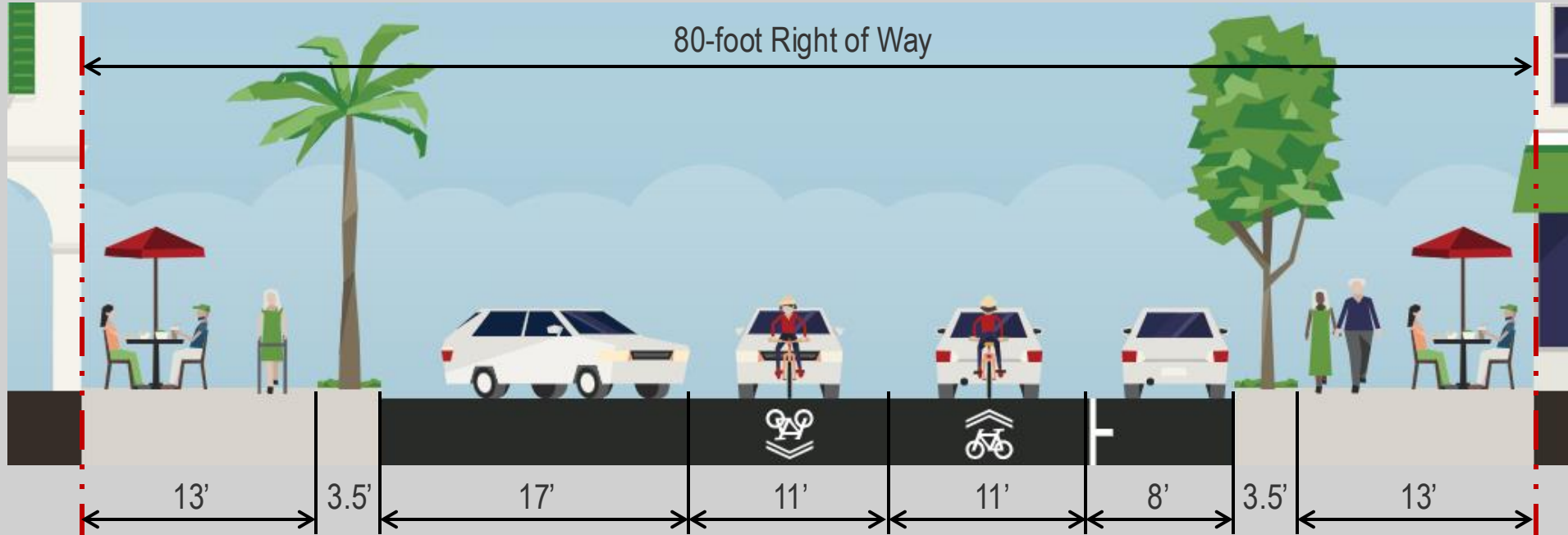
Low Speed and Volume = Bicycle Boulevard

Stormwater Resiliency

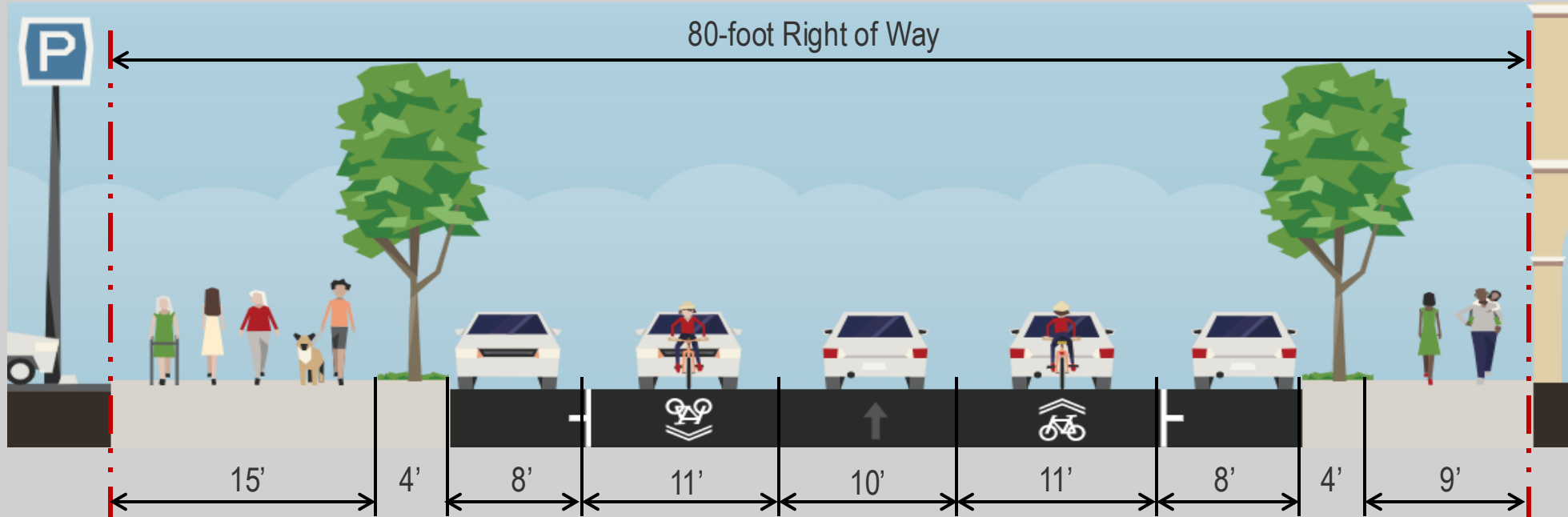
Large gaps between drainage inlets
Flat roadway grades

Create spaces for low impact development facilities

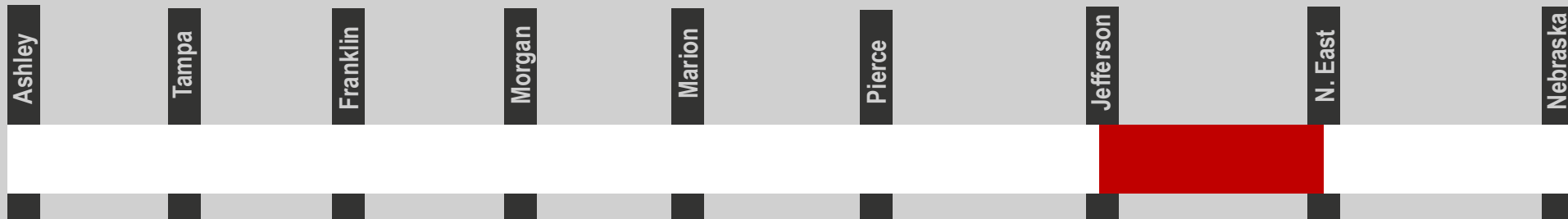
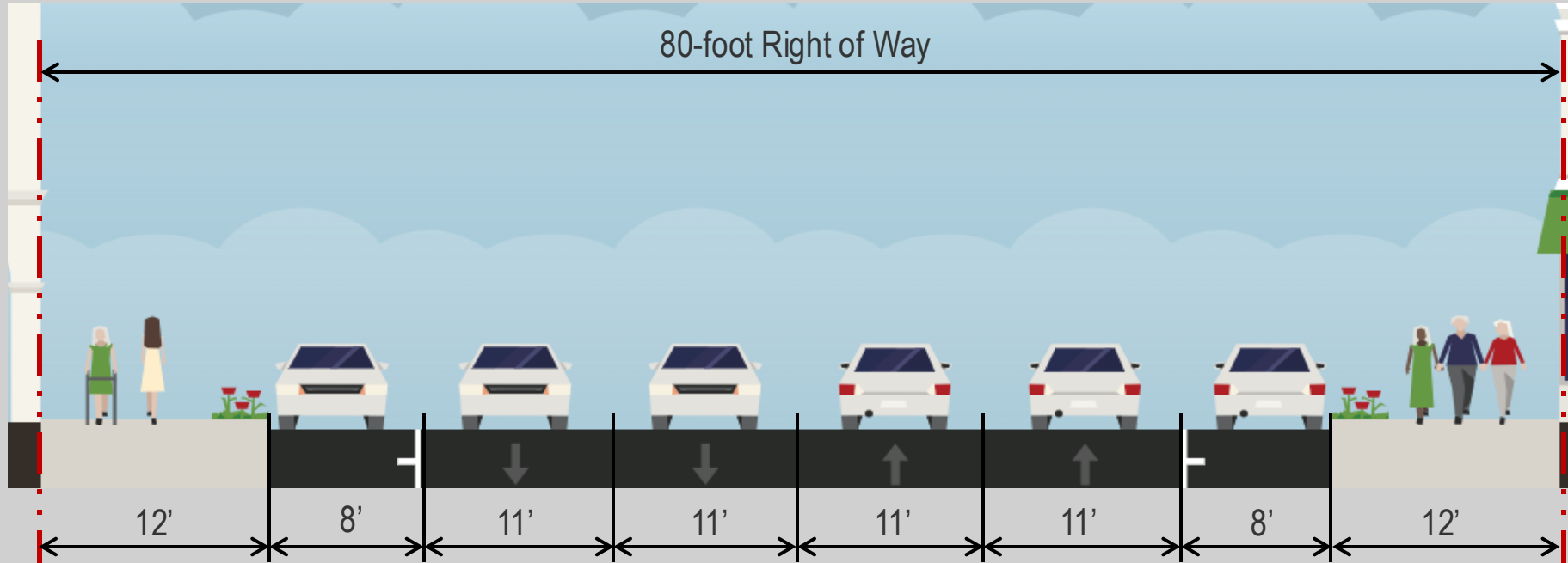
Ashley to Pierce - Segment



