


2020 Mill and Overlay Project

City Council Work Session on Final Plans

January 14, 2020



Tonight's Outline

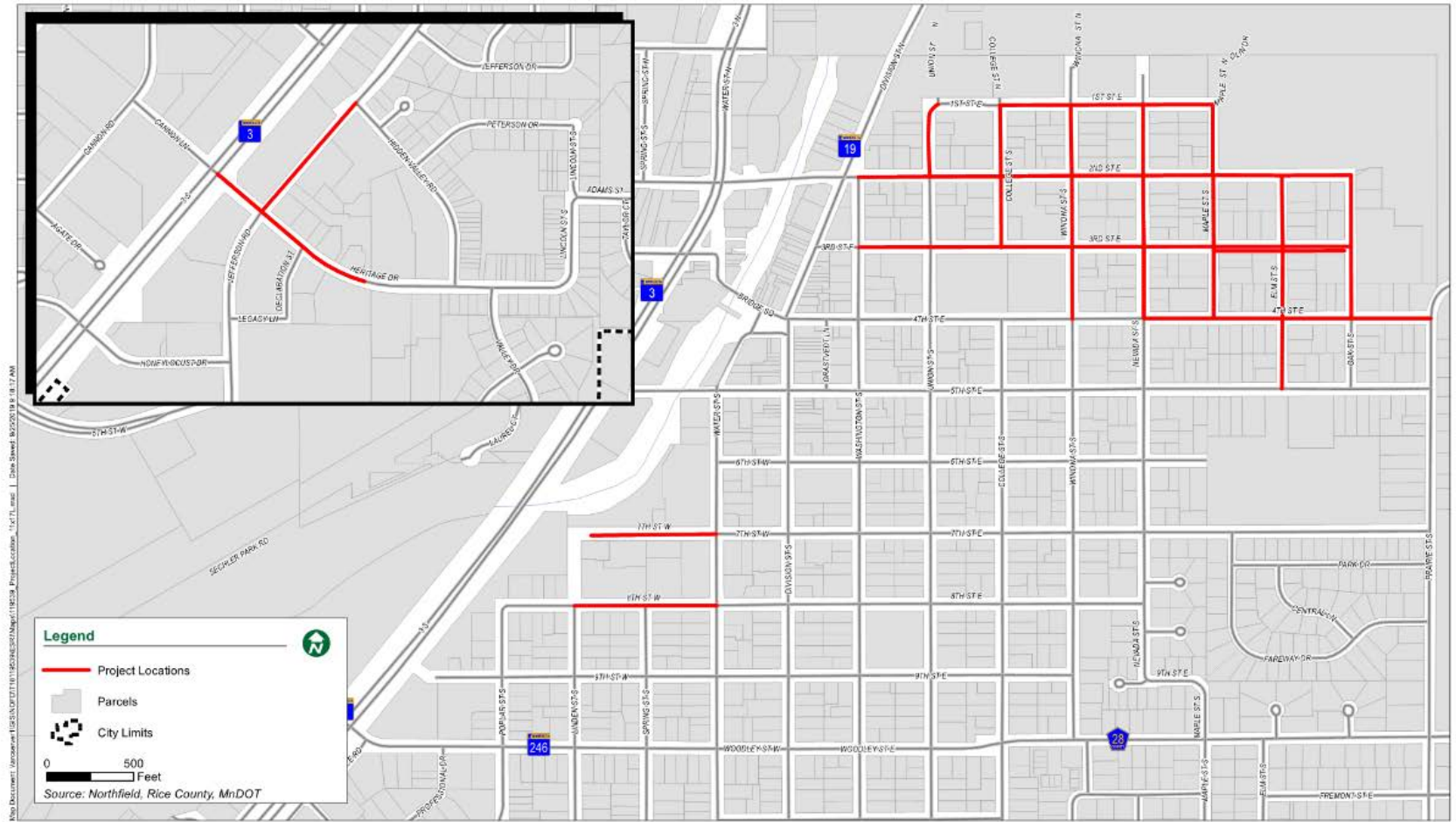
- 7th Street Turnaround
 - Drainage Improvements
 - Tree Removals
 - Bikeway Improvements
 - Bumpouts
 - Truck Turning Movements
- 

Project Location



2020 Mill & Overlay Project
City of Northfield, MN

Figure 1: Project Location
September 2019

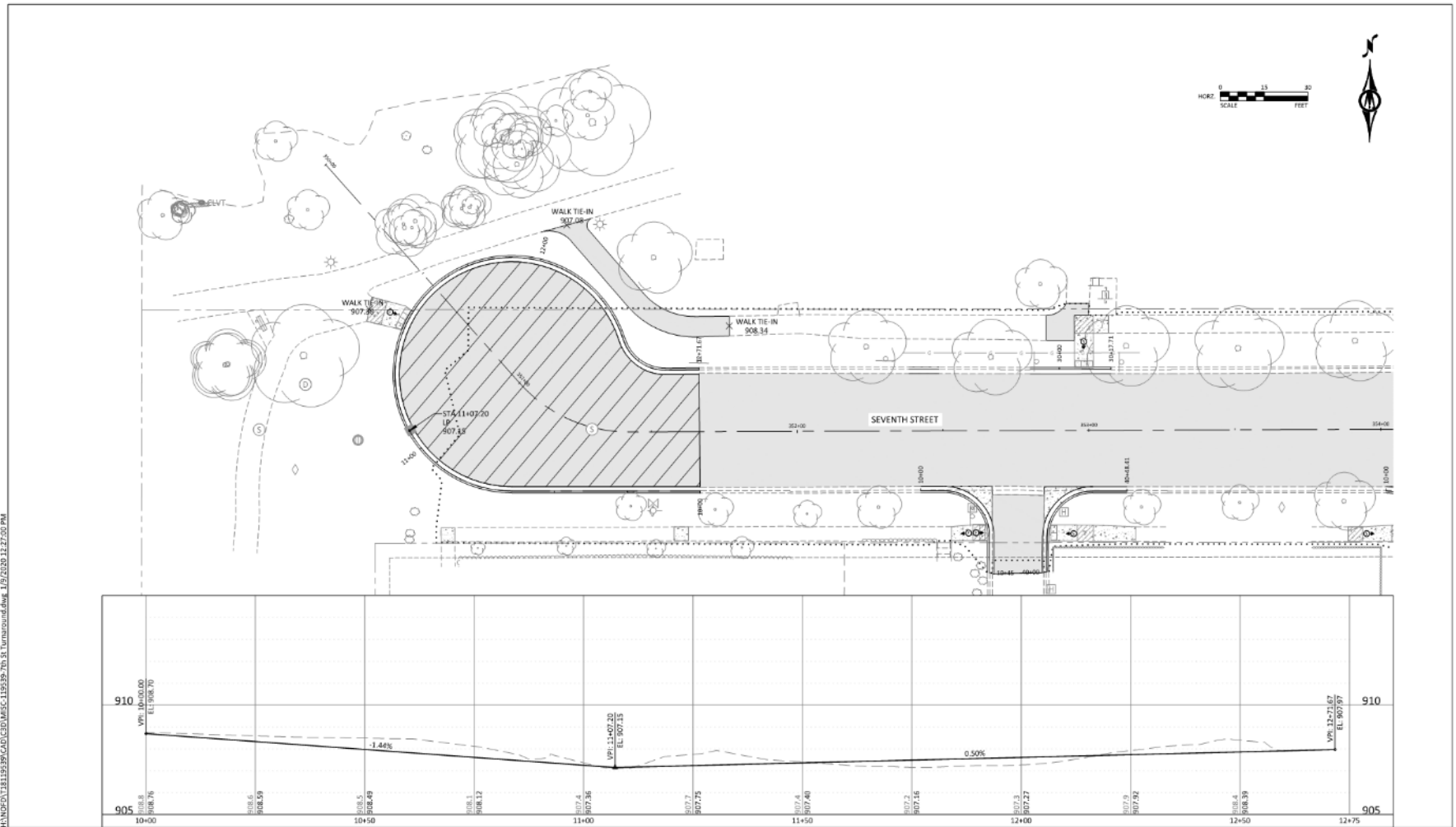


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7th Street Turnaround

2020 Mill & Overlay
City of Northfield

Figure 4: 7th Street Turnaround
January 2020

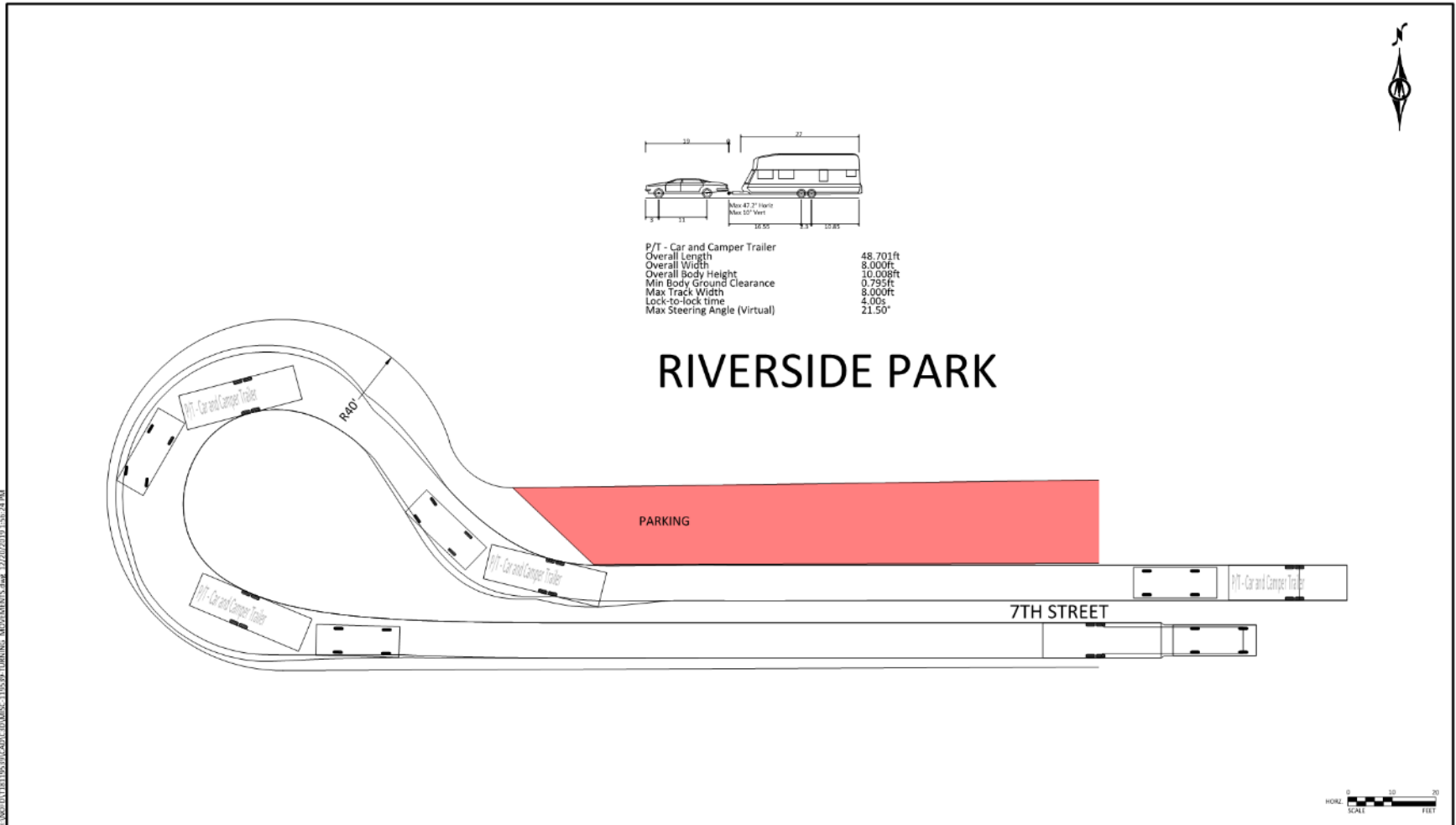


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Turning Movements

7TH STREET TURNAROUND CUL-DE-SAC 1
CITY OF NORTHFIELD

CAR & CAMPER TRAILER TURNING MOVEMENTS
JANUARY 2020

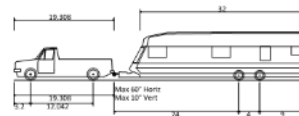


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Turning Movements

7TH STREET TURNAROUND CUL-DE-SAC 2
CITY OF NORTHFIELD

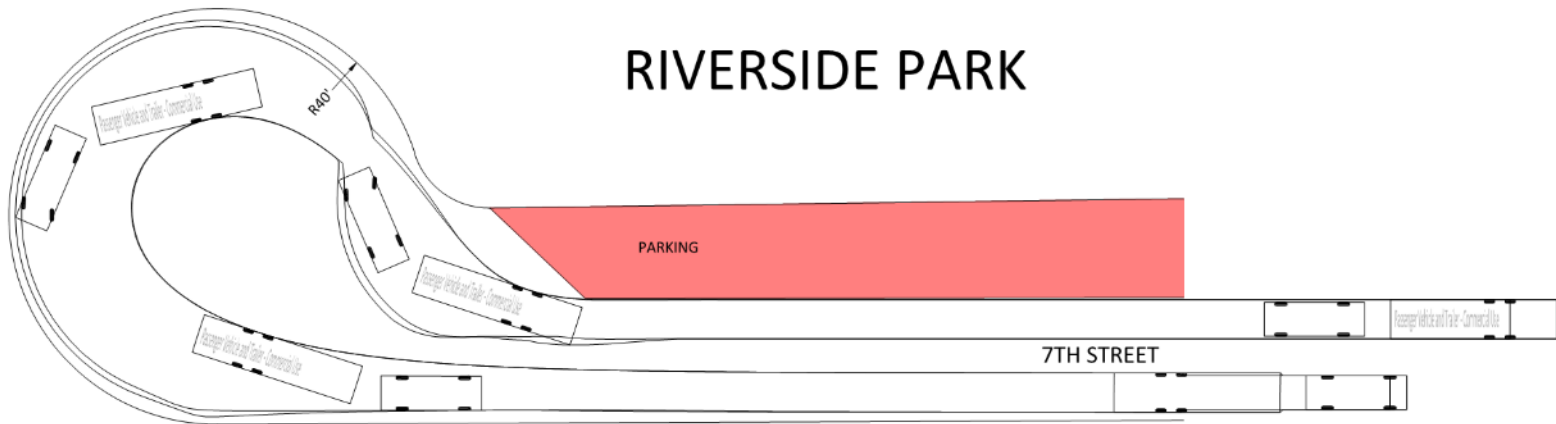
PASSENGER VEHICLE & TRAILER TURNING MOVEMENTS
JANUARY 2020



Passenger Vehicle and Trailer - Commercial Use

Overall Length	56.308ft
Overall Width	7.540ft
Overall Body Height	9.260ft
Min Body Ground Clearance	0.583ft
Max Track Width	7.539ft
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	23.500ft

