



Pedestrian, Bike, and Trail System

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Presentation Outline

1. Project Overview
2. Community Engagement Recap
3. Mill Towns State Trail: Planned Route Through Northfield
4. Northfield High School and Arcadia Charter School
 - a) Walking and Bicycling Issues Maps
 - b) Walking and Bicycling Recommendation Maps
5. Street Type Table Update
6. Planned Walking and Bicycling Network Map
7. Questions and Discussion

Project Overview

- The *Northfield Pedestrian, Bike, and Trail System Update* aims to:
 - Update the Pedestrian, Bicycle, and Trail System map to create a more connected bicycle and pedestrian network
 - Recommend an alignment for the Northfield portion of the Mill Towns State Trail
 - Develop infrastructure recommendations around Northfield High School and Arcadia Charter School
 - Update City's Street Chart Table



Project Overview

Project Tasks

Existing Plan and Policy Review

Community Engagement

Safe Routes to School Planning

Mill Towns State Trail Alignment Map

Pedestrian & Bicycle Network Analysis

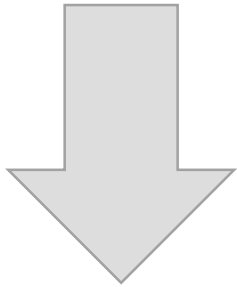
Update Pedestrian, Bicycle and Trail System Map

