



VAN DUZER STREET CORRIDOR TRANSPORTATION IMPROVEMENTS

Presentation to Staten Island Community Board 1

June 14th, 2016





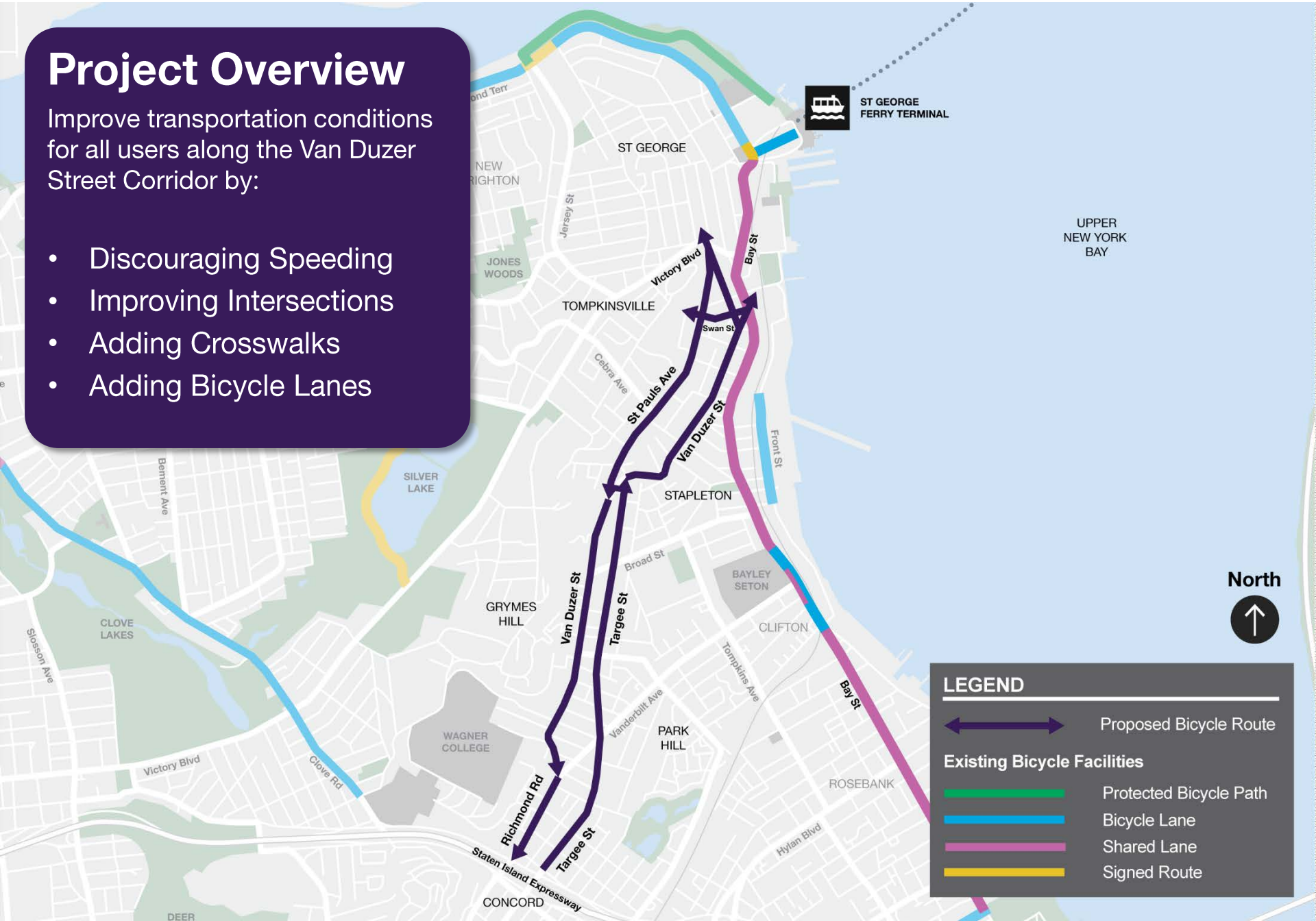
Project Background

- Fall 2015 - NYC DOT began investigating corridor after receiving numerous complaints regarding speeding and poor intersection design along route
- June 2016 – Project presented to Van Duzer St Civic Association

Project Overview

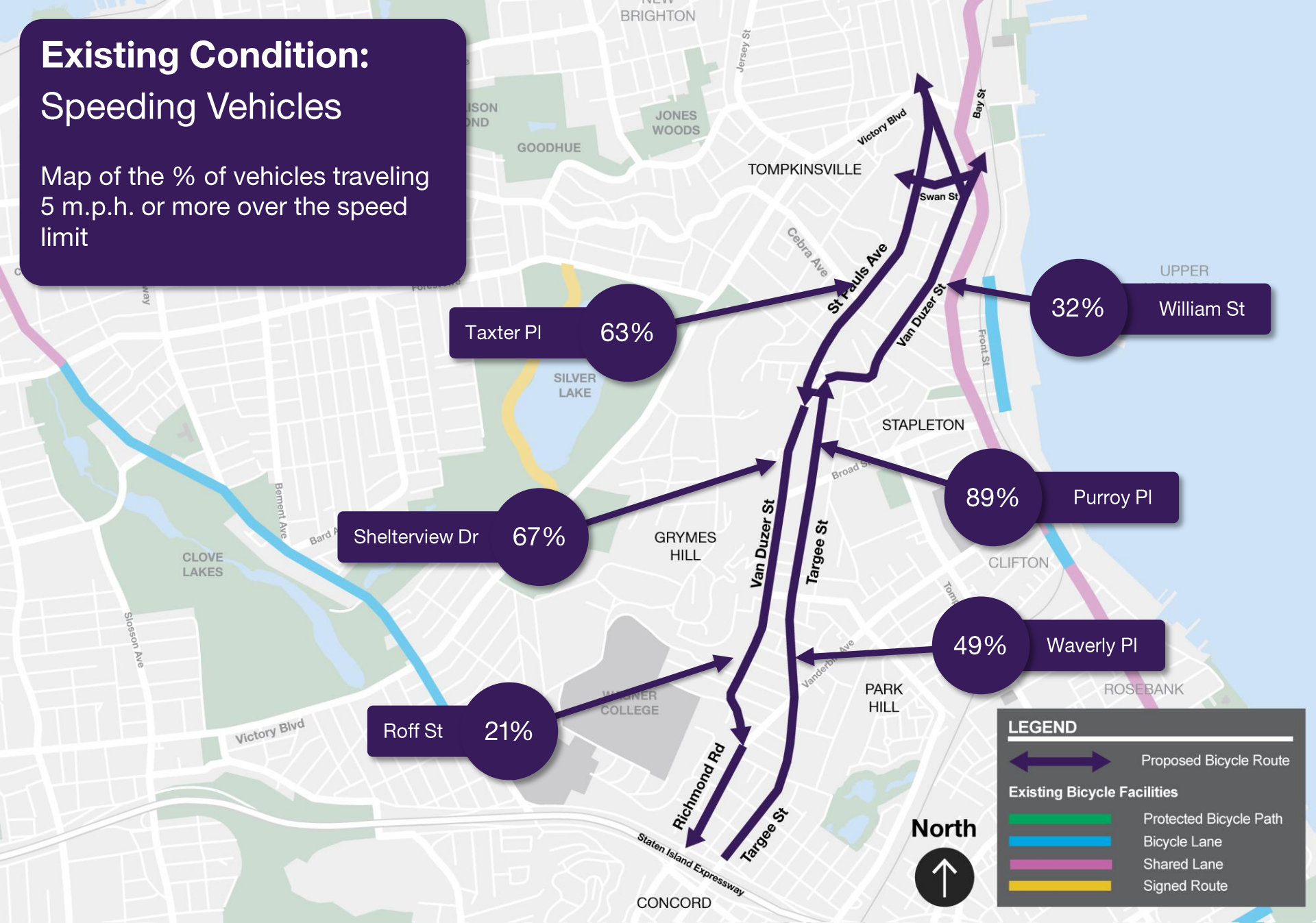
Improve transportation conditions for all users along the Van Duzer Street Corridor by:

- Discouraging Speeding
- Improving Intersections
- Adding Crosswalks
- Adding Bicycle Lanes



Existing Condition: Speeding Vehicles

Map of the % of vehicles traveling 5 m.p.h. or more over the speed limit



Existing Conditions

Map of existing road conditions

Wide Travel Lanes

Wider than standard travel lanes contribute to speeding

Wide Travel Lanes with Channelization

Excess channelization limits other road uses and can be replaced

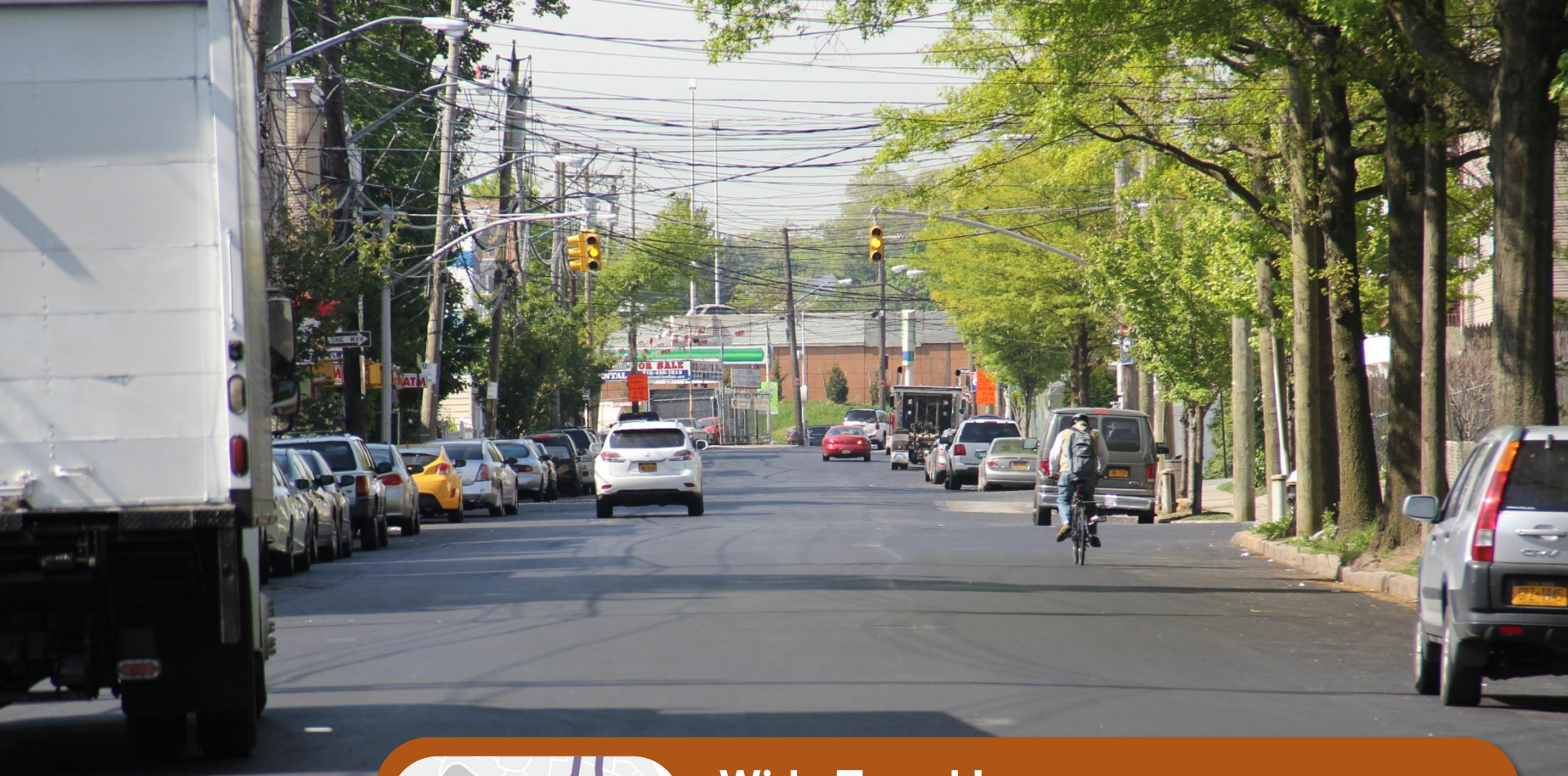
Wide Roadway

A second travel lane, where volume does not require it, contributes to speeding and aggressive driving

Pinch Points

Due to peak-hour traffic volume or limited road widths, additional traffic calming measures are limited





Wide Travel Lanes

Example: Richmond Rd, Van Duzer St to Narrows Rd N

- Two very wide travel lanes contribute to speeding

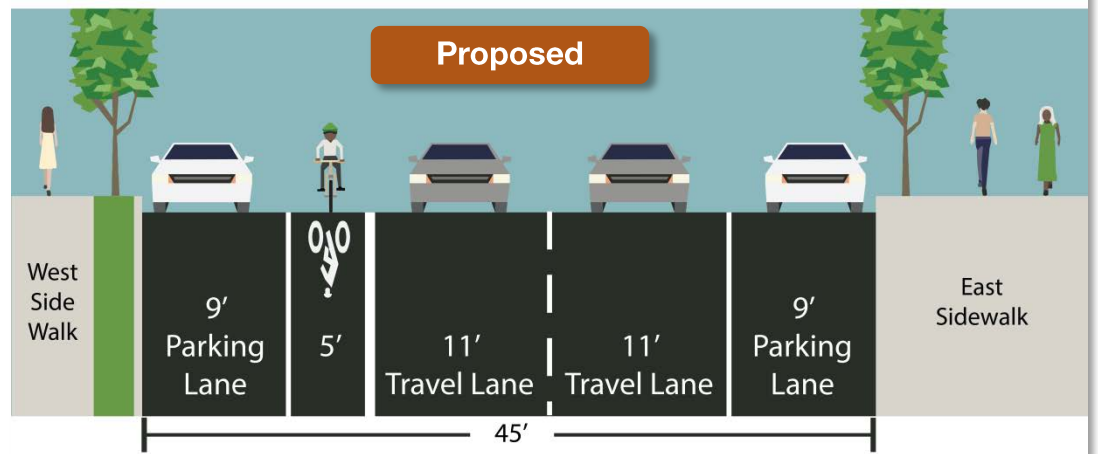
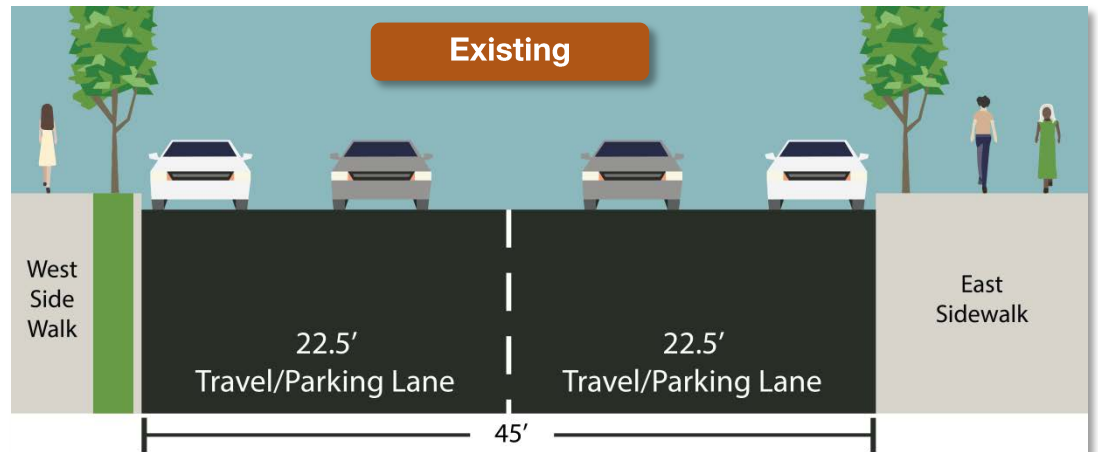


Wide Travel Lanes

Example: Richmond Rd

From Van Duzer St to Narrows Rd N

- Narrowing travel lanes to standard width provides room for bicycle lane



Example of Proposed Design

Skillman Ave, Queens





Wide Travel Lane with Channelization

Example: St Pauls Ave

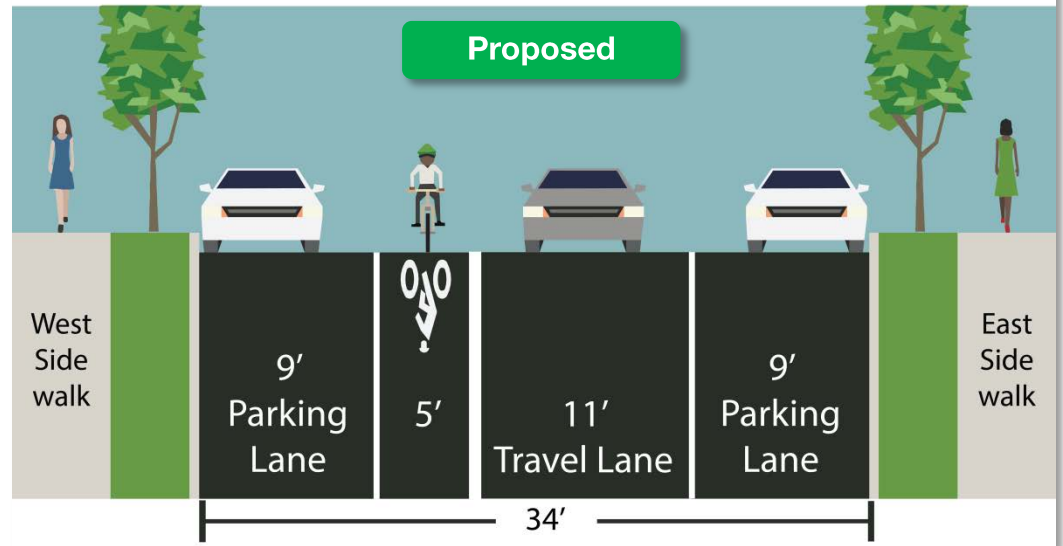
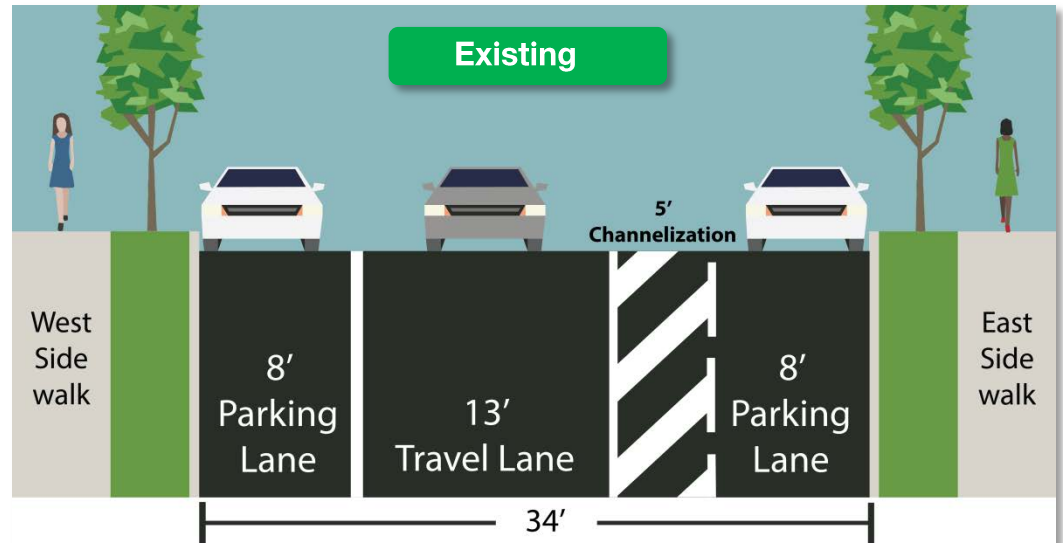
- Wide road with channelization
- 63% of vehicles speeding at Taxter Place



