

Appendix A | Traffic Calming Analysis, Evaluation, & Concept Recommendations

Appendix A provides individual subsections for each of the six (6) priority locations identified by the City of West Fargo and the impetus for the West Fargo Traffic Calming Study. Each location subsection contains detailed technical information and analysis including the following information:

- Preliminary Traffic Calming Policy Evaluation & Prioritization
- Recommended Traffic Calming Alternatives
- Planning-Level Cost Estimates
- Existing Conditions
- Traffic Conditions

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Overview

Existing Conditions

The existing conditions analysis provides a detailed analysis of the current conditions of the six (6) priority traffic calming locations identified by the City of West Fargo. This subsection identifies information about the existing roadway, adjacent land uses, nearby destinations, and other key features (roadway condition, access points, street trees, signage, etc.). The existing conditions analysis also features a map that highlights the location of the priority traffic calming location, identifies existing facilities, points of interest, and additional notes related to the specific location. Also included in the subsection are existing plan view and typical cross section.

Traffic Conditions

The traffic analysis provides existing traffic data collected by Metro COG at the six (6) priority traffic calming locations. This subsection quantifies the amount of speeding and cut-through traffic along the roadway including traffic volume (ADT). Metro COG utilized tube counters to collect traffic direction, speed, and volume data at strategic locations along the priority locations. StreetLight Data, which uses Location Based Services (LBS) traffic data to assign origin-destination information, was utilized to calculate an estimate of cut-through traffic or those trips which start and end outside of the adjacent study area.

Recommended Traffic Calming Concepts

After analyzing public feedback, existing conditions, and traffic conditions, the Study team, with help from the SRC developed recommended traffic calming concepts for the six (6) priority locations. The recommended traffic calming concepts for each location were based on several factors including public support and feedback, existing conditions analysis, traffic analysis, SRC input, and technical review from the project team. The project team considered a number of factors when developing recommendations including implementation feasibility, effectiveness, cost, traffic volumes and speeds, on-street parking, access driveways, transit, right-of-way, and safety.

Planning-Level Cost Estimates

Planning-level cost estimates were developed for each recommended concept. The cost estimates include costs for implementing the recommended traffic calming measures along the various roadways and any incedentals that may be required. Cost estimates are only intended to be used at a planning-level and should be refined with future project development.

The cost estimates are based on West Fargo average bid prices and were developed by identifying major pay items and estimating rough quantities for implementation. Cost estimates do not include engineering, easement or right-of-way acquisition, permitting, inspection, construction management, surveying, geotechnical investigation, environmental documentation, site remediation, escalation, operations and maintenance, or unforeseen project-specific cost items. The cost estimate includes a 25% contingency that may account for some of the aforementioned costs. Cost estimates have been rounded up to to the nearest \$5,000 and should be considered fiscal year 2021 dollars. Estimates may need to be inflated for the year in which a project is programmed.

Construction costs will vary based on project scope, site conditions and constraints, schedule, and the economic conditions at the time of construction.

Preliminary Technical Evaluation Criteria

Each location was evaluated based upon the preliminary Traffic Calming Policy found in **Chapter 5** of the main body of the report. It was determined that 1 of 3 criteria would need to be met in order move on to the next step of the process towards programming a traffic calming project. The technical criteria include the following:

- Median speed greater than 27 MPH
- 85th-percentile speed greater than 30 MPH
- 2 or more crashes (in the study area)