Update Street Chart Table

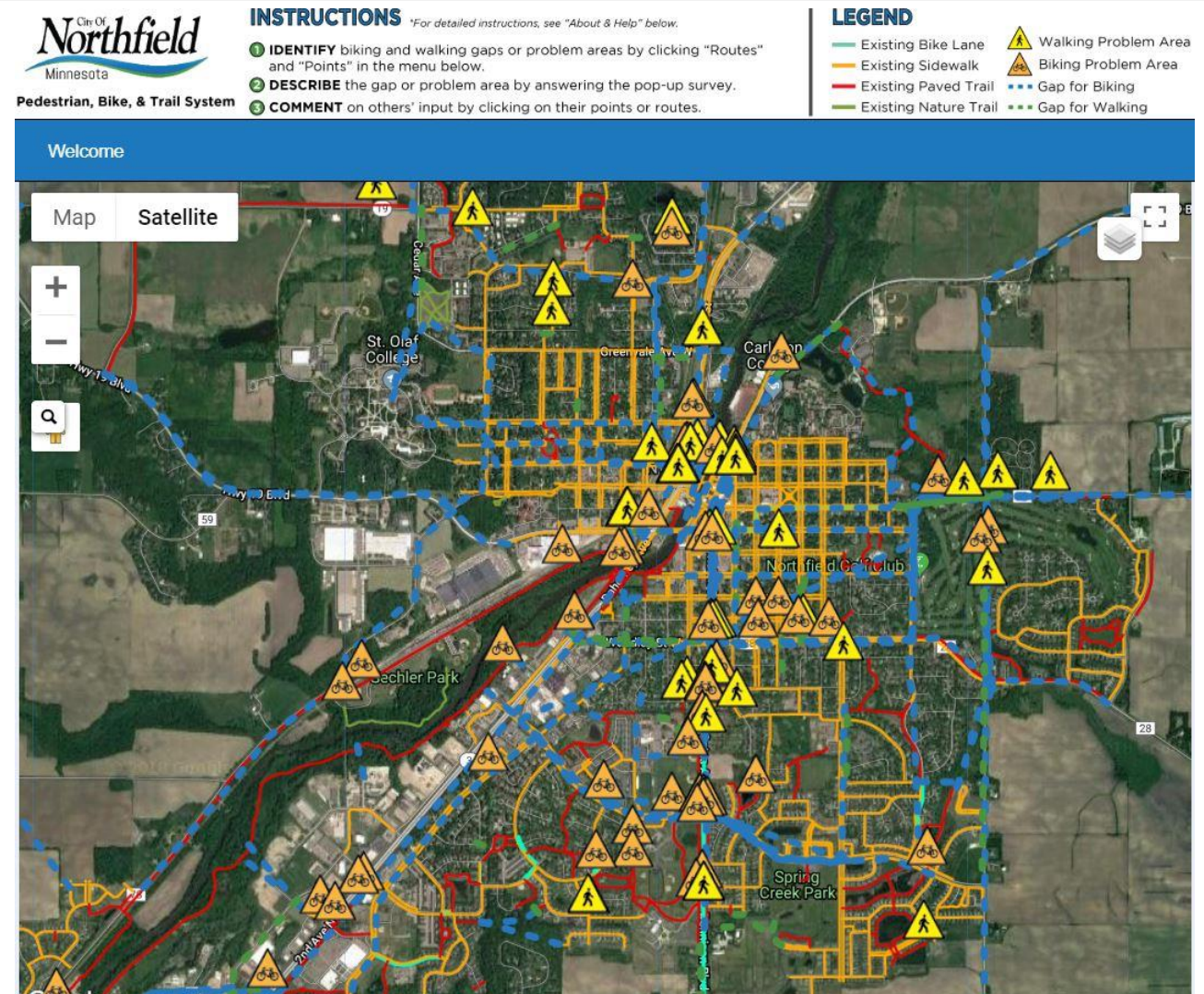


Community Engagement Recap

- Two key components:
 - Community meetings
 - Online interactive map



**Update Pedestrian, Bicycle
and Trail System Map**

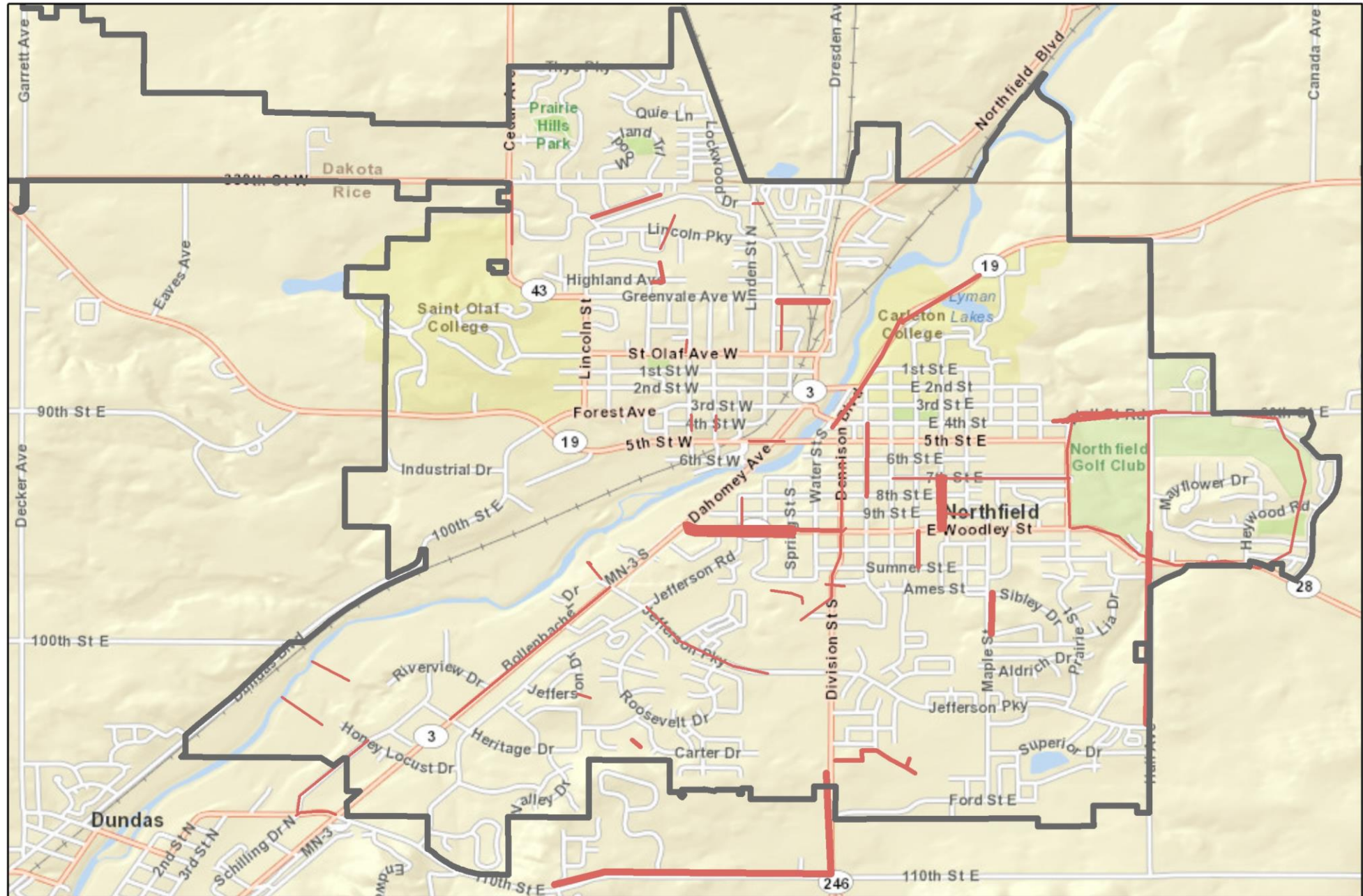


What We Heard

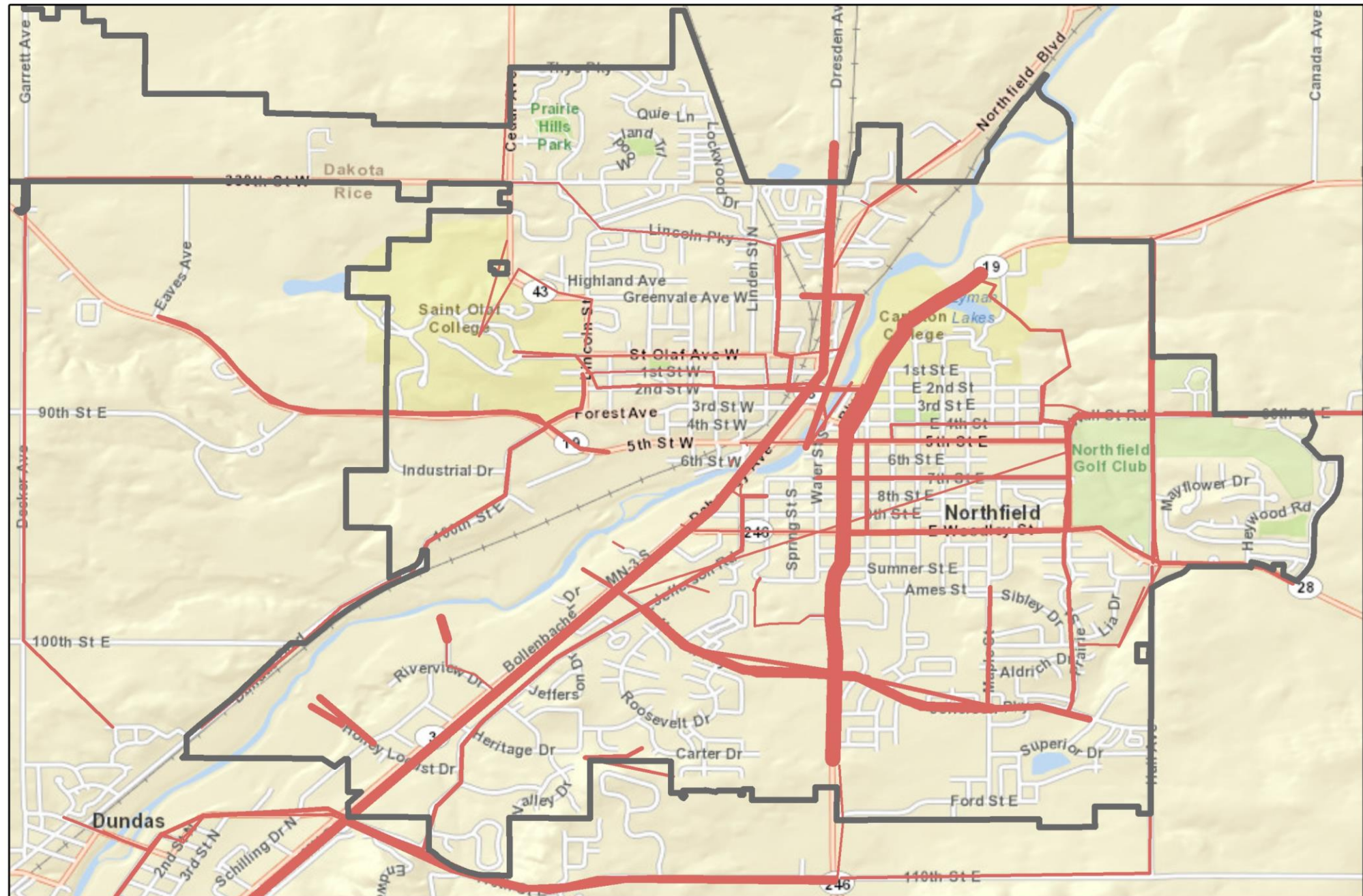
- Desire for improvements on Highway 3 and Division Street corridor
 - Safer crossings
 - Improved walking and biking facilities
- Safer access around K-12 schools
- Limited protection at dangerous intersections for pedestrians and bicyclists
- Sidewalk gaps throughout city, especially in the fast-growing SE area
- Connections to off-street trails need improvement (through physical trail connections to the street and/or improved wayfinding signage)
- Drivers often don't stop for pedestrians or bicyclists, which makes crossing wide streets difficult