Wide Travel Lanes with Channelization

Example: St Pauls Ave

- Narrow travel lane to standard width to discourage speeding
- Replace channelization with bicycle lane



Example of Proposed Design

Onderdonk Ave, Queens





Wide Roads

Example: Targee St (Vanderbilt Ave to Van Duzer St)

- Traffic volume drops after Vanderbilt Ave and vehicle speeds increase
- 49% of vehicles speeding at Waverly PI, 89% by Purroy PI

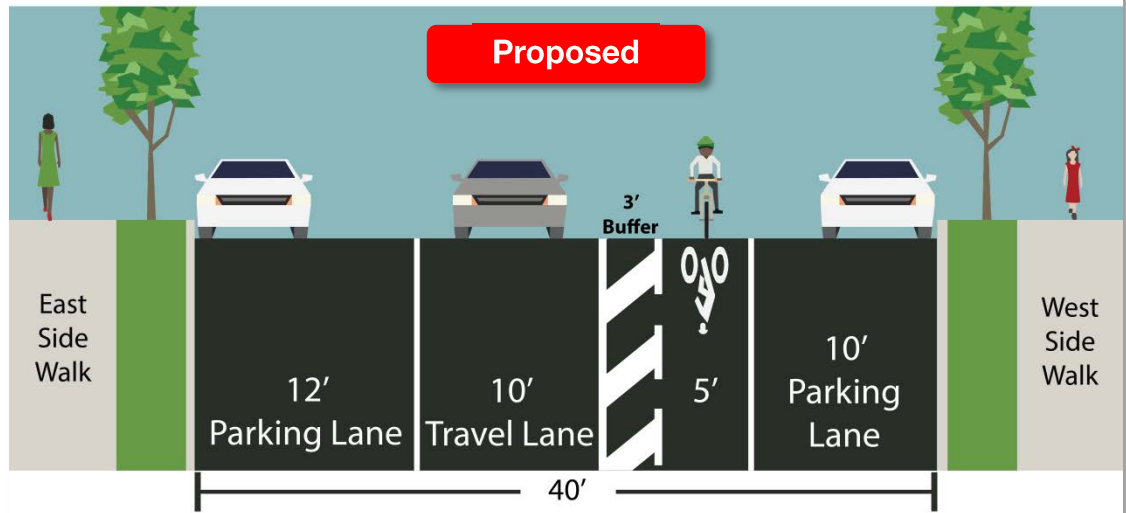
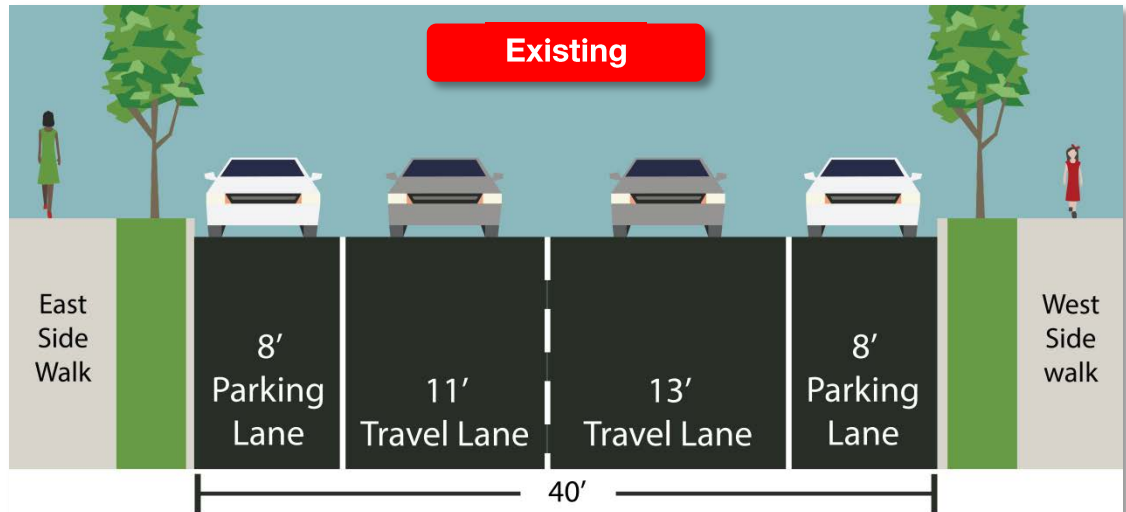


Wide Roads

Example: Targee St

From Vanderbilt Ave to Van Duzer St

- Replace unnecessary second travel lane with buffered bicycle lane and wider parking lanes
- Add right-turn lane at Broad St intersection





Pinch Point

Example: Van Duzer St

From Beach St to Grant St & Van Duzer St Ext to Hannah St

- Narrow roadway limits further traffic calming measures
- But speeding has dropped 57% since Targee St



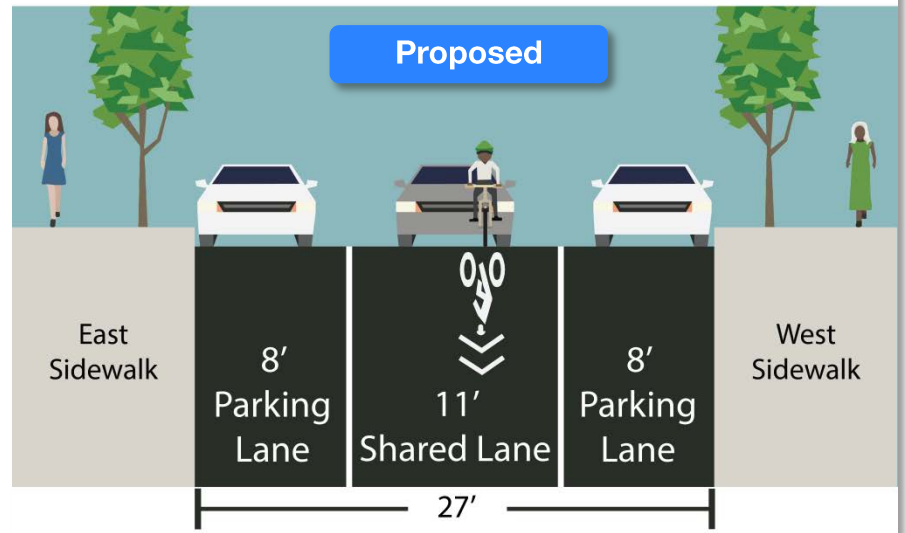
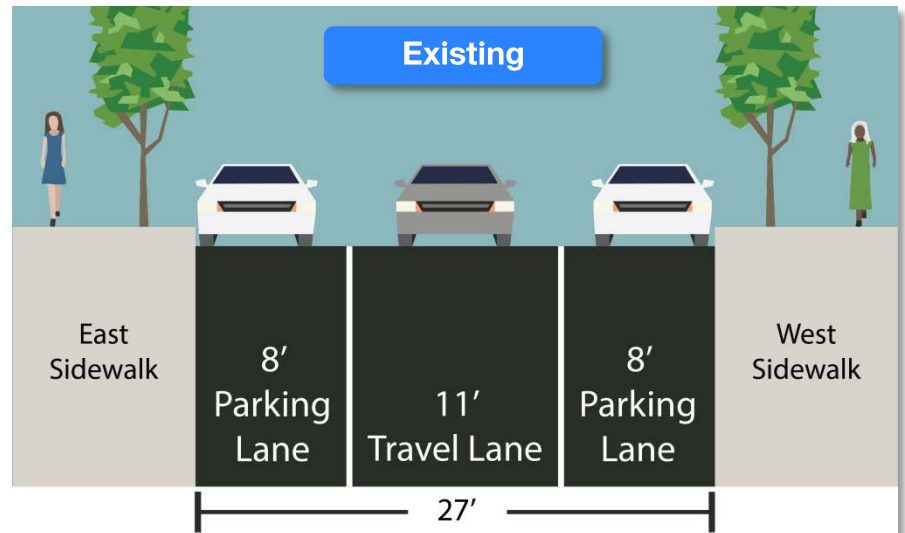
Pinch Point

Example: Van Duzer St

From Beach St to Grant St

From Van Duzer St Ext to Hannah St

- Add shared lane markings where roadway is too narrow for additional bicycle lanes



Example of Proposed Design

Hoyt Ave, Brooklyn





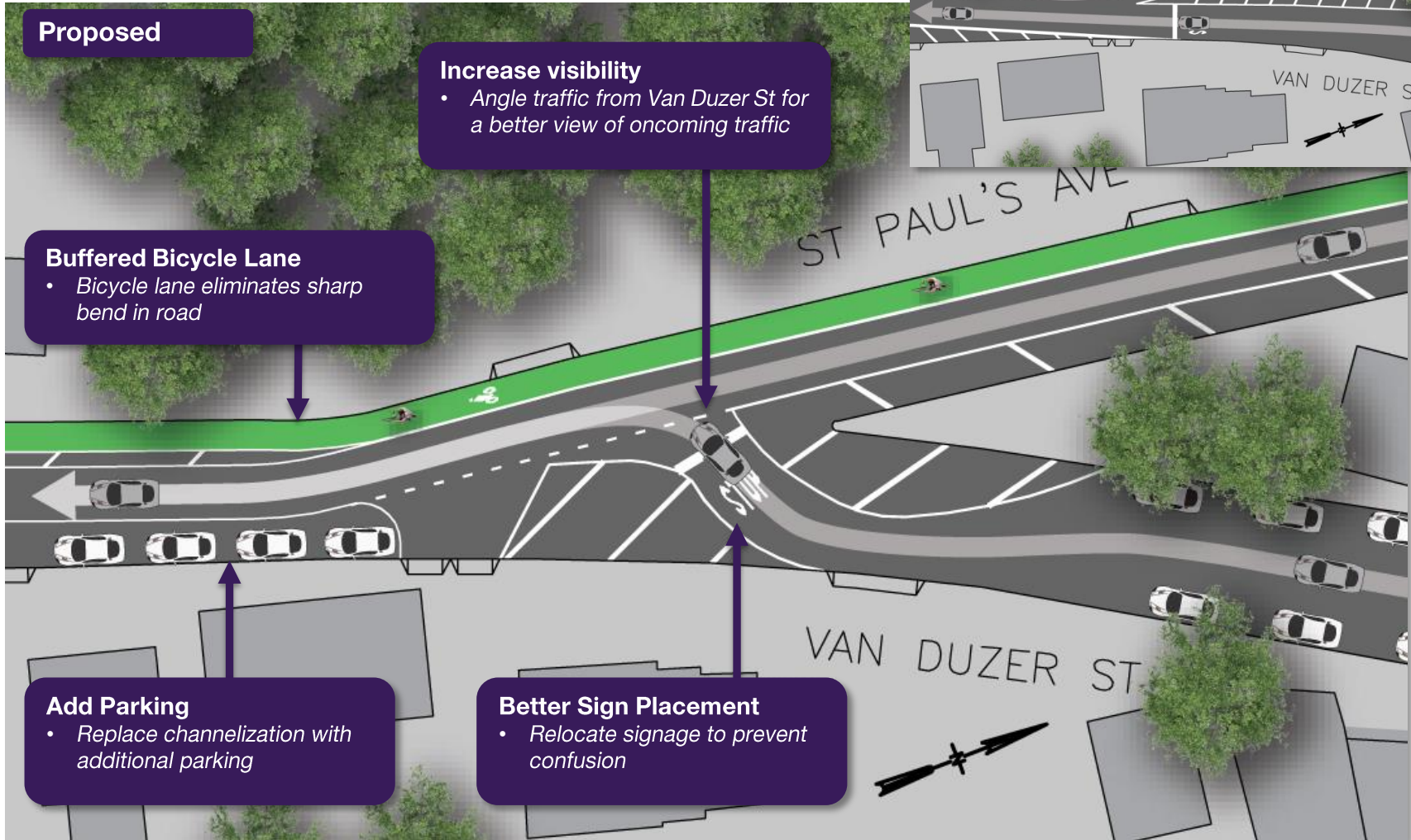
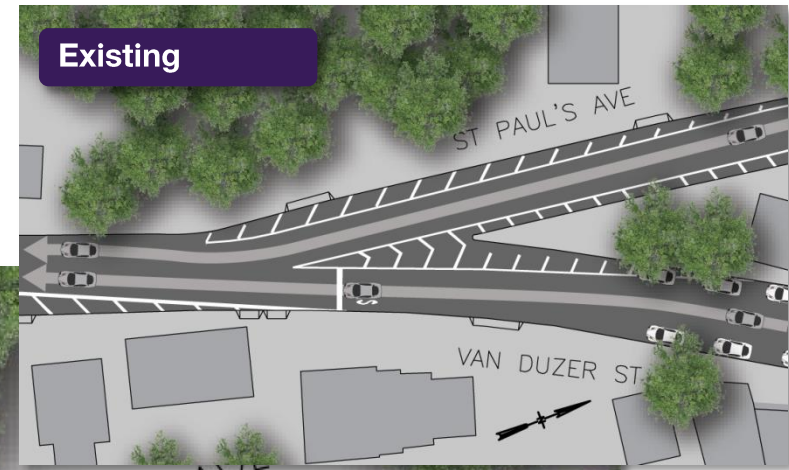
Existing Condition: Poor Intersection Design

St Paul's Ave & Van Duzer St

- Intersection a frequent source of complaints
- Angle of intersection leads to:
 - Poor visibility
 - Confusing sign placement
 - Loss of parking