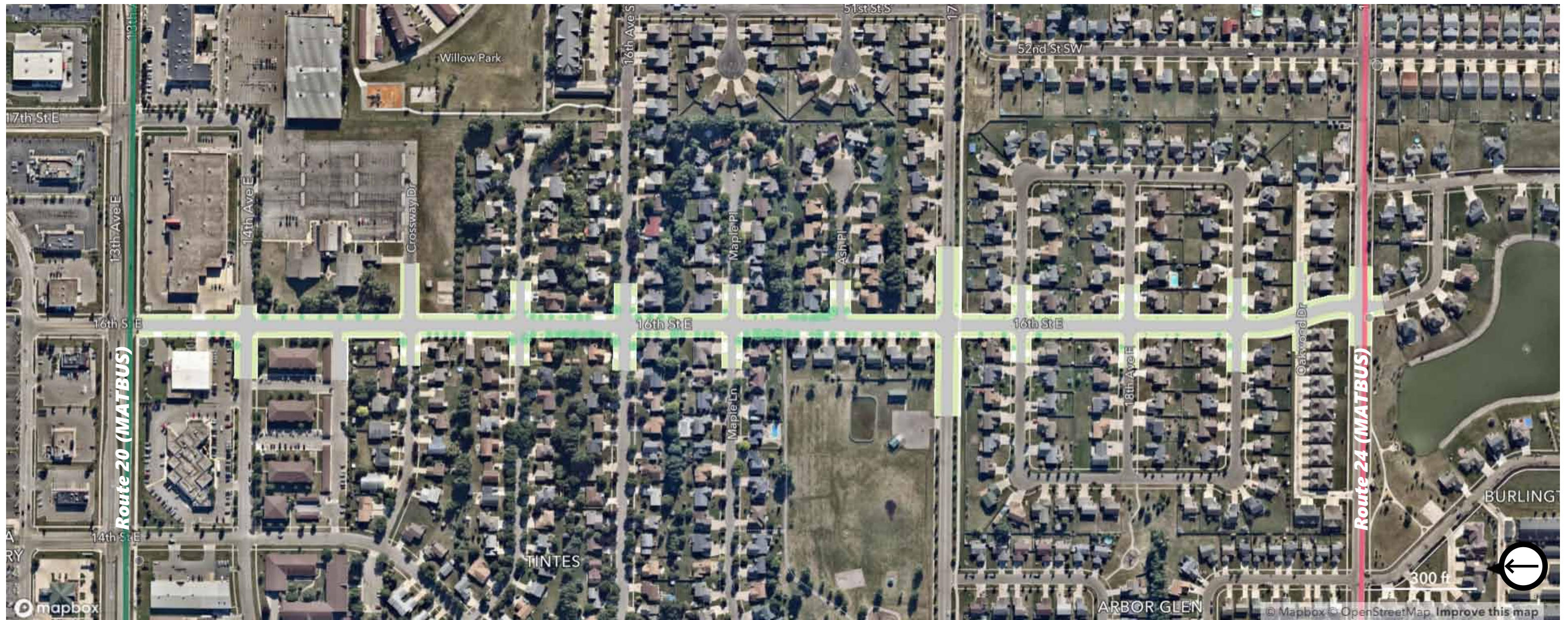
The table below summarized the data obtained from the pneumatic counters and crash data obtained by NDDOT for the 5-year period of 2016-2020.

Technical Evaluation															
Street	Counter Location	Volume	Median Speed	85th Percentile Speed	5 yr (2015-2020) Crash Severity & Type					CRITERIA MET?			Sidewalks (min 1 side)	Project Eligible?	Priority
					Fatal	Possible Injury/non-incapacitating injury	PDO	Bike/Ped	TOTAL Crashes	Median Speed	85th Percentile Speed	Safety			
2nd Street	3300 block	649	24.1	29.1	0	0	5	0	5	N	N	Y	Y	Y	6
	3400 block	415	22.2	26.7						N	N		Y		
	3600 block	208	26.4	34.1						N	Y		N		
	3800 block	282	21.0	26.8						N	N		Y		
15th Ave E	700 block	903	27.4	32.4	0	5	8	0	13	Y	Y	Y	Y	Y	2
16th St E	1400 block	2777	30.4	37.2	0	13	38	1	52	Y	Y	Y	Y	Y	1
	1600 block	2995	28.6	33.5						Y	Y		Y		
	1700 block	1492	28.0	33.1						Y	Y		Y		
7th St W	1600 block	1423	25.2	29.6	0	0	5	0	5	N	N	Y	Y	Y	5
	1800 block	1421	25.7	29.6						N	N		Y		
10th St W	1500 block	1058	26.2	31.3	1	0	7	0	8	N	Y	Y	Y	Y	4
	1600 block	1082	26.9	32.1						N	Y		Y		
	1800 block	1215	28.3	33.4						Y	Y		Y		
Beaton Dr	700' w of Sheyenne River	846	35.3	40.7	0	0	17	0	17	Y	Y	Y	N	Y	3
	400' e of Sheyenne River	865	32.5	38.3						Y	Y		N		
	Titan Machinery	1226	35.6	41.7						Y	Y		Y		
	S of Biolife Entrance	1455	30.8	35.1						Y	Y		Y		