Pierce to Jefferson - Segment

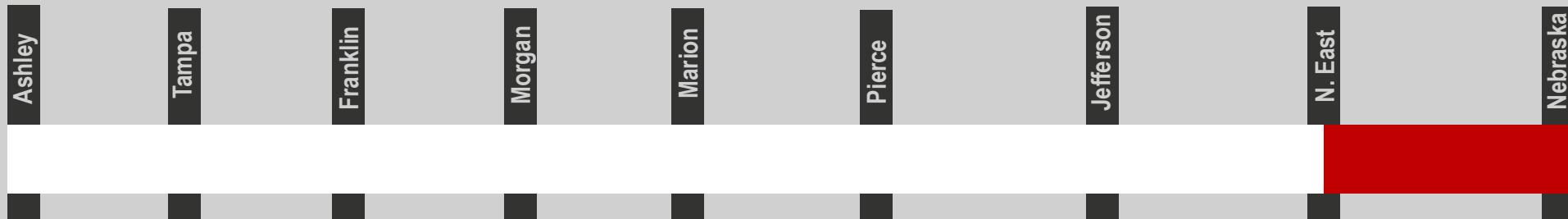
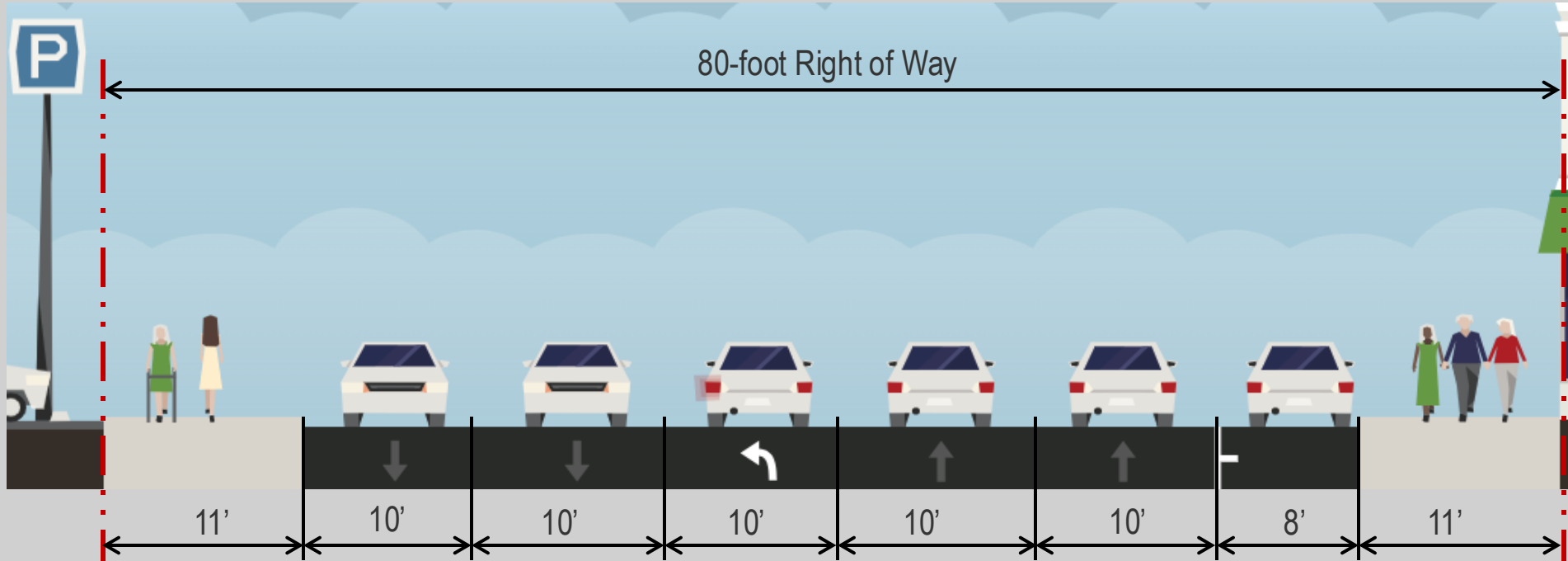


Jefferson to N. East - Segment





N. East to Nebraska - Segment





Ashley to Tampa

100 Block



One Tampa & Curtis Hixon

Provide ample walkways to park

Coordinate Bike Lane with One Tampa

Private Loading Bay creates more space

Bike Connectivity with Tampa St. Bike Lane

Outdoor dining at One Tampa Tower

Curtis Hixon Gateway Plaza



| | |
|-------------------|---------------------|
| 2045 Traffic Data | 4,500 AADT / LOS B |
| Construction \$ | \$ 300,000 |
| On-Street Parking | 13 |
| Walkway Widths | 26ft (16 ft Public) |



Tampa to Franklin 200 Block



Historic Corridor

Pedestrian Priority with wide walkways
Outdoor dining and parklets
Streetscape for Tampa's 1st Downtown

| | |
|-------------------|---------------------|
| 2045 Traffic Data | 2,200 AADT / LOS A |
| Construction \$ | \$ 700,000 |
| On-Street Parking | 18 |
| Walkway Widths | 22ft (16 ft Public) |

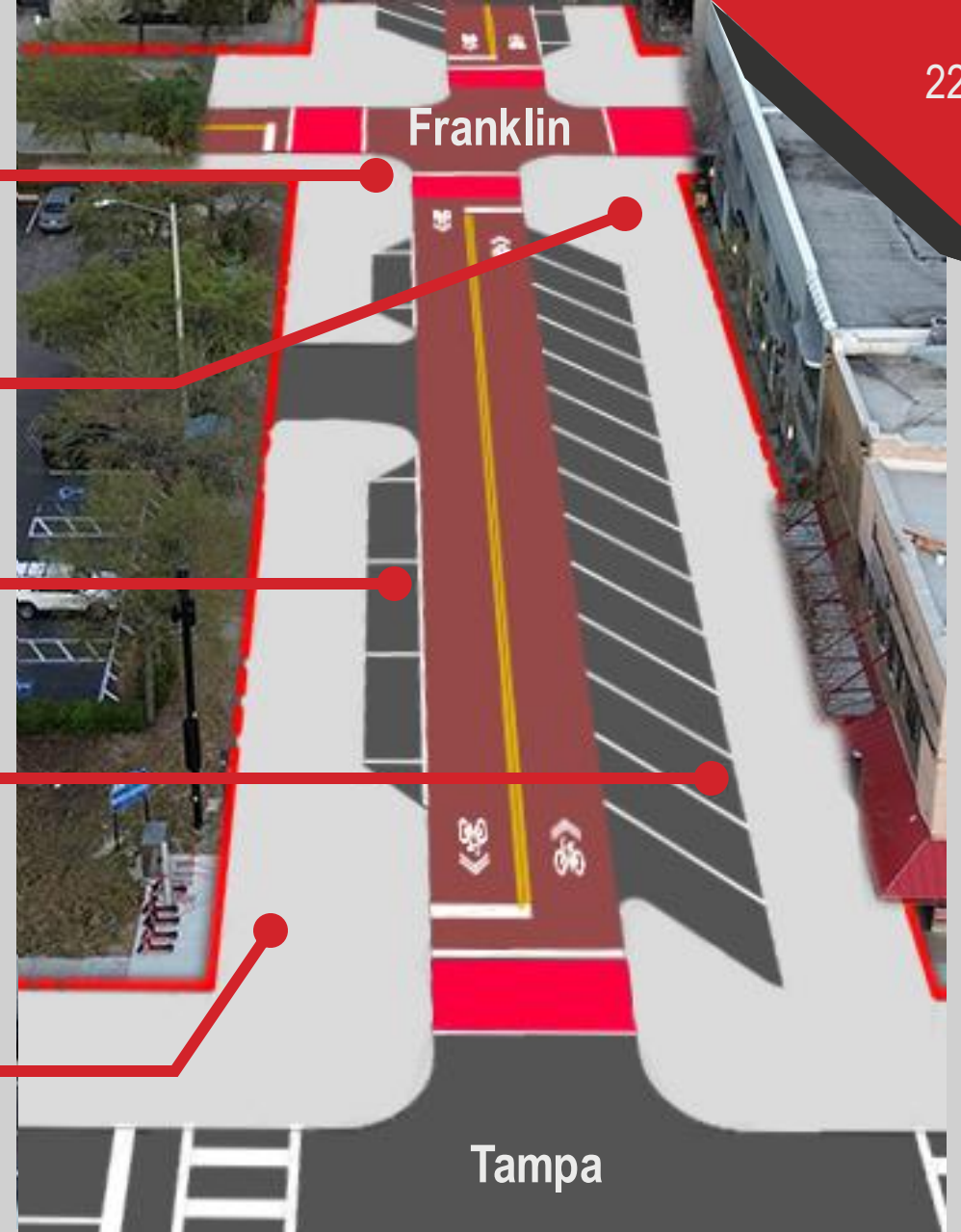
Chicane at intersection for traffic calming

Artistic Plaza for Franklin Street views

On-street 15-minute loading bays

Back-in Parking at Business Sides

Ample space for micromobility corrals





Franklin to Florida

300 Block



Priority to Franklin

- Promote Franklin Pedestrian Corridor
- Convert Traffic Signal to 4-Way Stop
- Social Pocket Parks