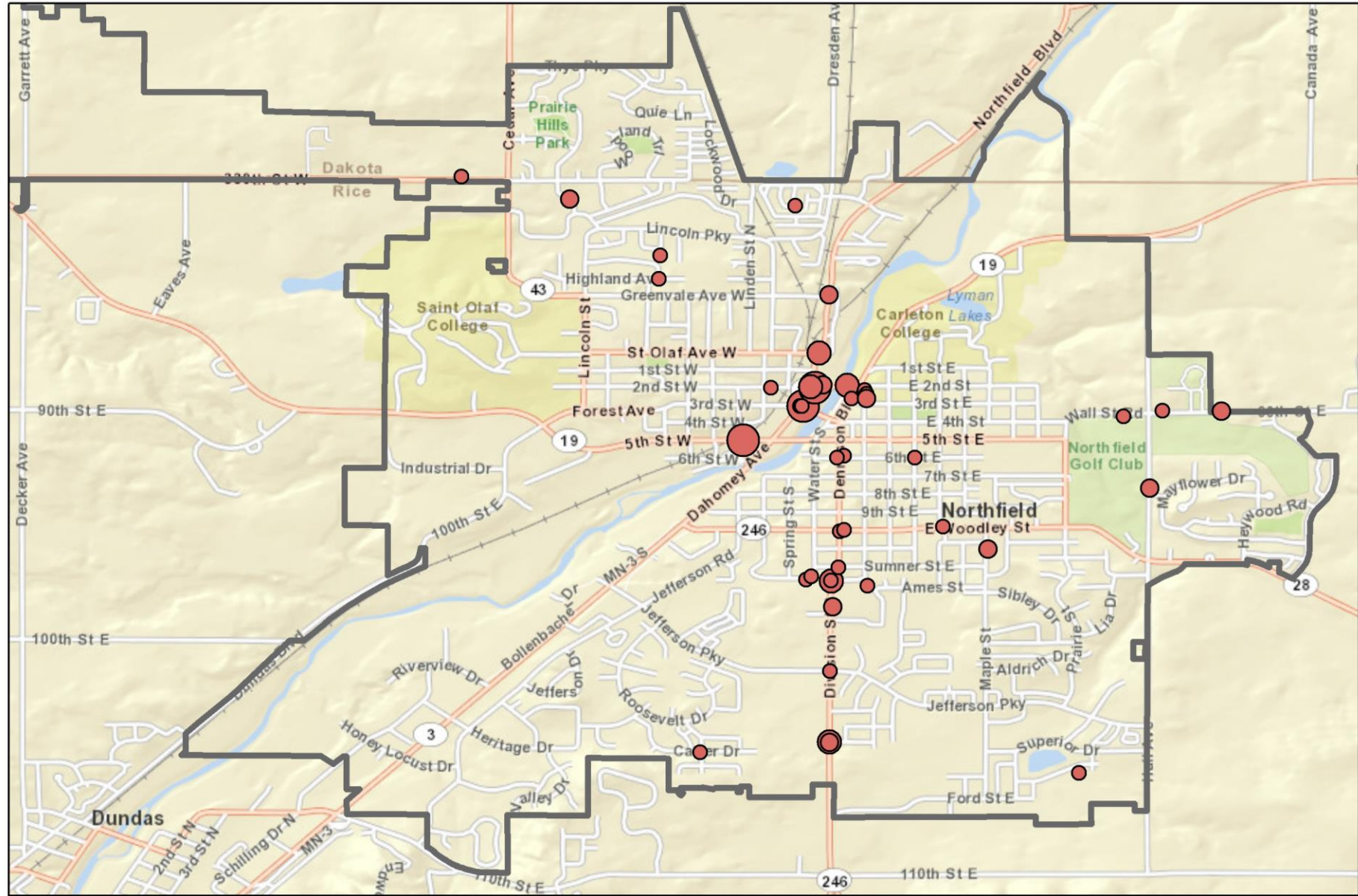
Walking Gaps



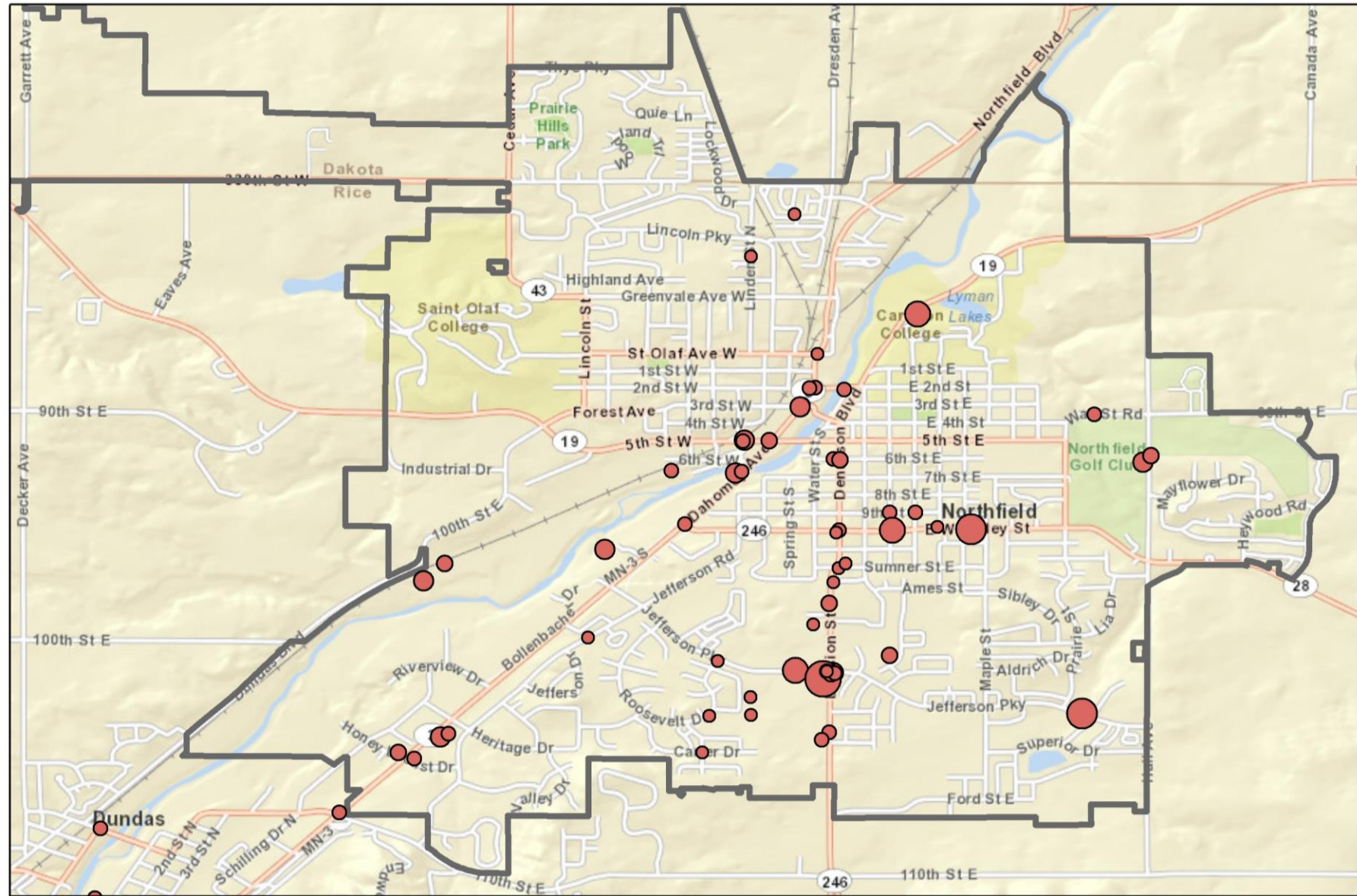
Biking Gaps



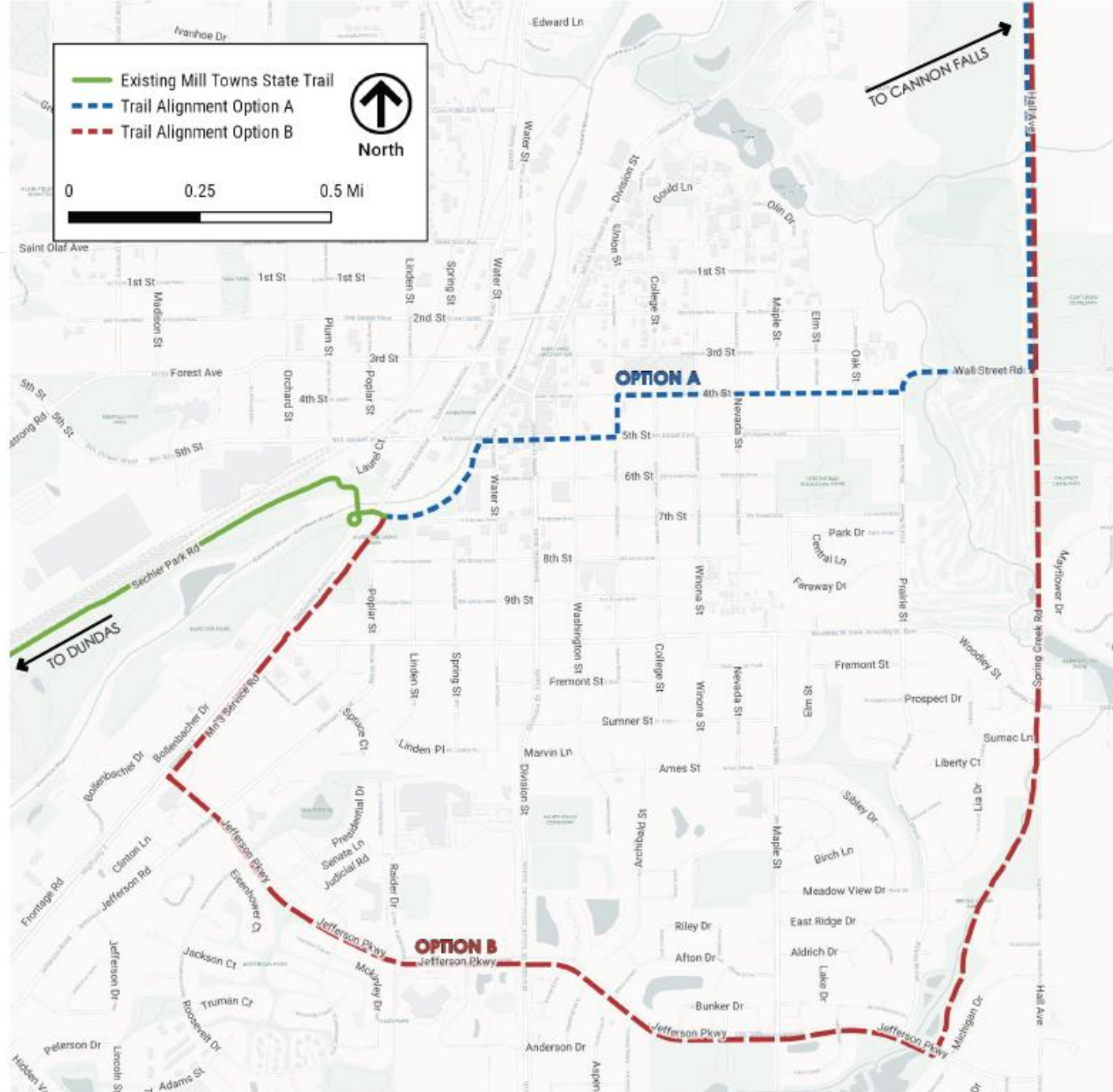
Walking Problem Areas



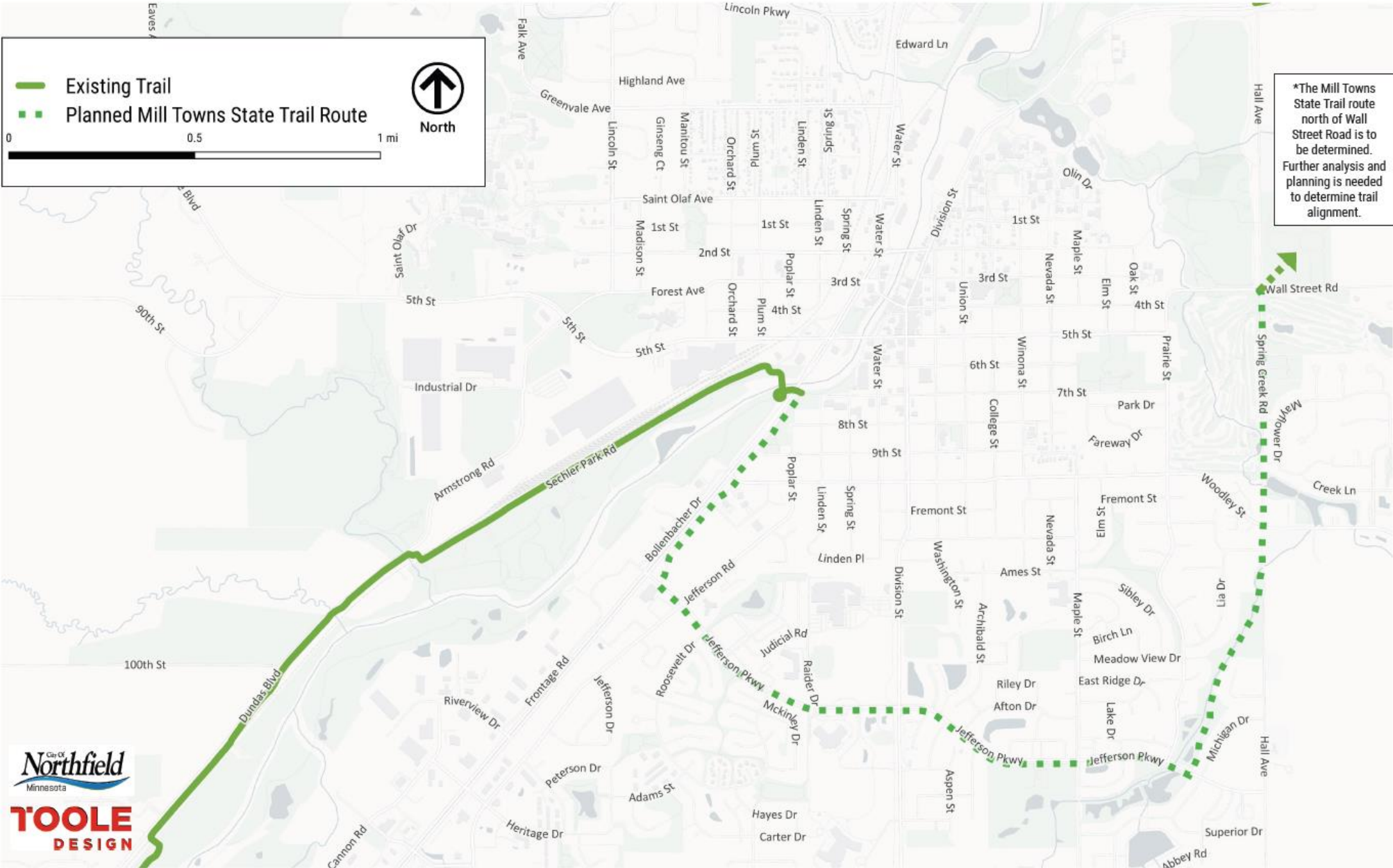
Biking Problem Areas



- T'OOLE**
DESIGN