16th Street East - *between 13th and 19th Avenue E*

Scenario 1 - Existing/Do Nothing

\$0



16th Street East - *between 13th and 19th Avenue E*

Scenario 2 - Mini Roundabouts & Median Islands

\$910,000

Mini Roundabout @ 14th Ave E



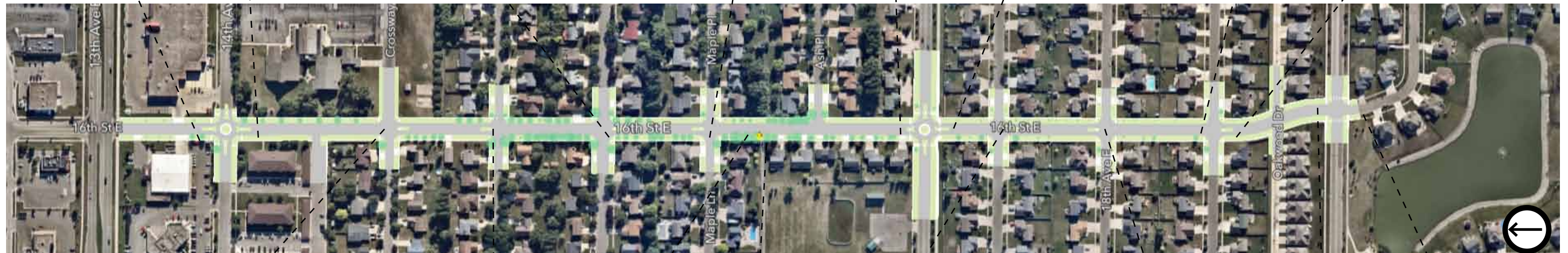
Median Refuge Islands - 1600 Block



Mini Roundabout @ 17th Ave E



Median Refuge Island - 1800 Block



Median Refuge Islands - 1400 Block



Signage @ Maple Wood Park
Shared Use Path Connection



Median Refuge Islands - 1700 Block



Curb Extensions and Crossing
Improvements @ 19th Ave E

16th Street East - *between 13th and 19th Avenue E*

Existing Conditions

Summary

The 16th Street E study area is from 13th Avenue E to 19th Avenue E. 16th Street E is classified as a collector road between 13th Avenue E, a minor arterial, and 17th Avenue E, a collector. 16th Street E is classified as a local road between 17th Avenue E to 19th Avenue E, both collectors. The street is 40 feet wide however, there are two distinct segments of roadway with varying lane widths along the study area of 16th Street E:

1. between 13th and 17th Ave E
 - two 16-foot driving lanes, one 8-foot parking lane on the west side of the street
2. between 17th and 19th Ave E
 - two 20-foot driving lanes

Land Use & Neaby Destinations

The corridor is primarily single-family residential land use including a twin home development near the 19th Ave E intersection. Other land uses include commercial and office land uses near the 13th Ave E intersection, multiple-family and institutional land uses near the 14th Ave E intersection. Lutheran Church of the Cross is located on the southeast corner of the intersection of 16th St E and 14th Ave E including a YWCA housing facility. Maplewood Park is located near the northwest corner of the intersection of 16th St E and 17th Ave E. The intersection of 16th St E and 17th Ave E is 4-way stop controlled. Stop signs are provided for traffic coming off of all adjacent perpendicular streets except for 13th and 19th Ave E. 16th St E provides a north-south connection between 13th

Ave E and 19th Ave E. 13th Ave E is one of the busiest major commercial corridors in the region.

Other Key Features

16th St E has virtually no existing roadway striping. There is one visible crosswalk on 16th St E just south of 17th Ave E, there is some evidence other markings have faded or worn off. Boulevard trees are inconsistent and vary in size, some property owners have not yet planted trees in the boulevard. Driveway access points are limited. There is a shared use path connection from 16th St E to Maplewood Park and there are shared use paths that run along 13th and 17th Ave E. MATBUS route 24 runs along 19th Ave E.