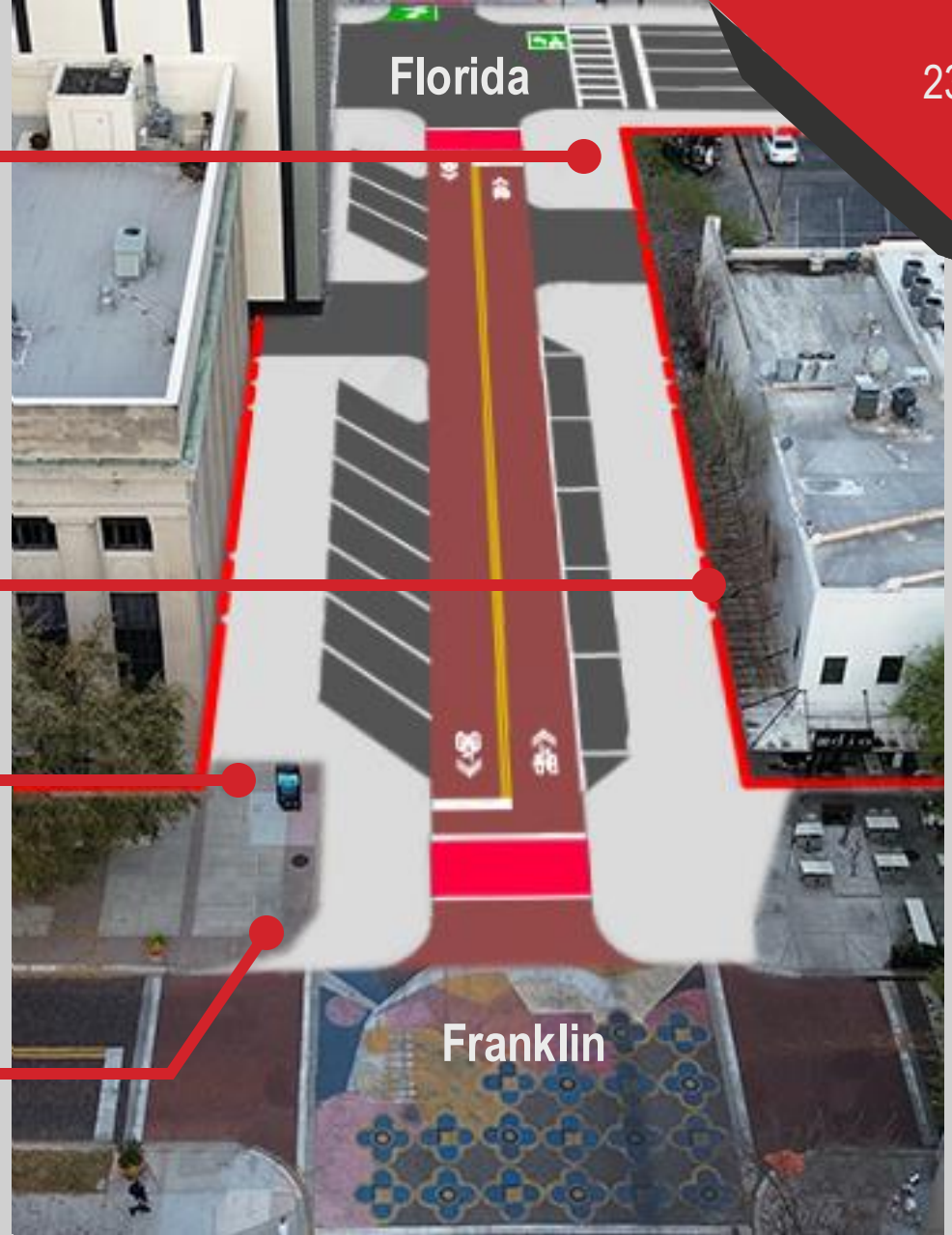
| | |
|-------------------|---------------------|
| 2045 Traffic Data | 6,000 AADT / LOS B |
| Construction \$ | \$ 700,000 |
| On-Street Parking | 15 |
| Walkway Widths | 24ft (16 ft Public) |

Create spaces for pocket parks with microbusiness

On-street parklets and dining corridor

Wayfinding touchscreen with social connection

Priority to pedestrian traffic with 4-Way Stop





Florida to Marion

400 Block



Local Connections

Enhance walkway connections to Le Meridien and Sacred Heart

Parking Leases with Streetscaping

Bike boxes for Florida Bike Lanes

2045 Traffic Data

8,500 AADT / LOS A

Construction \$

\$ 750,000

On-Street Parking

18

Walkway Widths

26ft (16 ft Public)

Accommodate long-term parking leases

Connect to Le Meridien public spaces

Connect to Sacred Heart public spaces



Marion

Florida



Marion to Morgan

500 Block



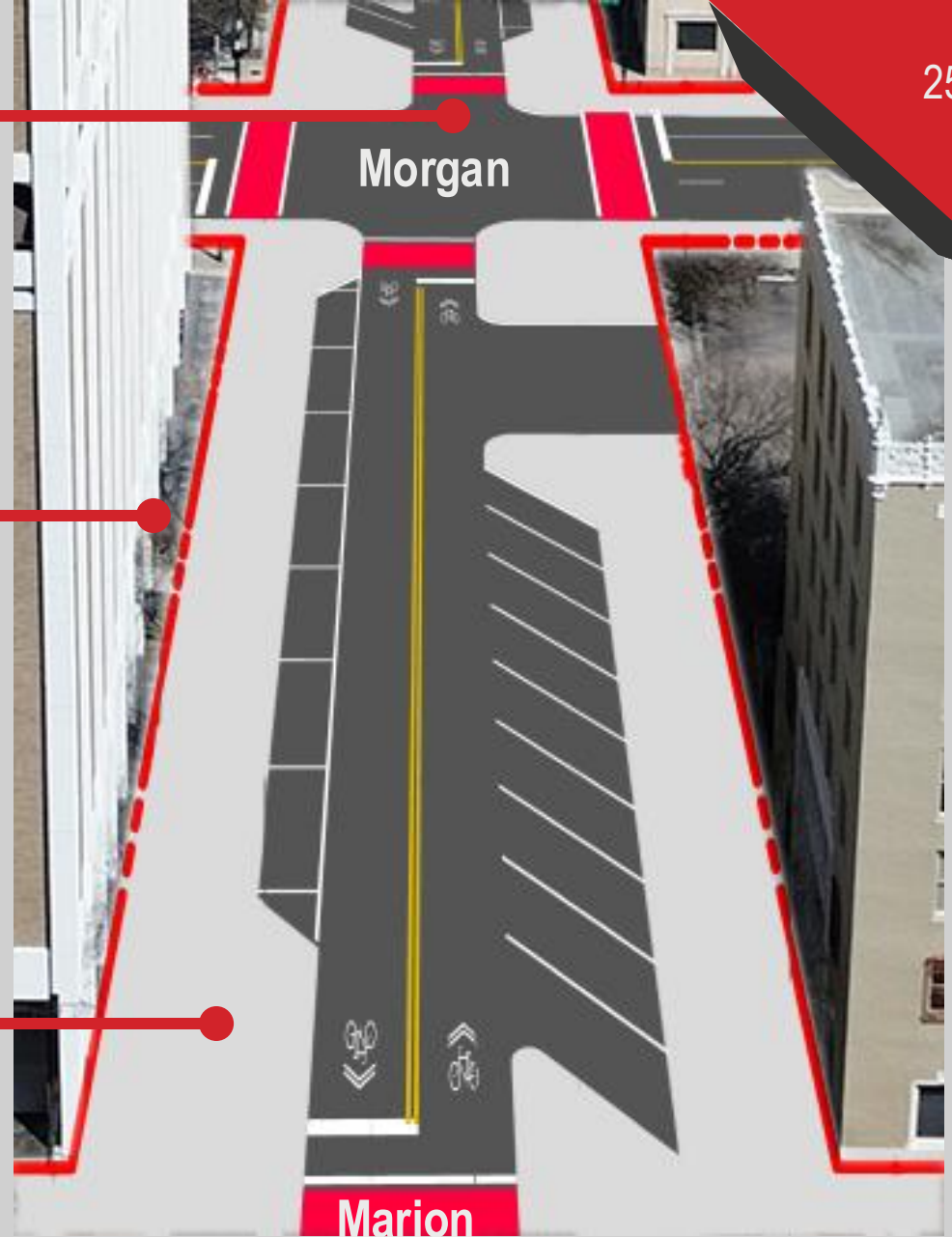
Streetscaping and Lights

St. Andrew's Streetscaping Agreement
Frontier light show on granite slabs
Large Pedestrian Areas for Amenities

Intersection chicane for
25mph Target Speed

Historic vistas projected to
Frontier dark granite slabs

Wide bulb-outs for low
impact development



| | |
|-------------------|---------------------|
| 2045 Traffic Data | 8,600 AADT / LOS B |
| Construction \$ | \$ 750,000 |
| On-Street Parking | 16 |
| Walkway Widths | 20ft (16 ft Public) |



Morgan to Pierce 600 Block



Professional Offices

Mid-Term Bicycle Parking

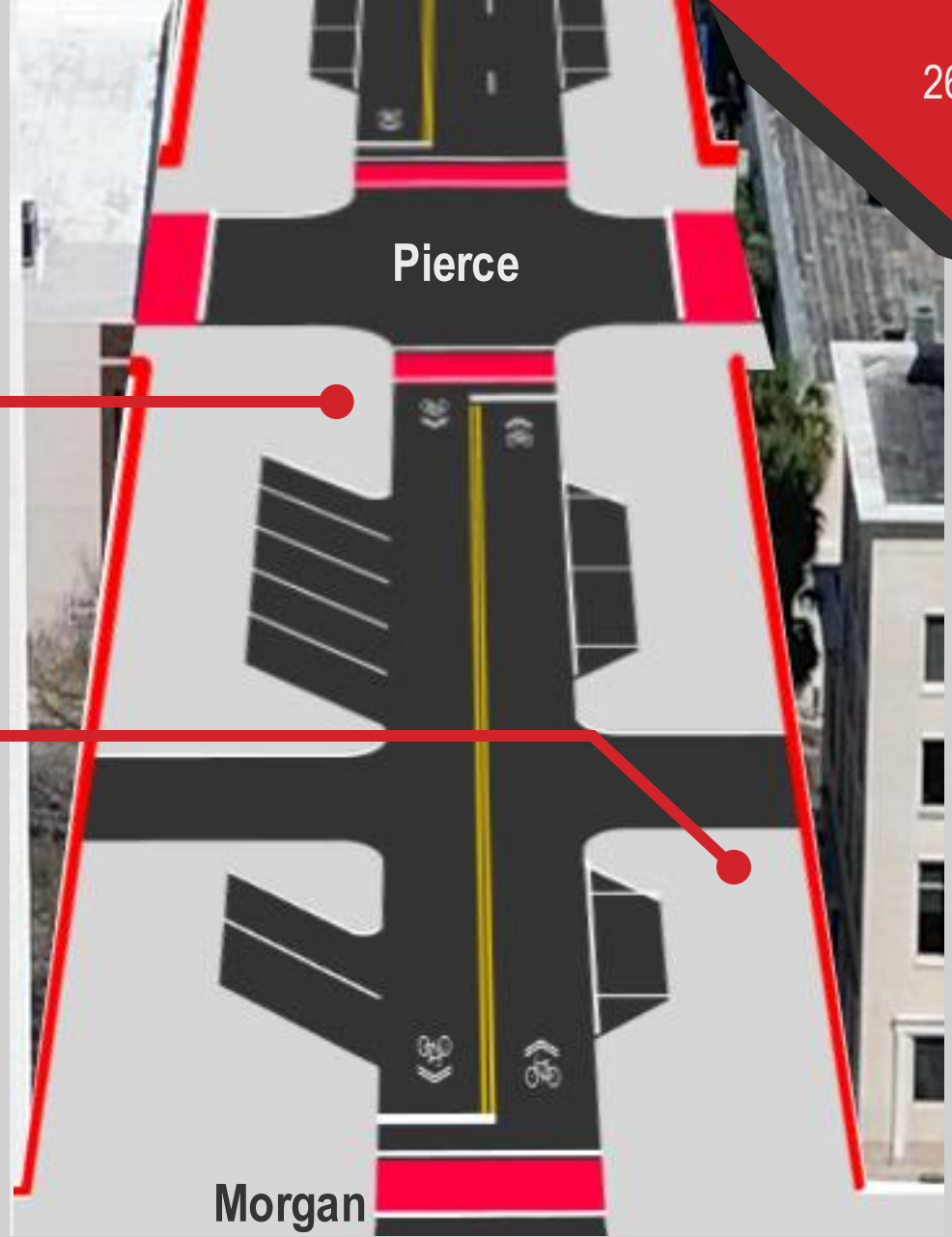
Digital wayfinding with route schedules

HART Route 9 Stop

| | |
|-------------------|---------------------|
| 2045 Traffic Data | 9,400 AADT / LOS B |
| Construction \$ | \$ 750,000 |
| On-Street Parking | 10 |
| Walkway Widths | 19ft (16 ft Public) |