Proposed Design Concept

To be installed at St Pauls Ave & Van Duzer St





Existing Condition: Poor Intersection Design

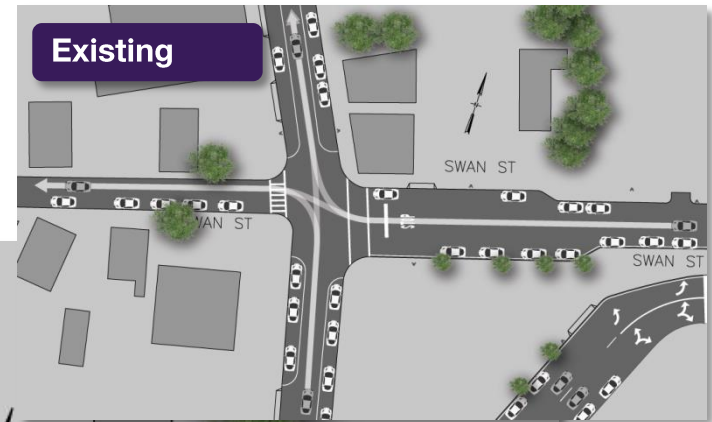
Van Duzer St & Swan St

- Long crossing for pedestrians
- Poor alignment for through traffic

Proposed Design

To be installed at Van Duzer St & Swan St

Existing



Improve Road Alignment

- Painted curb extension improves alignment through intersection

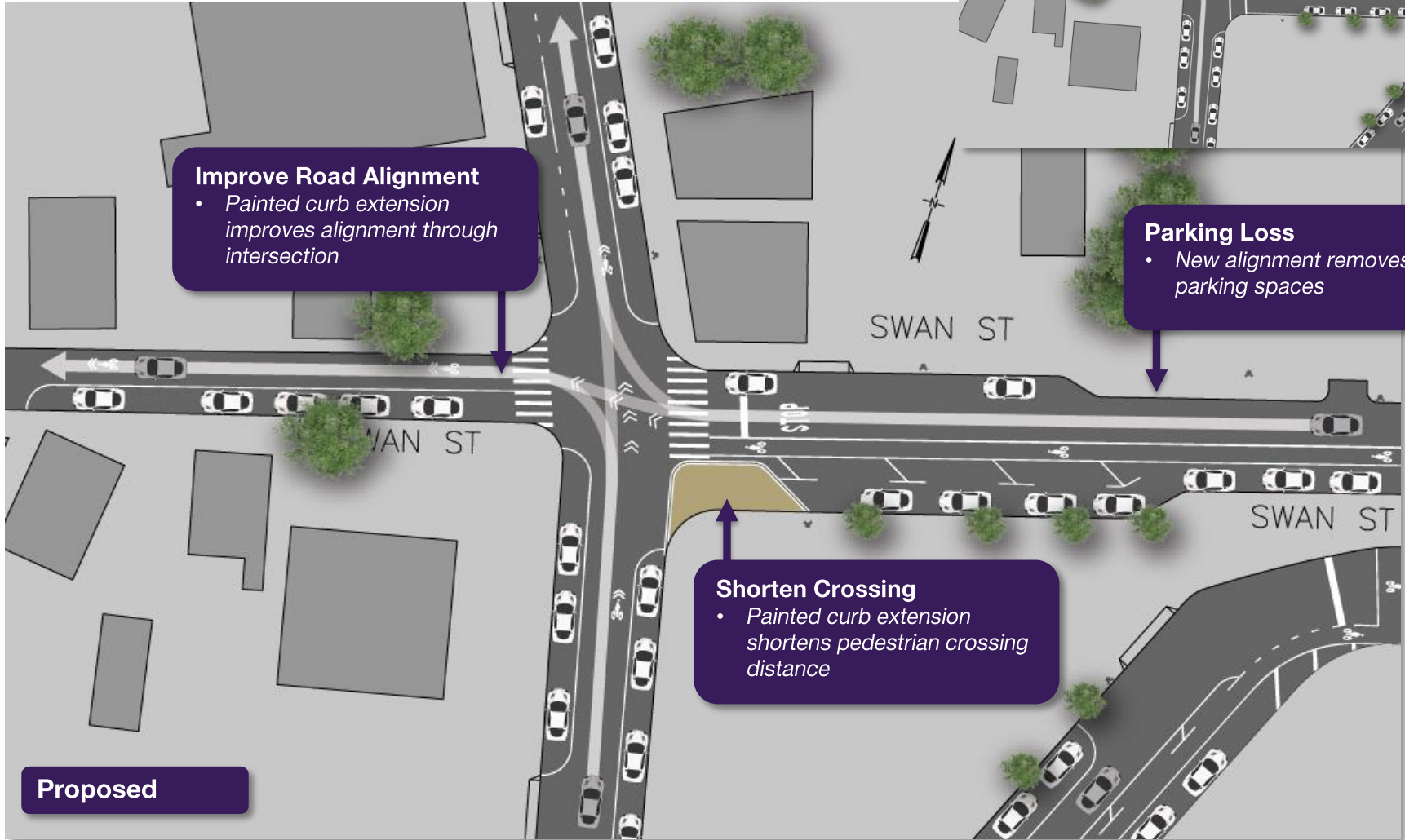
Parking Loss

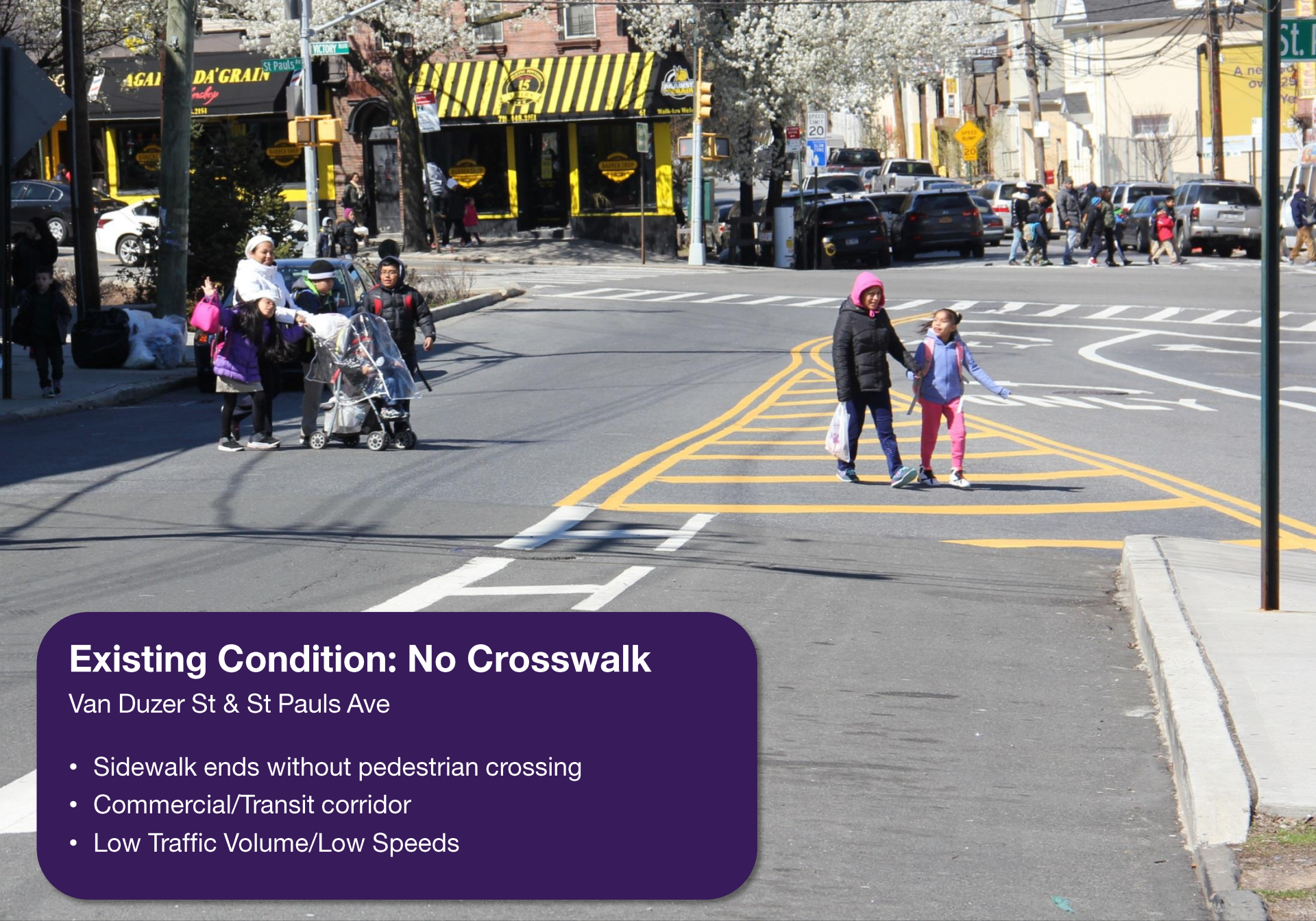
- New alignment removes two parking spaces

Shorten Crossing

- Painted curb extension shortens pedestrian crossing distance

Proposed





Existing Condition: No Crosswalk

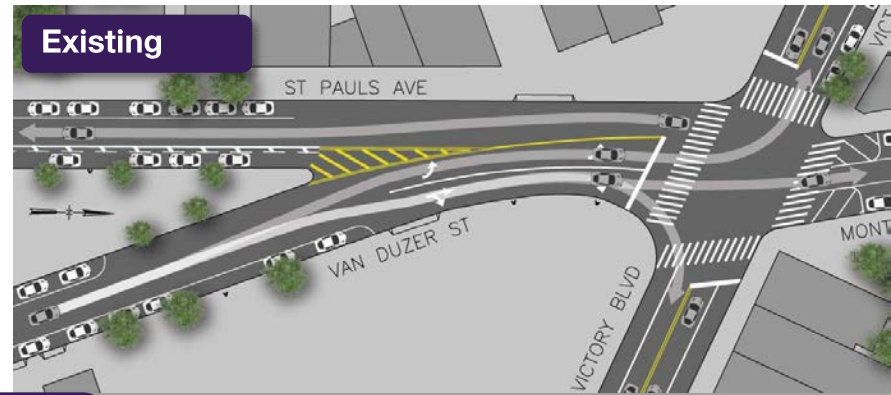
Van Duzer St & St Pauls Ave

- Sidewalk ends without pedestrian crossing
- Commercial/Transit corridor
- Low Traffic Volume/Low Speeds

Proposed Design Concept

Van Duzer St & St Pauls Ave

Existing

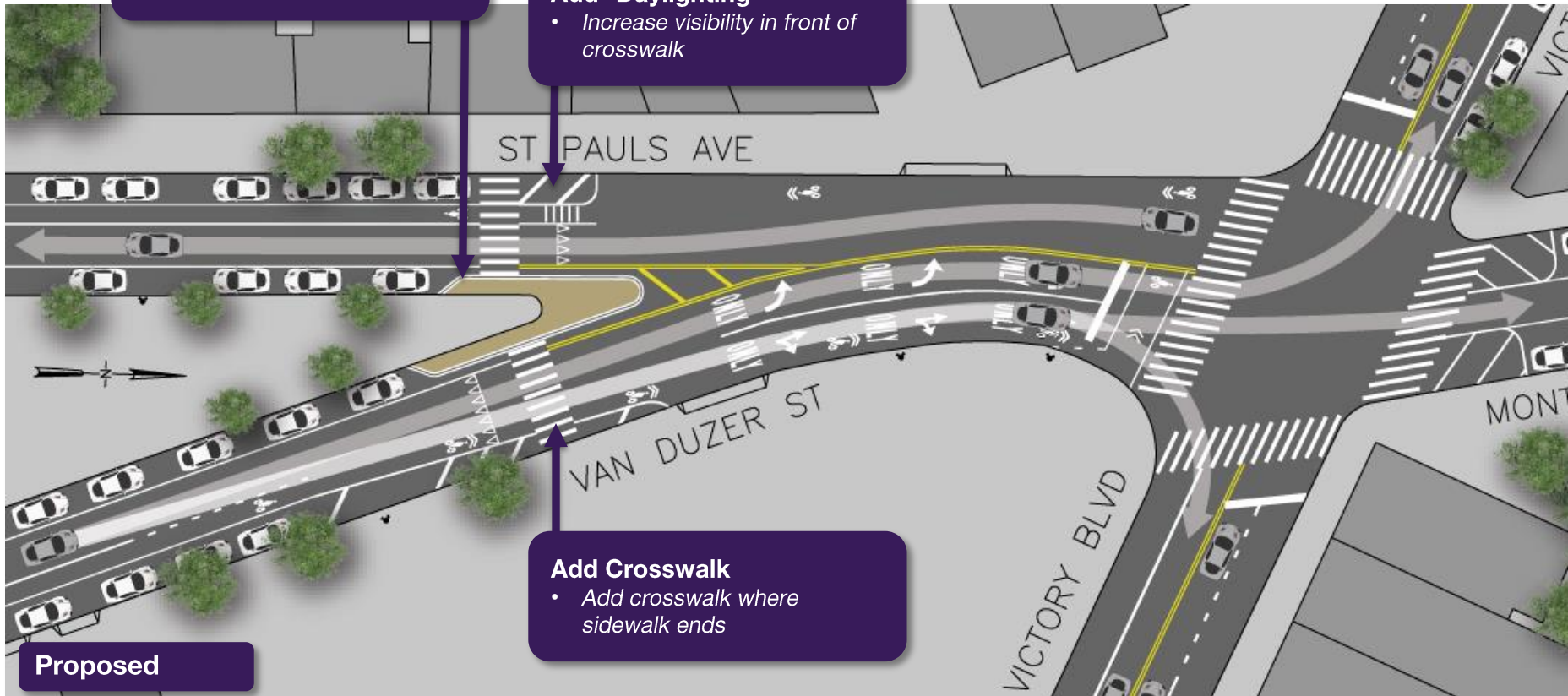


Add Pedestrian Space

- Painted curb extension shortens crossing distance

Add "Daylighting"

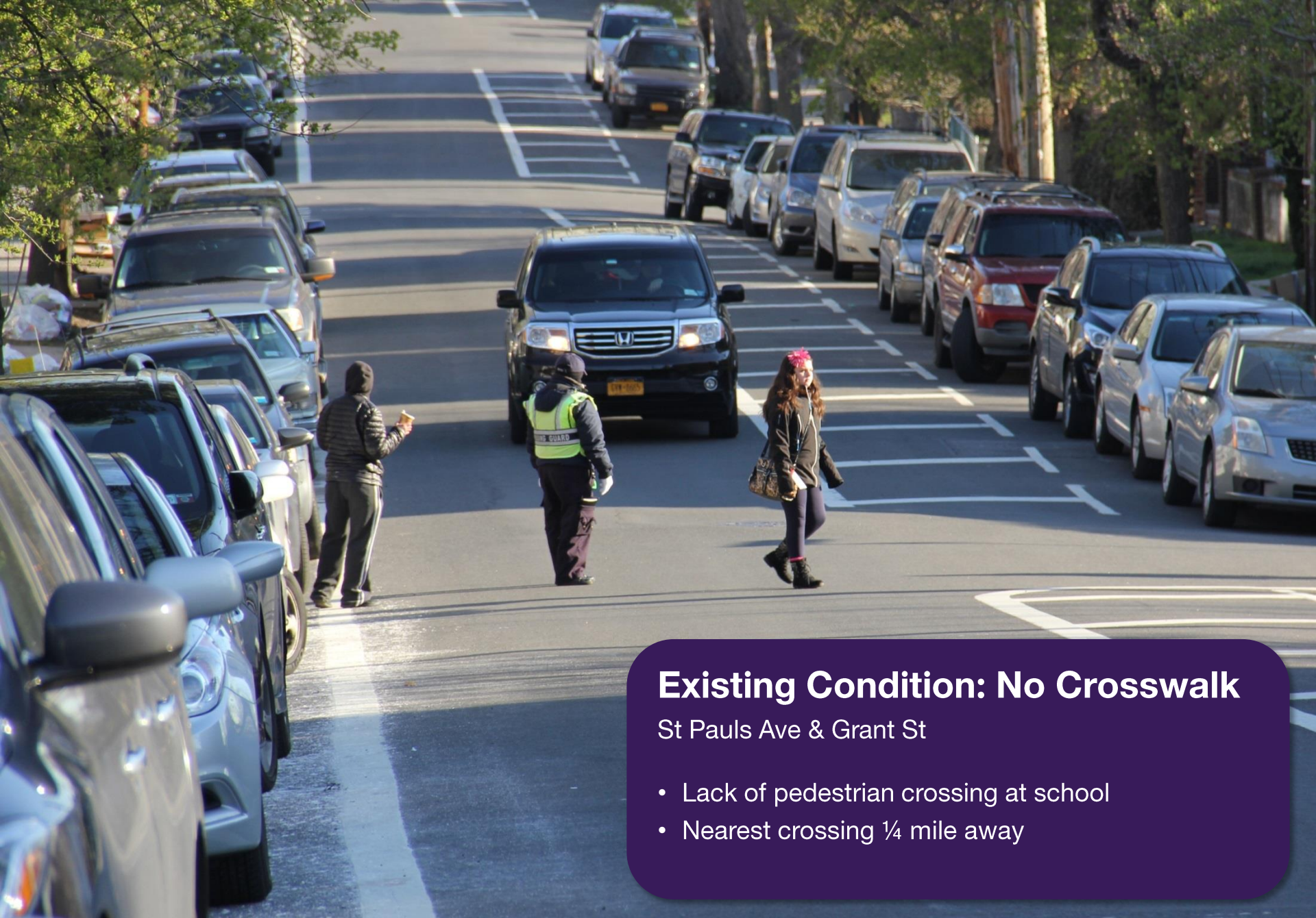
- Increase visibility in front of crosswalk



Add Crosswalk

- Add crosswalk where sidewalk ends

Proposed



Existing Condition: No Crosswalk

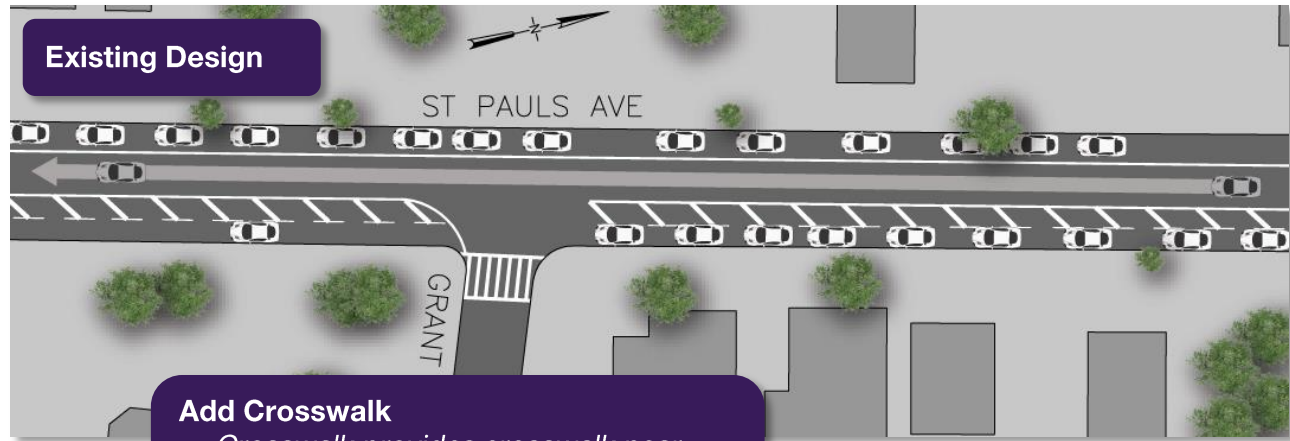
St Pauls Ave & Grant St

- Lack of pedestrian crossing at school
- Nearest crossing ¼ mile away

Proposed Design Concept

To be installed at St Pauls Ave & Grant St

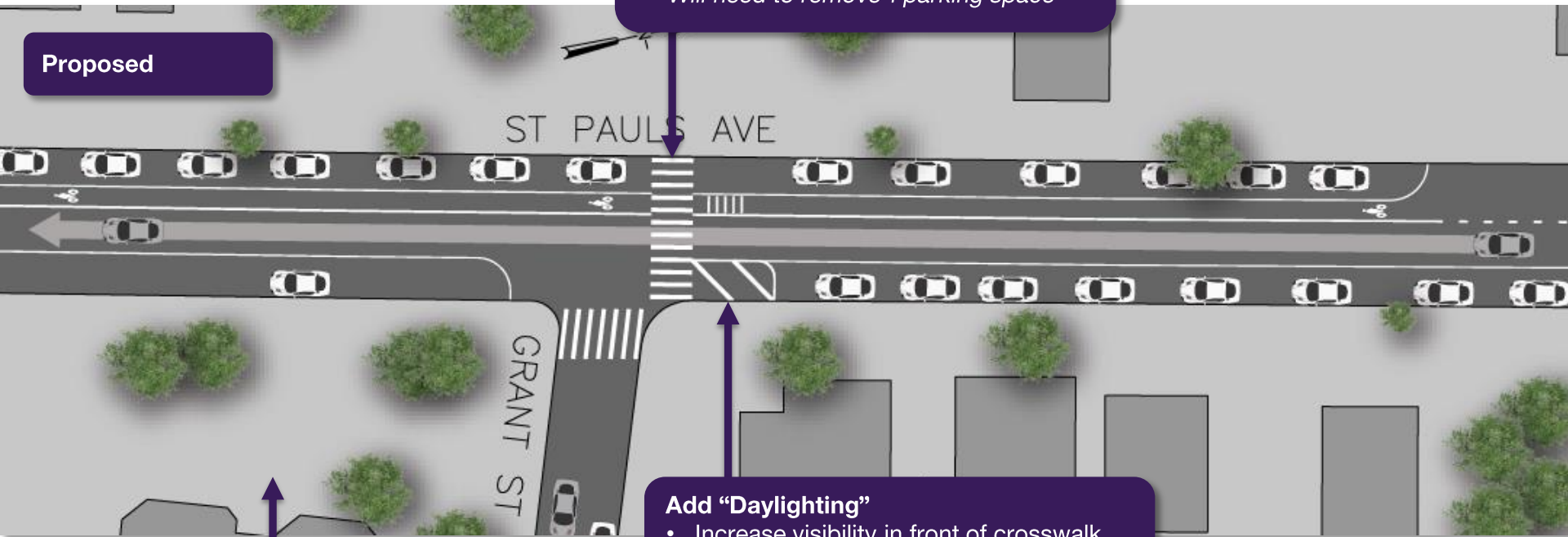
Existing Design



Add Crosswalk

- Crosswalk provides crosswalk near school
- Will need to remove 1 parking space

Proposed



Add "Daylighting"