Mill Towns State Trail: Planned Route Through Northfield



Safe Routes to School

- Northfield High School
 - Walking and bicycling issues map
 - Recommendation map
- Arcadia Charter School
 - Walking and bicycling issues map
 - Recommendation map



- Challenges crossing Division Street between Woodley and Jefferson Parkway



- Sidewalk gaps and lack of maintenance



- Missing curb ramps



Legend

- Northfield High School
- Half-mile radius
- Mill Towns State Trail:
Planned Route

Existing Network

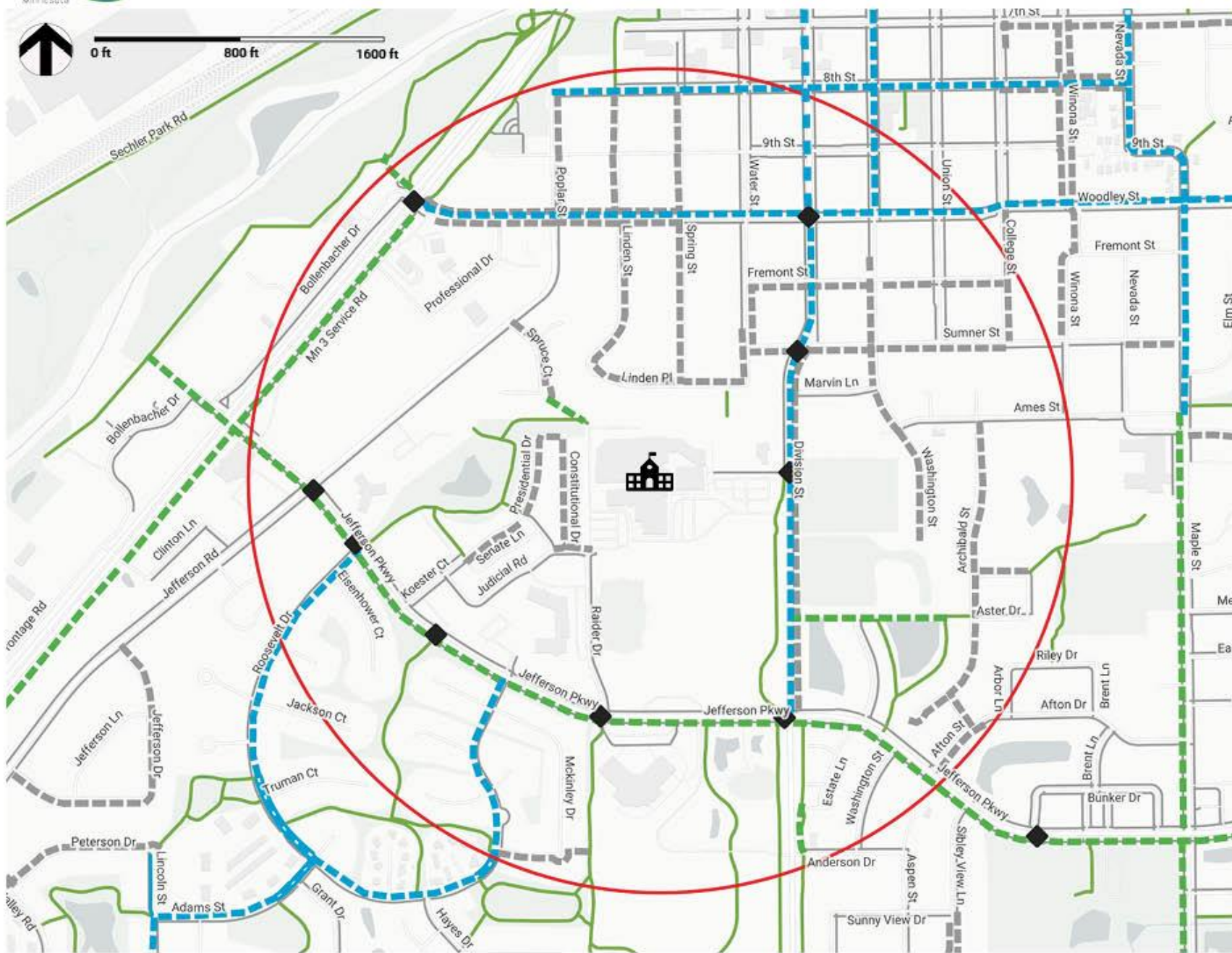
- Off-street trail / path
- On-street bikeway
- Sidewalk