HART Bus Stop with
Digital Wayfinding

Provide mid-term
bicycle parking for
businesses





Pierce to Jefferson

700 Block

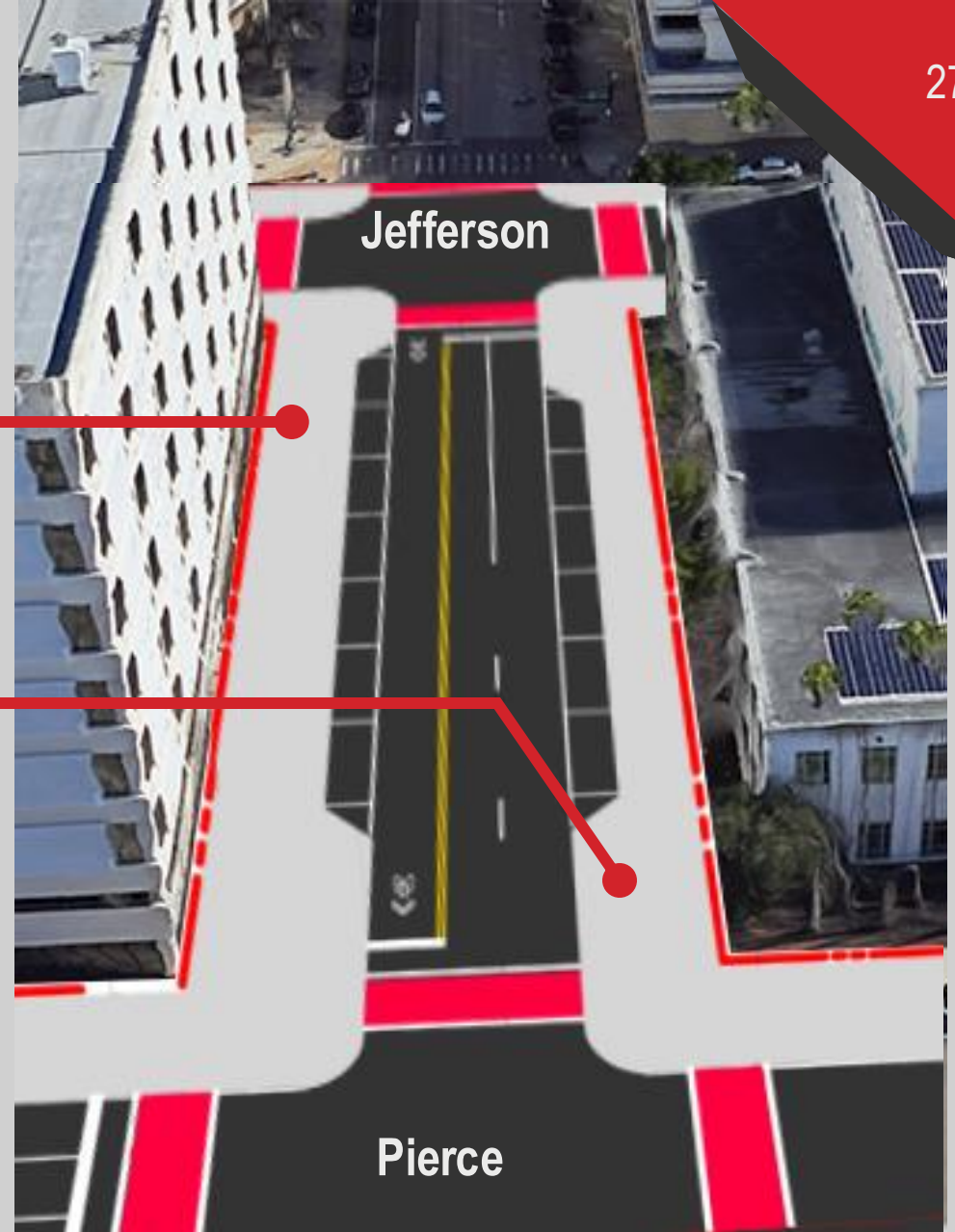


Courthouse Transition

- Two eastbound lanes for peak hour
- Mid-term bicycle parking for Users
- Low impact development parks

Mid-term bike parking for
Public Defender & Library

HART Bus Stop with
Digital Wayfinding



| | |
|-------------------|---------------------|
| 2045 Traffic Data | 11,500 AADT / LOS B |
| Construction \$ | \$ 600,000 |
| On-Street Parking | 13 |
| Walkway Widths | 26ft (16 ft Public) |



Jefferson to N. East St.

800 Block



Bike Connections & Plaza

Reduce crossing with bulb-outs

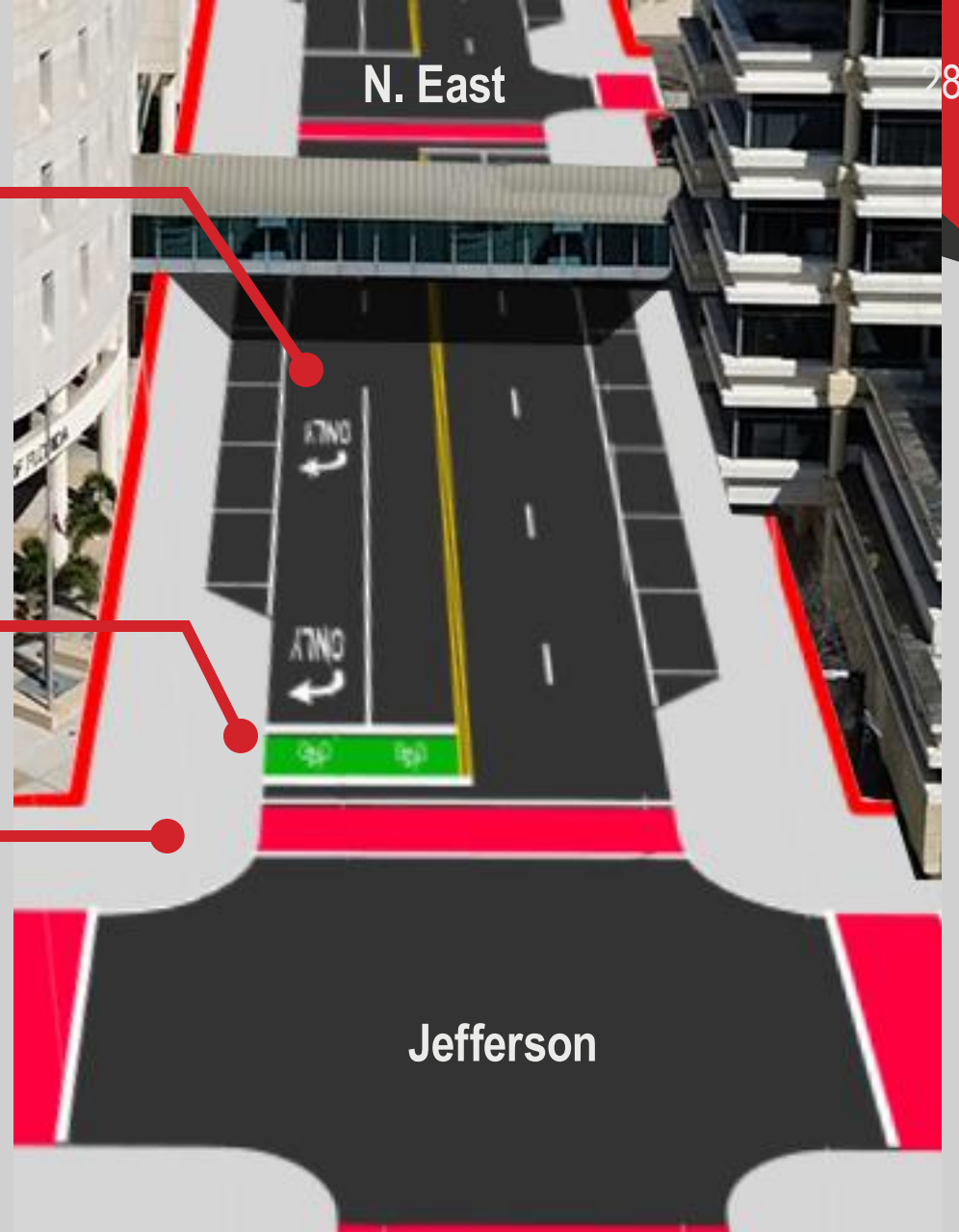
Bike ramps for SUP transition

Low impact development at building sides

Bike ramp to transition from shared-use path

Courthouse plaza featurette

Right Turn Lane for PM Peak Exit Traffic



| | |
|-------------------|---------------------|
| 2045 Traffic Data | 13,500 AADT / LOS B |
| Construction \$ | \$ 200,000 |
| On-Street Parking | 14 |
| Walkway Widths | 20ft (11 ft Public) |