- Increase visibility in front of crosswalk
- Will need to remove 1 parking space

School



Existing Condition: No Crosswalk

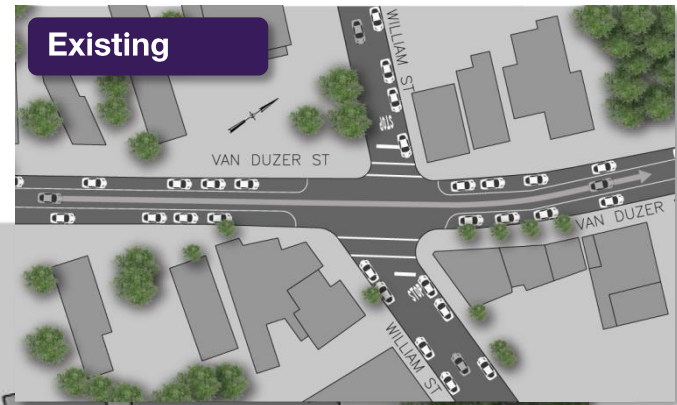
Van Duzer St & William St

- ¼ mile between pedestrian crossings
- William St links neighborhood to Bay St commercial corridor
- Low traffic volume/low speeding levels

Proposed Design Concept

To be installed at Van Duzer St & William St

Existing



Add Crosswalk

- Cuts crossing distance between crosswalks
- Improves neighborhood connection to Bay St
- Improves connection to nearby bus stop

VAN DUZER ST

Reuse "Daylighting" Curb Regulation

- Use existing "No Standing Anytime" regulation for increased visibility without losing parking spaces

Shorten Crossing Distance

- Painted curb extensions cuts down on crossing distances

Proposed

Parking Changes

- Net gain of 38 full-time parking spaces (18 new spaces, 20 upgraded overnight spaces)
- Net loss of 7 overnight parking spaces

St Pauls Ave at Grant St

Remove 2 spaces for crosswalk

Van Duzer St at St Pauls Ave

Add 3 spaces after change to intersection

Van Duzer St at Shelterview Dr

Upgrade 16 overnight spaces to fulltime and remove 14 to replace extra travel lane

Van Duzer St at Young St

Add 19 spaces by replacing channelization

Swan St at Bay St

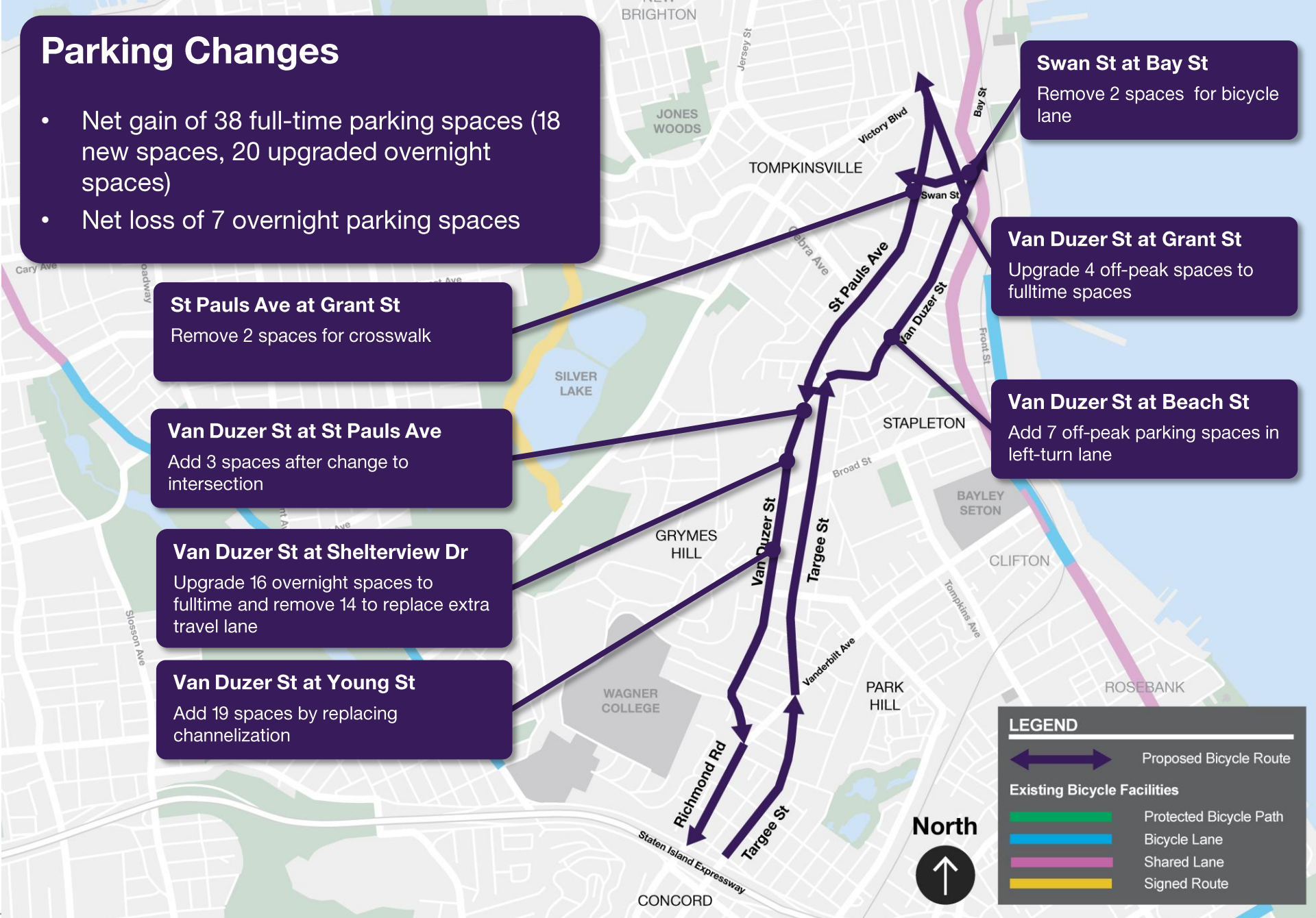
Remove 2 spaces for bicycle lane

Van Duzer St at Grant St

Upgrade 4 off-peak spaces to fulltime spaces

Van Duzer St at Beach St

Add 7 off-peak parking spaces in left-turn lane



LEGEND

Proposed Bicycle Route

Existing Bicycle Facilities

- Protected Bicycle Path
- Bicycle Lane
- Shared Lane
- Signed Route

Project Summary

- Reduce speeding along a residential corridor, while maintaining needed traffic capacity
- Improve traffic alignments and improve visibility through problem intersections
- Add more crosswalks for pedestrians
- Add or upgrade parking
- Add a bicycle route connecting to Bay St and St George Ferry Terminal



THANK YOU!

Questions?



NYC DOT



NYC DOT



nyc_dot



NYC DOT

Addendum:
Southbound Route Improvements





St Pauls Ave

Victory Blvd to Van Duzer St

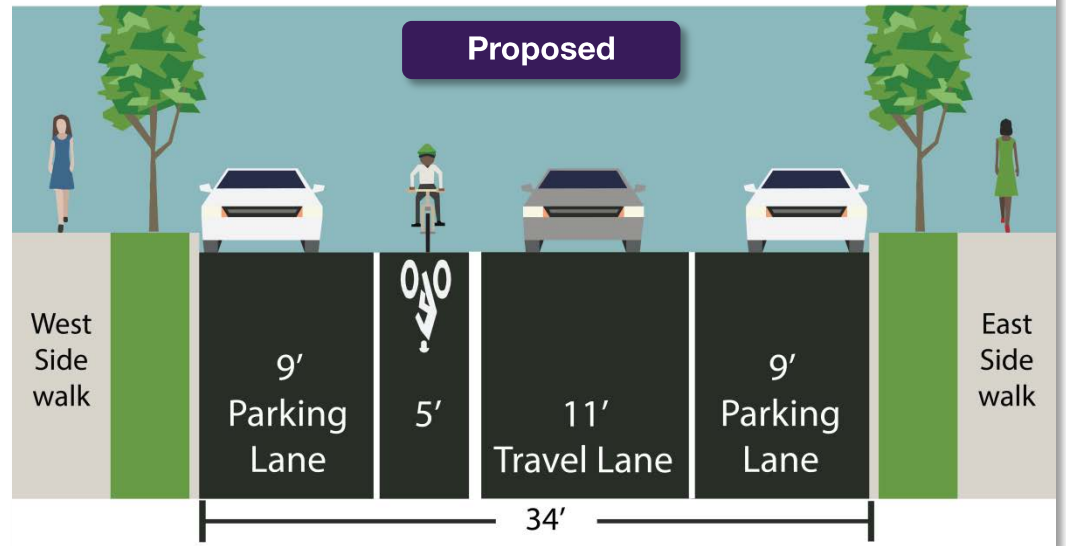
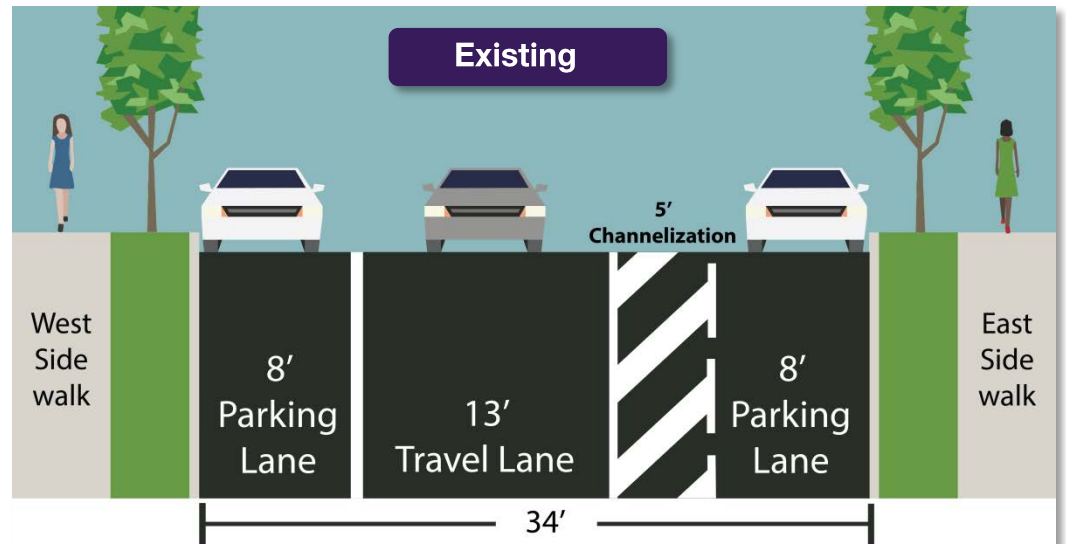
- Wide road with channelization
- 63% of vehicles speeding at Taxter Place

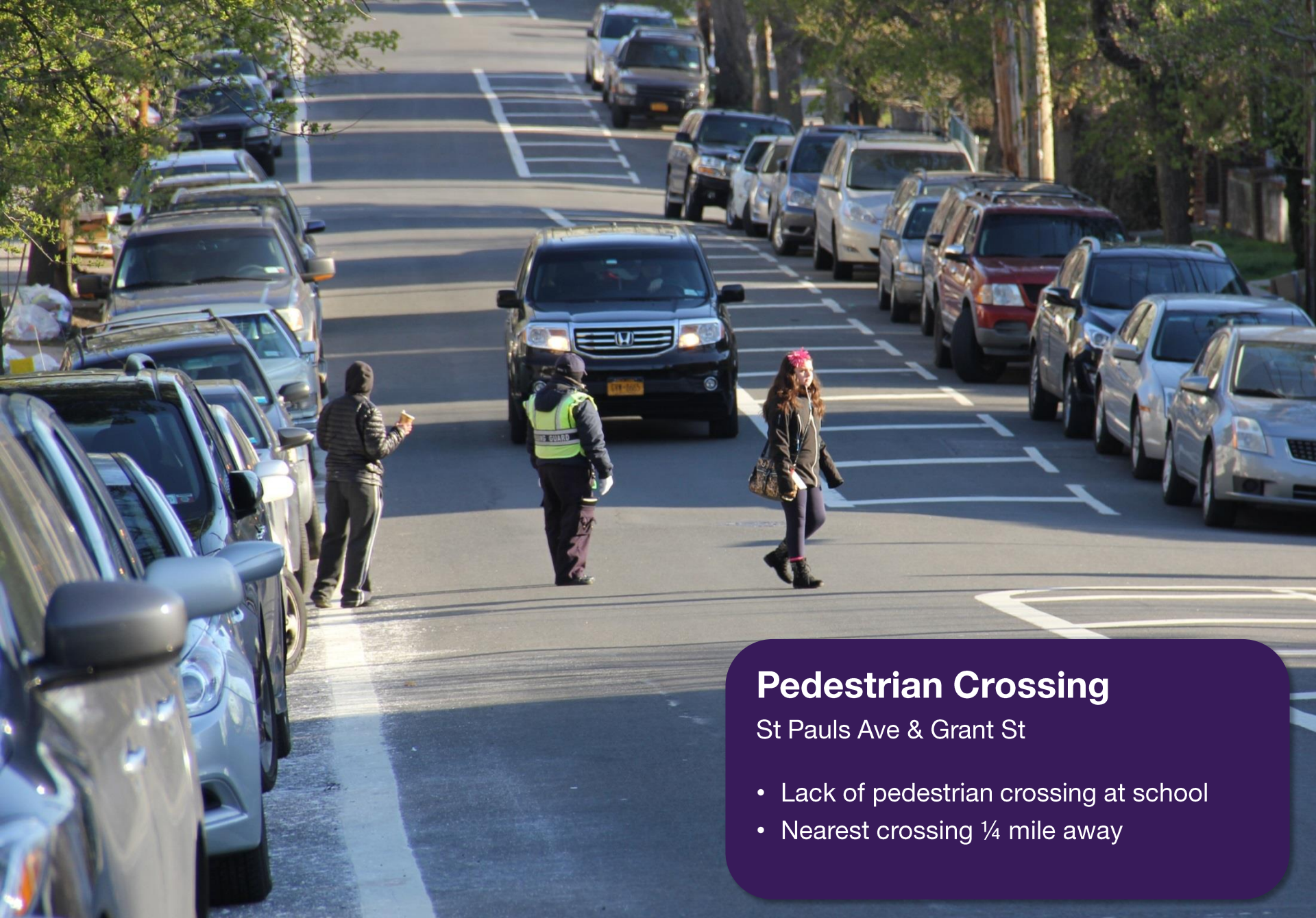


Proposed Design

To be installed on St Pauls Ave

- Narrow travel lane to standard width to discourage speeding
- Replace channelization with bicycle lane





Pedestrian Crossing

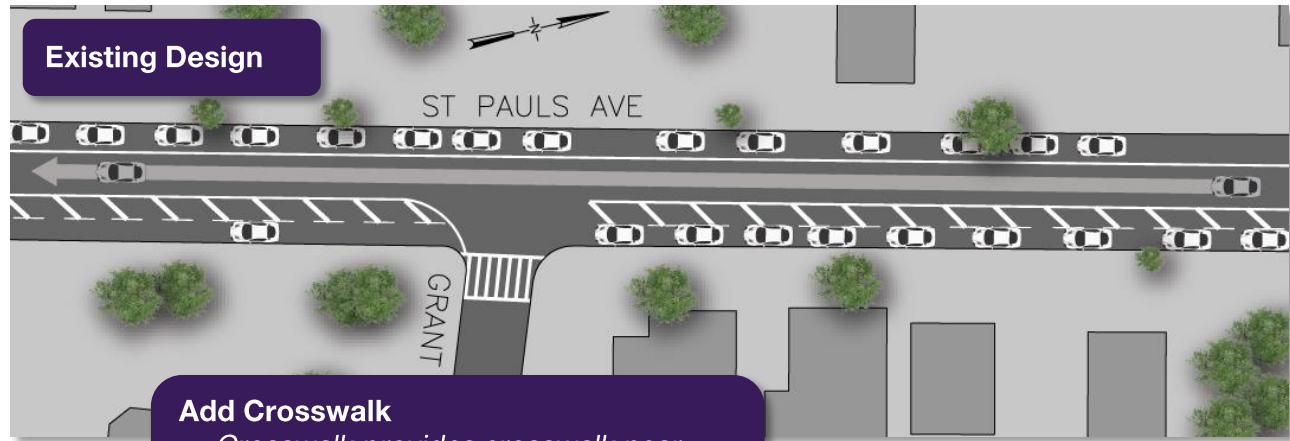
St Pauls Ave & Grant St

- Lack of pedestrian crossing at school
- Nearest crossing ¼ mile away

Proposed Design Concept

To be installed at St Pauls Ave & Grant St

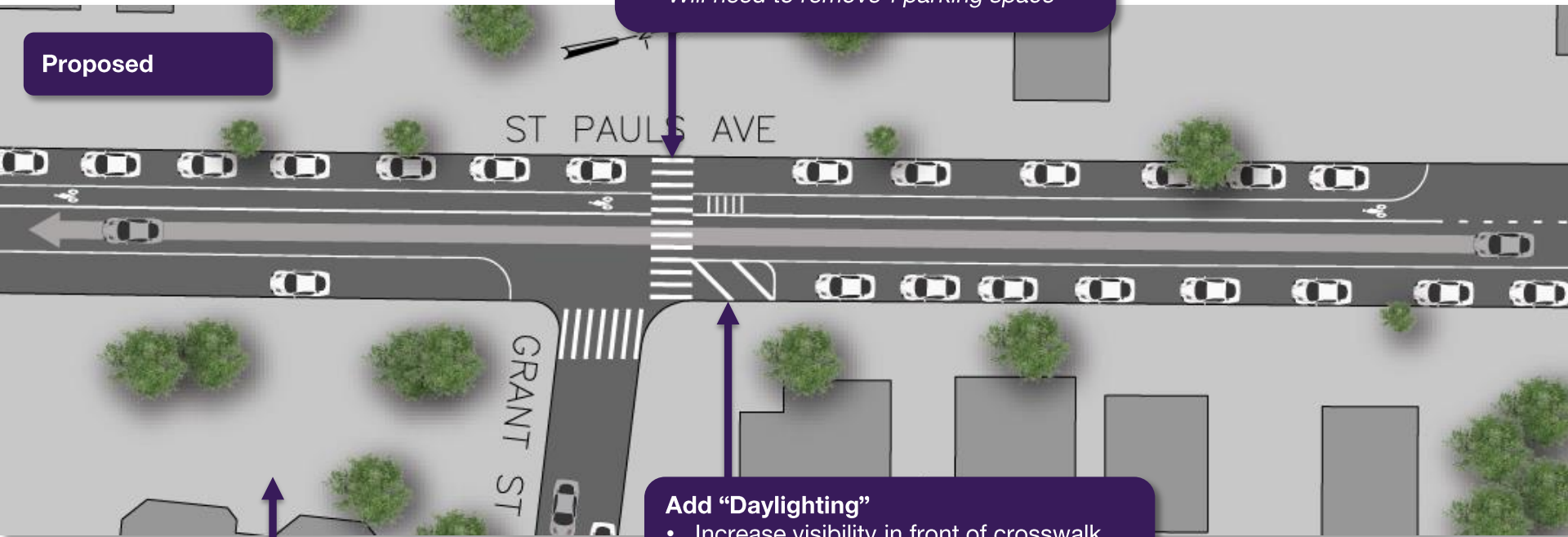
Existing Design



Add Crosswalk

- Crosswalk provides crosswalk near school
- Will need to remove 1 parking space

Proposed



Add "Daylighting"