Walking and Bicycling Issues

- Sidewalk gap
- No bicycle facility
- Poor connectivity
- Street crossing issue

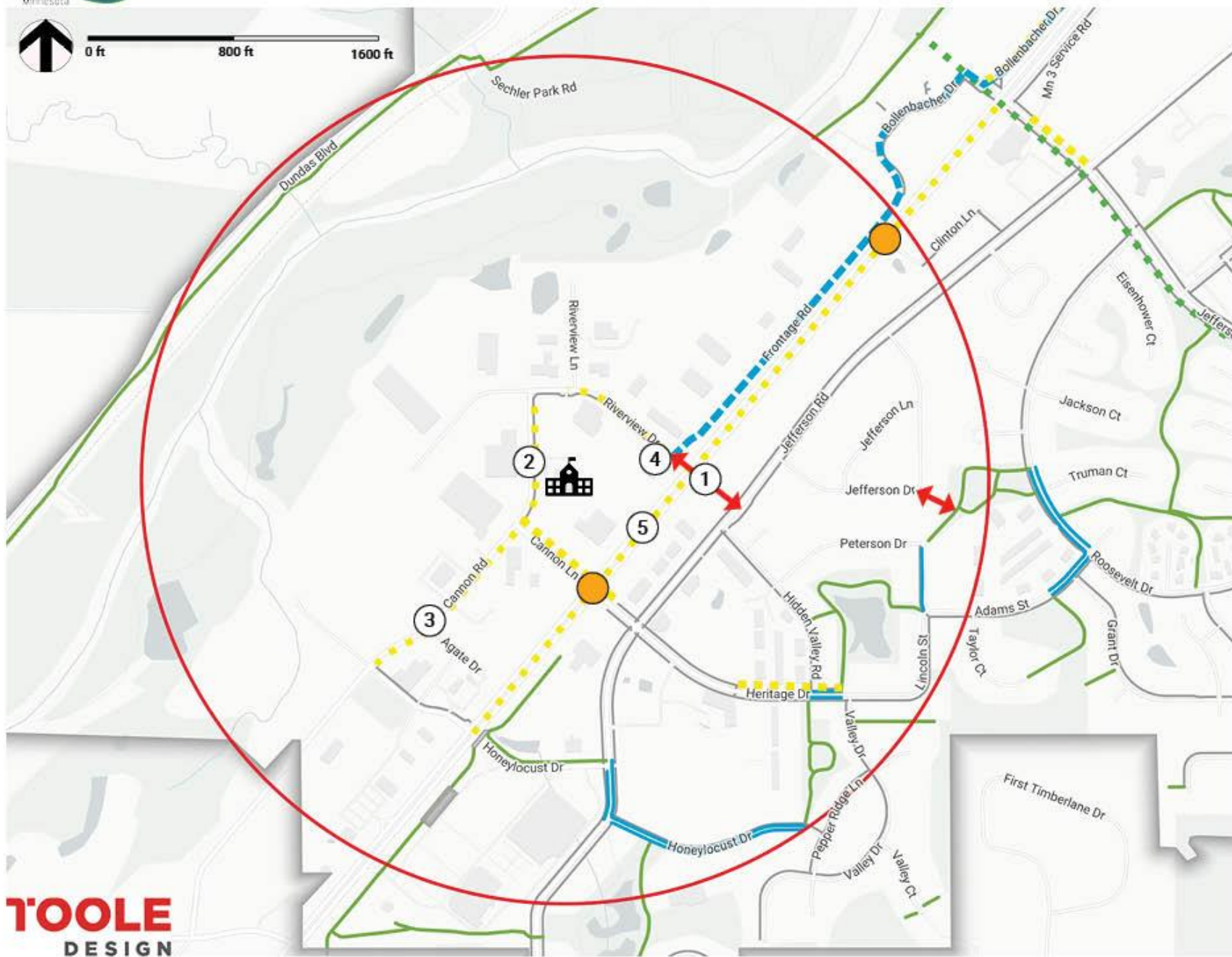
Notes

- No crossing to connect to trail in Jefferson Park
- No crosswalk connecting trail and sidewalk
- Important crossing for both Bridgewater Elementary and Northfield High School
- Dangerous intersection; trails along Division St do not align
- No crossings between Woodley St and Jefferson Pkwy;
- Students crossing from high school to church parking lot
- Students feel unsafe crossing Woodley St



Legend

-  Northfield High School
-  Half-mile radius
- Existing Network**
 -  Off-street trail / path
 -  On-street bikeway
 -  Sidewalk
- Planned Network**
 -  Sidewalk
 -  On-street bikeway
 -  Off-street trail / path
 -  Enhanced crossing



Legend

- Arcadia Charter School
- Half-mile radius
- City border
- Mill Towns State Trail: Planned Route

Existing Network

- Off-street trail / path
- On-street bikeway
- Sidewalk

Walking and Bicycling Issues

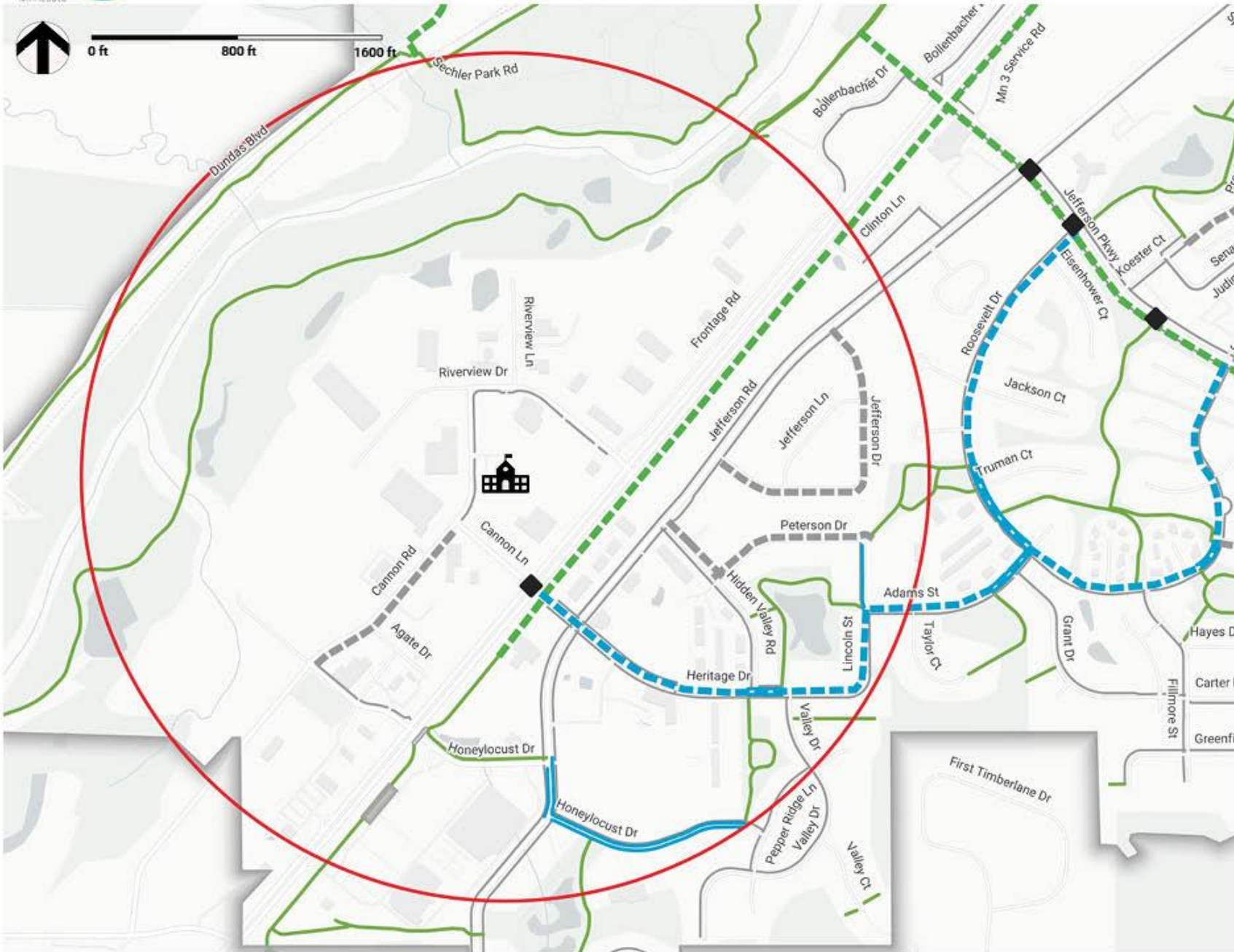
- Sidewalk gap
- No bicycle facility
- Poor connectivity
- Street crossing issue