N East St. to Twiggs Garage

900 Block



Midblock & Bulb Outs

Shorten block with crossing at Garage

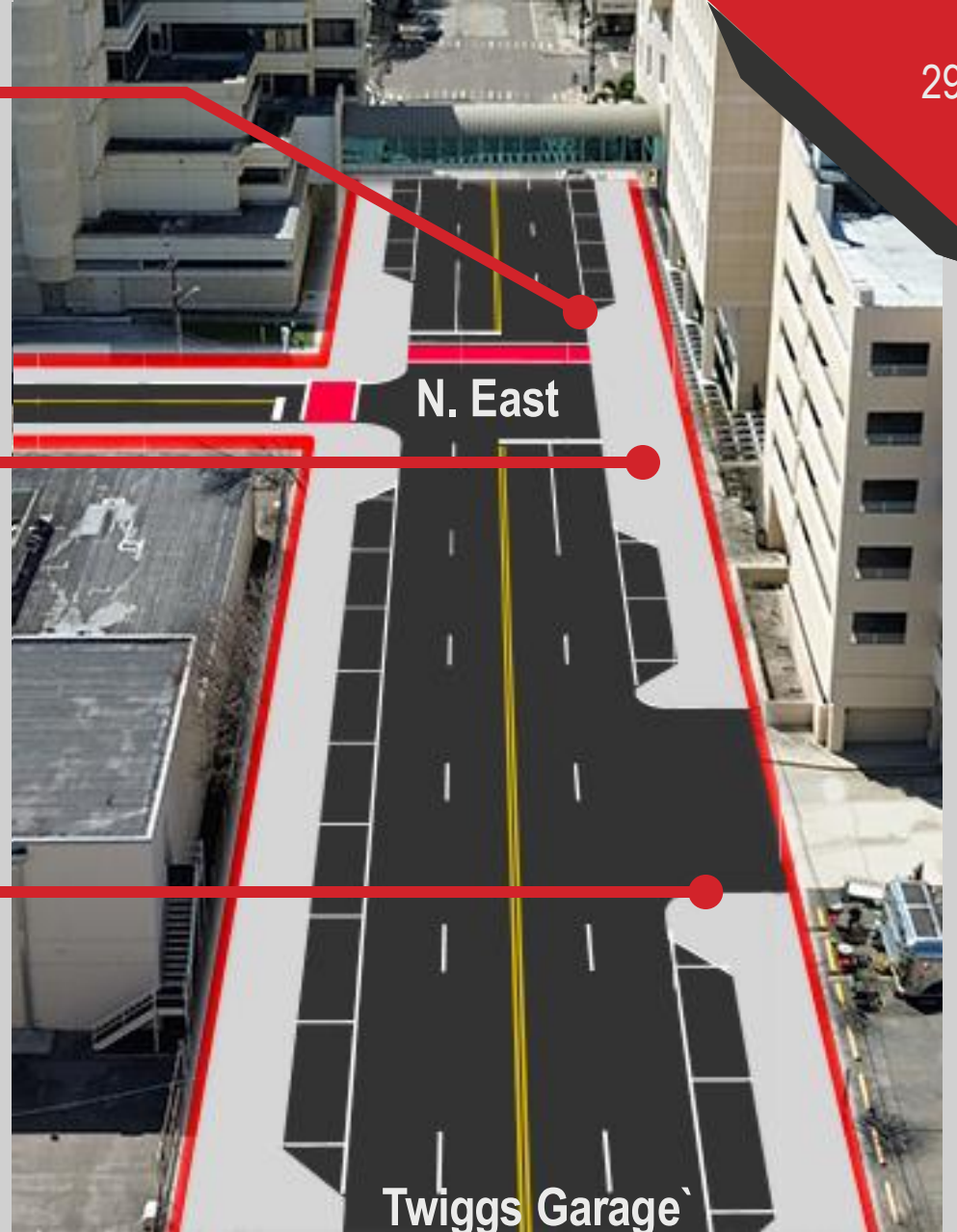
Vendors at bulb outs

Security parking at Courthouse

Reduce crossing length with Bulb-outs

Bus Loading & Courthouse Plaza

Use sidewalk space to support micro vendors



| | |
|-------------------|---------------------|
| 2045 Traffic Data | 13,500 AADT / LOS B |
| Construction \$ | \$ 200,000 |
| On-Street Parking | 17 |
| Walkway Widths | 11ft (11 ft Public) |



Twiggs Garage to Nebraska

1,000 Block

Connect to Selmon Greenway & Nebraska Avenue Bike Lanes

Signature gateway park and bus stop

Smart signs to move traffic to next garage entrance



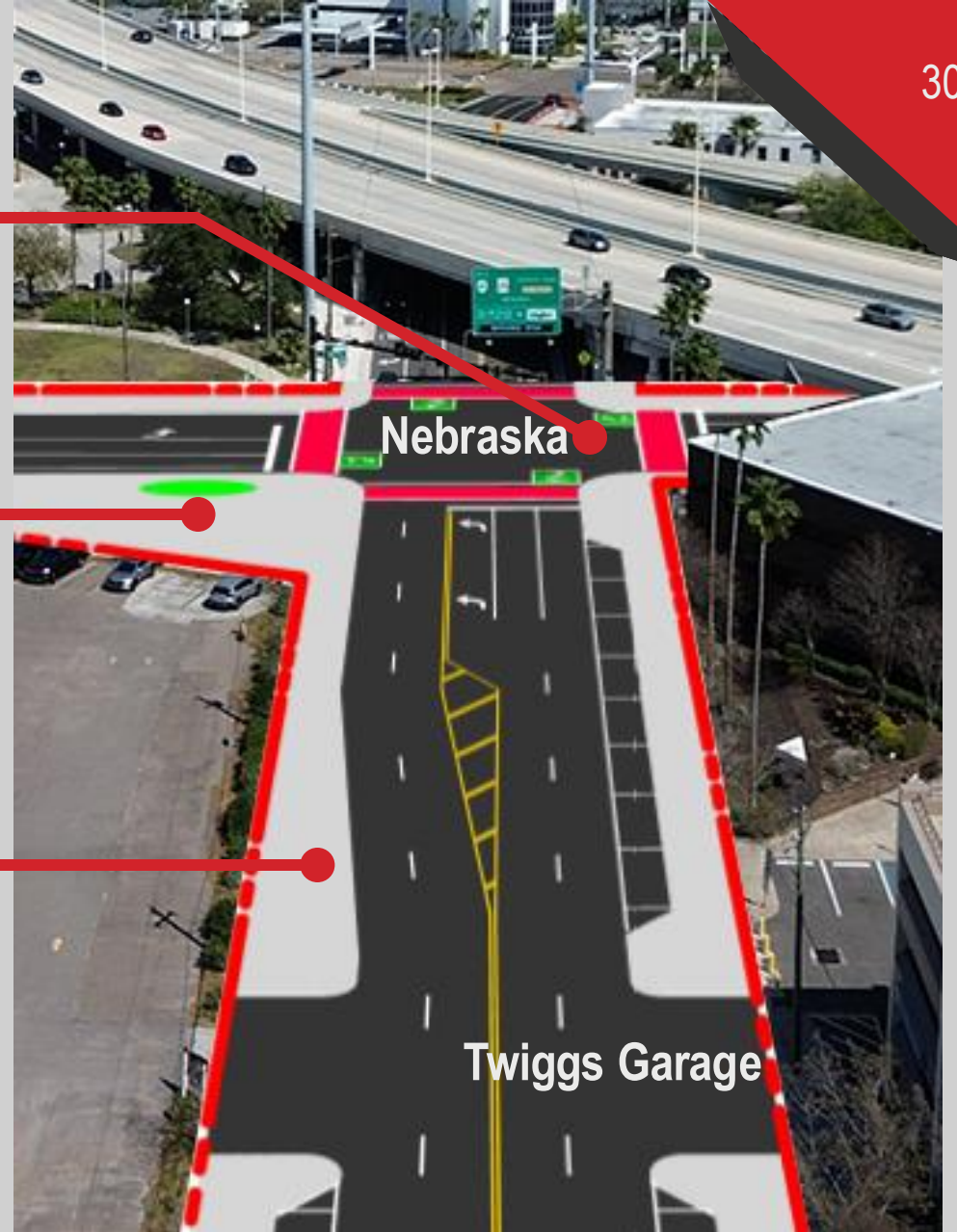
Safety and Capacity

Provide bike boxes for safe turns

Add EB-NB Left Turn Lane

Provide shared-use path for cyclists

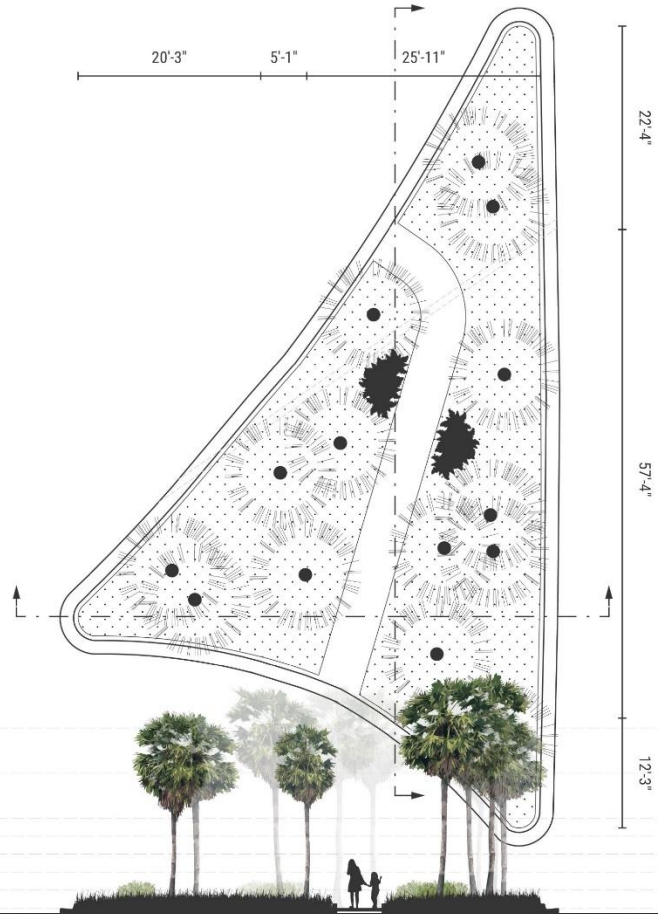
| | |
|-------------------|---------------------|
| 2045 Traffic Data | 13,500 AADT / LOS B |
| Construction \$ | \$ 450,000 |
| On-Street Parking | 14 |
| Walkway Widths | 11ft (11 ft Public) |