RIVERSIDE PARK








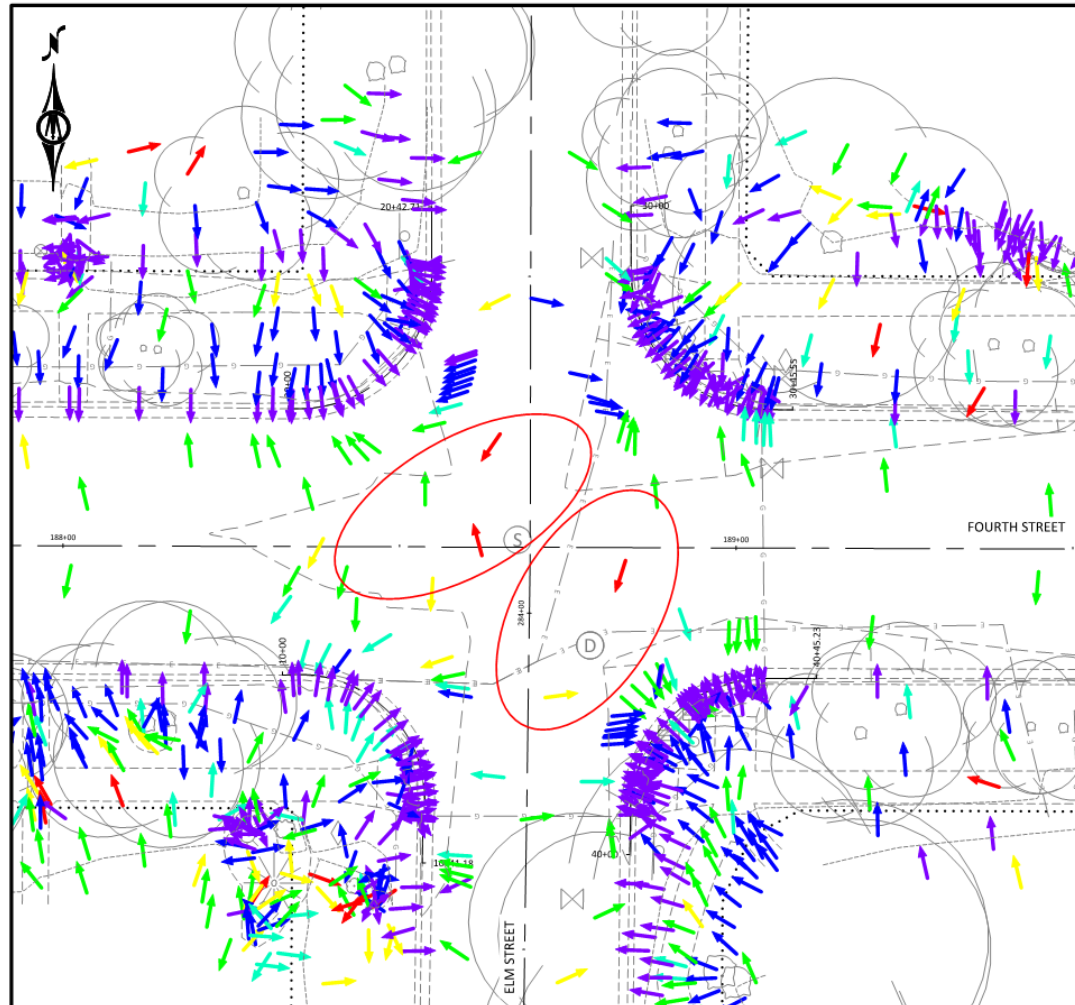
Drainage Analysis

- Paving will correct potholes and flat Cross-Slope roads that hold water by re-establishing the crown in the road
 - The Cross Slope will help drain water to the curb line
- Spot replacement of curb & gutter will correct settlements and cracks that hold water
 - This corrected grade will help drain water to the catch basins
- Catch Basins will be added near existing CB's to improve slow drainage, where possible
- Existing flatter streets will still have slow drainage during freeze/thaw cycles and when leaves build up in the gutters



Example Existing Drainage Issue

-  = <1.0%
-  = 1.0-1.5%
-  = 1.5-3.0%
-  = >3.0%
- 



Drainage Improvement: Proposed Additional CB's

FIGURE 3: PROPOSED ADDITIONAL CATCH BASINS

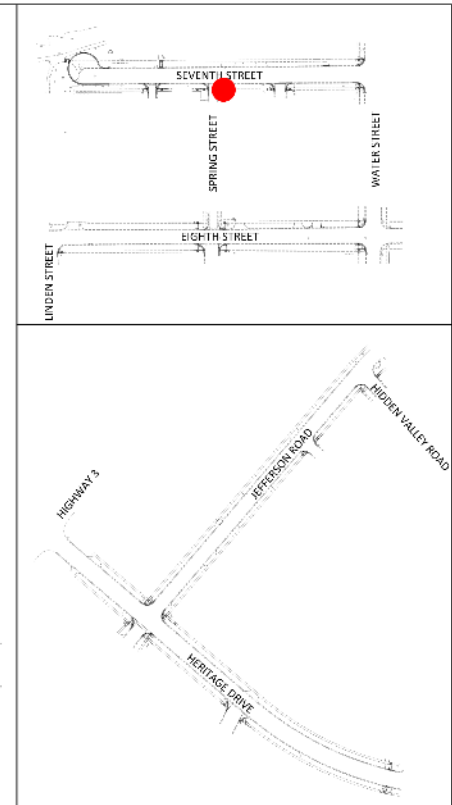
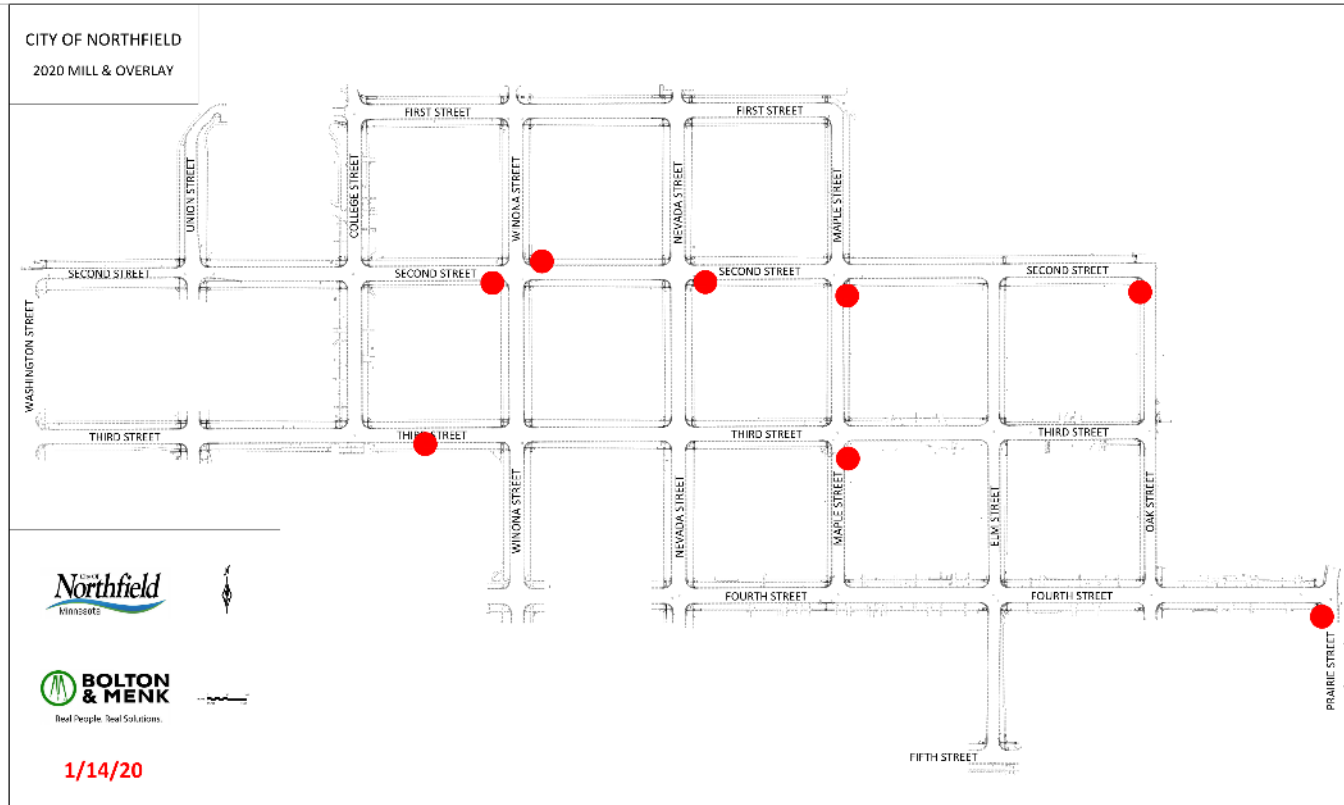


FIGURE 3: PROPOSED ADDITIONAL CATCH BASINS

Tree Removals

- Tree Removals will take place as part of the project (~110).
Tree removals are identified by the following criteria:
 - Arborist Recommended removals based on tree condition
 - Ash Trees that have a DBH of 13” & smaller
 - Trees that will be significantly impacted by construction
- New trees will also be planted as part of the project
- Thoughts/Comments on Heritage Drive/Jefferson Road tree removals



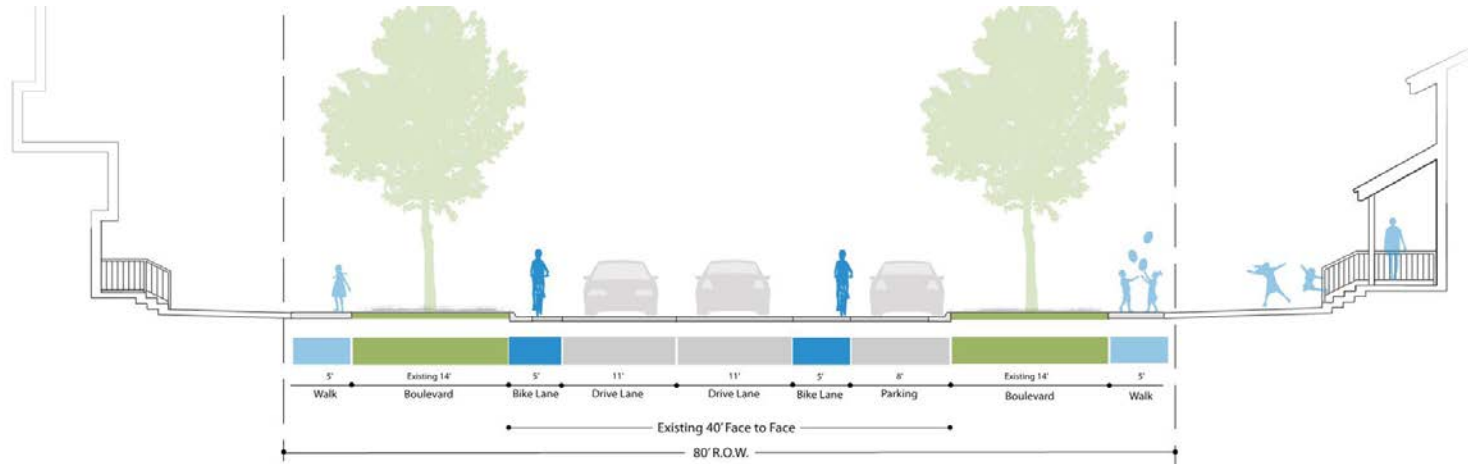
Bikeway Improvements

- Bike facilities will be implemented with the Mill & Overlay project
 - Locations identified per City of Northfield Pedestrian, Bike, and Trail System Report
 - Design follows City of Northfield Complete Streets Policy
 - Multiple options were considered for each street and Council provided direction on which option to move forward with in design – see Boards for options
- Bikeway additions are only portions of the overall planned bikeway system
- Considerations on how each option will fit and/or transition to existing and future improvements



Fourth Street Bikeway Improvements

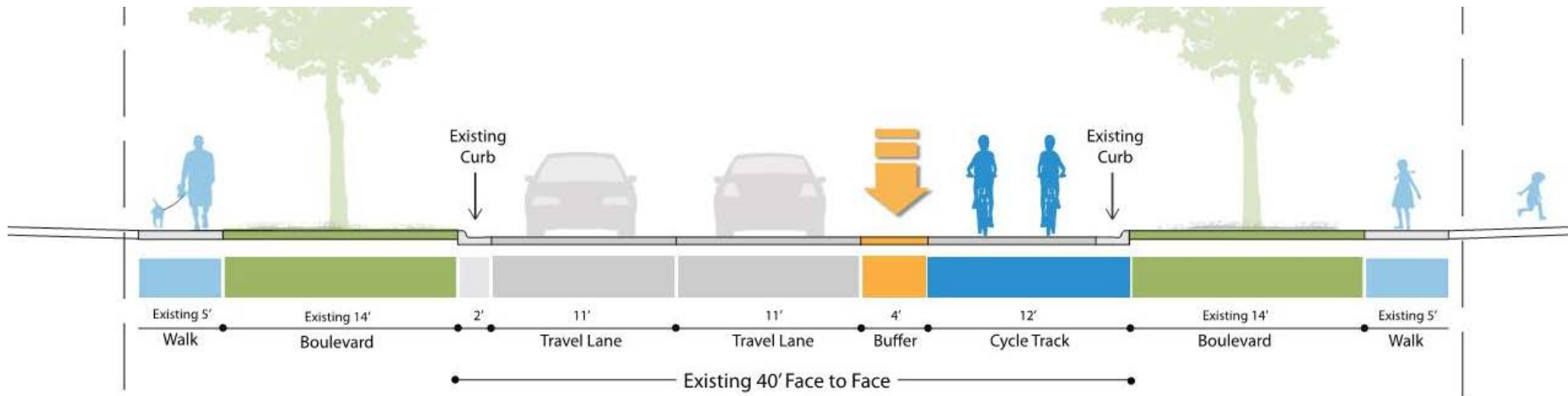
Nevada Street – Prairie Street



Existing Street Configuration

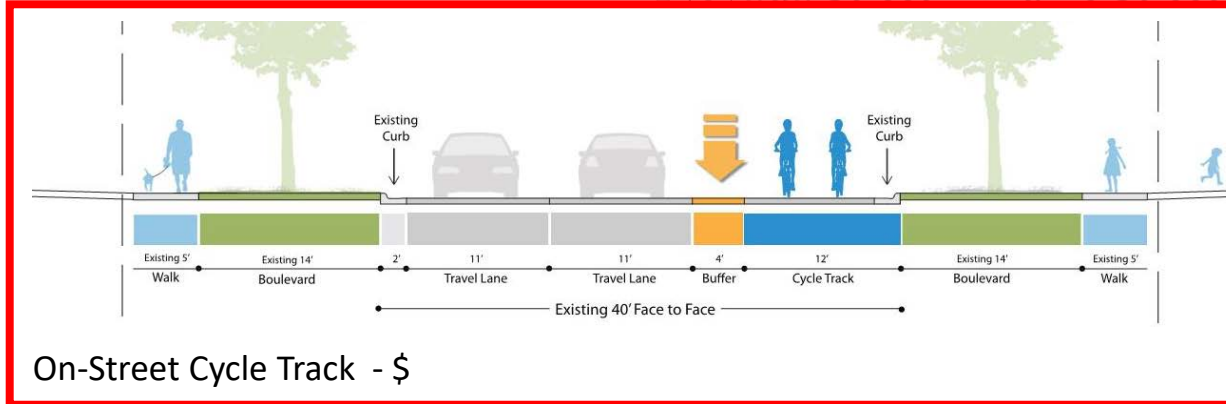
Fourth Street Bikeway Improvements

- Nevada Street to Prairie Street
- On-Street Cycle Track
 - Fits in Existing Street Footprint
 - Painted Buffer but No Physical Barrier
 - Family-Oriented Bicycle Facility that appeals to wide range of users
 - On-Street Parking for residents will be relocated to adjacent streets