Notes

- ① No direct walking route from school to neighborhoods across Highway 3 to the east
- ② Sidewalk is flush with street and people park on it
- ③ Important walking route to Highway 3 crossing at Honeylocust Dr
- ④ Narrow sidewalk between Highway 3 and trail spur that connects to school
- ⑤ No biking or walking facility along Highway 3 between Jefferson Parkway and Honeylocust Drive



- Sidewalk gaps and curbless streets; cars park on sidewalks



Legend

-  Northfield High School
-  Half-mile radius
-  City border
- Existing Network**
 -  Off-street trail / path
 -  On-street bikeway
 -  Sidewalk
- Planned Network**
 -  Sidewalk
 -  On-street bikeway
 -  Off-street trail / path
 -  Enhanced crossing

Street Chart Table Update

- Key changes:
 - Simplify and reduce redundancy
 - More emphasis on context of street, less emphasis on anticipated motor vehicle volumes (land use vs. functional classification)
 - Lower target speeds (design of roadway + speed limit = target speed)
 - Developed one-page spreads for each street type
 - Detailed information on design characteristics

Context is key

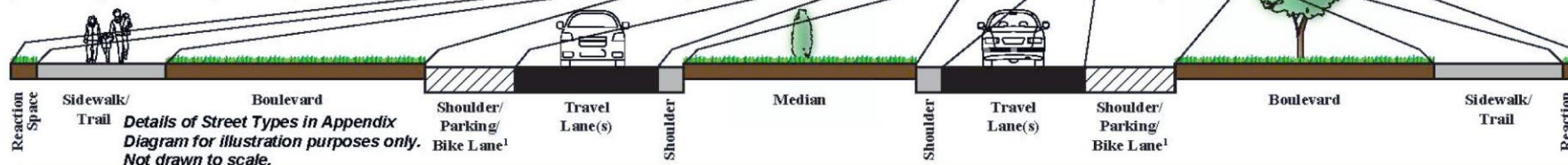


Context is key



Table 3.11-3: Street Types and Requirements

Street Type ^[a]	Functional Classification	Right-of-Way Width	Road Section Type	Reaction Space	Sidewalk /Trail	Boulevard	Shoulder/ Parking	Bike Lane ^[b]	Travel Lane(s)	Shoulder	Median	Shoulder	Travel Lane(s)	Bike Lane ^[b]	Shoulder / Parking	Boulevard	Sidewalk /Trail	Reaction Space	Parking	Where Allowed
All Measurements in Feet																				
Parkway	Major Collector	100-120	Rural	2	10	20	6-8	[c]	11	2	18	2	11	[c]	6-8	20	10	2	No On-Street Parking	May be applied across any of the zoning districts at the discretion of the city based on the Comprehensive Transportation Plan Update.
Avenue	Minor Arterial	140-180	Rural	2	10	16-20	8	[c]	24	2	18-30	2	24	[c]	8	16-20	10	2	No On-Street Parking	
	Major Collector	100-110	Urban	2	10	10-20	6-8	[c]	11	2	18	2	11	[c]	[c]	6-8	10	2	No On-Street Parking	
Drive	Minor Arterial	130-150	Urban	2	10	7-10	8	[c]	24	2	18	2	24	[c]	8	7-10	10	2	No On-Street Parking	
	Major Collector	80-110	Combination	2	6	10-12	8	[c]	11-12	[c]	[c]	[c]	11-12	[c]	5-8	20-30	[c]	[c]	One Side of Street	Collector streets in the R1-B, BR-2, BR-3, BR-4, N1-B, and PI-S districts. NC-F district.
Road	Local	60-66	Combination	2	5-6	10	8	[c]	10	[c]	[c]	[c]	10	[c]	5-8	20-30	[c]	[c]	One Side of Street	
	Major Collector	80-90	Rural	2	5	13-17	8	[c]	11-12	[c]	[c]	[c]	11-12	[c]	8	13-17	5	2	No On-Street Parking	AH-S, PI-S, and ED-F districts
Street	Minor Collector	60-66	Rural	[c]	[c]	18-21	[c]	[c]	12	[c]	[c]	[c]	12	[c]	[c]	18-21	[c]	[c]	No On-Street Parking	
	Local	60-66	Rural	[c]	[c]	18-21	[c]	[c]	12	[c]	[c]	[c]	12	[c]	[c]	18-21	[c]	[c]	No On-Street Parking	
	Local (residential)	60-66	Urban	1	5-6	7+	[c]	[c]	10	[c]	[c]	[c]	10	[c]	8	7+	5-6	1	One Side of Street	New local streets in the R1-B, BR-2, BR-3, BR-4, N1-B, and PI-S districts
	Local (residential)	60-66	Urban	1	5-6	7+	8	[c]	10	[c]	[c]	[c]	10	[c]	8	7+	5-6	1	Two Sides of Street	
	Local (non-residential)	66'	Urban	1	5	7	8	[c]	12	[c]	[c]	[c]	12	[c]	8	7	5	1	Two Sides of Street	C2-B, I1-B, and ED-F districts
	Minor Collector	60-66	Urban	1	5-6	7+	8	[c]	10	[c]	[c]	[c]	10	[c]	8	7+	5-6	1	Two Sides of Street	
Main Street	Major Collector	80-90	Urban	1	5-6	7-10	8-10	4-6	11-12	[c]	[c]	[c]	11-12	4-6	8-10	7-10	5-6	1	Two Sides of Street	Collector streets in the R1-B, BR-2, BR-3, BR-4, N1-B, and PI-S districts
	Major & Minor Collector	80	Urban	[c]	14	[c]	19	[c]	12	[c]	[c]	[c]	11	[c]	10	[c]	4	[c]	One side angled, One side parallel	
Alley	None	20	Rural	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]	14	[c]	[c]	[c]	[c]	[c]	None	C1-B, and ED-F districts