Nebraska

Twiggs Garage

Gateway Park at Nebraska



Creating a Signature Corridor

Pocket Parks with activities (chess tables)

Frontier building historic projections

Connections to open private spaces

Wide areas for micromobility users

Outdoor dining with ample walkways

Gateway active parks

Strategic refuse corners

On-street loading spaces

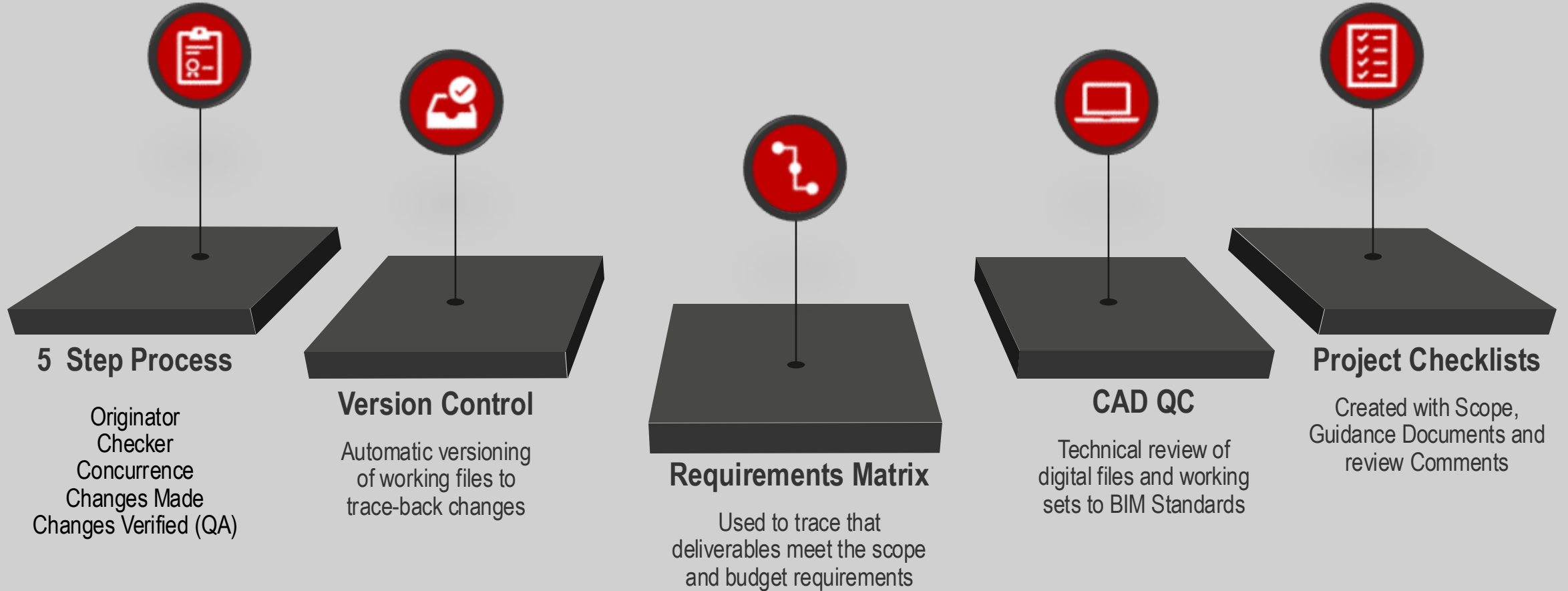


Creating a Signature Corridor

| Block | From | To | Construction \$ |
|--------------|---------------|---------------|---------------------|
| 100 | Ashley | Tampa | \$ 300,000 |
| 200 | Tampa | Franklin | \$ 700,000 |
| 300 | Franklin | Florida | \$ 700,000 |
| 400 | Florida | Marion | \$ 750,000 |
| 500 | Marion | Morgan | \$ 750,000 |
| 600 | Morgan | Pierce | \$ 750,000 |
| 700 | Pierce | Jefferson | \$ 600,000 |
| 800 | Jefferson | N East St | \$ 300,000 |
| 900 | N East St | Twiggs Garage | \$ 200,000 |
| 1,000 | Twiggs Garage | Nebraska | \$ 450,000 |
| Total | | | \$ 5,500,000 |



Project Specific Quality Control Plan





Selecting the AlfKa Team

Community Focused Design

Create Twiggs as a Social Corridor
Safety for Pedestrians and Cyclists

Transforming Tampa's Tomorrow

Tampa MOVES
Climate Action and Equity Plan

Dedicated City Team

Twiggs is our Signature Project
100% WMBE and SLBE Lead



TWINGES

*Transforming Tampa's Tomorrow with
Downtown's First Social Corridor*

Tampa MOVES Team

Funding Experts

Can easily pivot to assist City



Tampa MOVES

Mobility, Safety, Equity and Resiliency Experts

Historical Knowledge

EOR for Zack Street Construction Management



Downtown Experts

Leader in Temporary Traffic Control for Downtown

Tampa MOVES Toolbox

Cyclist Crashes Proven Countermeasures

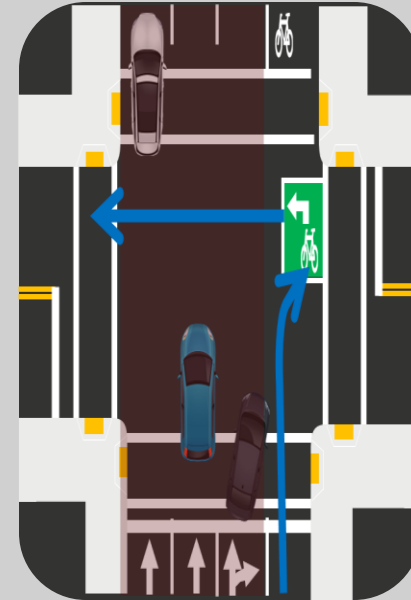
Two-Stage Left Turn Boxes
Move cyclists out of harms way

Back-In Angle Parking
Same movement as parallel parking, and allows motorists to see cyclists

Low Speed Facilities
Reduce conflicts between cars and cyclists



Low Stress Facility for Cyclists



Safety Priority for Cyclists



Low Speed reduces conflicts

Tampa MOVES Toolbox

Pedestrian Crashes Proven Countermeasures

Pedestrian Bulb-Outs

Reduce pedestrian exposure on the roadway

Wide Walkways

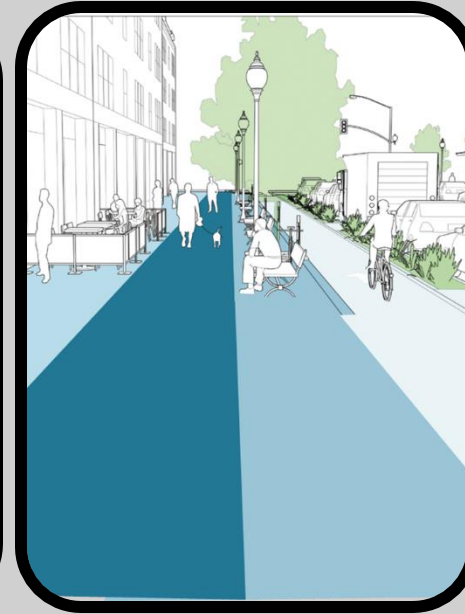
Provide ADA routes, and reduce conflicts with micromobility users

Low Speed Facilities

More reaction time and reduces injury severity



Shorter Crossings
reduce exposure

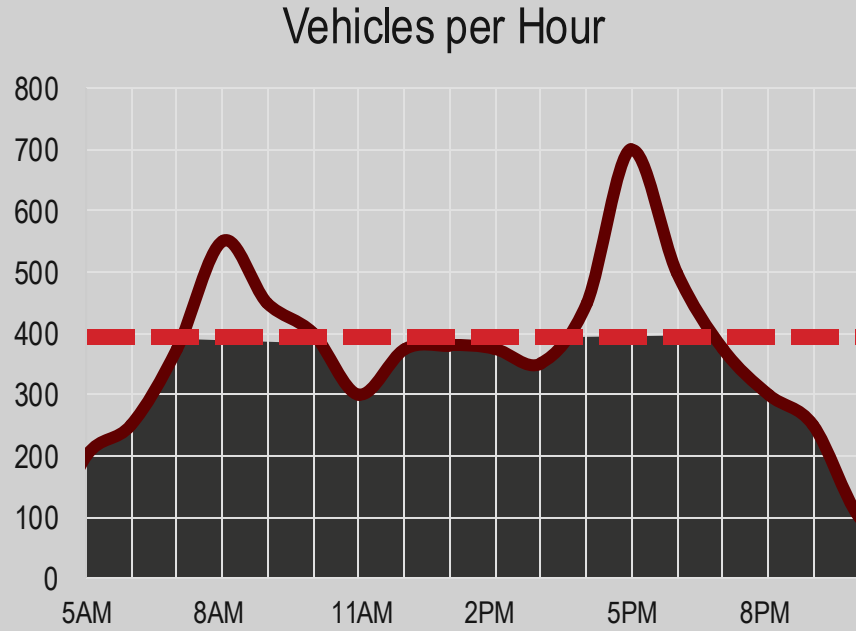


Wide Walkways
reduce conflicts

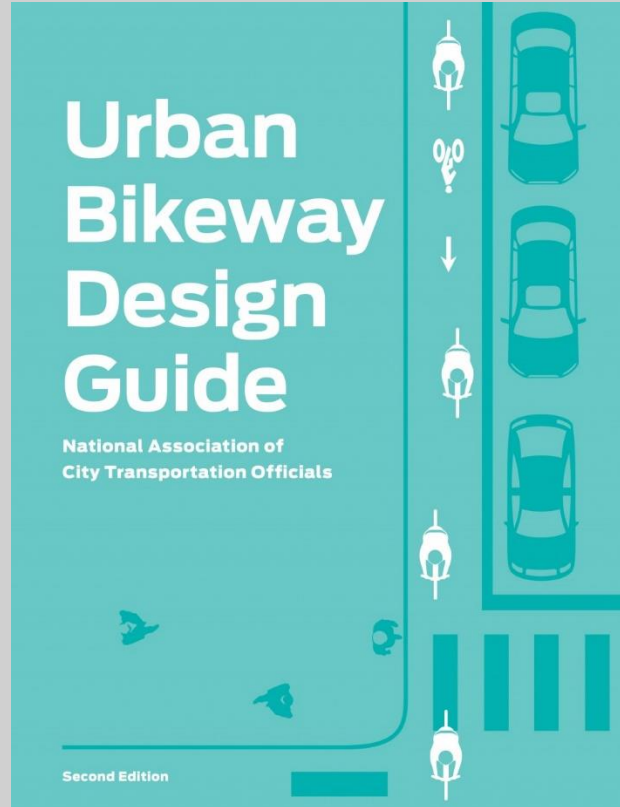


Low Speed
reduces severity

NACTO Bicycle Boulevard Guidelines



90% of Volume below Shared Lane Threshold



*Bicycle boulevards place bicycle and motor vehicle traffic in the **same space at the same time.***