Fourth Street Bikeway Options

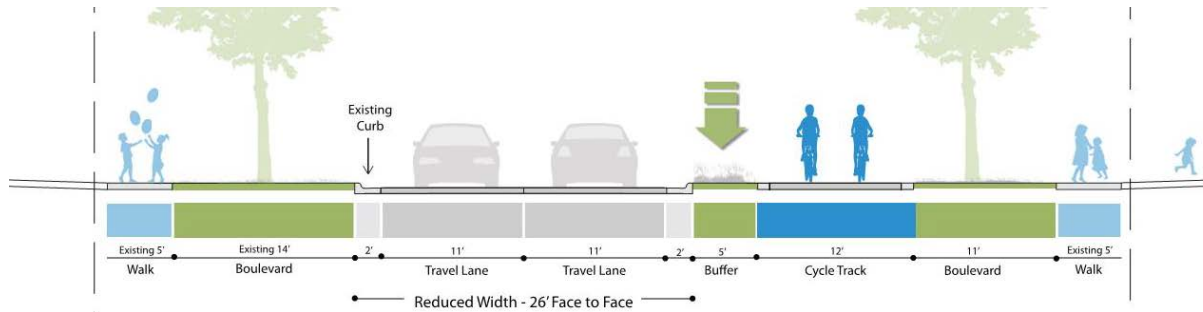
Nevada Street – Prairie Street



On-Street Cycle Track - \$

On-Street Considerations

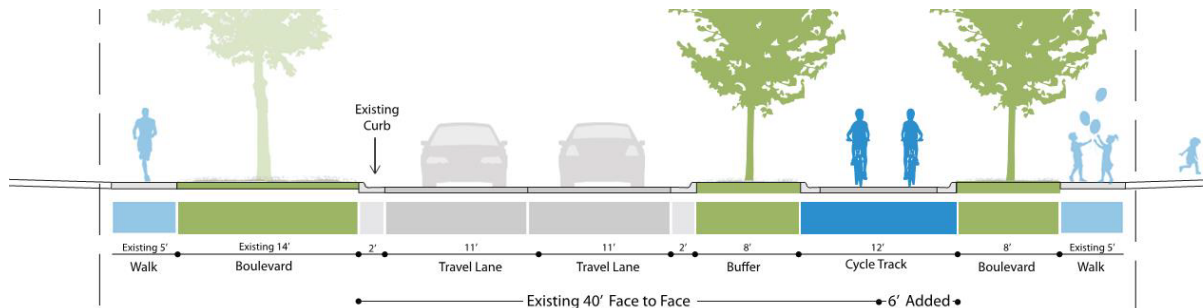
- Painted buffer space – no physical barrier
- Existing road width remains
- High visibility of cycle track



Raised Cycle Track - \$\$

Raised Cycle Track Considerations

- Reduced road width
- Elevated cycle track separation
- Small snow storage area
- Opportunity for raised street crossings
- Storm relocation



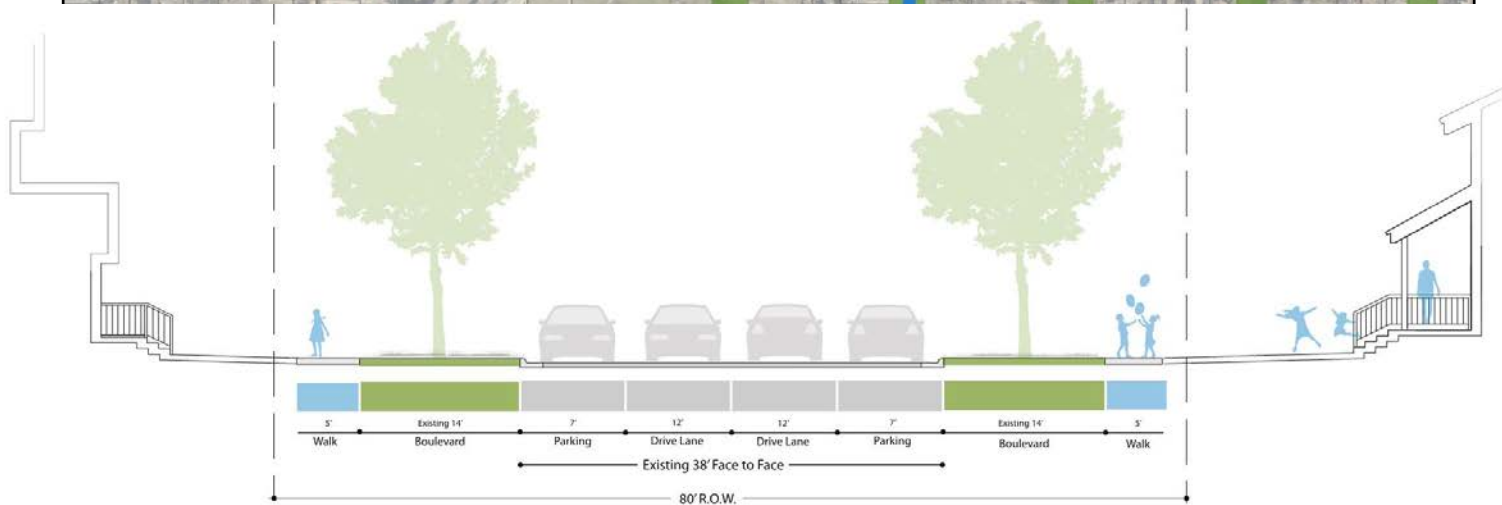
Raised Buffer Cycle Track - \$\$\$

Raised Buffer Considerations

- Reduced road width
- Storm relocation - stormwater control in buffer
- Larger snow storage area
- New curb on road and bike

College Street Bikeway Improvements

First Street – Third Street

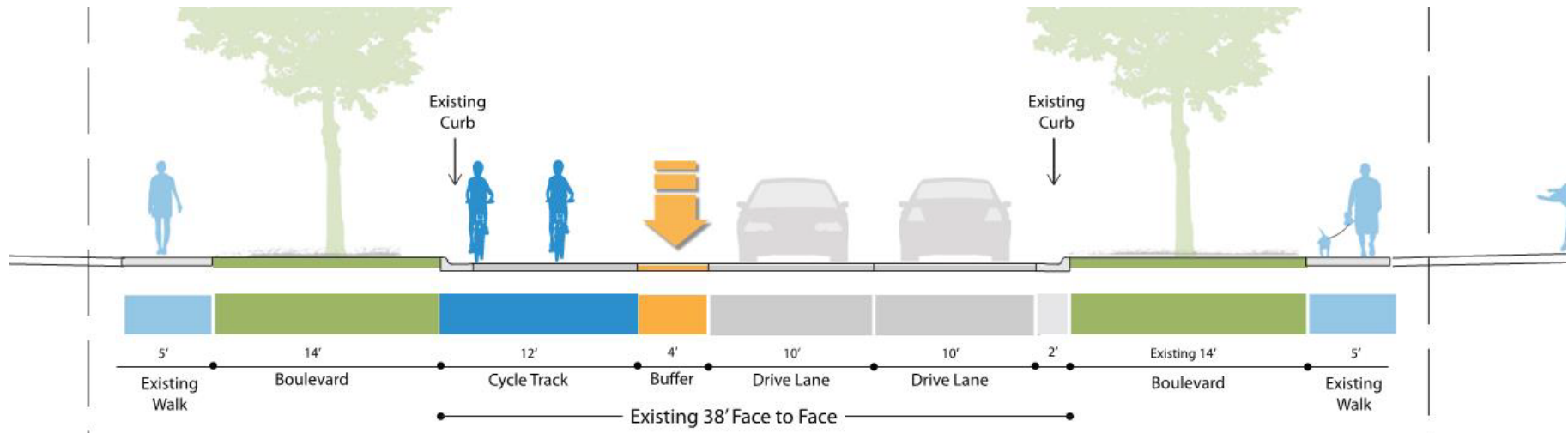


Existing Street Configuration

College Street Bikeway Improvements

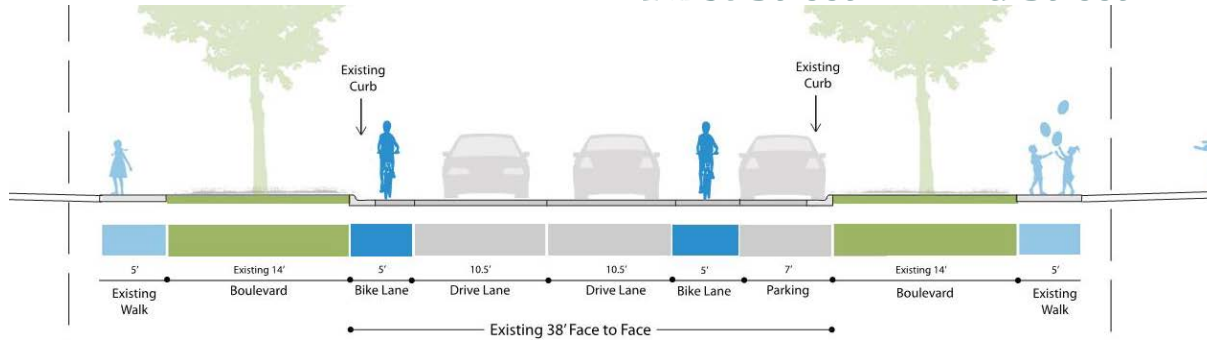
First Street – Third Street

- First Street to Third Street
- On-Street Cycle Track (funded by Carleton College)
 - Fits in Existing Street Footprint
 - Painted Buffer but No Physical Barrier
 - Family-Oriented Bicycle Facility that appeals to wide range of users
 - On-Street Parking for residents will be relocated to adjacent streets



College Street Bikeway Options

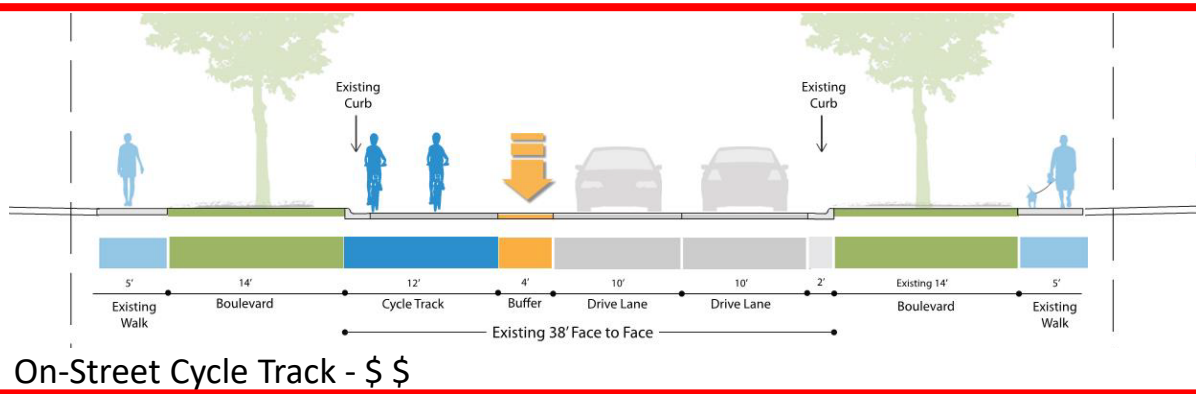
First Street – Third Street



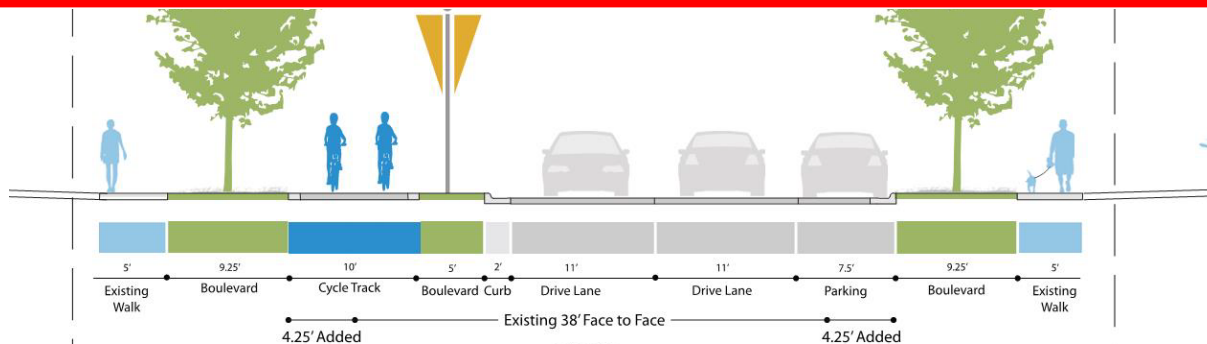
Bike Lane Considerations

- Existing road width
- One side parking
- Commuter accommodation

On-Street Bike Lanes - \$



On-Street Cycle Track - \$ \$



Raised Cycle Track - \$ \$ \$

Cycle Track Considerations

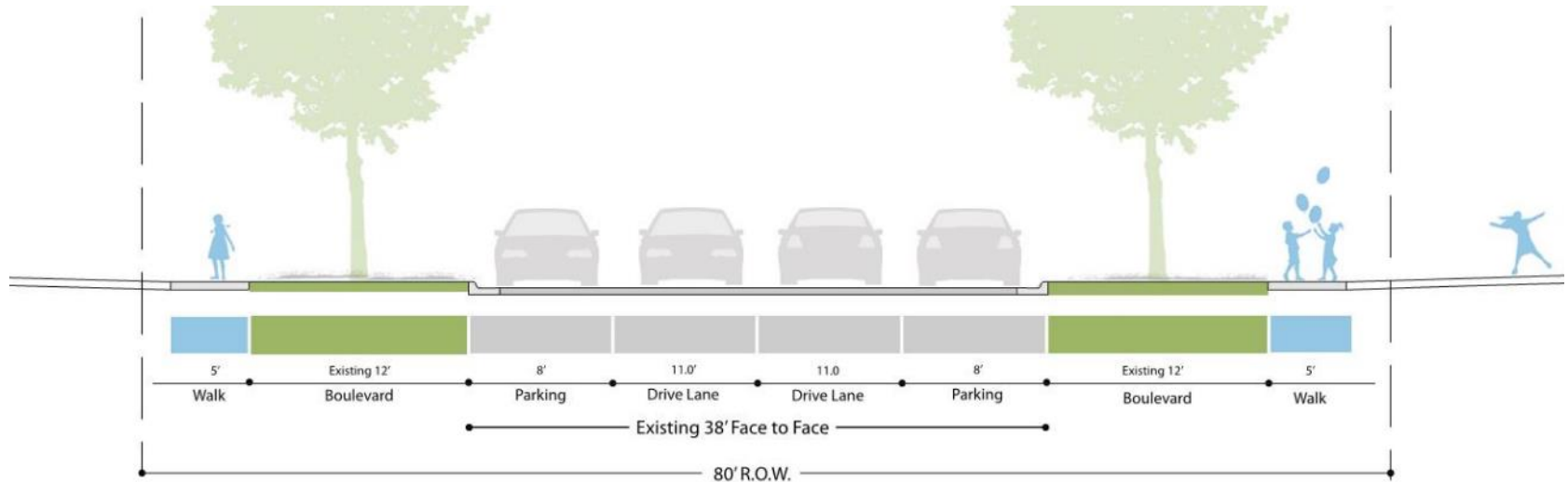
- Existing road width
- Painted buffer space – no physical barrier
- High visibility of cycle track
- No parking