NOTES:

[a] Details of Street Types in Appendix

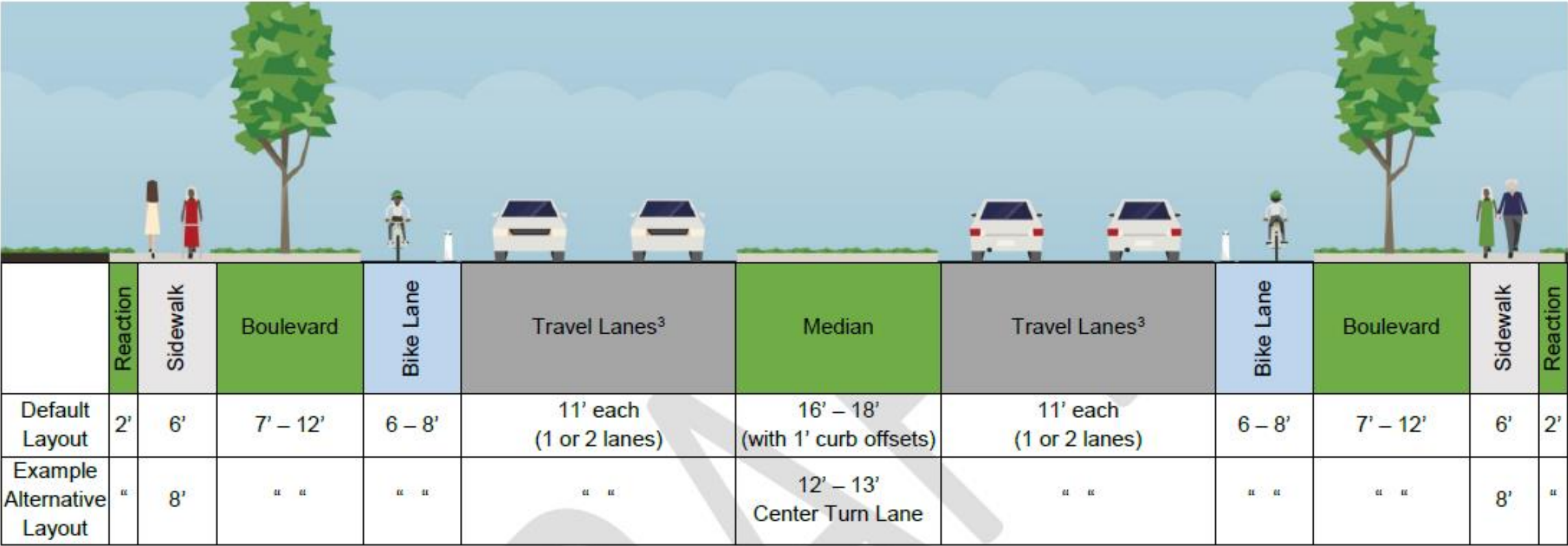
[b] Bike Lanes shall be located on streets identified in the Parks, Trails and Open Space Plan.

[c] Requirement not included in this Street Type.

UPDATED STREET TYPE TABLE | DRAFT

Street Type	Compatible Contexts	Function	Candidate Streets	Functional Classification	Typical Traffic Volume	Target Speed ¹	Right-of-Way Width	Reaction Space ²	Sidewalk / Off-street path	Boulevard	Shoulder / Parking	On-Street Bikeway ³	Travel Lanes	Median / Center Turn Lanes
Parkway	Rural Urban/Rural Transition Park & Open Space Locations with deep setbacks	Throughput-focused	2 nd Ave NW, Hwy 19 (5 th Street West)	Principal & Minor Arterial	4,000+ AADT	35 mph or higher	100'-180'	2'	10'-12' off-street path (one or both sides)	16'-20'	6'-8' shoulder	n/a (shoulder)	11'-12' lanes (1 or 2 per direction)	18'-30' Median (with 2' curb offset on each side)
Avenue	Commercial Residential Downtown	Throughput/access balanced	Water Street/Hwy 3 (North of Hwy 19), Jefferson Pkwy	Principal & Minor Arterial, Major Collector	4,000+ AADT	25-30 mph	100'-150'	2'	6'-8' sidewalk (both sides)	7'-12'	n/a	6'-8' Bike lanes ⁴	11' lanes (1 or 2 per direction)	16'-18' Median (with 1' curb offset on each side) or 12'-13' CTL
Drive	Commercial Residential	Throughput/access balanced	Woodley Street, Greenville Ave	Minor Arterial, Major Collector	Up to 6,000 AADT	25 mph	60'-90'	1'	6' sidewalk (both sides)	7'-10'	7'-8' parallel parking	5'-8' Bike lanes	10'-11' lanes	Not typical (10'-13' CTL optional)
Road	Rural Urban/Rural Transition Park & Open Space Locations with deep setbacks	Throughput-focused	Dresden Ave, Spring Creek Rd	Minor Arterial, Major & Minor Collector, Local	Up to 4,000 AADT	30-35 mph	60'-90'	1' ⁵	10'-12' off-street path (one side)	6'-20' ⁶	Not typical (4'-6' optional)	n/a (optional shoulder)	12' lanes	Not typical (12'-15' optional)
Street	Commercial Residential	Access-focused	Water St South, St Olaf Ave	Major & Minor Collector, Local	Up to 1,000 AADT	25 ⁷ mph	60'-66'	1'	5'-6' sidewalk (both sides)	7'-10'	6'-7' un-delineated parallel parking (one or both sides)	n/a	16'-20' feet total ⁸	n/a
Main Street	Downtown Mixed Use	Access-focused	Downtown streets	Major & Minor Collector, Local	Up to 2,000 AADT	25 ⁷ mph	70'-80'	0'	8'-10' sidewalk (both sides)	5'-10' ⁹	7'-8' parallel parking (16' reverse angle optional on one side)	Shared lane markings	20'-22' feet total	n/a

AVENUE



DESCRIPTION

Avenues are streets that balance access and throughput and often traverse commercial areas and neighborhoods. They have high volumes of motor vehicles and moderate to high volumes of people walking. While they are essential to the flow of people across the city, the needs of people passing through must be balanced with the needs of those who live and work along the street.

STREET FEATURES

- Mix of commercial and residential land use
- Median or center turn lane
- Sidewalks on both sides of the street
- On-street bikeways
- Target speed: 25-30 mph

Planned Walking and Bicycling Network Map

- Update aims to create a more connected bicycle and pedestrian network
 - Fill key sidewalk gaps
 - Identify trail and on-street bikeway alignments
- Recommendations based on:
 - Feedback received from community members
 - Existing network analysis
 - Coordination with City staff



Next Steps

- Opportunity to comment on draft documents through Fri. March 8th
- All comments can be submitted to Tim Behrendt at:
tim.behrendt@ci.northfield.mn.us
- Revisions to draft documents
- Follow-up presentation to City Council



Questions and Discussion

Connor Cox, Toole Design

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