*All Ages & Abilities condition may be reached below approximately **400 vehicles per hour.***

*Set target speeds at or below **25 mph** to improve comfort and allow drivers to more easily react when bicyclists need to move into the motor vehicle lane.*



100 Block Ashley to Tampa

- Outdoor Dining
- Wayfinding
- Urban Garden
- Micro-Mobility
- Bike Parking
- One Tampa Tower



200 Block – Tampa to Franklin

Rain Gardens

Proven Low Impact
Development
Features at Scott
Street



Loading Bay

Serves Businesses
and improves sight
distance



Art Benches

Frontage to Franklin
promoting historic
corridor

Outdoor Dining

Seats 150 to 200



300 Block – Franklin to Florida



Street Vendors

Transition from dining corridor

Pocket Parks

Chess/Checkers Tables

Micromobility

Corrals and Bike Racks

Wayfinding

Support Franklin Corridor

400 Block – Florida to Marion

Micromobility

Organized areas for scooter and bike parking within the streetscape



Pocket Playgrounds

Active and engaging public spaces for all ages



Historical Vistas

1890's Historic Buildings are part of Tampa's social fabric

Local Connections

Coordinate with Sacred Heart and Le Meridien to enhance connectivity to private-public spaces

TWIGGS



500 Block Marion to Morgan

- Frontier Building
Lighting
- Refuse Corners
- Street Vendors
- Raised Landscape
Beds



600 Block – Morgan to Pierce

Long-Term Bike Parking



Pocket Parks

Outdoor Seating



Bus Lounge



700 Block – Pierce to Jefferson



- Mid-Term Bike Parking
- Micromobility Corrals
- Outdoor Seating
- Bus Lounge

800/1000 Block – Jefferson to Nebraska

Shade and Benches



Historic Corner Park

Street Vendor Bulb-Out Parks



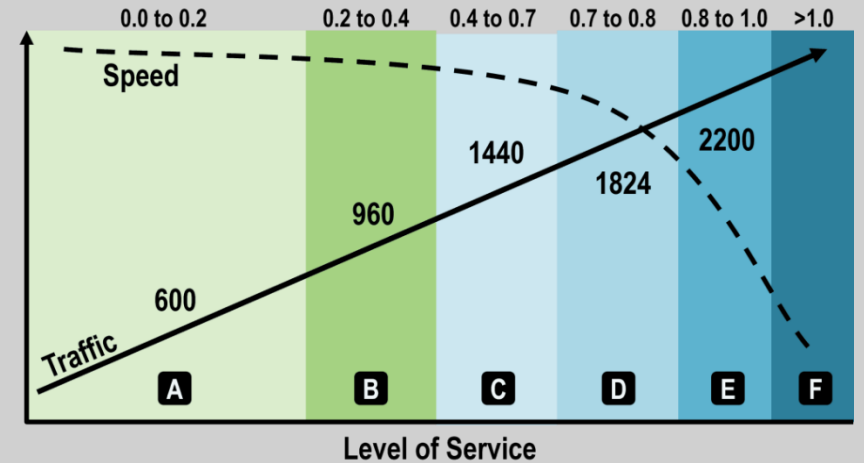
Social Parks and Gathering Spots



Traffic Analysis and Simulation

Level of Service Analysis

- Existing Conditions
 - Lane Geometry
 - Volumes
 - Signal Timing
- Implementation of Proposed Improvements
 - Construction of roadway corridor
- Future Conditions with development
 - Volume-to-Capacity Ratio (V/C)



| Level of Service | Description |
|-----------------------------------|---|
| FREE FLOW LOS A | Low volumes and no delays. |
| STABLE FLOW LOS B | Speeds restricted by travel conditions, minor delays. |
| STABLE FLOW LOS C | Speeds and maneuverability closely controlled because of higher volumes. |
| STABLE FLOW LOS D | Speeds considerably affected by change in operation conditions. High density traffic restricts maneuverability; volume near capacity. |
| UNSTABLE FLOW LOS E | Low speeds; considerable delay; volume at or slightly over capacity. |
| FORCED FLOW LOS F | Very low speeds; volumes exceed capacity; long delays with stop-and-go traffic. |

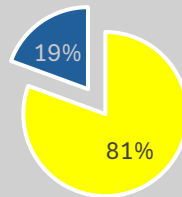
| Intersection | Ashley | | | | | Tampa | | | | | Franklin | | | | | Florida | | | | | Marion | | | | | Morgan | | | | | Pierce | | | | | Jefferson | | | | | Nebraska | | | | | | | | | |
|------------------------|--------|----|----|----|-----|-------|----|----|----|-----|----------|----|----|----|-----|---------|----|----|----|-----|--------|----|----|----|-----|--------|----|----|----|-----|--------|----|----|----|-----|-----------|----|----|----|-----|----------|----|----|----|-----|---|---|---|---|---|
| | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | EB | NB | SB | WB | INT | | | | | |
| Existing - 2023 | B | B | A | B | B | A | - | B | A | B | A | A | A | A | A | A | B | - | A | B | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | - | A | A | A | B | B | A | A | B | C | A | B | B | B |
| Proposed - 2023 | B | B | A | A | B | A | - | B | A | B | A | A | A | A | A | B | B | - | B | B | A | A | A | A | A | B | A | A | A | A | B | - | A | A | A | B | B | A | A | B | C | A | B | B | B | | | | | |
| Existing - 2045 | D | B | A | A | B | B | - | B | B | B | A | C | C | A | A | C | B | - | B | B | A | A | A | A | A | B | B | A | A | B | A | - | C | B | B | B | B | A | A | B | E | A | E | B | D | | | | | |
| Proposed - 2045 | D | B | A | A | B | B | - | B | B | B | A | A | A | A | C | C | - | B | B | A | A | A | A | A | B | B | A | A | B | B | - | B | B | B | B | B | A | A | B | D | B | A | A | B | | | | | | |