Raised Cycle Track Considerations

- Reduced road width – new curb
- One side parking
- Snow storage area
- Additional streetscape options
- Hydrant/Street Light relocation

Second Street Bikeway Improvements

Washington Street – Oak Street

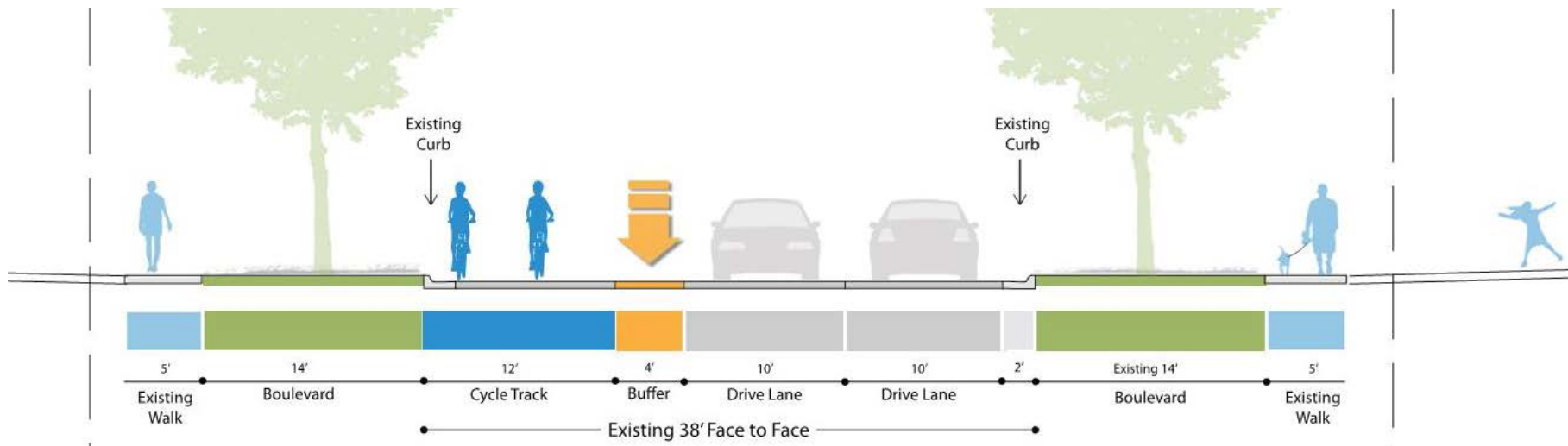


Existing Street Configuration

Second Street Bikeway Improvements

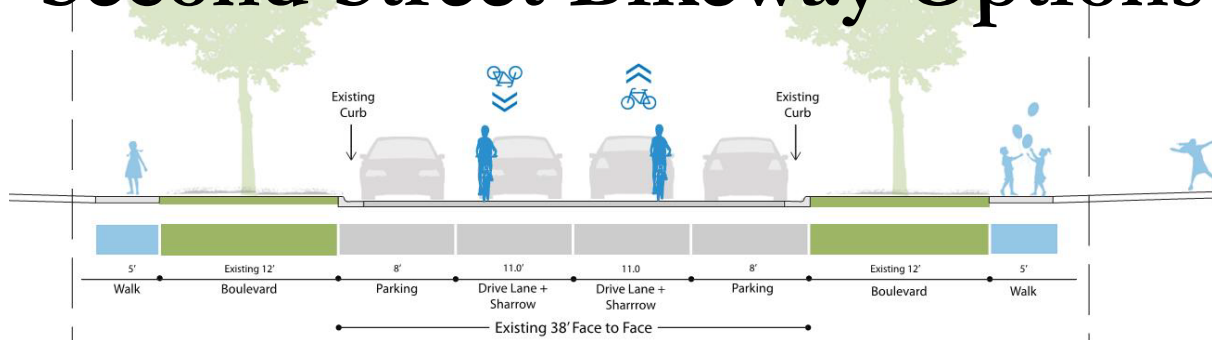
Washington Street – Oak Street

- Washington Street to Oak Street
- On-Street Cycle Track
 - Fits in Existing Street Footprint
 - Painted Buffer but No Physical Barrier
 - Family-Oriented Bicycle Facility that appeals to wide range of users
 - On-Street Parking for residents will be relocated to adjacent streets



Existing Street Configuration

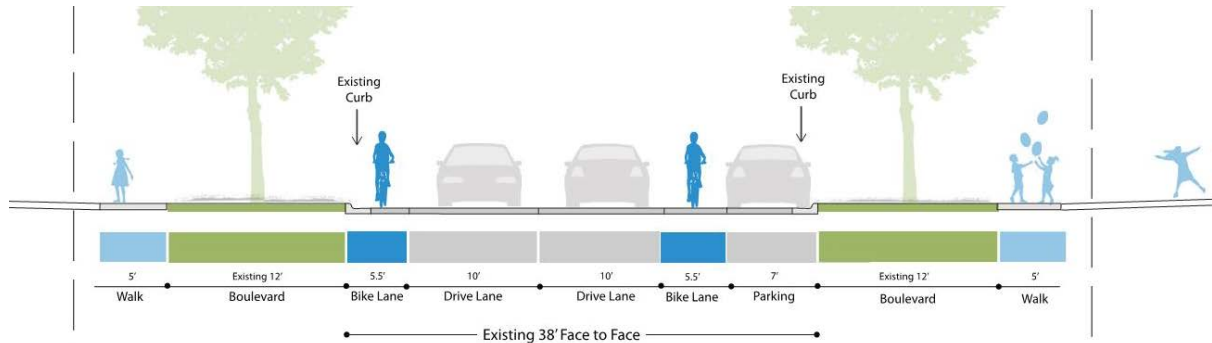
Second Street Bikeway Options



Sharrows - \$

Sharrows Considerations

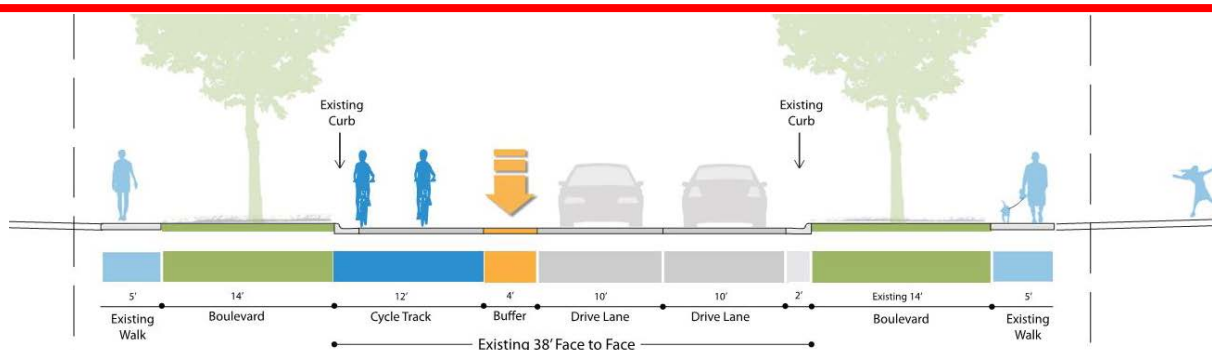
- Existing road width
- Painted symbol for shared lane use
- Parking Remains



On-Street Bike Lanes - \$\$

Bike Lane Considerations

- Existing road width
- No buffer
- One side parking
- Commuter accommodation



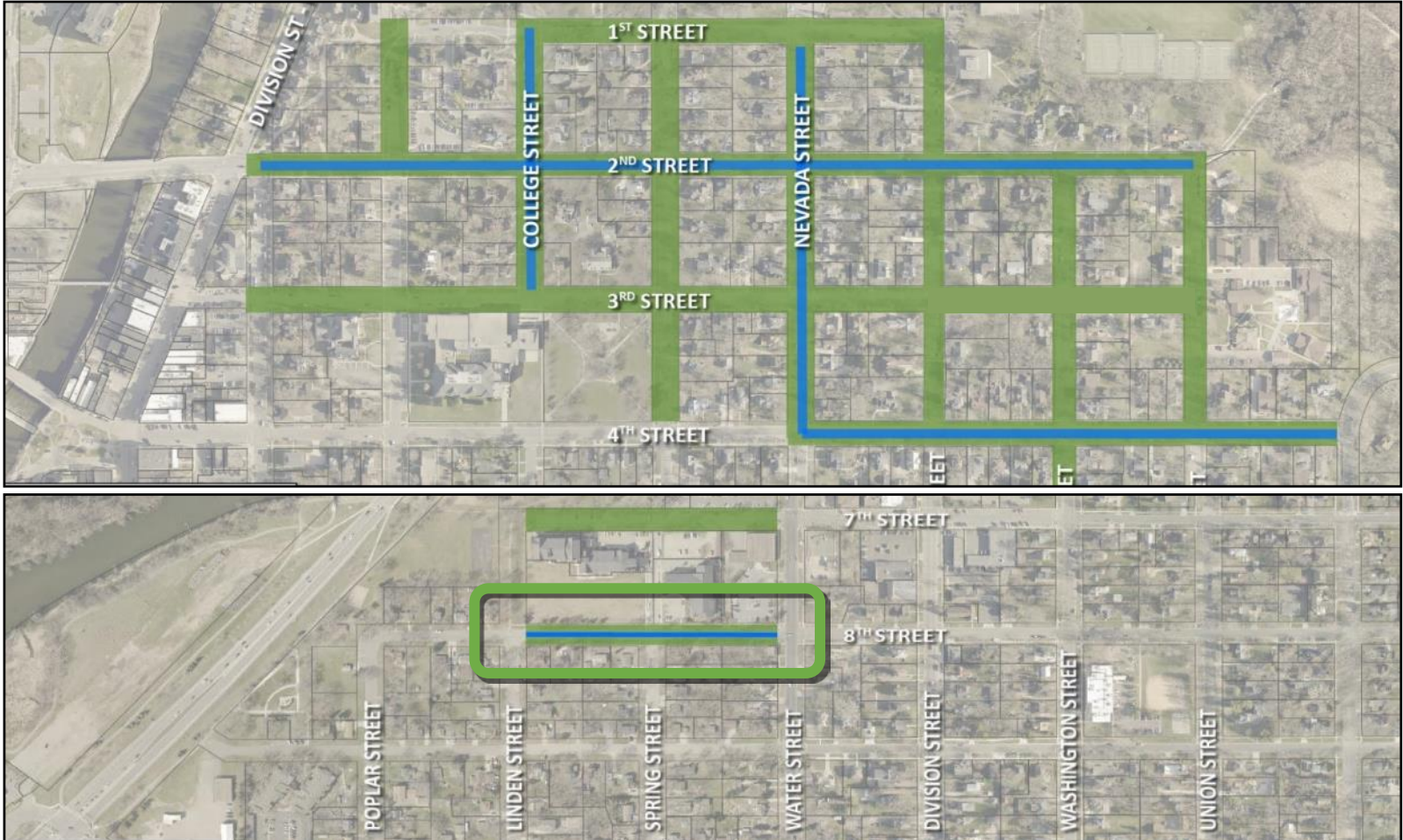
On-Street Cycle Track - \$\$\$

Cycle Track Considerations

- Existing road width
- Painted buffer space – no physical barrier
- High visibility of cycle track
- No parking

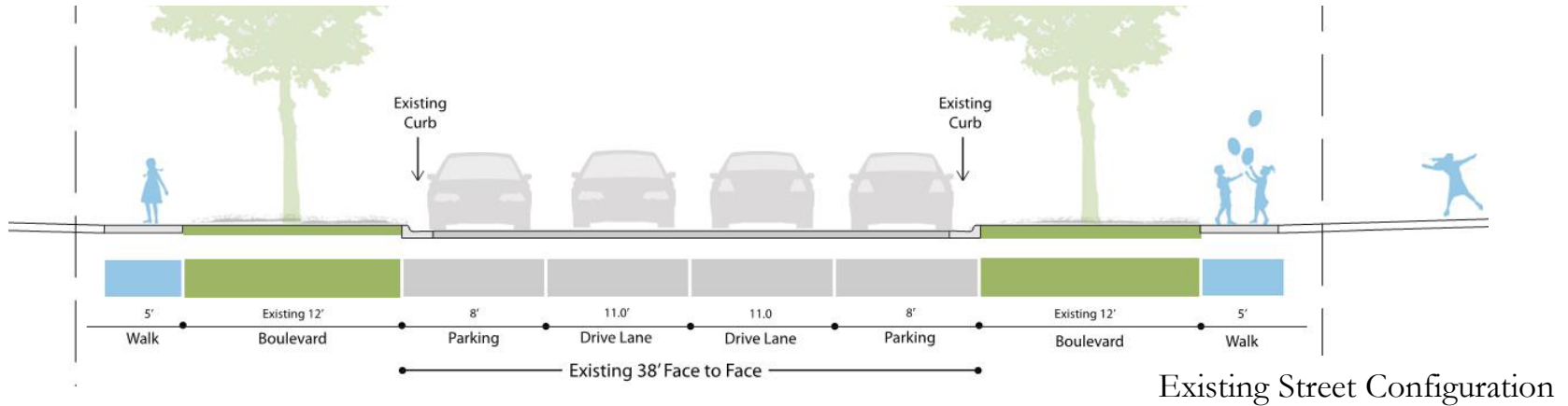
Nevada & Eighth St. Bikeway Improvements

First Street – Fourth Street
Linden Street – Water Street



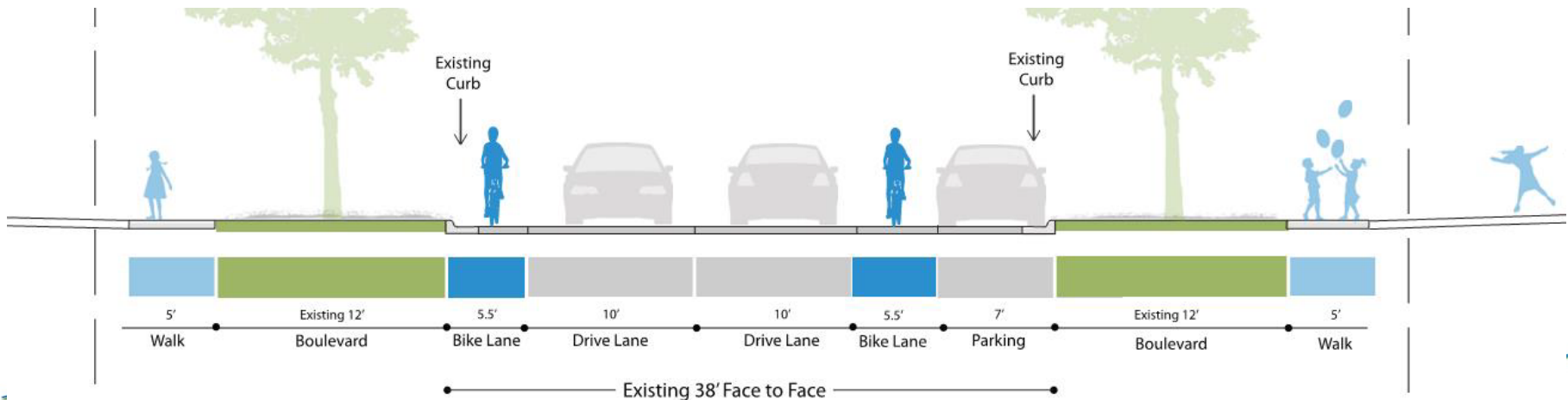
Nevada & Eighth St. Bikeway Improvements