Context Photos

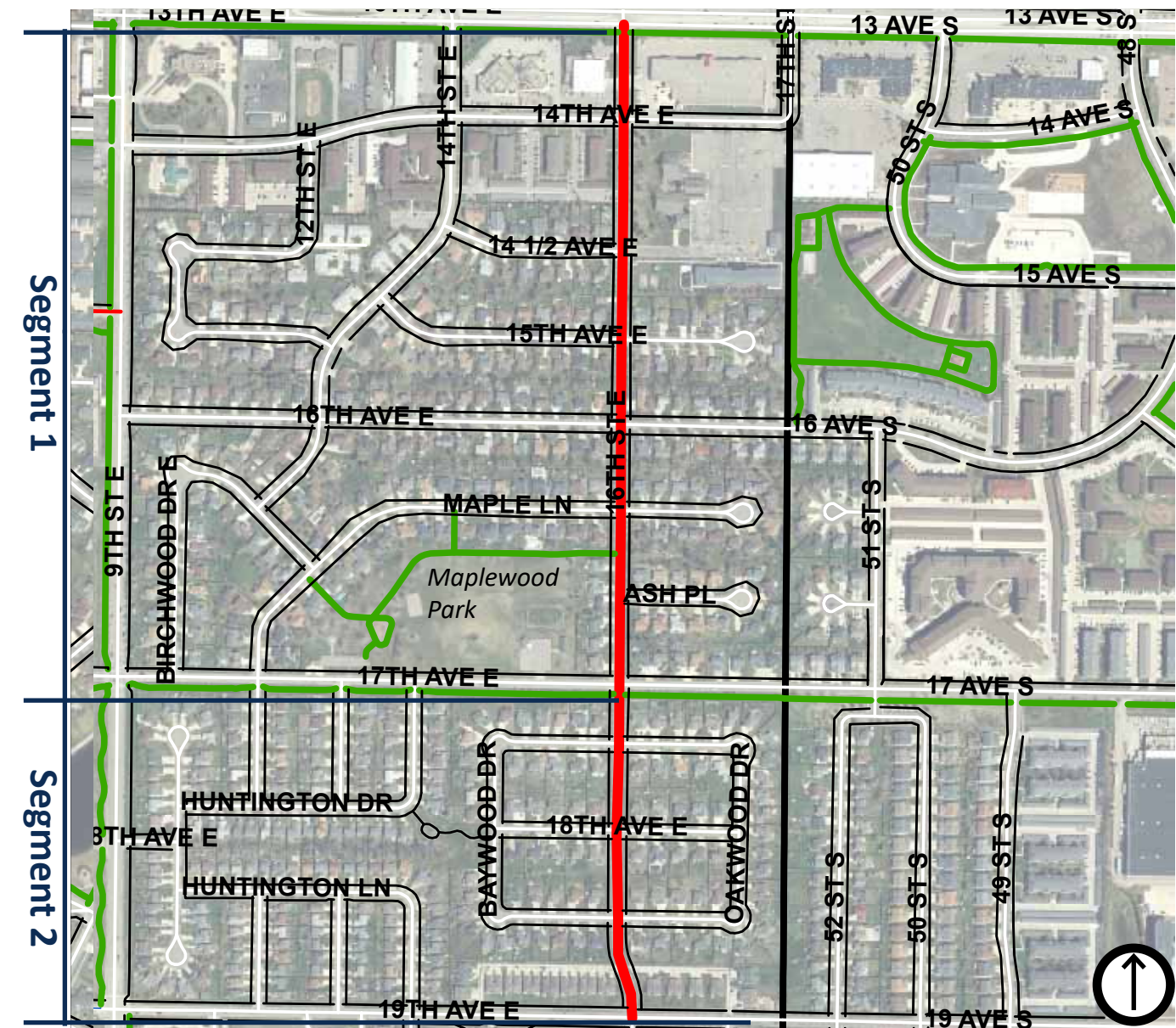


16th Street E looking south



16th Street E looking south near 17th Ave E

Map



Existing Typical Cross Section (mary vary depending on location)



Map Key

- Study Area
- Sidewalk
- Shared Use Path
- On-street Bike Facility

Corridor Features

16 th Street E	Width	Speed limit (mph)	On-Street Parking? ¹	Right-of-way	Traffic Volume	% Above 30 mph	% Cut-through
segment 1	40'	25	West side only	80'	2777 - 2995	37% - 52%	85.5%
segment 2	40'	25	None	80'	1492	32%	

¹Signs were posted on the side where parking is allowed stating “No Parking Wednesdays 8 a.m - 5 p.m.”

Traffic Conditions

Data was collected at three (3) locations, location 1, location 2, and location 3, for a total of 72 hours between Tuesday, May 11, 2021 and Thursday, May 13, 2021.