- Increase visibility in front of crosswalk
- Will need to remove 1 parking space

School



Van Duzer St (southbound)

St Pauls Ave to Broad St

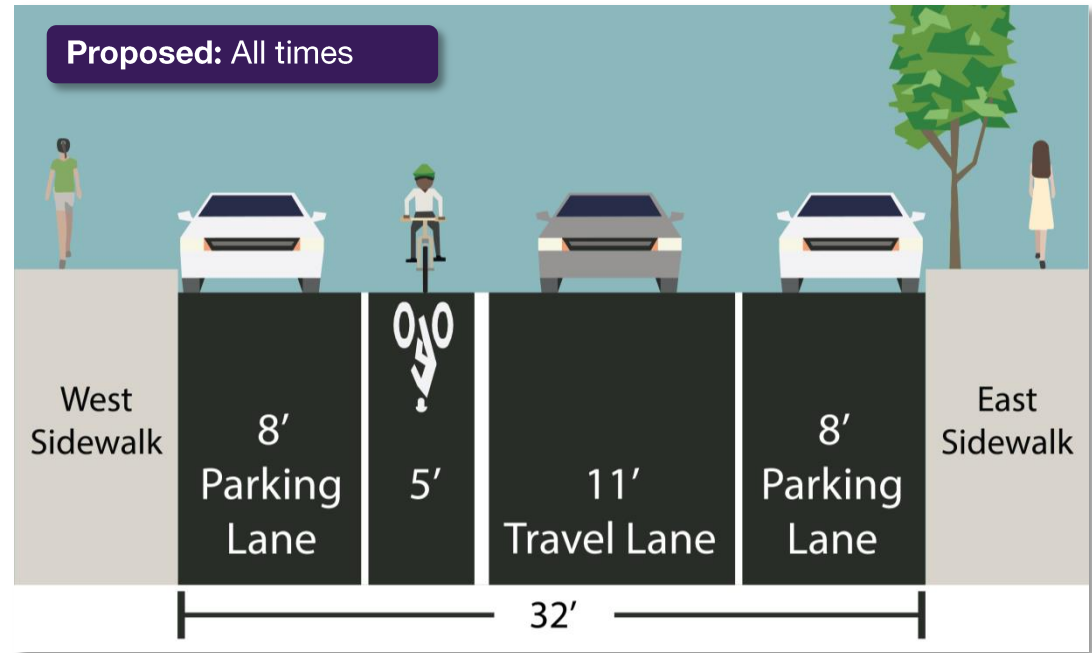
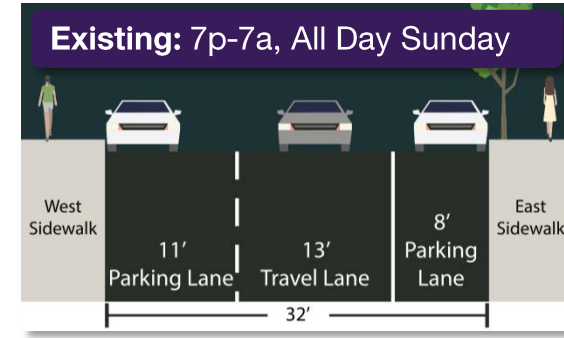
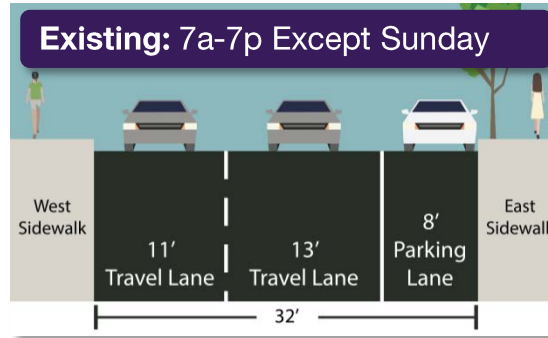
- Extra travel lane for short distance during the day leads contributes to speeding and limits parking
- 67% of vehicles speeding at Shelterivew Drive
- Vehicles parked on sidewalk



Proposed Design

To be installed on Van Duzer St from St Pauls Ave to Broad St

- Replace daytime travel lane with bicycle lane and fulltime parking to discourage speeding





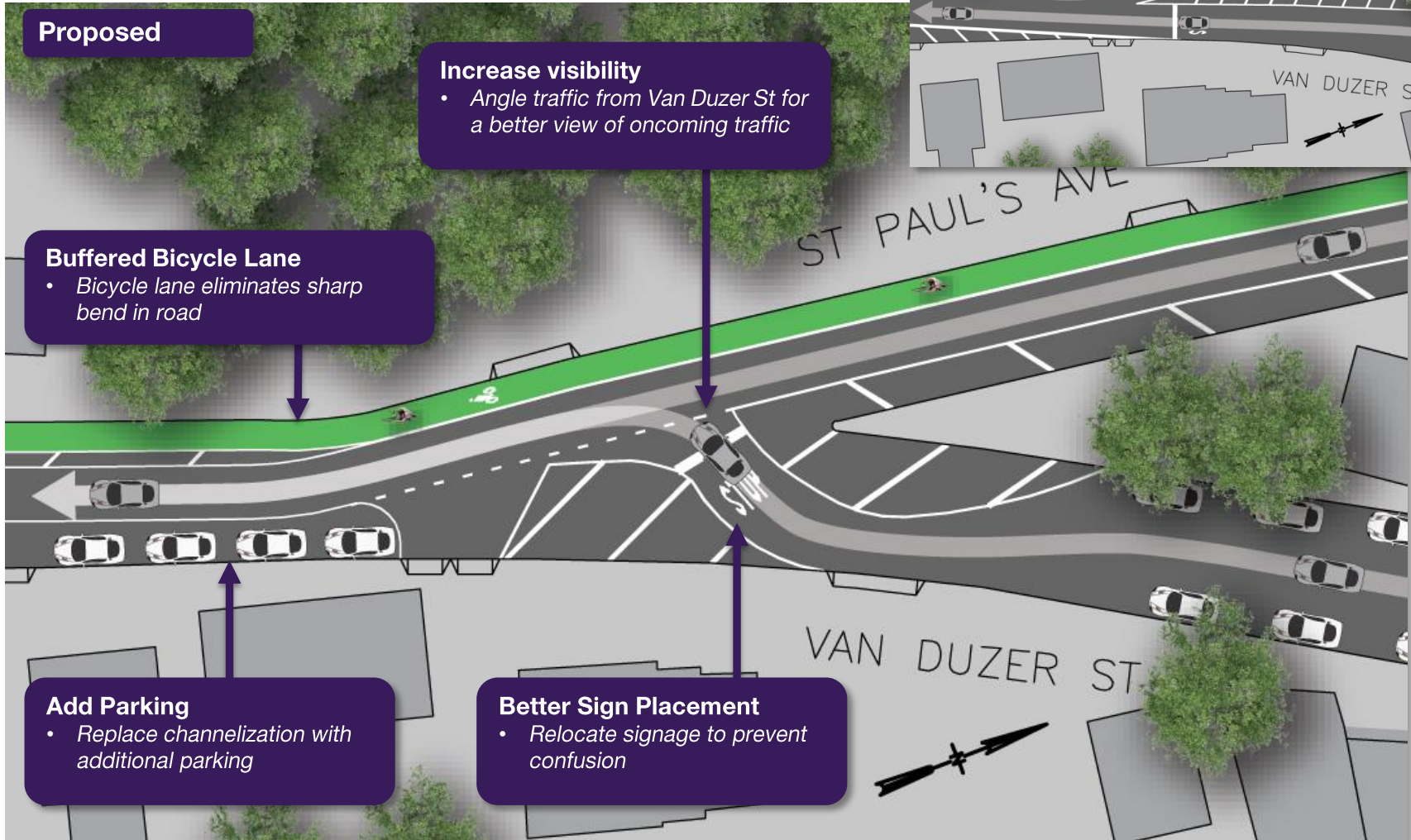
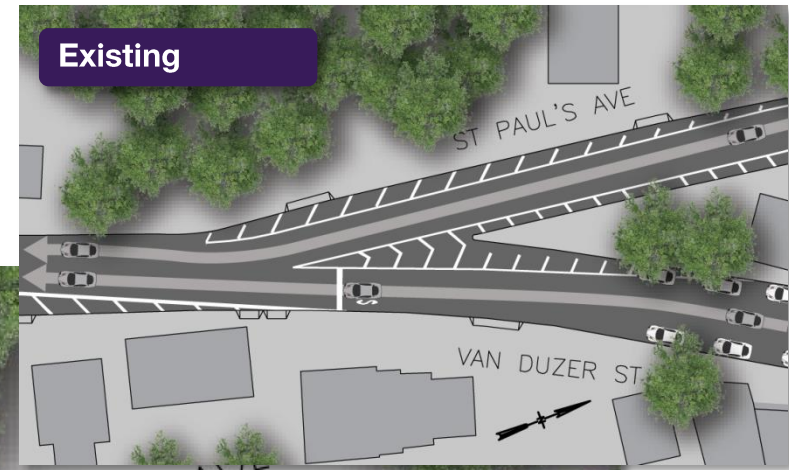
Intersection

St Paul's Ave & Van Duzer St

- Intersection a frequent source of complaints
- Angle of intersection leads to:
 - Poor visibility
 - Confusing sign placement
 - Loss of parking

Proposed Design Concept

To be installed at St Pauls Ave & Van Duzer St





Van Duzer St (southbound)

Broad St to Baring Pl & Roff St to Hillside Ave

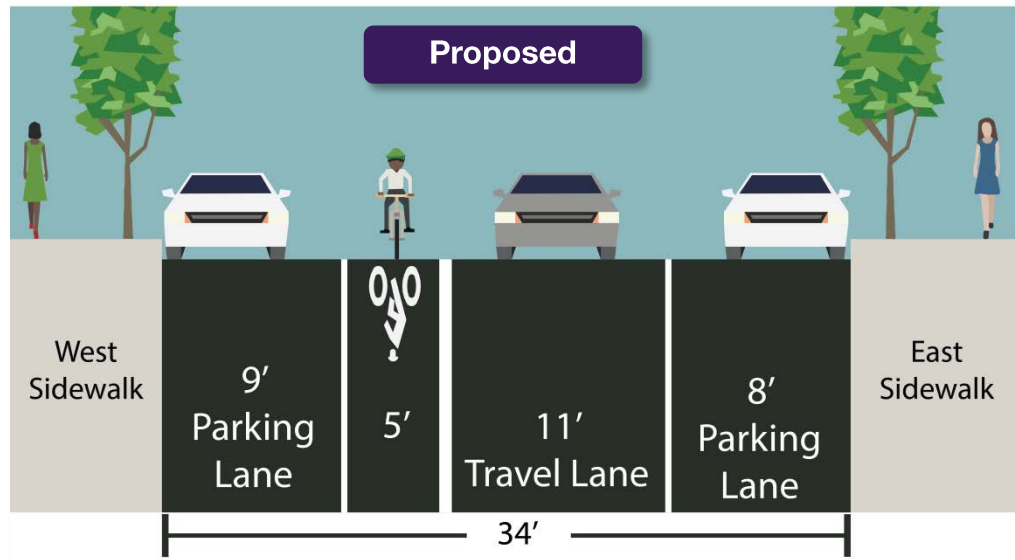
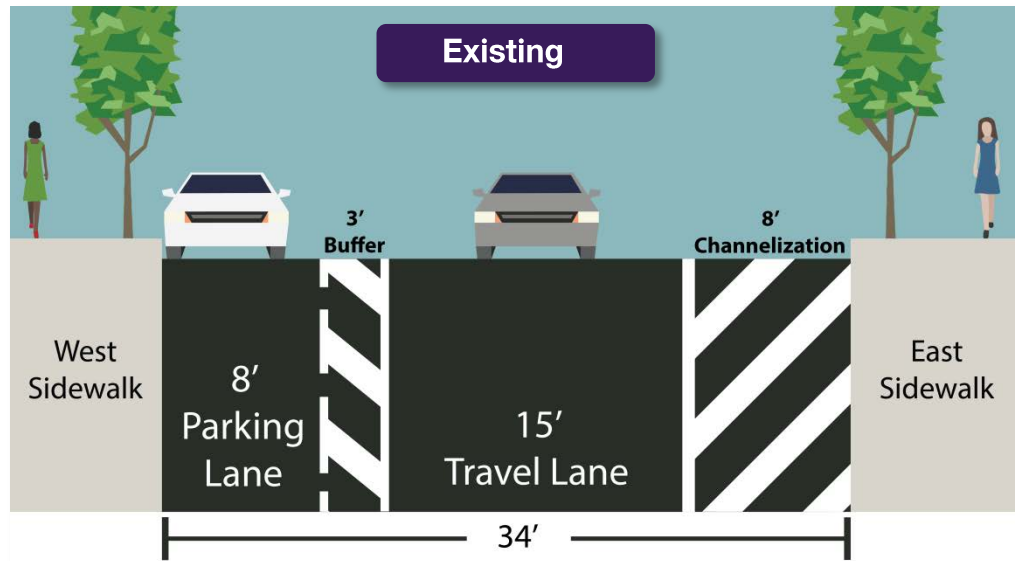
- Wide travel lanes with excess channelization limits parking and contributes to speeding
- 54% of vehicles speeding at Young St
- Vehicles park in channelization



Proposed Design

To be Installed on Van Duzer St
From Broad St to Baring Pl,
From Roff St to Hillside Ave

- Narrow travel lane to standard width to discourage speeding
- Replace channelization with additional parking and bicycle lanes





Van Duzer St (southbound)

Baring Pl to Roff St

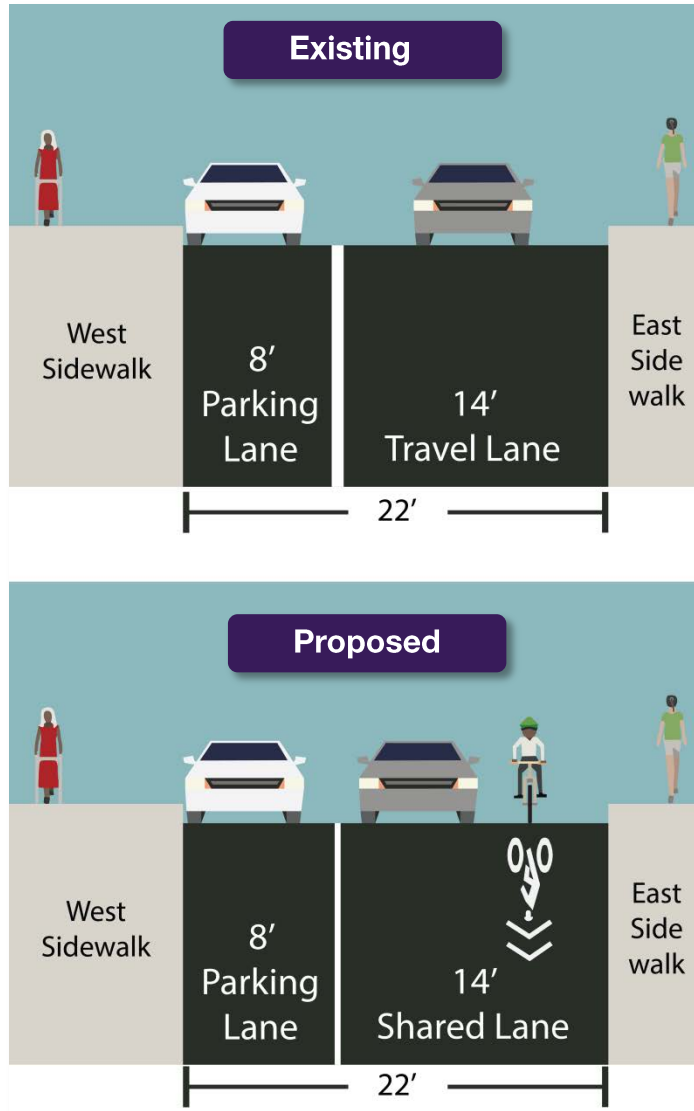
- Roadway narrows, limiting traffic calming options
- But speeding has also dropped by 33% from previous section



Proposed Design

To be Installed on Van Duzer St
From Baring Pl to Roff St

- Shared lane markings connect bicycle route where there is not enough room for bicycle lanes



Shared Lane Markings

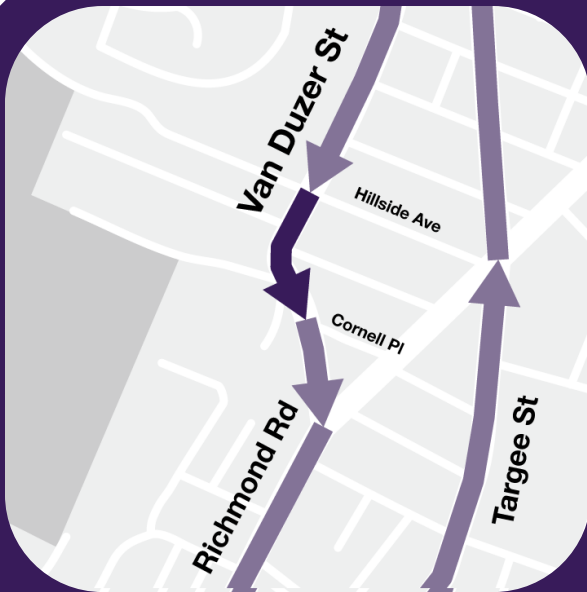
- Connects bicycle route where road is too narrow for bicycle lanes
- Alerts motorist to the presence of cyclists
- Shows cyclists where they should be in the roadway