- First St to Fourth St & Linden St to Water St

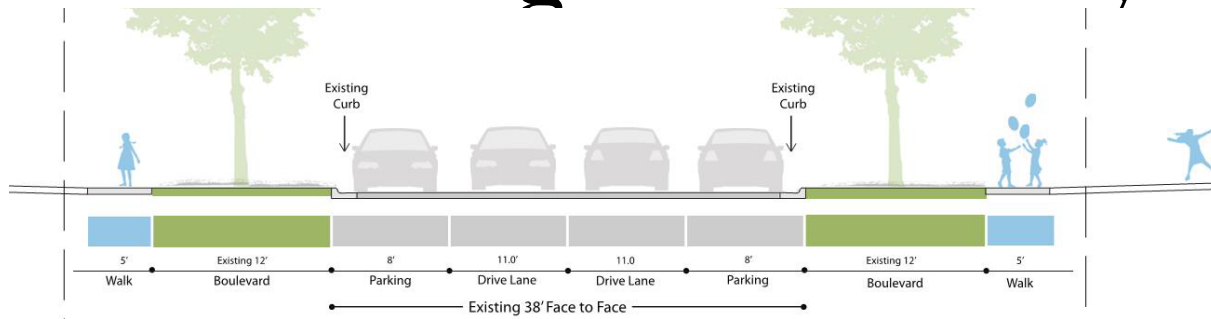


• On-Street Bike Lanes

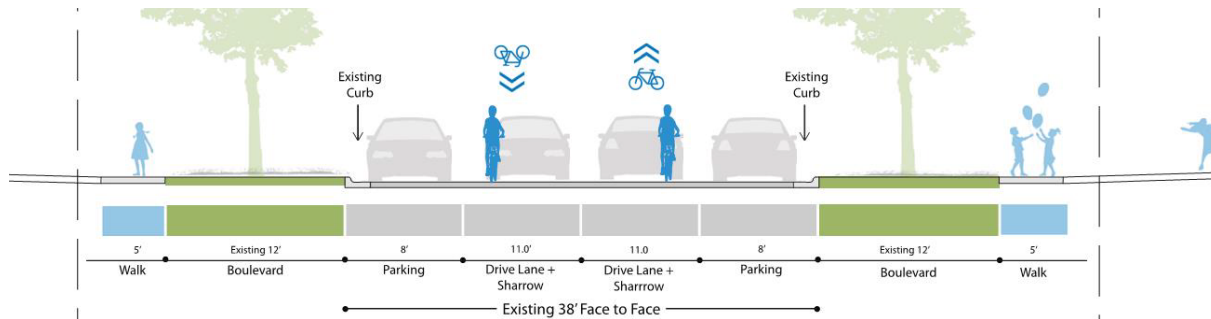
- Fits in Existing Street Footprint, No Buffer, Maintains Parking on One Side



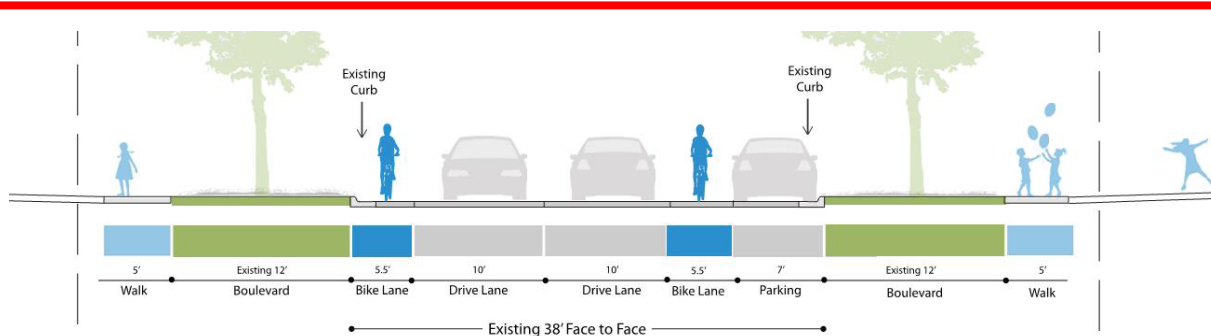
Nevada & Eighth St. Bikeway Options



Existing Street Configuration



Sharrows - \$



On-Street Bike Lanes - \$\$

Existing Configuration

- No Bikes
- Two side parking
- Large Boulevards

Sharrows Considerations

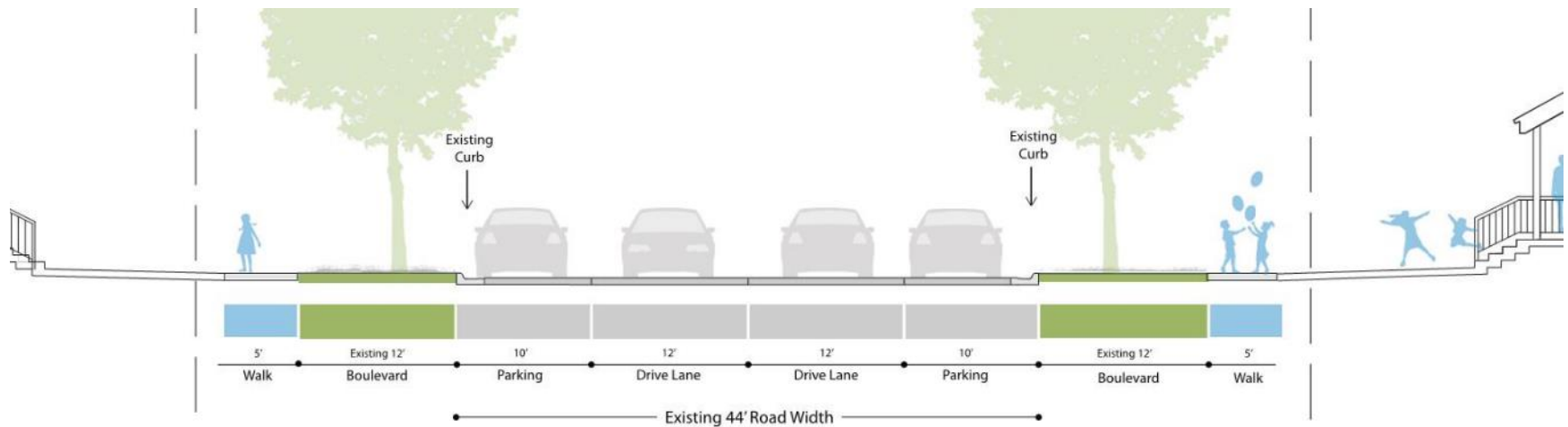
- Existing road width
- Painted symbol for shared lane use
- Parking Remains

Bike Lane Considerations

- Existing road width
- No buffer
- One side parking
- Commuter accommodation

Heritage Drive Bikeway Improvements

Hwy 3 – 500 ft west of Hidden Valley Rd

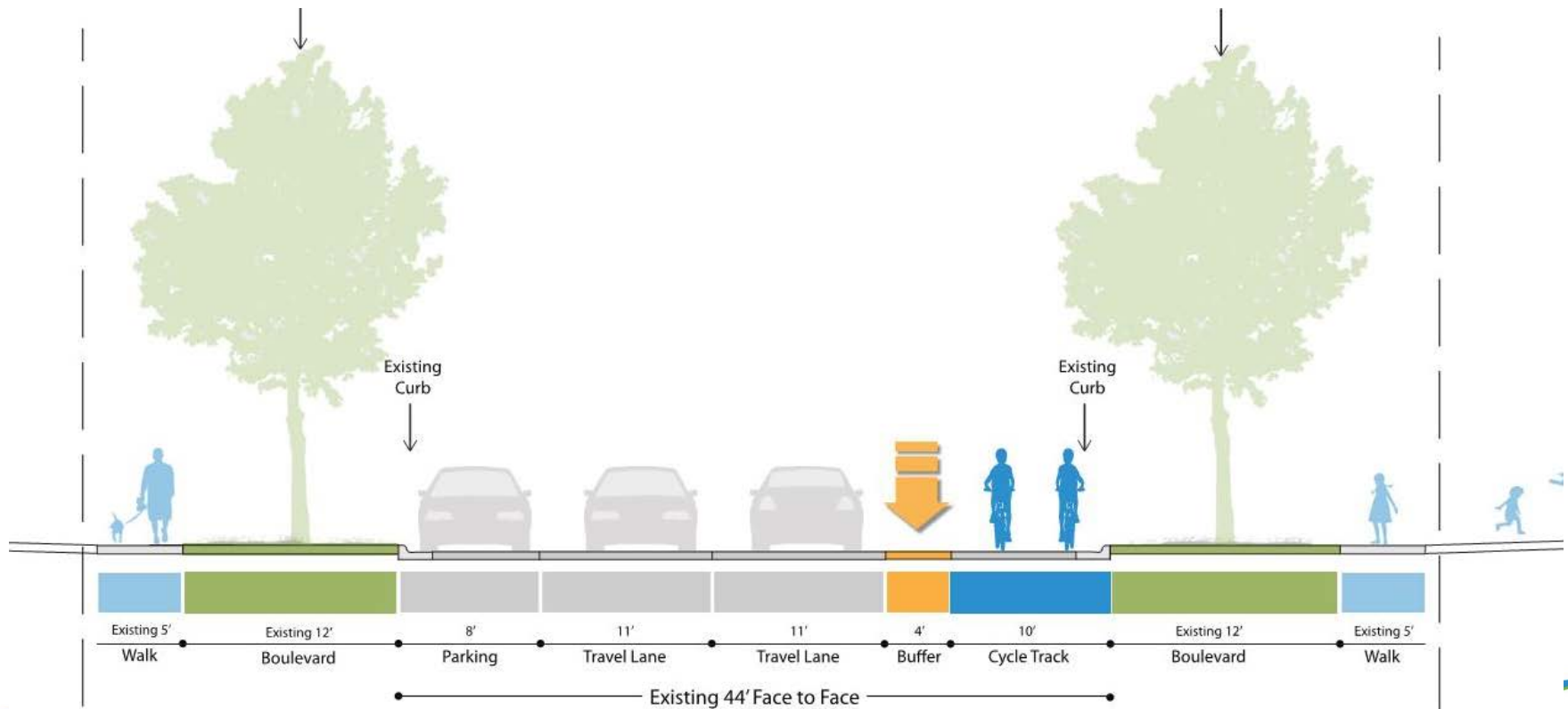


Heritage Drive Bikeway Improvements

Hwy 3 – 500 ft west of Hidden Valley Rd

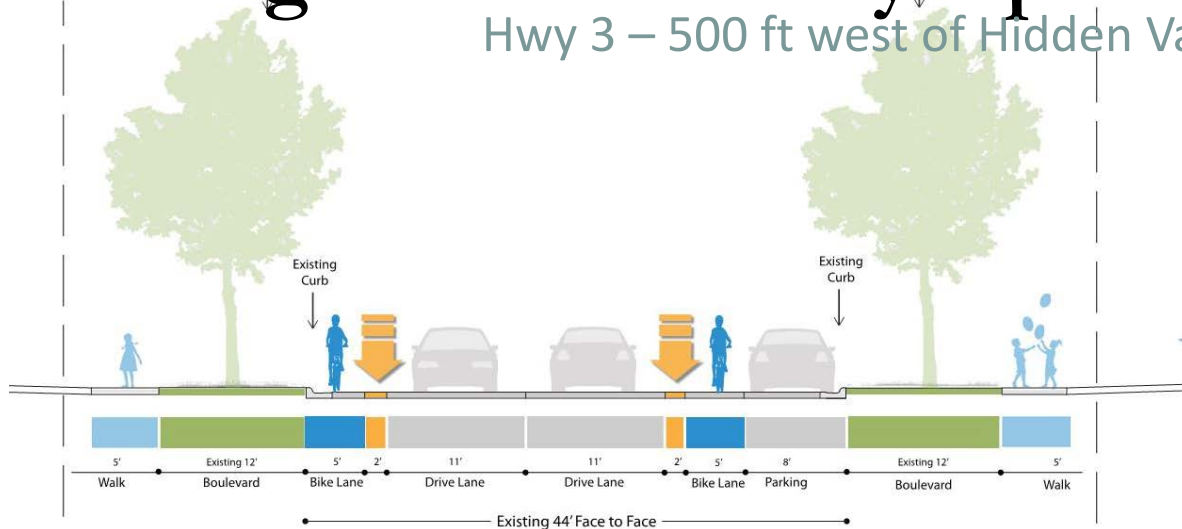
On-Street Cycle Track

- Fits in Existing Street Footprint
- Painted Buffer but No Physical Barrier
- Maintains Parking on One Side