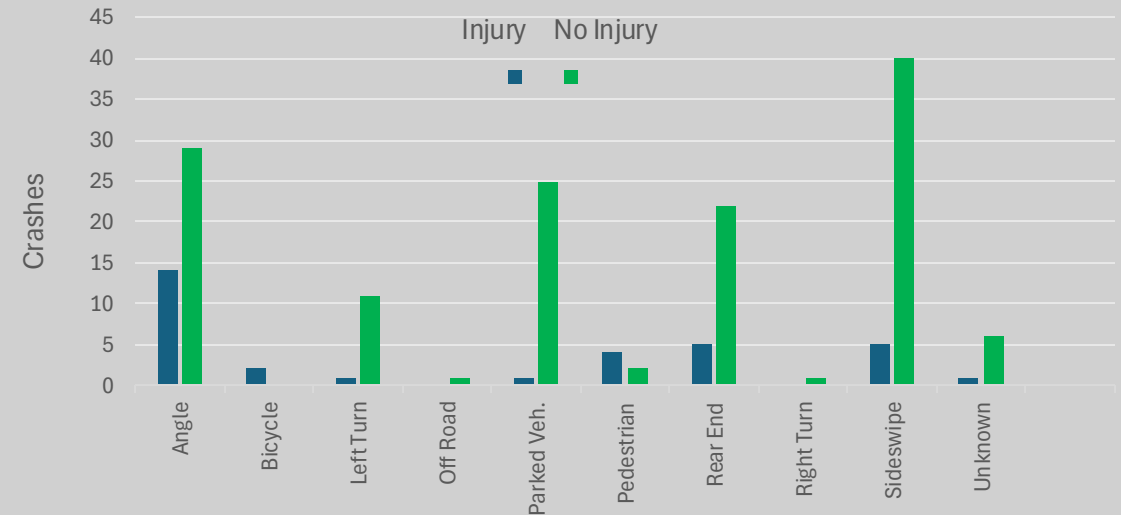
Safety Analysis

Crash Data

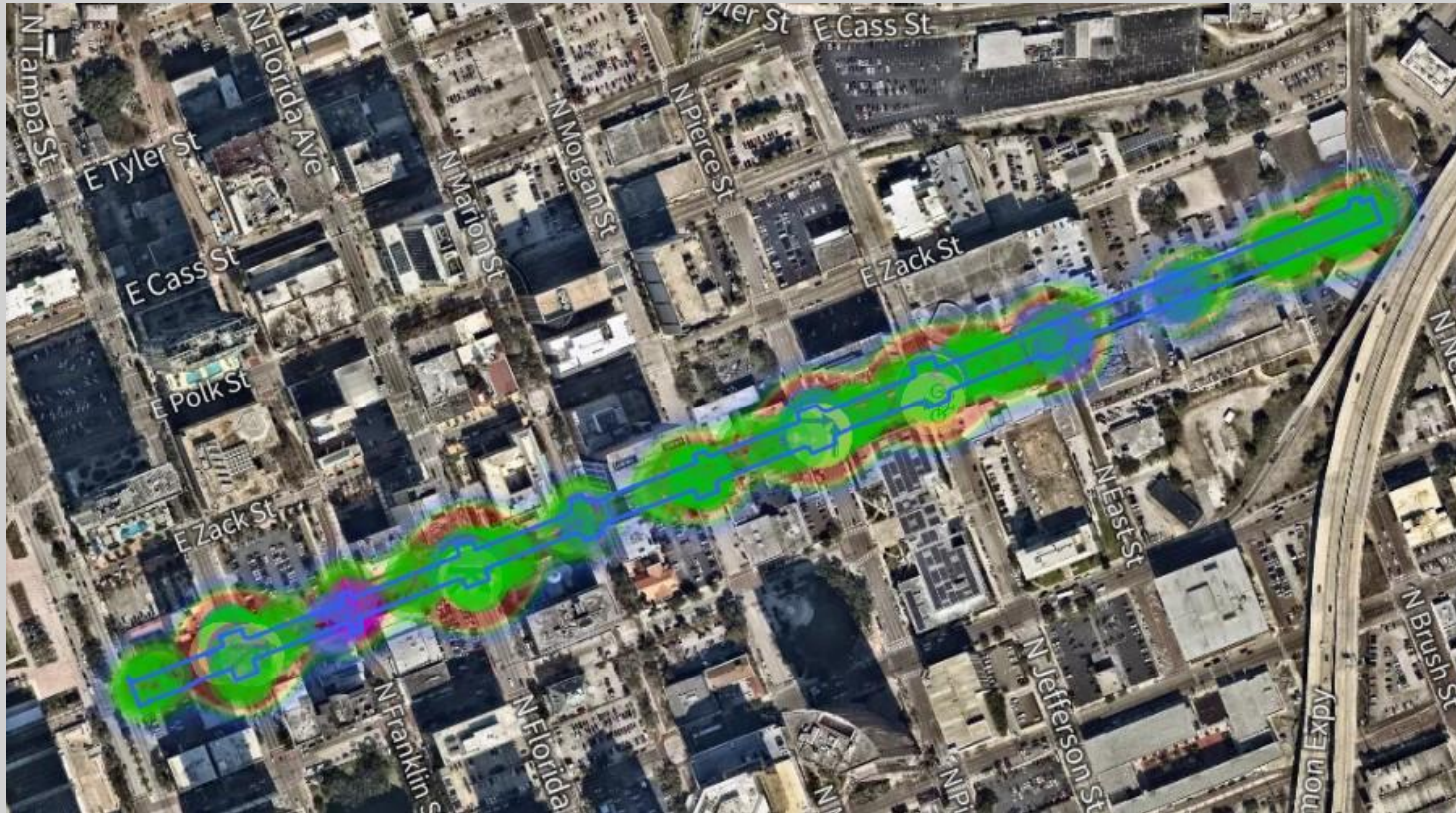
- Signal Four Analytics
- Crash Data from 1/1/2019 to 12/31/2023
- Total of 170 crashes reported
 - Day: 137 crashes
 - Night: 33 crashes
- No fatalities reported in the past 5 years
- Low Pedestrian and Bicycle crashes



Crash Severity vs Crash Type



Safety Analysis



| Year | Crashes | Dry | Wet | Day | Night |
|------|---------|-----|-----|-----|-------|
| 2019 | 49 | 48 | 1 | 38 | 11 |
| 2020 | 25 | 24 | 1 | 23 | 2 |
| 2021 | 30 | 28 | 2 | 23 | 7 |
| 2022 | 28 | 26 | 2 | 21 | 7 |
| 2023 | 38 | 37 | 1 | 32 | 6 |



Safety Analysis

Bicycle Crashes

Crash No. 25572439 (2022)

- V1 traveling WB on Twiggs, left turn on Jefferson
- NM1 crossing south leg



Crash No. 25587235 (2023)

- V1 traveling SB on Tampa, right turn on Twiggs
- NM1 crossing west leg



Utility Coordination and Engineering



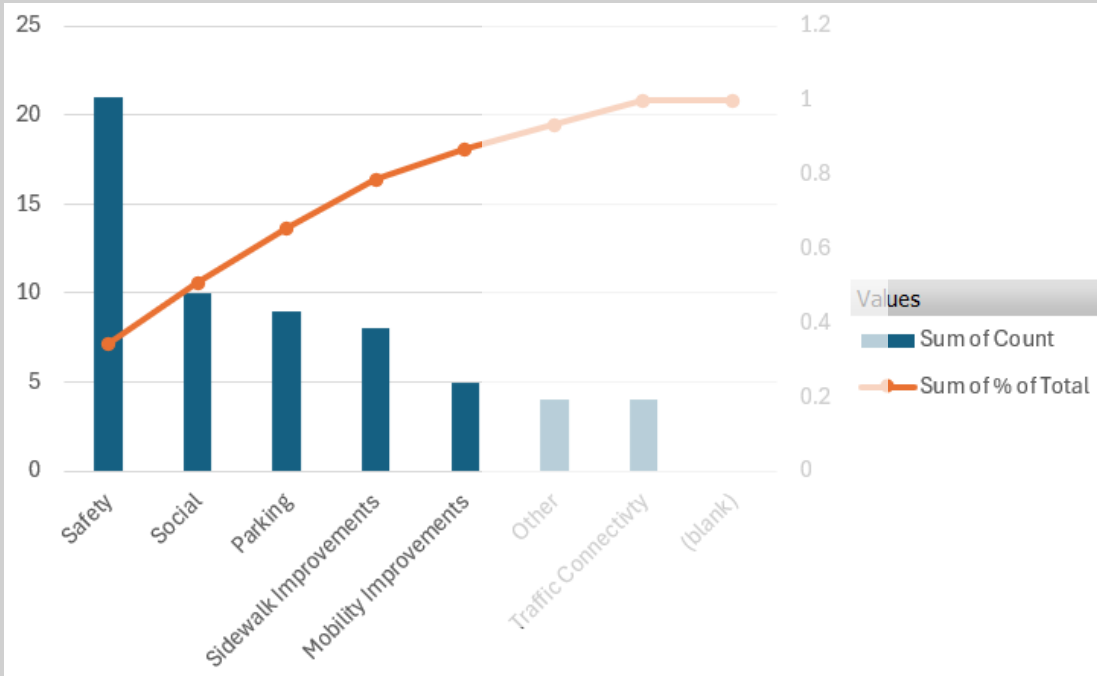
- 23 UAO's identified within corridor
 - Fiber, Communication, Electric, Gas, Water, Sewer, Storm, Signals
- Early coordination
 - Preparation of First Contact plans
 - Identification of possible conflicts
 - Identification of valves, manholes and pull boxes to be adjusted
- Development of a detailed utility conflict matrix
- Subsurface Utility Engineering Services (SUE) coordination if necessary
- Review of UAO's Utility Work Schedules



- Existing Sanitary Sewer line installed in 1949 at Twiggs and Jefferson
- Relined 15 years ago
- Minimum life expectancy of the CIPP line is required to be 50 years as per ASTM 1216 standards



Twiggs Stakeholder Meetings: Feedback



Safety

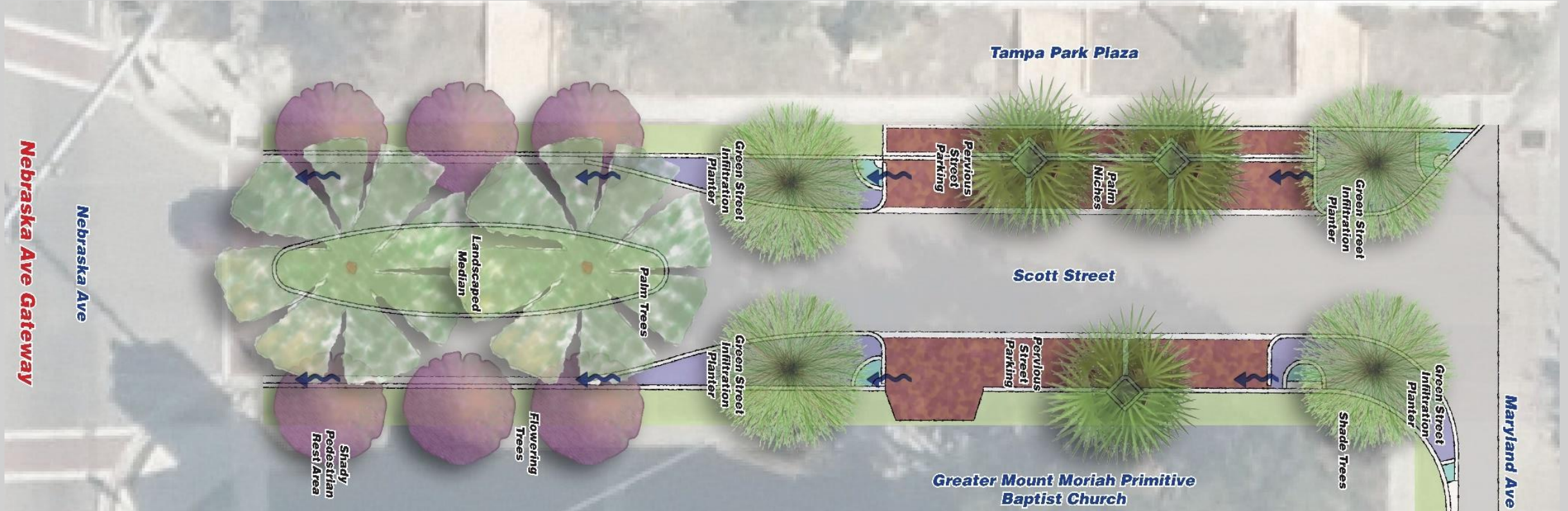
Social

Parking

Sidewalk Improvements

- Crossing Opportunities
- Conflicts around Courthouse
- Slow Down Traffic – Peak Times
- Disconnect: Channel District & Downtown Central Business Dist.
- Connection to Neighborhoods
- Parking Garage Conflicts
- Preserve On-street Parking
- Maintenance for Safety & Accessibility
- Maintain Brick Sections

Scott Street – Complete Streets



Scott Street – Complete Streets