Van Duzer St (southbound)

Hillside Ave to Cornell Pl

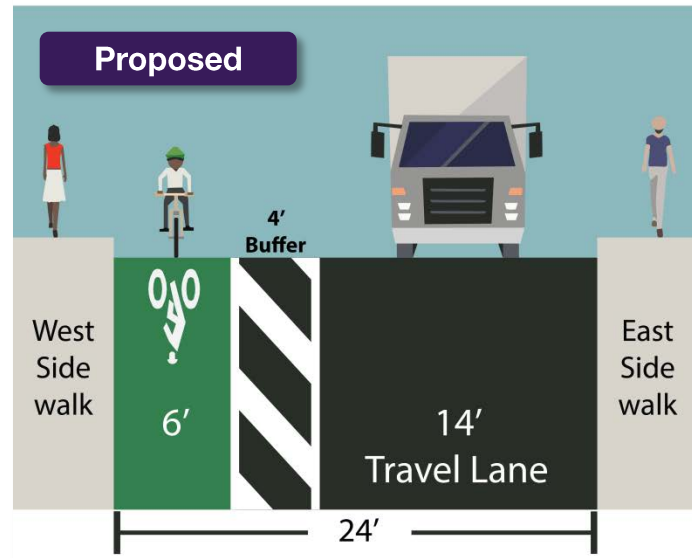
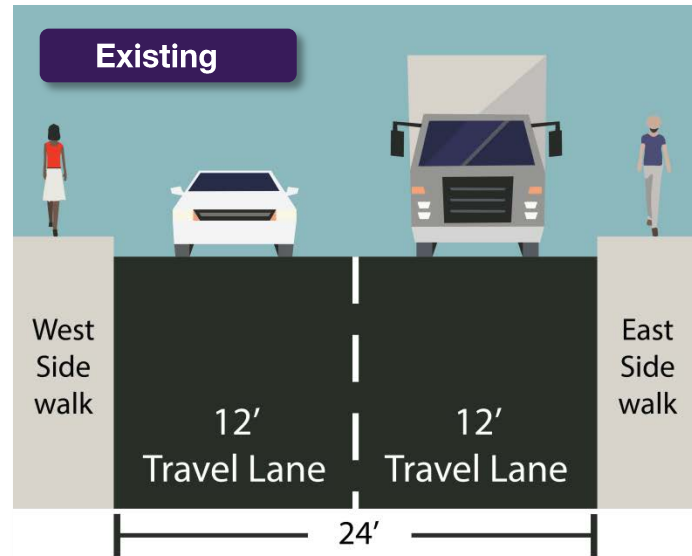
- Road not wide enough for two travel lanes on truck route
- Roadway does not require two travel lanes



Proposed Design

To be Installed on Van Duzer St
From Hillside Ave to Cornell Pl

- Buffered bicycle lane replaces extra travel lane on narrow, winding road
- Provides additional room for trucks





Van Duzer St (southbound)

Cornell Pl to Richmond Rd

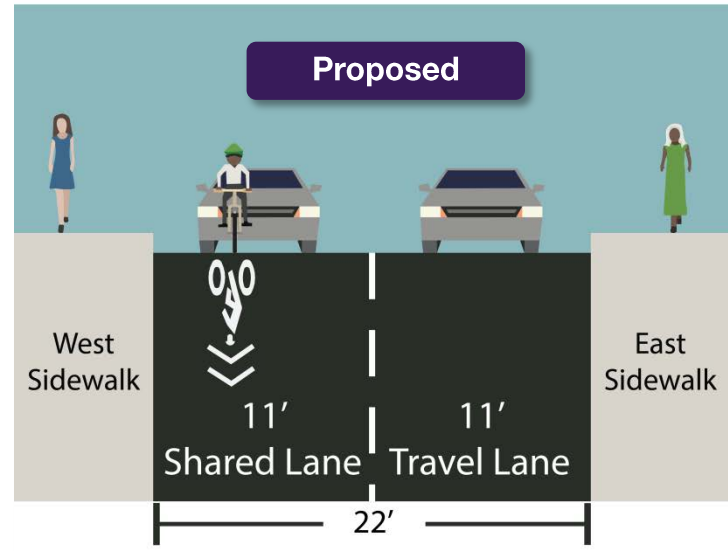
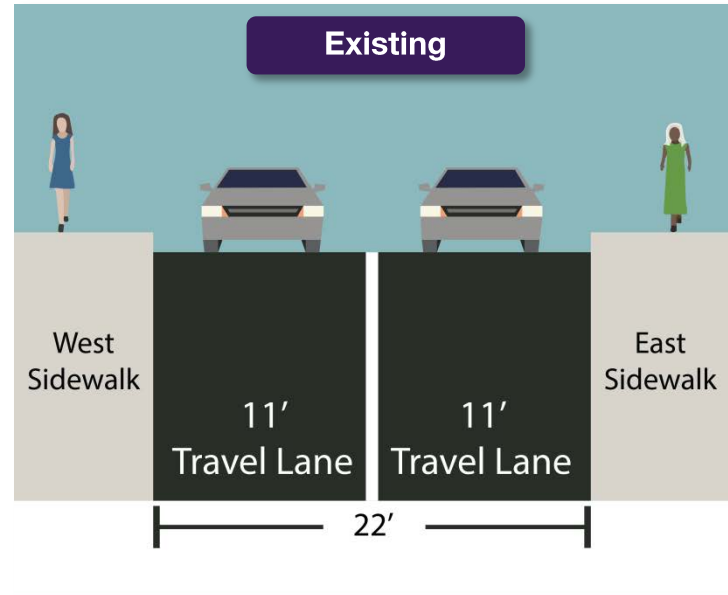
- Roadway needs two lanes to accommodate existing queues during red light at signal

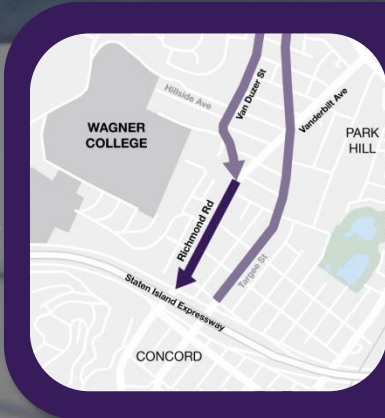


Proposed Design

To be Installed on Van Duzer St
From Cornell Pl to Richmond Rd

- Add shared lane markings to connect bicycle route where there is not enough room for bicycle lanes





Richmond Rd

Van Duzer St to Narrows Rd N

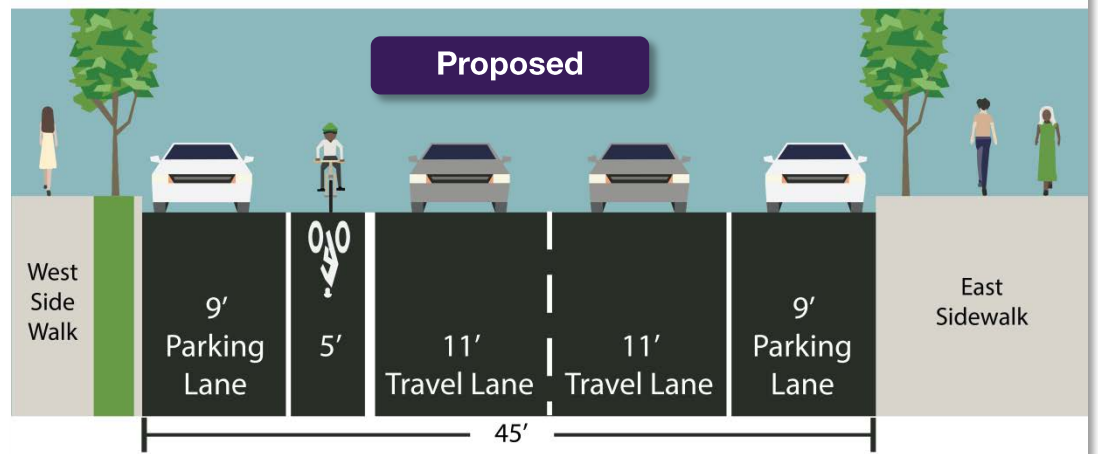
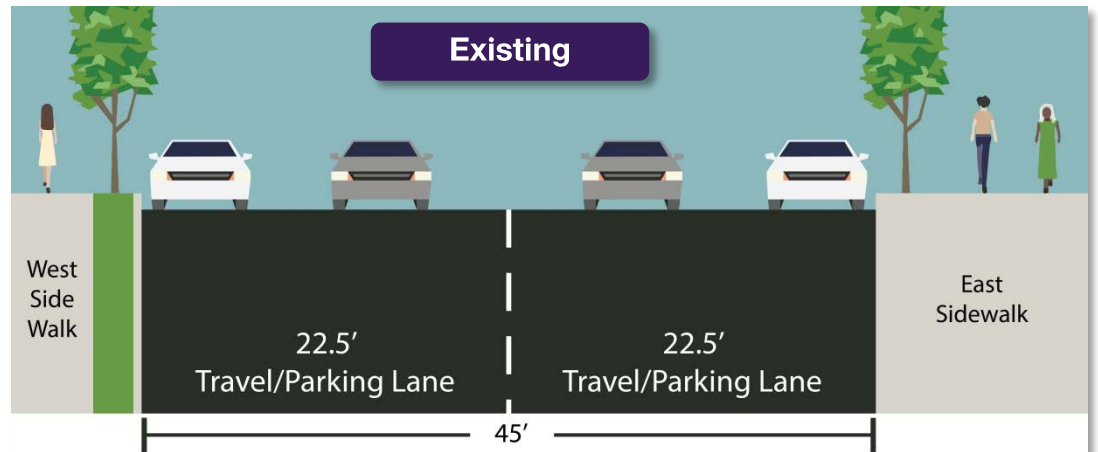
- Two very wide travel lanes
- Traffic volumes require second travel lane after Vanderbilt Ave



Proposed Design

To be Installed on Richmond Rd
From Van Duzer St to Narrows Rd N

- Narrowing travel lanes to standard width provides room for bicycle lane



Addendum:
Northbound Route Improvements

2



Targee St

Narrows Rd N to Vanderbilt Ave

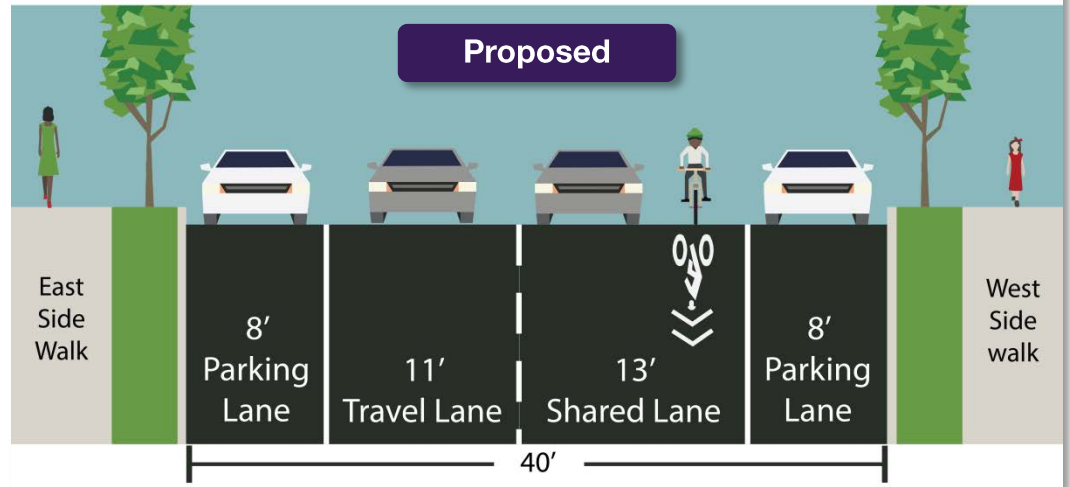
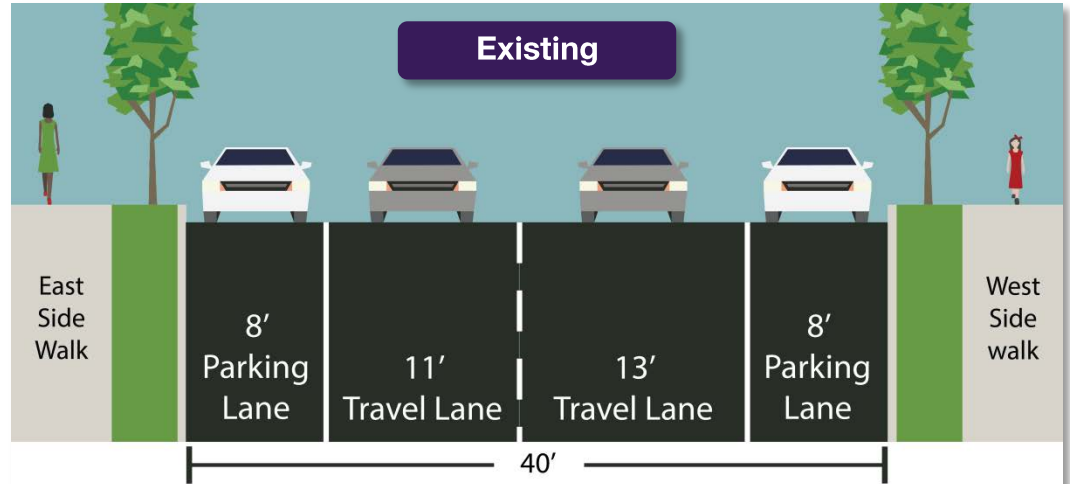
- Higher traffic volumes require two travel lanes, limiting traffic calming measures

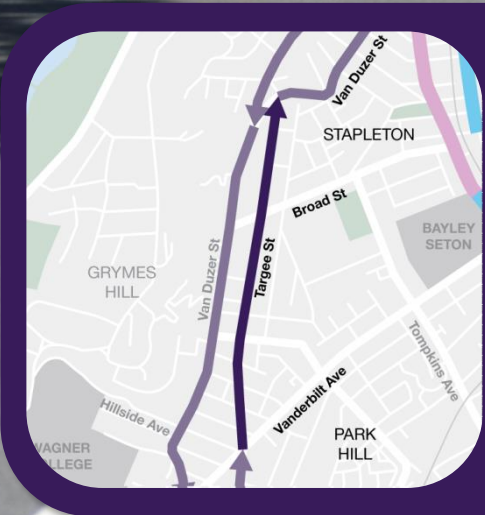


Proposed Design

To be Installed on Targee St
From Narrows Rd N to Vanderbilt Ave

- Shared lane markings connect bicycle route where traffic volumes limit additional traffic calming measures





Targee St

Vanderbilt Ave to Van Duzer St

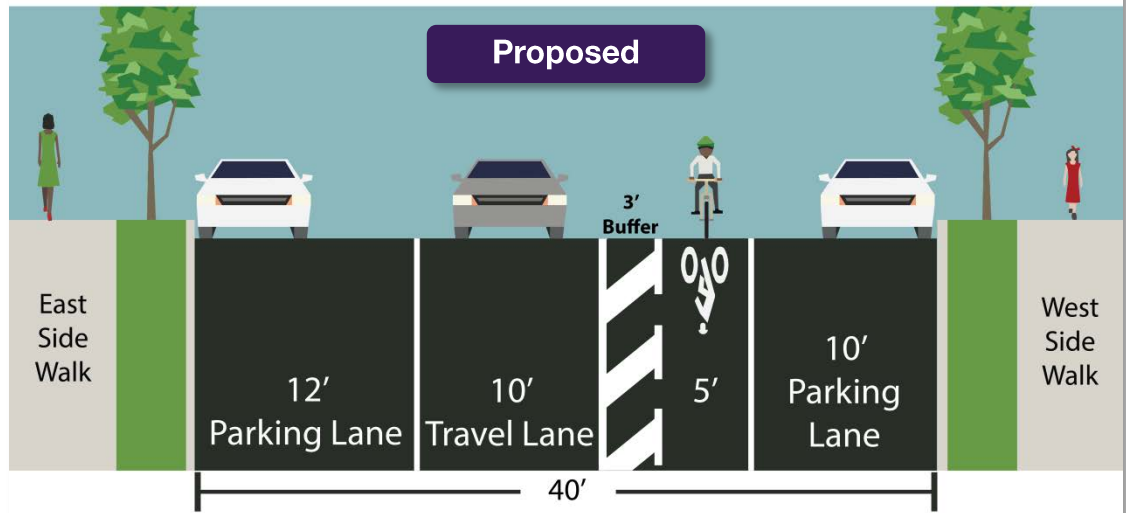
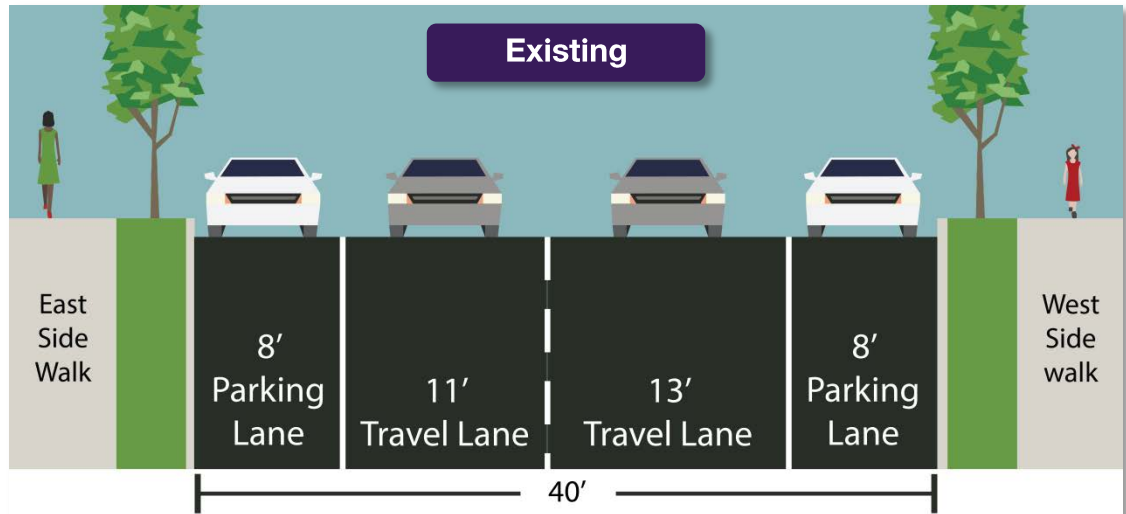
- Traffic volume on Targee St drops after Vanderbilt Ave, allowing for additional traffic calming measures