Heritage Drive Bikeway Options

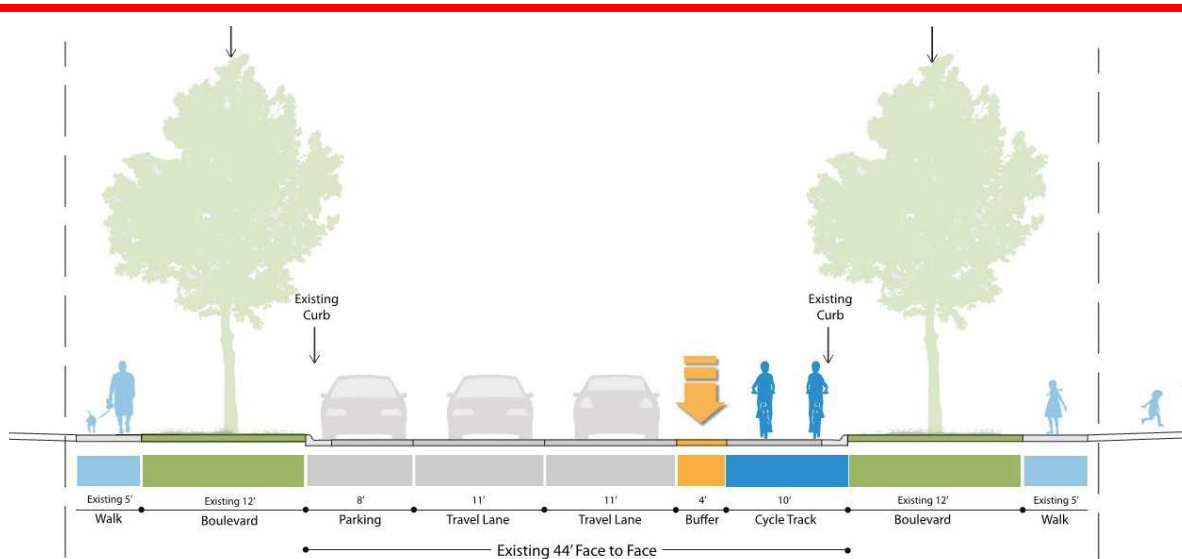
Hwy 3 – 500 ft west of Hidden Valley Rd



Bike Lane Considerations

- Narrow painted buffer
- One side parking
- Commuter accommodation

Buffered Bike Lanes - \$



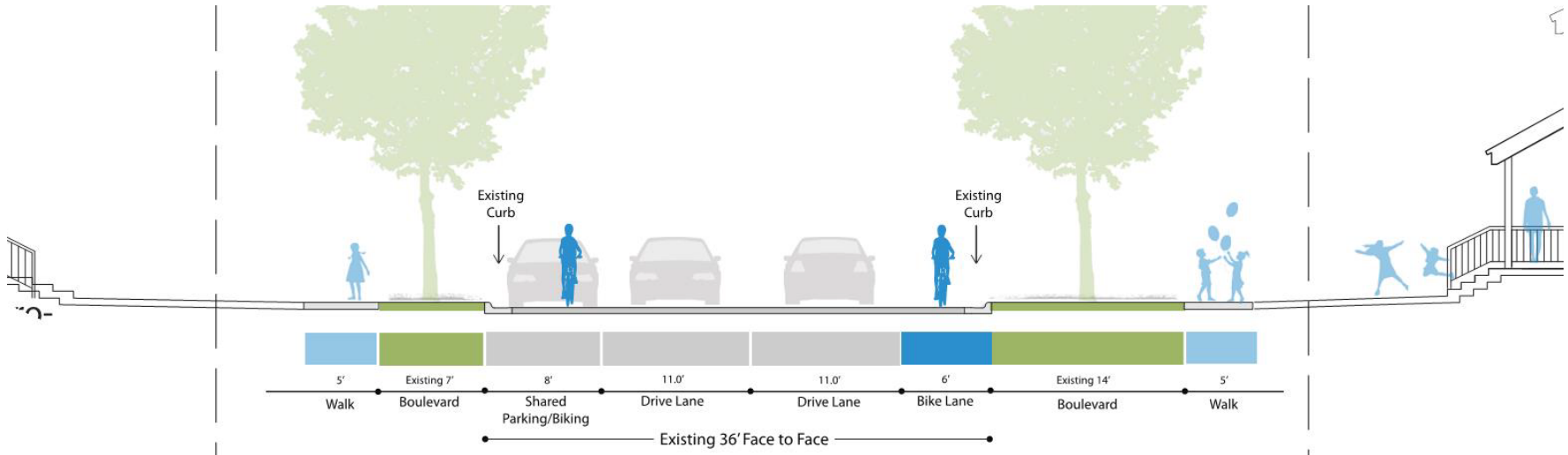
On-Street Cycle Track - \$\$

Cycle Track Considerations

- Painted buffer space – no physical barrier
- High visibility of cycle track
- One side parking
- Option to shift parking to cycle track side for additional protection.


Jefferson Road Bikeway Improvements

Heritage Drive – Hidden Valley Road



Existing Street Configuration to Remain

Pedestrian Bumpout Analysis

- Bump-outs Increase Pedestrian Safety and Traffic Calming
 - Intersection Crosswalks Pedestrian Flows Observed and Resident/City Council Input Considered to Identify Higher Traffic Areas
 - Limitations - Bikeway Conflicts, Delivery Routes, Street Width, etc.
 - Eliminated: low-density crossings & streets with limitations
 - Prioritized locations near specific destinations based on Origin-Destination trip generation: institutions, schools, parks, high children crossings, etc.
- 

Pedestrian Bumpout Analysis



2020 Mill and Overlay Project

Bumpout Selection Map - Updated January 2020

www.ci.northfield.mn.us/1313/2020-Mill-and-Overlay-Project

Intersections were eliminated because...



Low density of pedestrian crossings observed

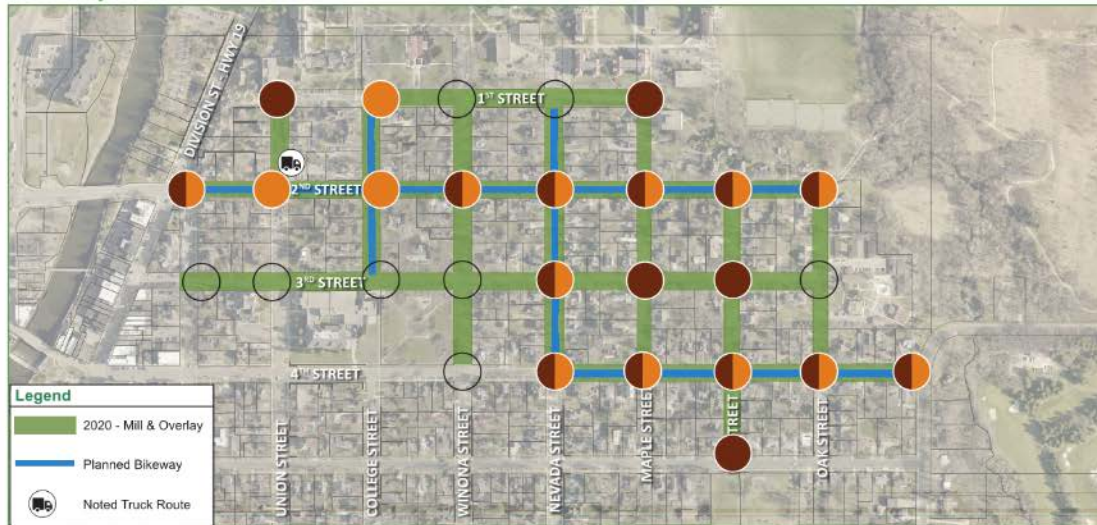


The street did not have parking lanes OR the street has proposed bikeways or other design restrictions

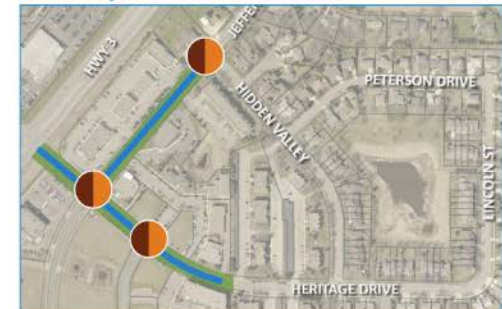


Potential bumpout candidate

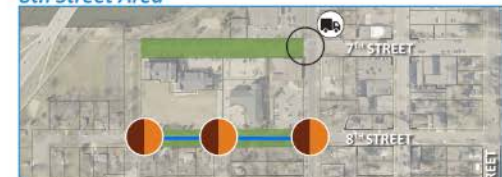
North Project Area



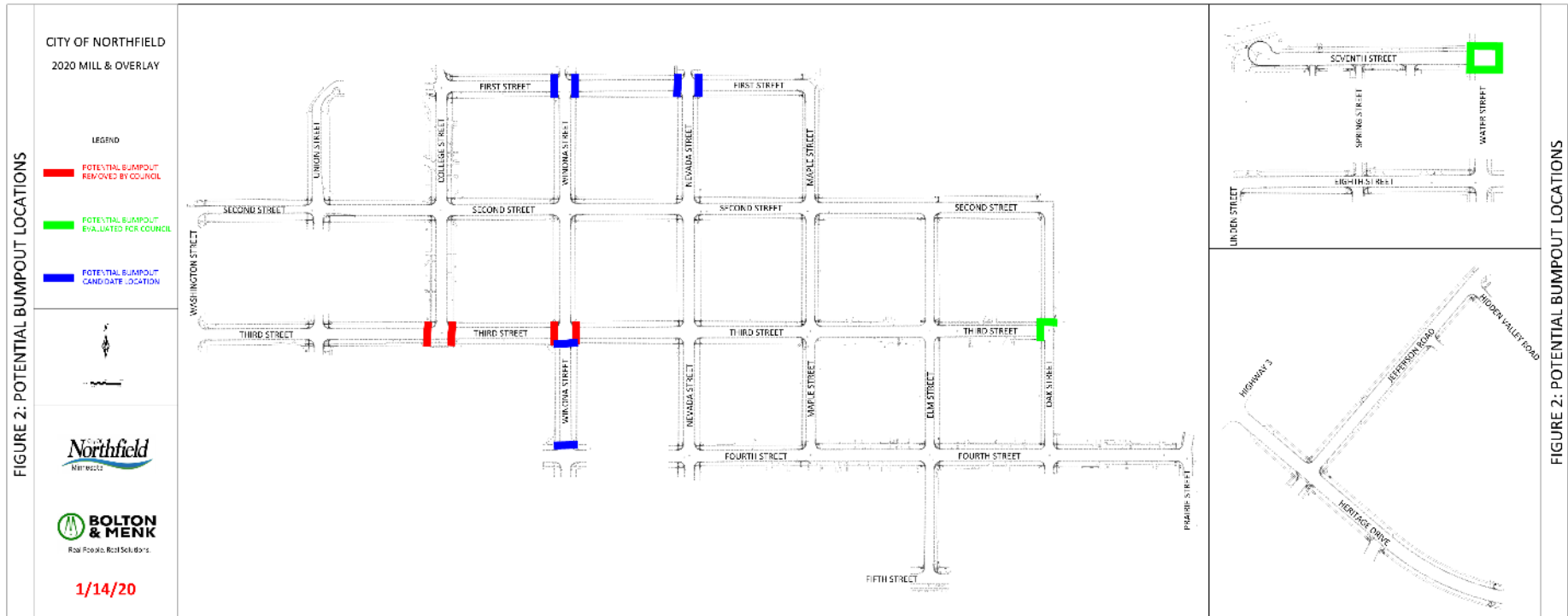
South Project Area



8th Street Area



Pedestrian Bumpout Candidates



1/14/20



LEGEND

CITY OF NORTHFIELD
2020 MILL & OVERLAY

FIGURE 2: POTENTIAL BUMPOUT LOCATIONS

FIGURE 2: POTENTIAL BUMPOUT LOCATIONS

CITY OF NORTHFIELD
2020 MILL & OVERLAY

LEGEND

 POTENTIAL BUMPOUT
REMOVED BY COUNCIL

 POTENTIAL BUMPOUT
EVALUATED FOR COUNCIL

 POTENTIAL BUMPOUT
CANDIDATE LOCATION



1/14/20

FIGURE 2: POTENTIAL BUMPOUT LOCATIONS

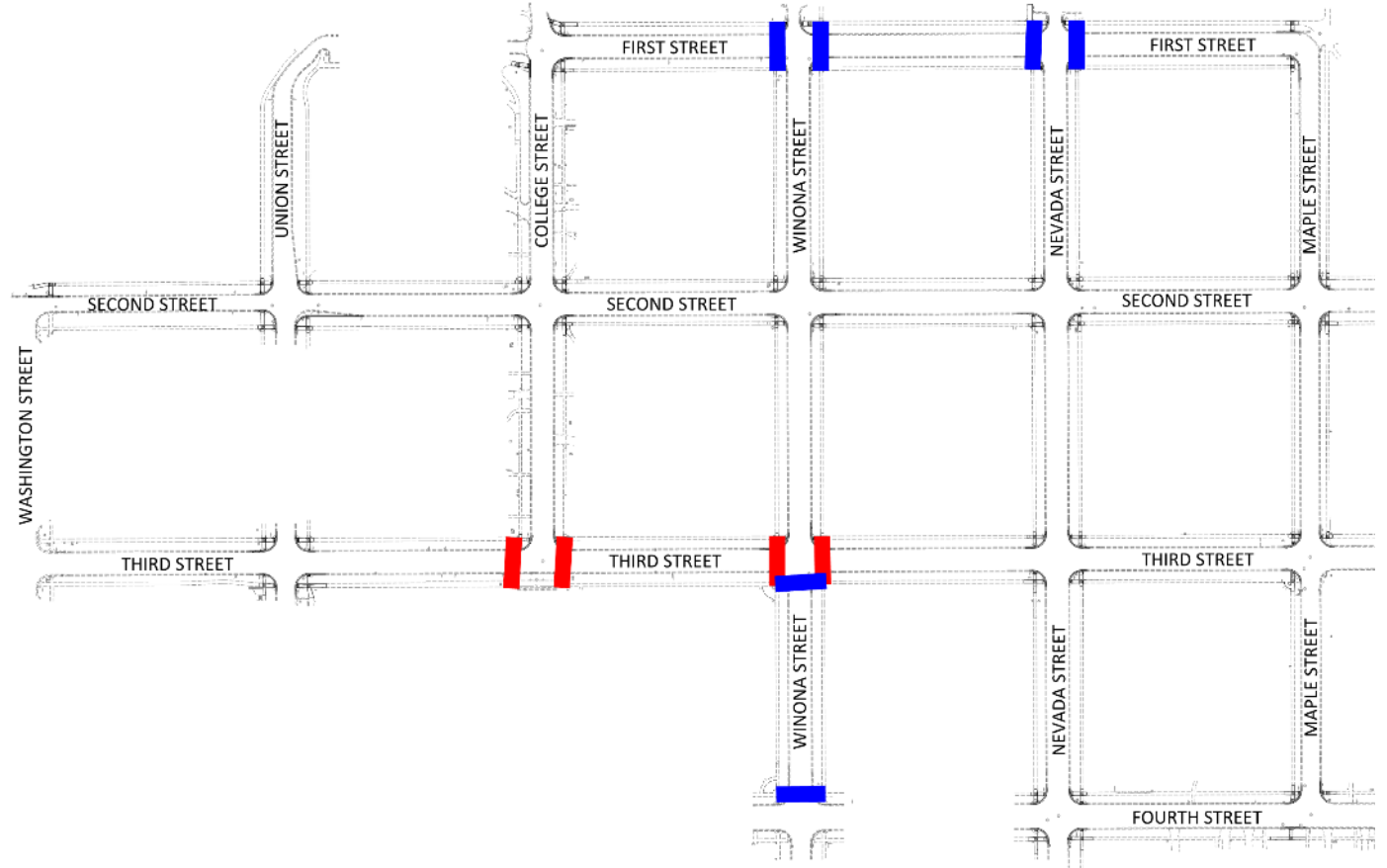





FIGURE 2: POTENTIAL BUMPOUT LOCATIONS

CITY OF NORTHFIELD
2020 MILL & OVERLAY

LEGEND

-  POTENTIAL BUMPOUT REMOVED BY COUNCIL
-  POTENTIAL BUMPOUT EVALUATED FOR COUNCIL
-  POTENTIAL BUMPOUT CANDIDATE LOCATION



1/14/20

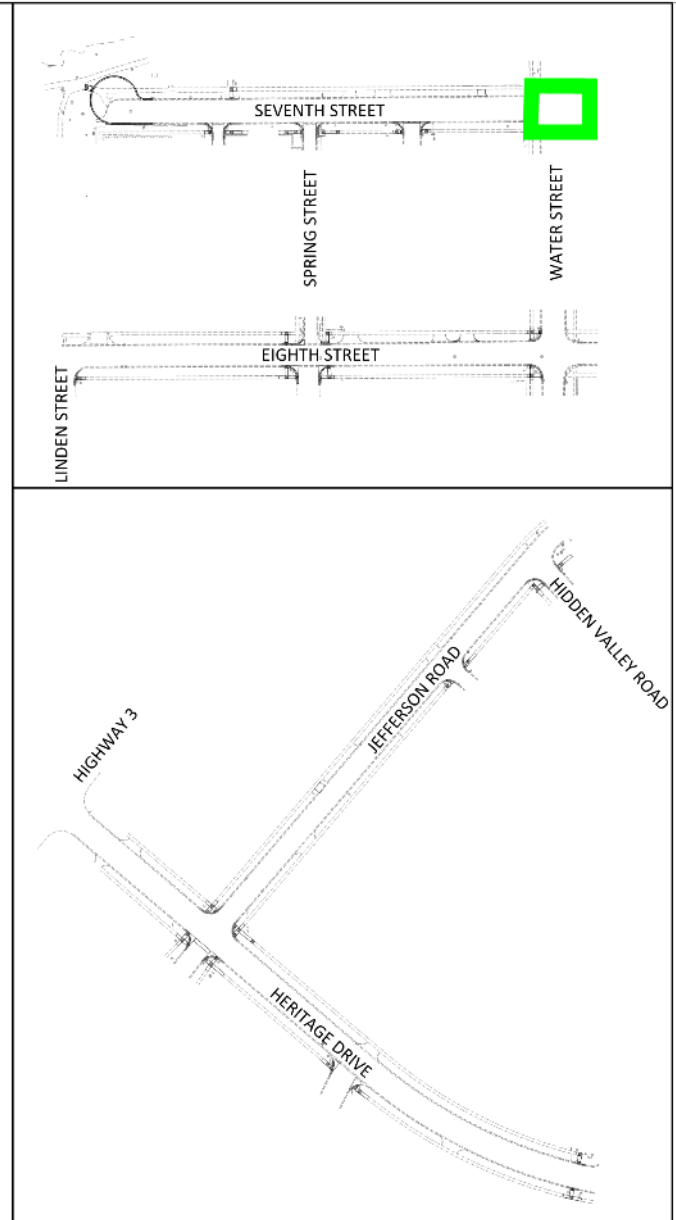
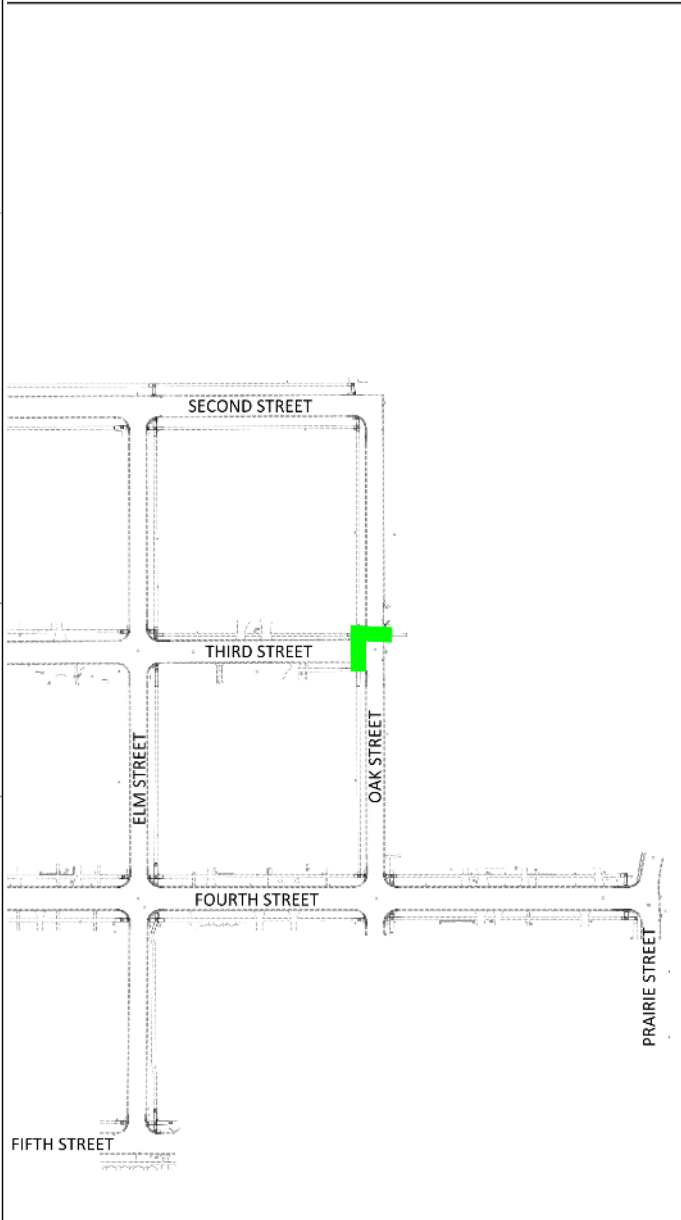
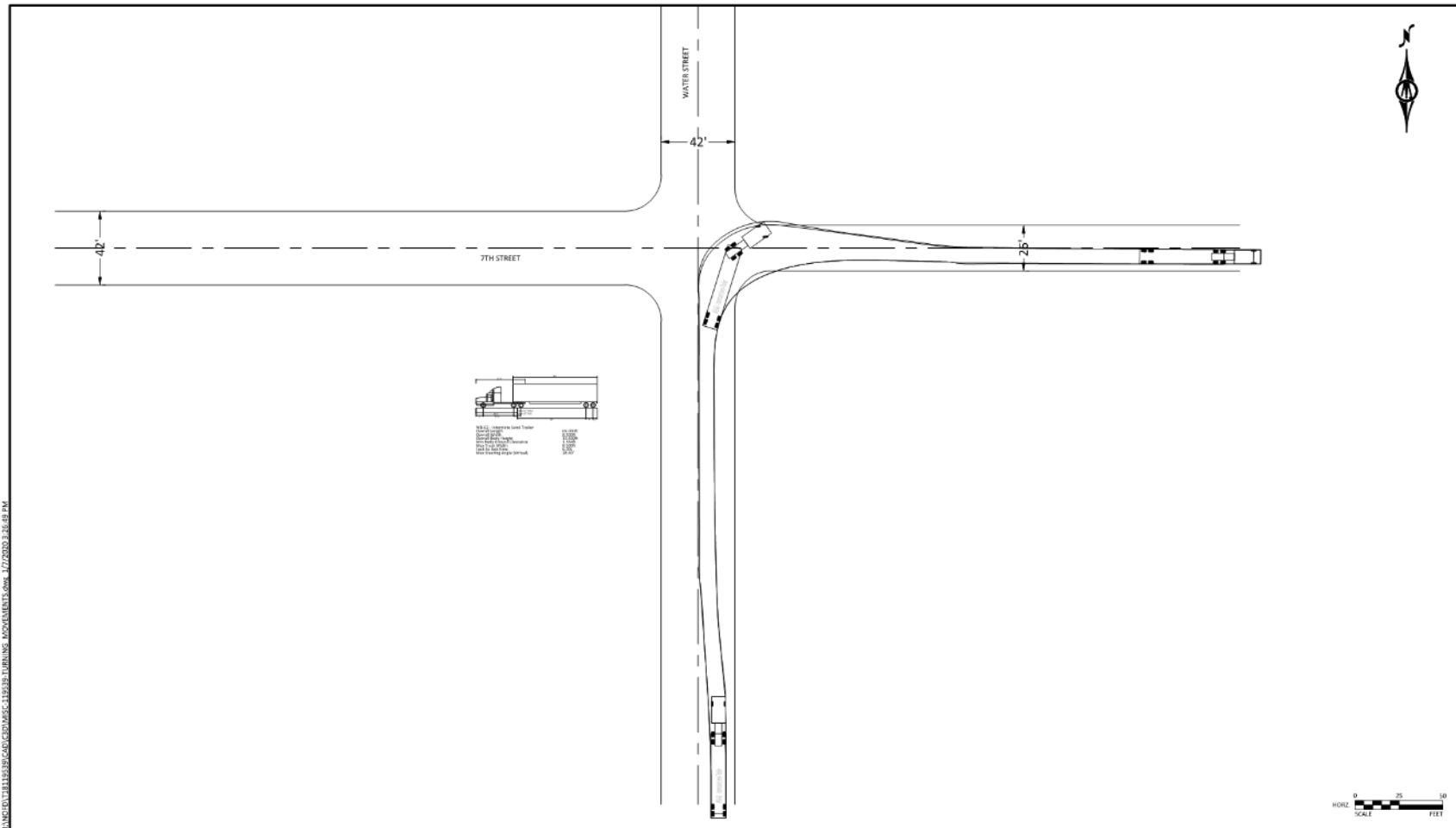


FIGURE 2: POTENTIAL BUMPOUT LOCATIONS

Truck Turning Movements

7TH & WATER DELIVERY TRUCK TURNING MOVEMENTS 1
CITY OF NORTHFIELD

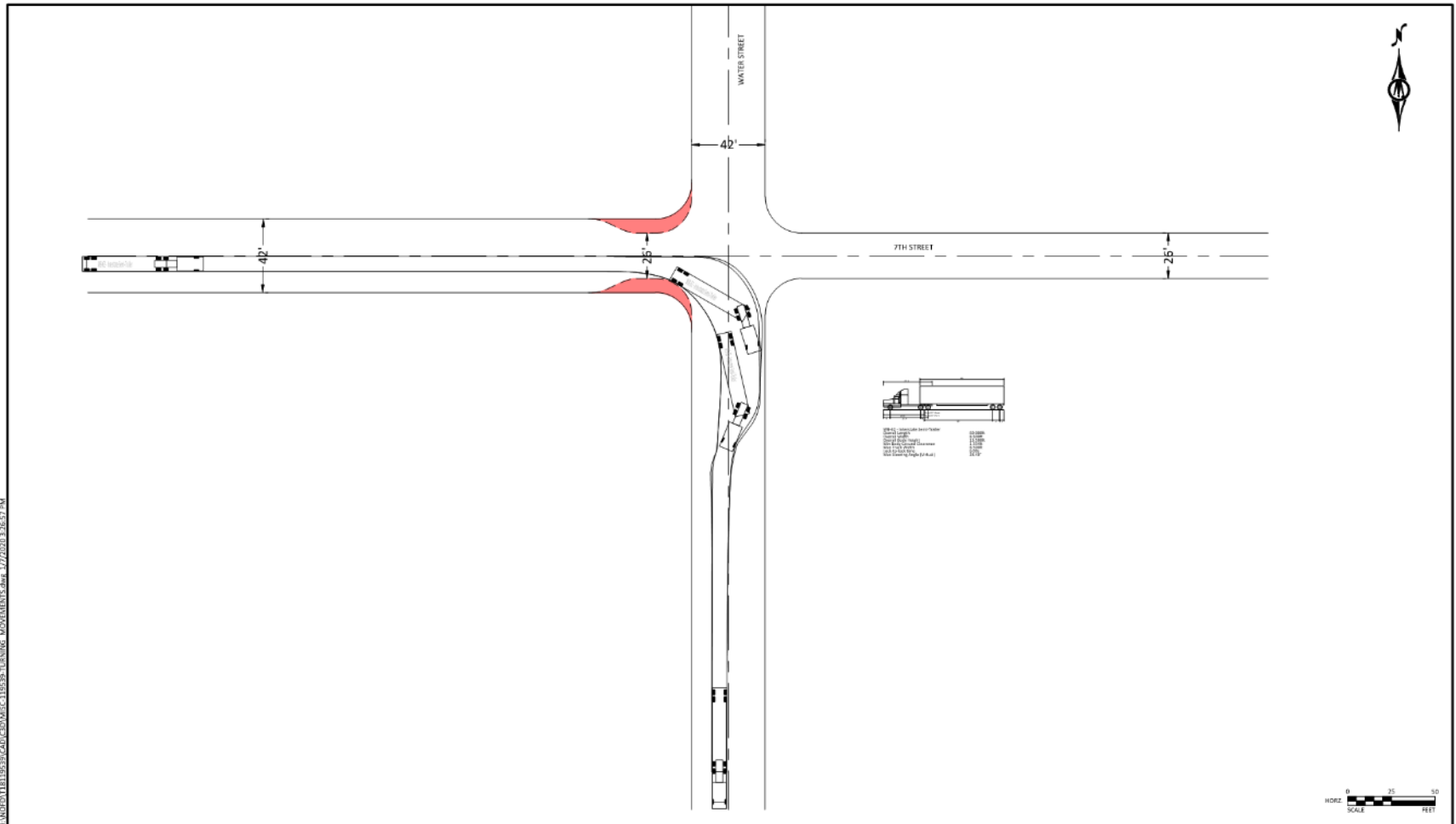
EXISTING CONDITIONS - NO BUMPOUTS
JANUARY 2020