Proposed Design

To be installed on Targee St
From Vanderbilt Ave to Van Duzer St

- Replace unnecessary second travel with buffered bicycle lane and wider parking lanes
- Add right-turn lane at Broad St intersection





Van Duzer St (northbound)

Targee St to Wright St

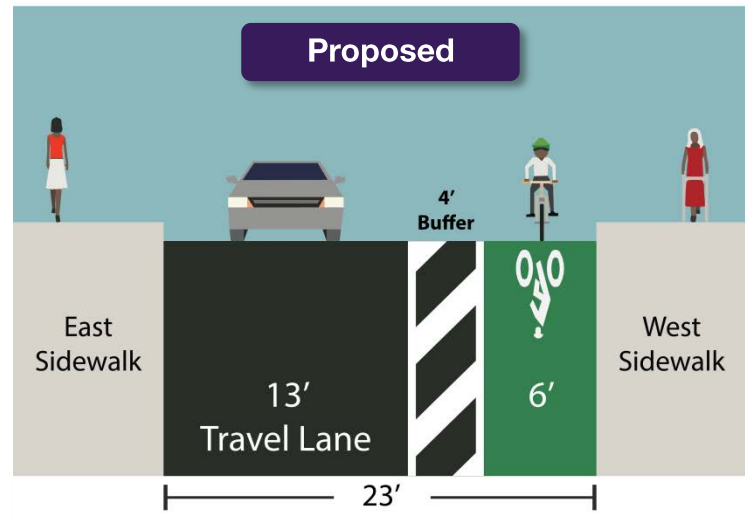
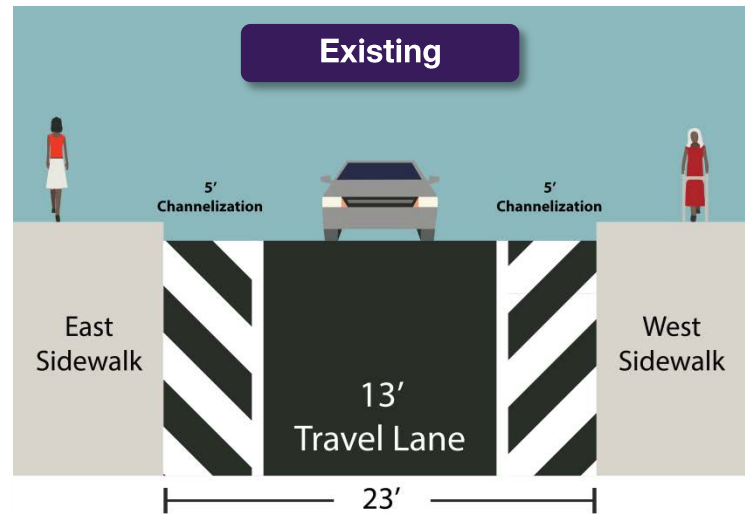
- Narrow winding roadway with channelization

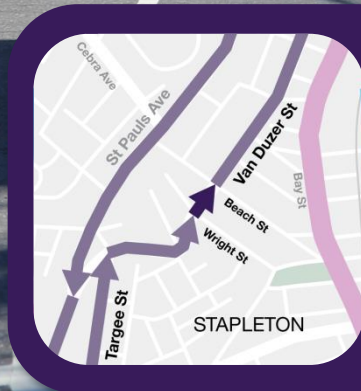


Proposed Design

To be Installed on Van Duzer St
From Targee St to Wright St

- Reuse excess channelization space for buffered bicycle lane





Van Duzer St (northbound)

Wright St to Beach St

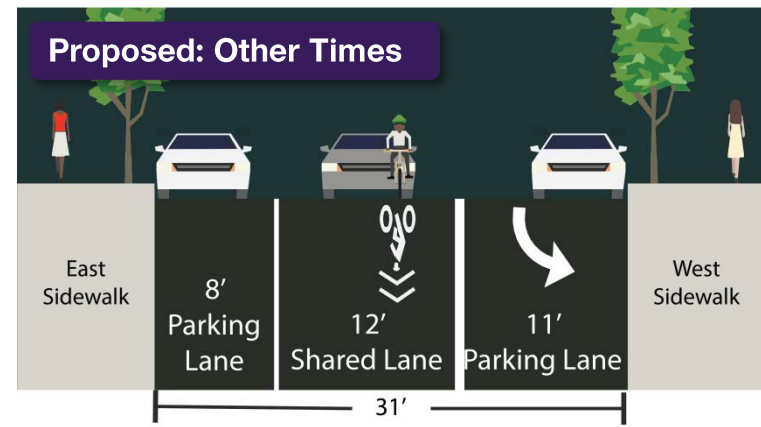
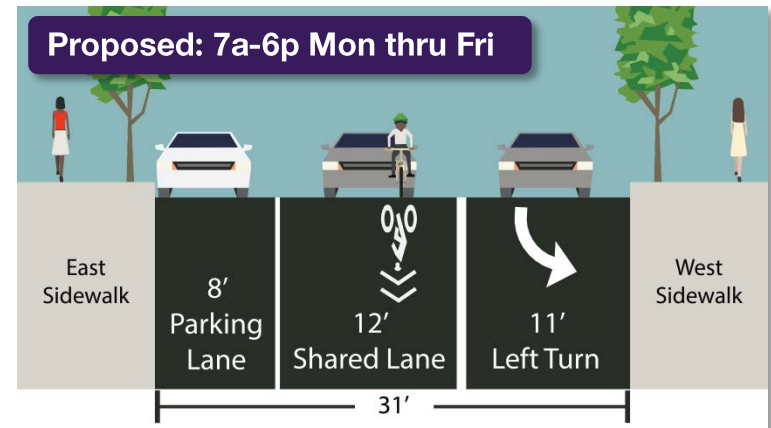
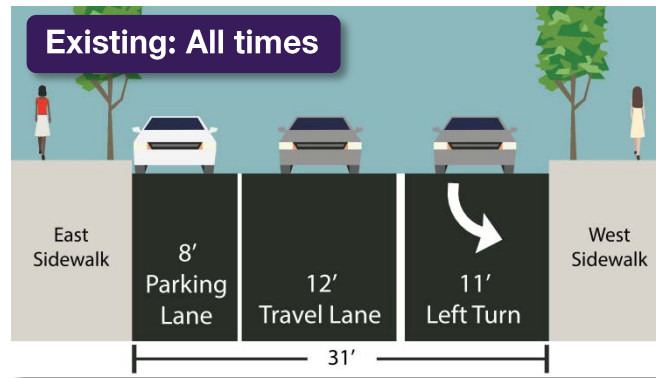
- Commercial corridor with limited parking
- Left-turn lane needed for weekday traffic

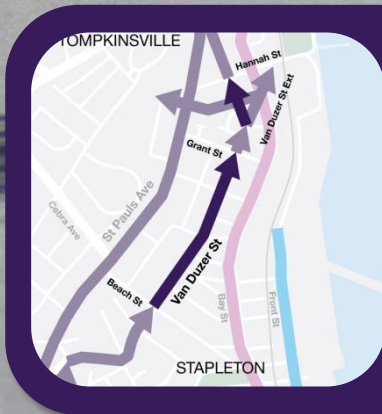


Proposed Design

To be Installed on Van Duzer St
From Wright St to Beach St

- Calm traffic by adding additional parking overnight and on weekend
- Shared lane markings assist cyclists in wayfinding





Van Duzer St (northbound)

Beach St to Grant St & Van Duzer St Ext to Hannah St

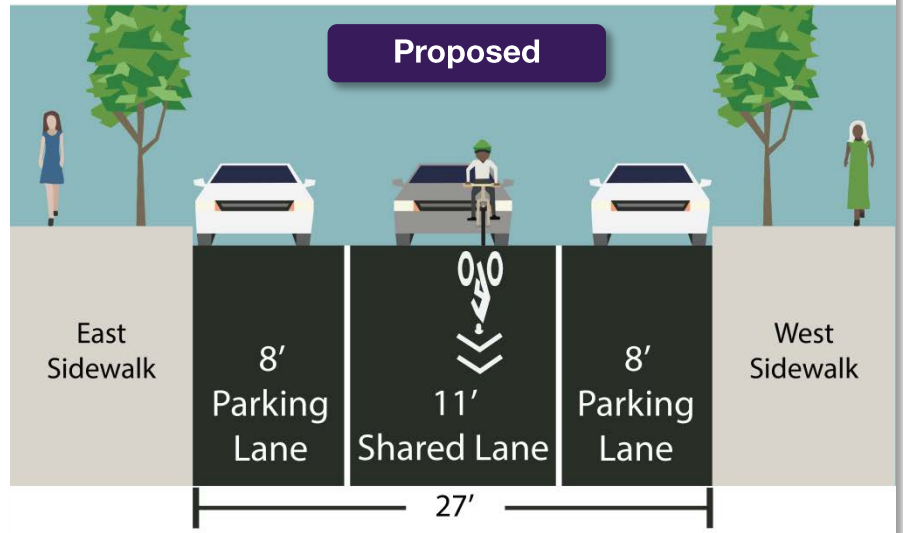
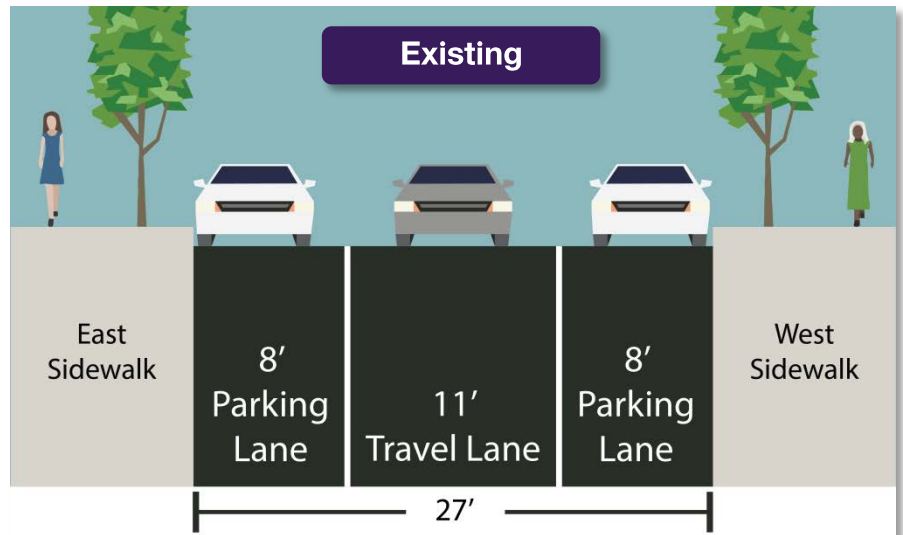
- Narrow roadway limits further traffic calming measures
- Speeding has dropped 57% since Targee St



Proposed Design

To be Installed on Van Duzer St
 From Beach St to Grant St
 From Van Duzer St Ext to Hannah St

- Add shared lane markings where roadway is too narrow for additional bicycle lanes





Pedestrian Crossing

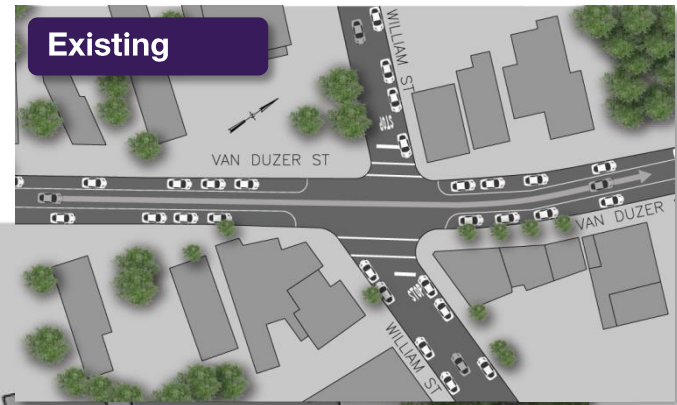
Van Duzer St & William St

- ¼ mile between pedestrian crossings
- William St links neighborhood to Bay St commercial corridor
- Bus stop nearby
- Low traffic volume/low speeding levels

Proposed Design Concept

To be installed at Van Duzer St & William St

Existing



Add Crosswalk

- Cuts crossing distance between crosswalks
- Improves neighborhood connection to Bay St
- Improves connection to nearby bus stop

VAN DUZER ST

Reuse "Daylighting" Curb Regulation

- Use existing "No Standing Anytime" regulation for increased visibility without losing parking spaces

Shorten Crossing Distance

- Painted curb extensions cuts down on crossing distances

Proposed



Van Duzer St (northbound)

Grant St to Van Duzer St Ext

- Unnecessary travel lane during the day
- Parking limited

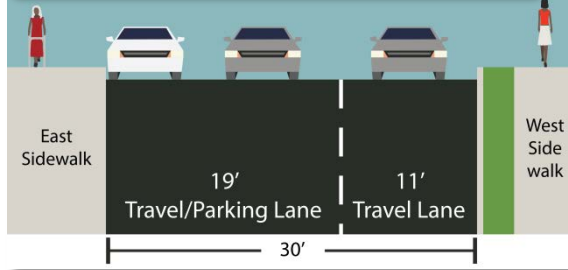


Proposed Design

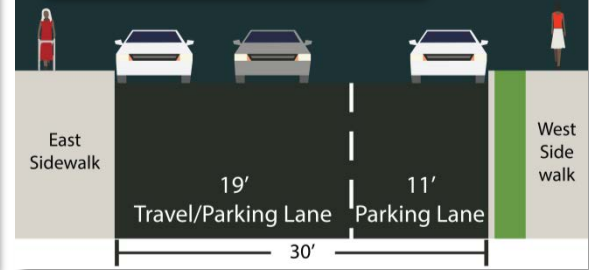
To be Installed on Van Duzer St
From Grant St to Van Duzer St. Ext.

- Overnight parking is made permanent to calm traffic
- Shared lane markings connect bicycle route where road is too narrow for bicycle lanes

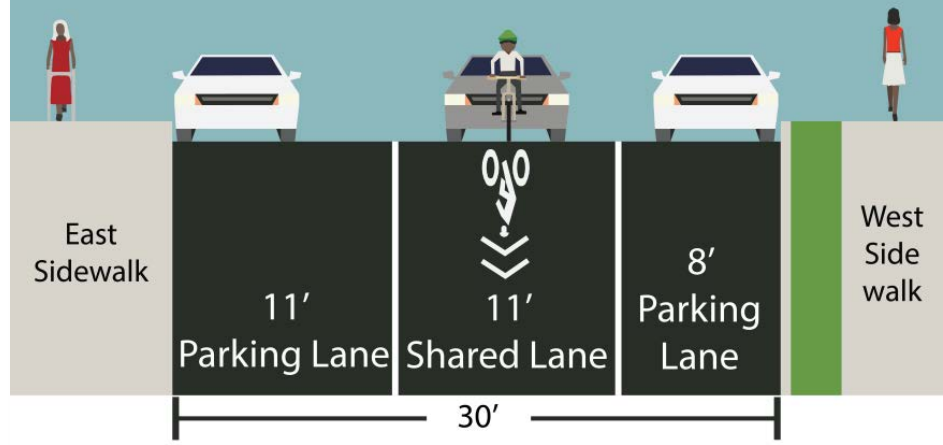
Existing: 7a-7p Except Sunday



Existing: Other Times



Proposed: All times





Van Duzer St (northbound)

Hannah St to Victory Blvd

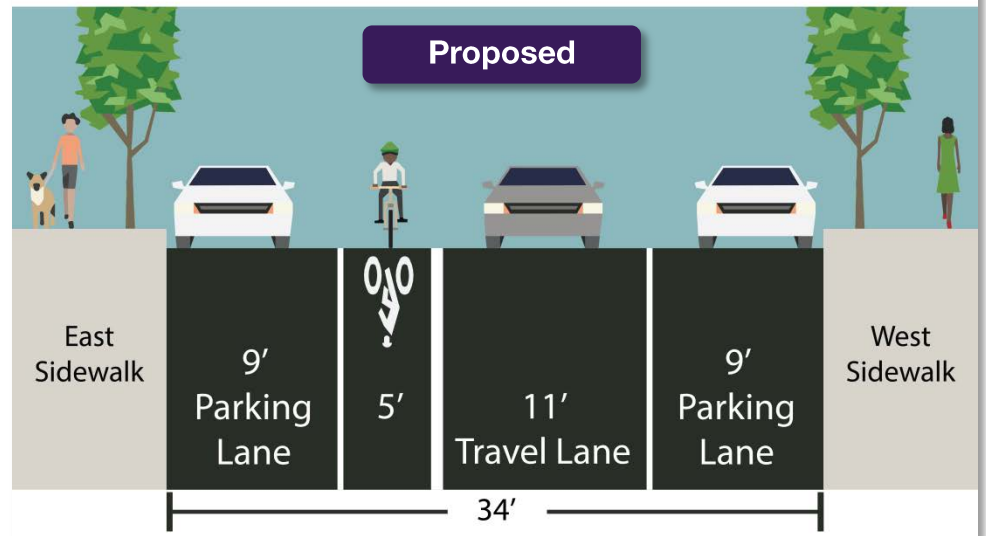
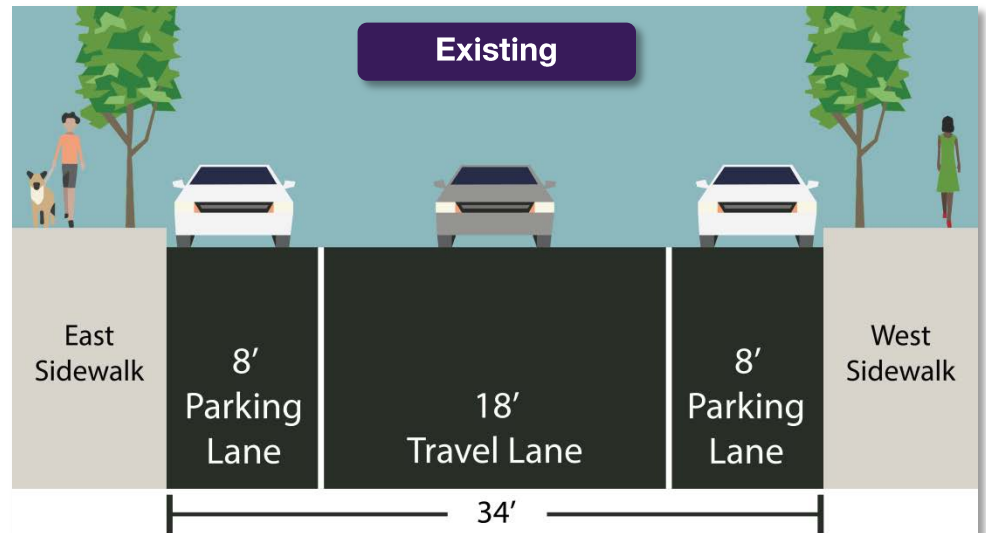
- Very wide travel lane in commercial corridor