Truck Turning Movements

7TH & WATER DELIVERY TRUCK TURNING MOVEMENTS 2
CITY OF NORTHFIELD

BUMPOUTS ACROSS 7TH
JANUARY 2020

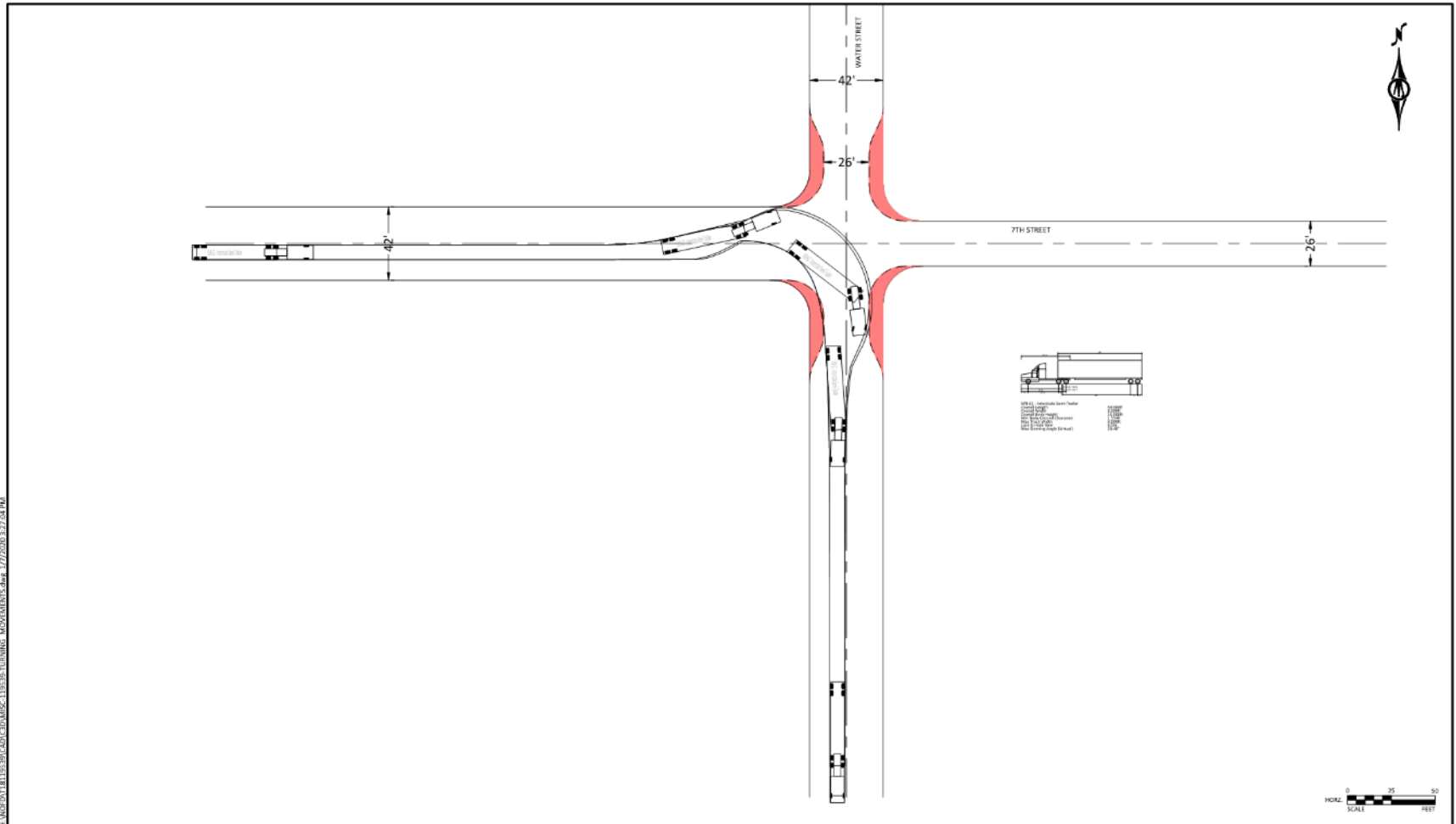


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Truck Turning Movements

7TH & WATER DELIVERY TRUCK TURNING MOVEMENTS 3
CITY OF NORTHFIELD

BUMPOUTS ACROSS WATER
JANUARY 2020

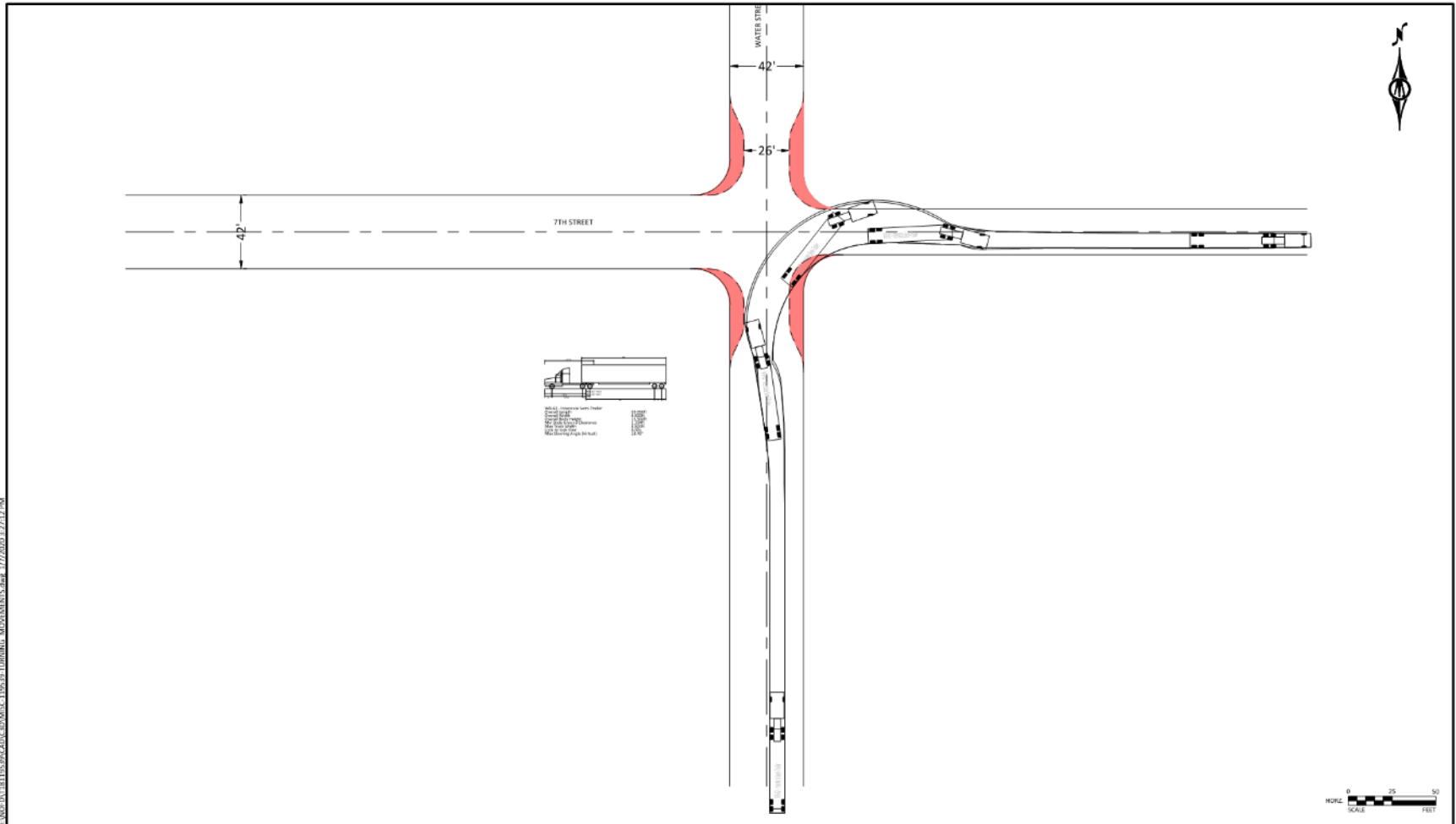


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Truck Turning Movements

7TH & WATER DELIVERY TRUCK TURNING MOVEMENTS 4
CITY OF NORTHFIELD

BUMPOUTS ACROSS WATER
JANUARY 2020

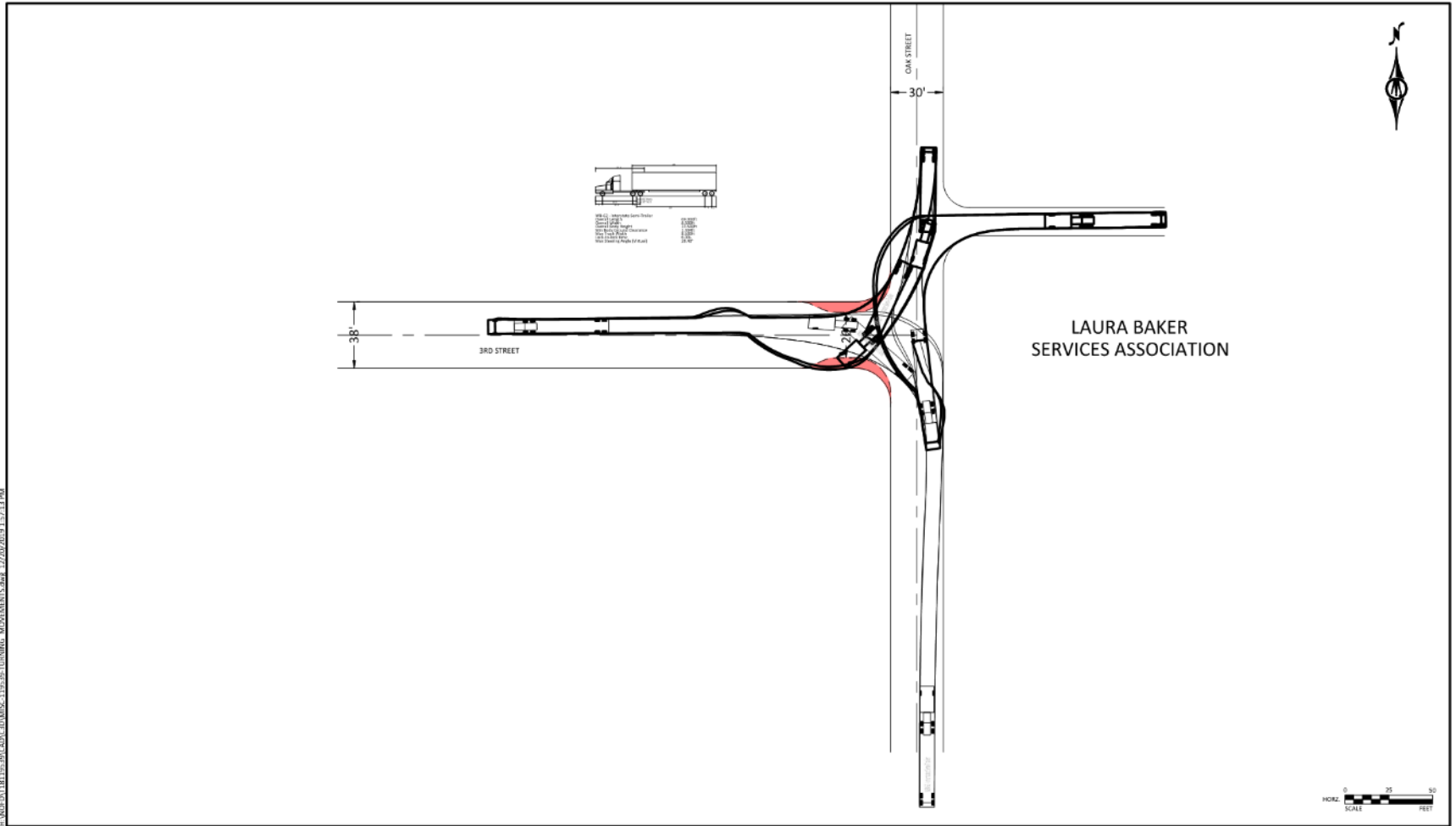


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Truck Turning Movements

3RD & OAK DELIVERY TRUCK TURNING MOVEMENTS 1
CITY OF NORTHFIELD

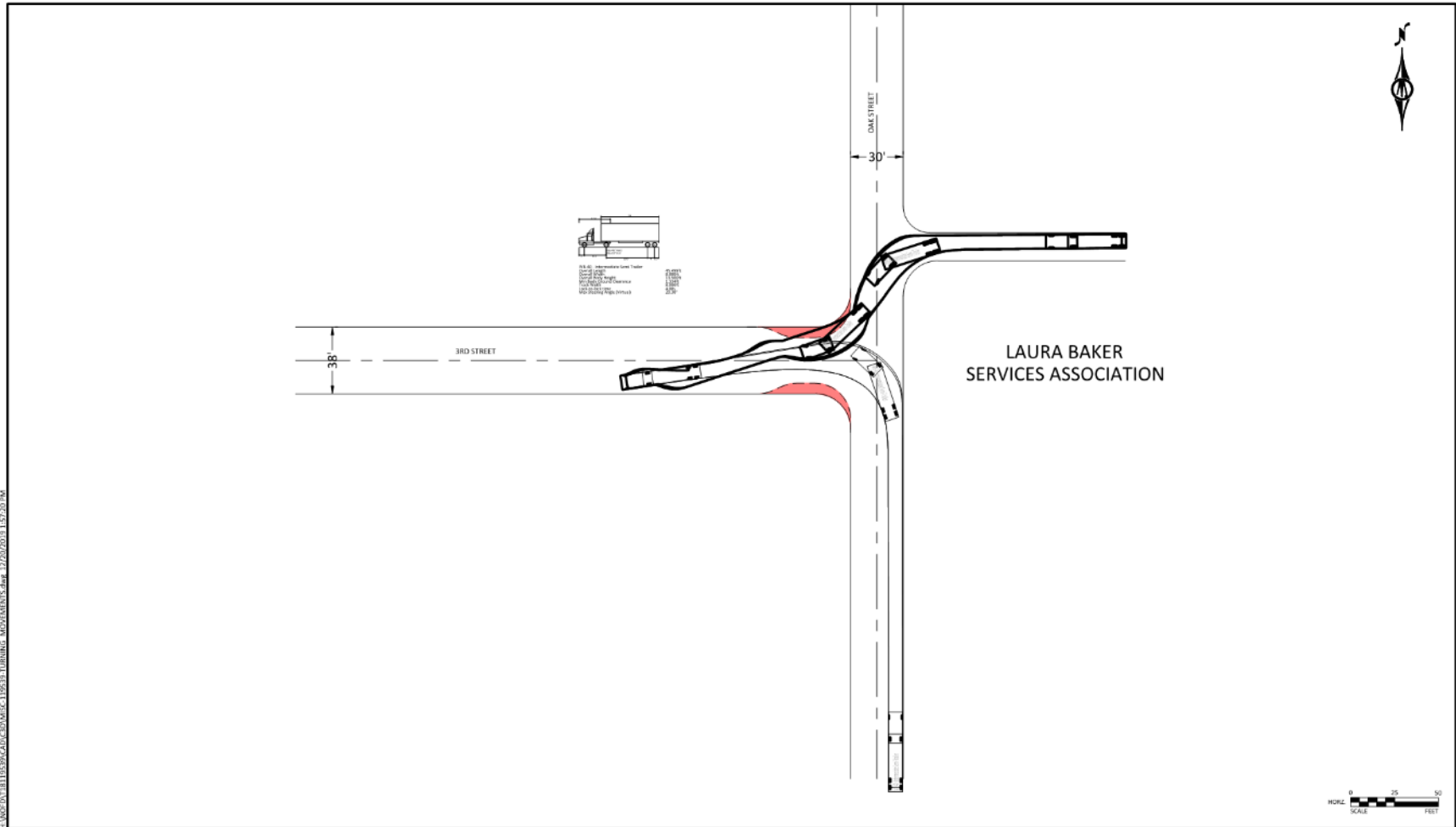
SEMI DELIVERY TO LAURA BAKER
JANUARY 2020



Truck Turning Movements

3RD & OAK DELIVERY TRUCK TURNING MOVEMENTS 2
 CITY OF NORTHFIELD

INTERMEDIATE SEMI DELIVERY TO LAURA BAKER
 JANUARY 2020



Project Process

- *Aug 20, 2019* - *Order Preparation of Feasibility Report*
- *Oct 2, 2019* - *Neighborhood Meeting #1*
- *Oct 15, 2019* - *Council Direction on Bikeway & Sidewalk Concepts*
- *Nov 5, 2019* - *Accept Feasibility Report & Call for Improvement Hearing & Order Preparation of Plans & Specifications*
- *Dec 3, 2019* - *Public Improvement Hearing & Order Improvements*
- *Jan 7, 2020* - *Order Improvement*
- *Jan 8, 2020* - *Neighborhood Meeting #2*
- **Jan 14, 2020** - **City Council Work Session on Final Plans**
- *Jan 21, 2020* - *Approve Final Plans/Specs & Order Advertisements for Bids*
- *Feb 20, 2020* - *Bid Opening*
- *Mar 10, 2020* - *Accept Bids & Award Contract*
- *April 7, 2020* - *Declare Amount to be Assessed/Call for Assessment Hearing*
- *April/May 2020* - *Property Owner Meetings*
- *May 5, 2020* - *Assessment Hearing/Adopt Assessment Roll*
- *June to Oct 2020* - *Construction*
- *June 2021* - *Accept Improvements & Authorize Final Payment*