Proposed Design

To be Installed on Van Duzer St
From Hannah St to Victory Blvd

- Narrow travel lane to standard width to discourage speeding
- Use remaining space to separate cyclists from other traffic





Pedestrian Crossing

Van Duzer St & St Pauls Ave

- Sidewalk ends without pedestrian crossing
- Commercial/Transit corridor
- Low Traffic Volume/Low Speeds

Proposed Design Concept

Van Duzer St & St Pauls Ave

Existing

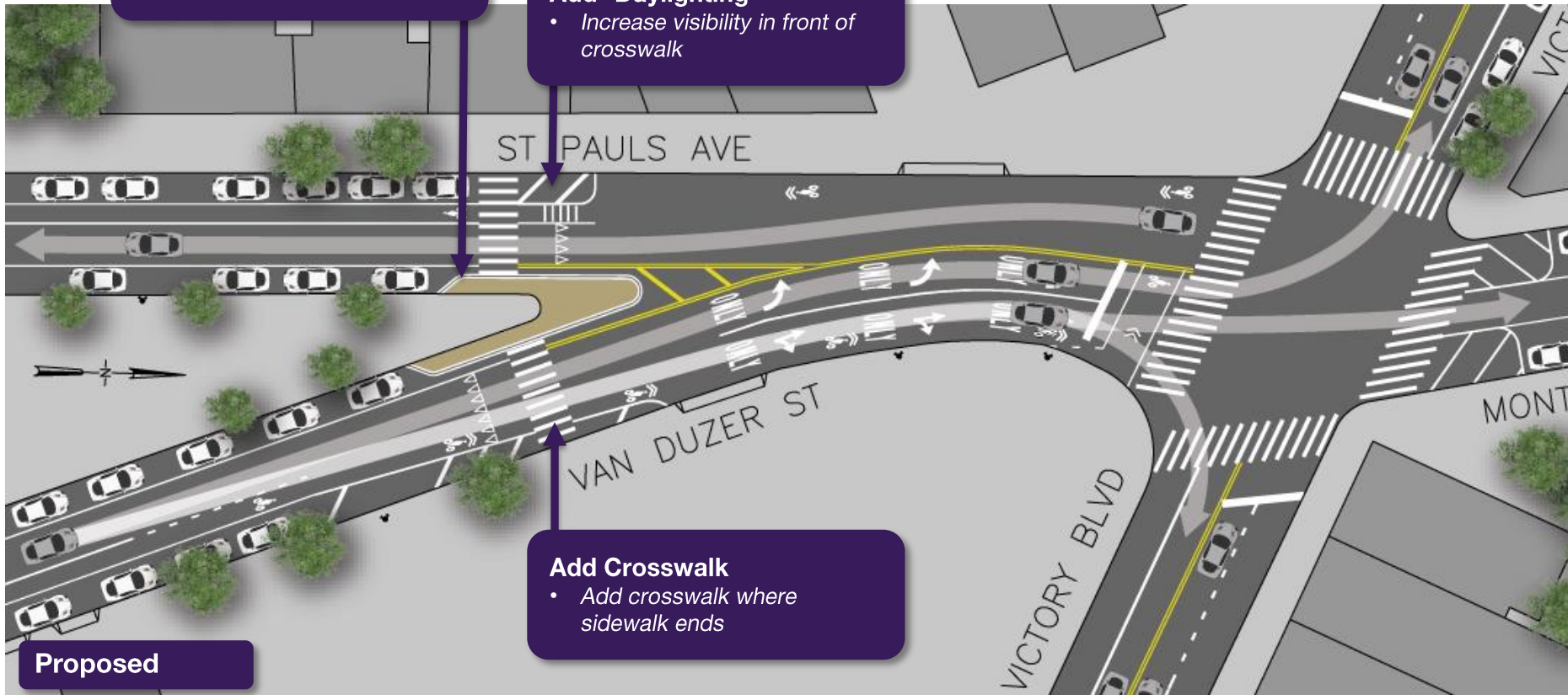


Add Pedestrian Space

- Painted curb extension shortens crossing distance

Add "Daylighting"

- Increase visibility in front of crosswalk



Add Crosswalk

- Add crosswalk where sidewalk ends

Proposed

Addendum:
Bay Street Connection

3



Van Duzer Street Extension

Van Duzer St to Bay St

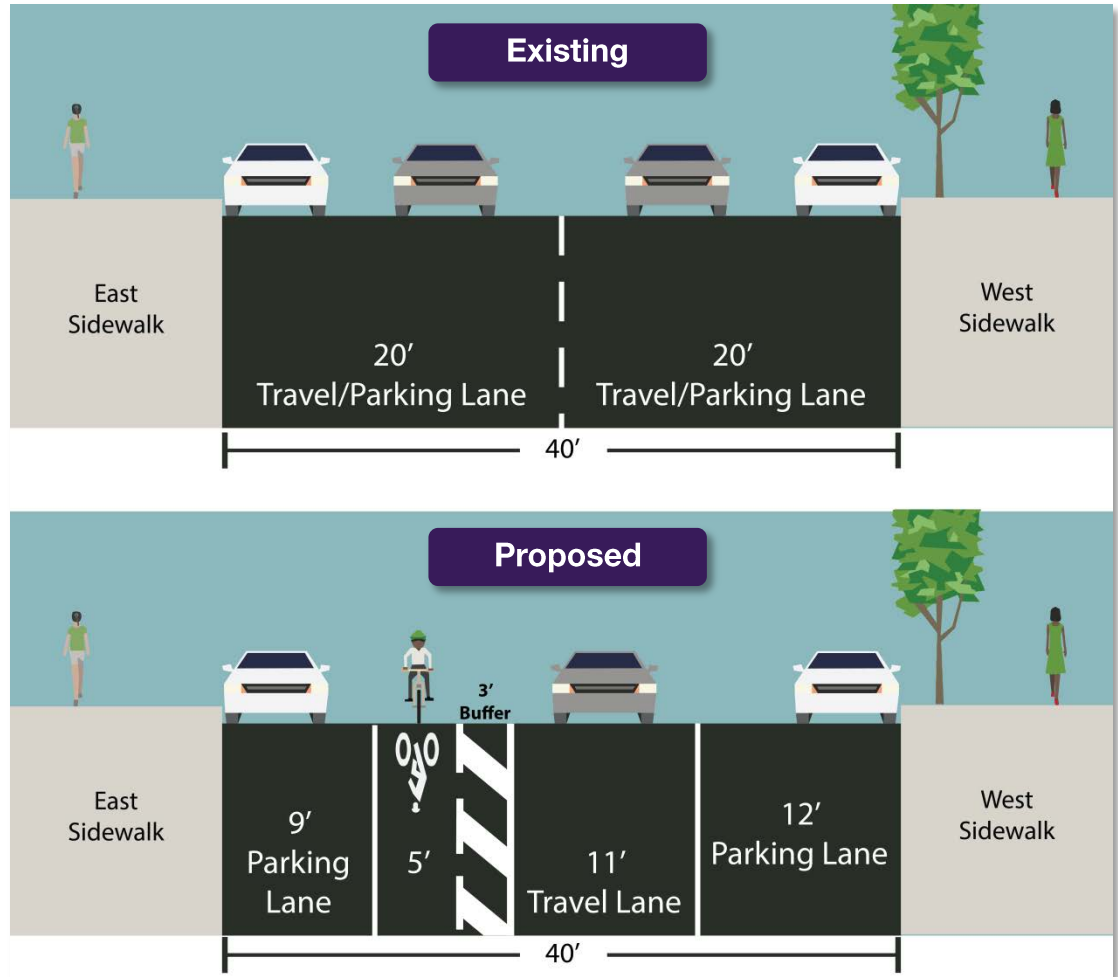
- Wide road with excess travel lane

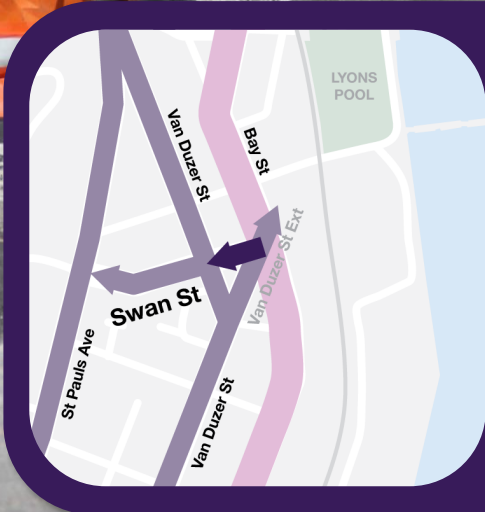


Proposed Design

To be Installed on Van Duzer St Ext.
From Van Duzer St to Bay St

- Replace extra traffic lane with buffered bicycle lane and parking lane





Swan St

Bay St to Van Duzer St

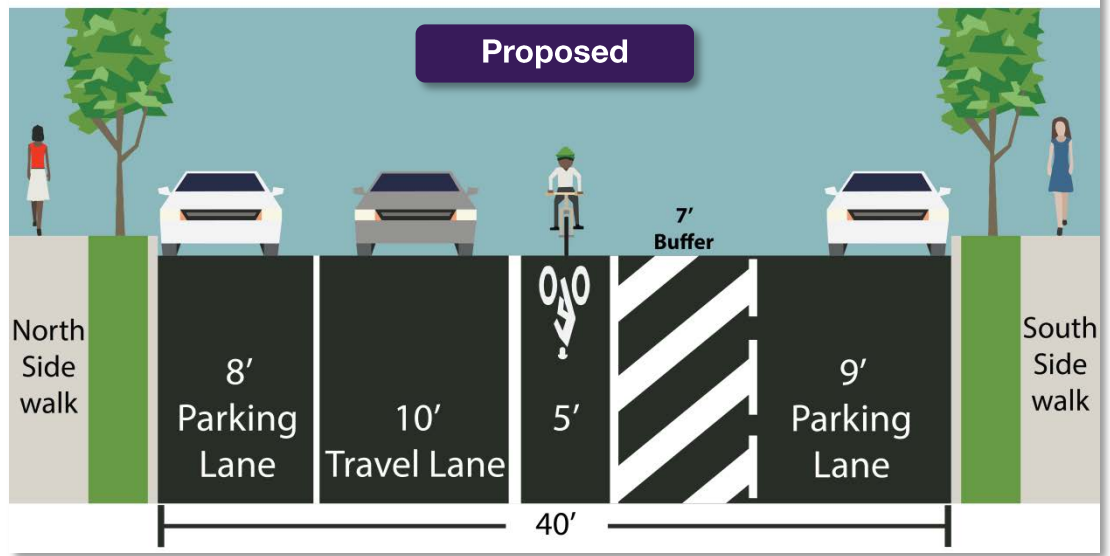
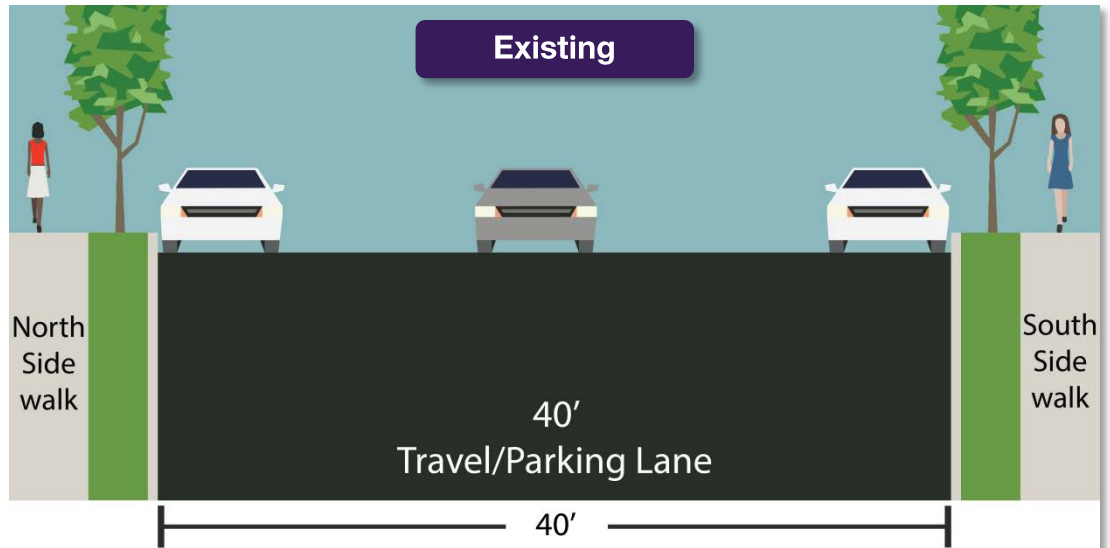
- Very wide travel lane
- Does not align well with next section of the road
- Connects Bay St to St Pauls Ave



Proposed Design

To be Installed on Swan St
From Bay St to Van Duzer St

- Buffered parking lane and bicycle lane narrow travel lane to standard width and align road better with next section





Intersection

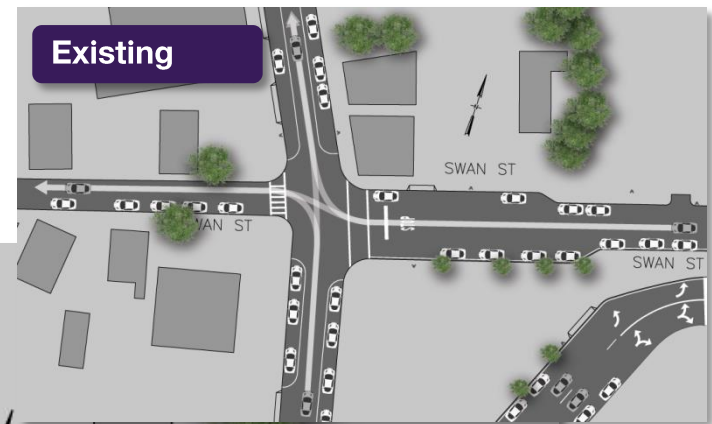
Van Duzer St & Swan St

- Long crossing for pedestrians
- Poor alignment for through traffic

Proposed Design

To be installed at Van Duzer St & Swan St

Existing



Improve Road Alignment

- Painted curb extension improves alignment through intersection

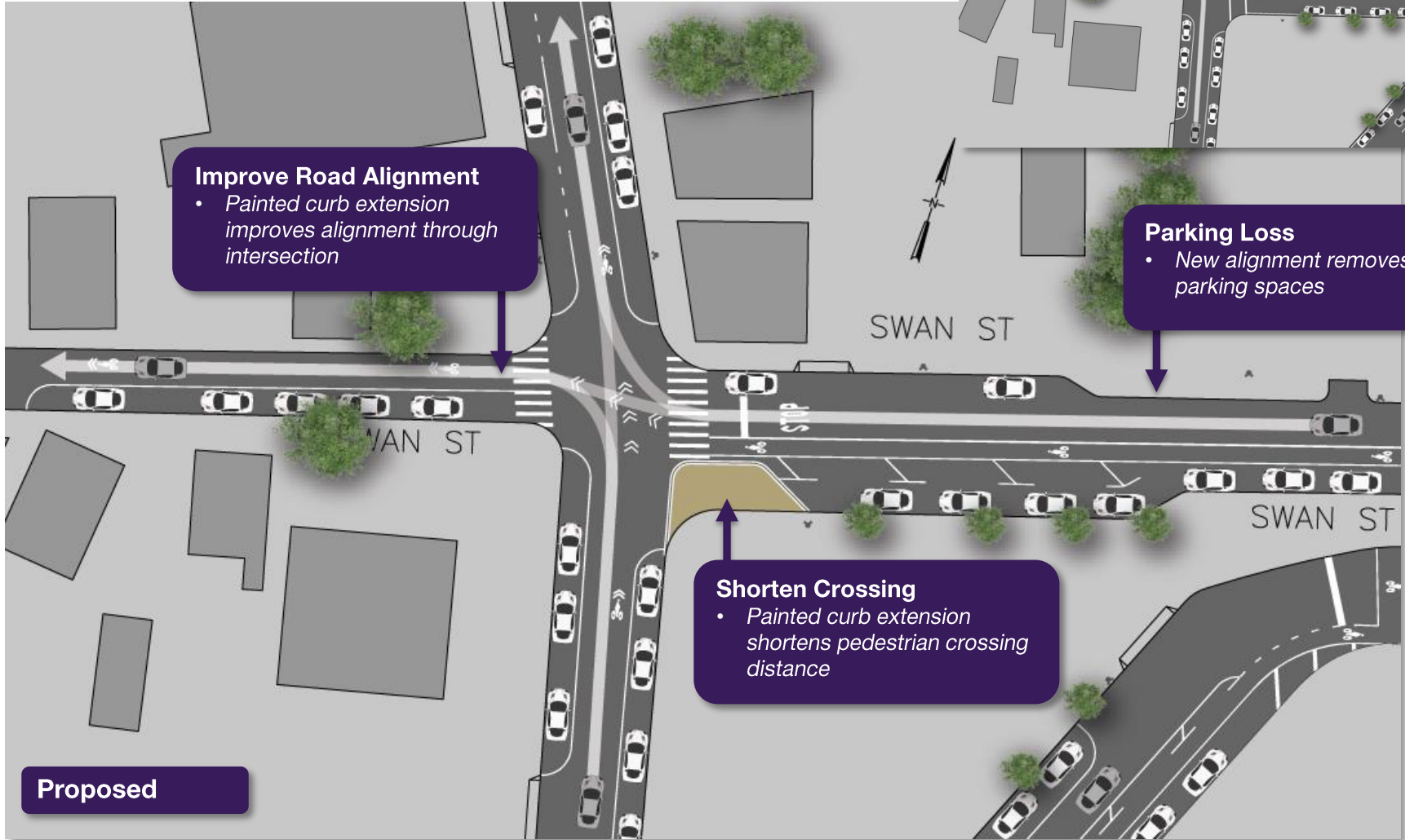
Parking Loss

- New alignment removes two parking spaces

Shorten Crossing

- Painted curb extension shortens pedestrian crossing distance

Proposed





Swan St

Van Duzer St to St Pauls Ave

- Very narrow roadway
- Connects Bay St to St Pauls Ave without steep hill



Proposed Design

To be Installed on Swan St
From Van Duzer St to St Pauls Ave

- Add shared lane markings to connect Bay St to southern route on St Paul's Ave