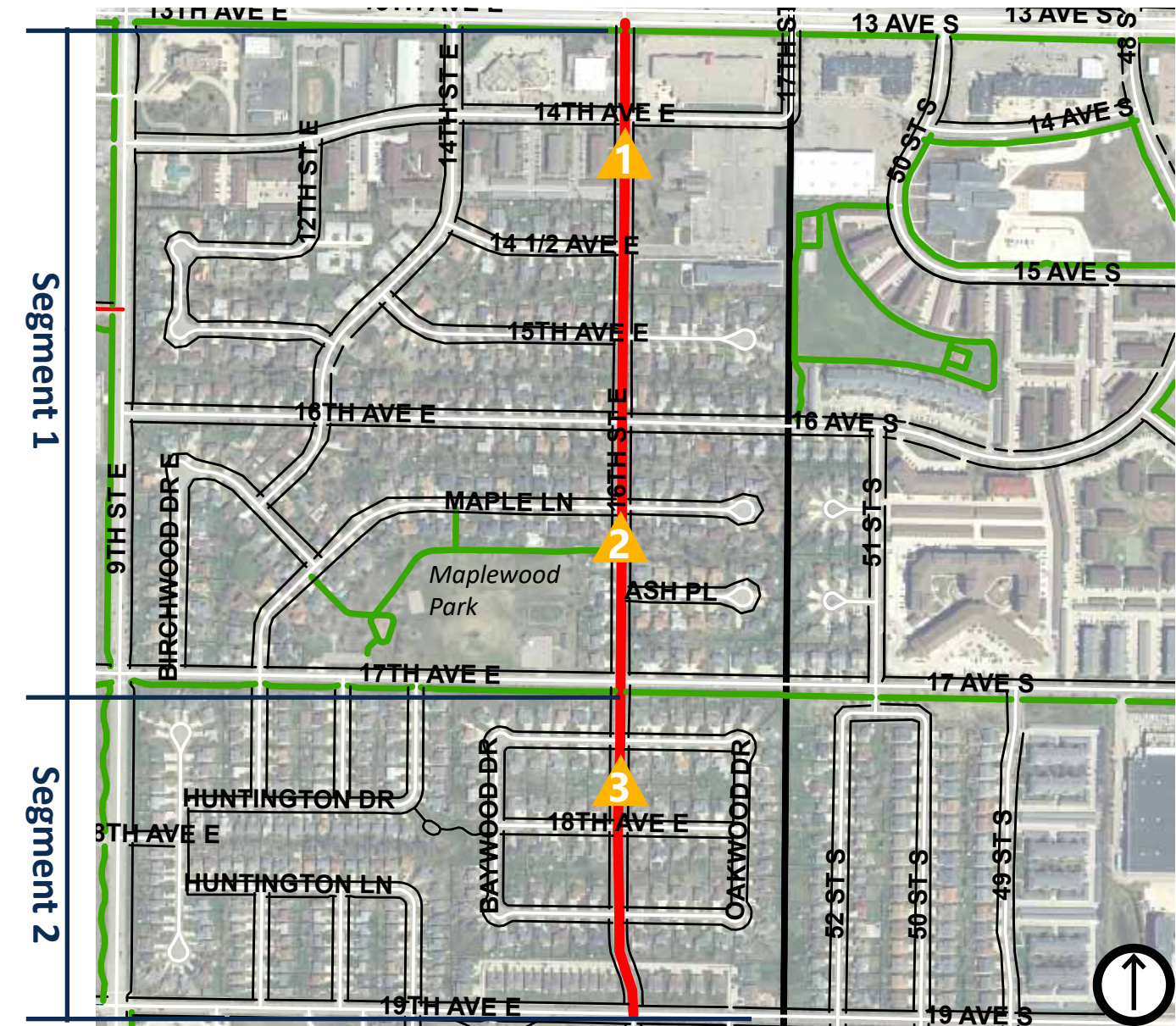
Corridor Traffic & Speed Data

16 th Avenue E	Average Daily Traffic	Above 25 mph			Above 30 mph
		NB	SB	Total	
location 1	2777	96%	73%	84%	52%
location 2	2995	81%	87%	84%	37%
location 3	1492	77%	78%	78%	32%

Traffic Analysis

The City of West Fargo has received frequent complaints about speeding vehicles on 16th Street E and the traffic data suggests that speeding along the corridor is very prevalent. At least (1) of every three (3) vehicles is traveling along the corridor in excess of 30 mph. Collector location 1 on the 1400 block of 16th St E has the most speeding, with over half of vehicles traveling over 30 mph. There is also a wider disparity in the northbound (NB) versus southbound (SB) traffic traveling above the speed limit. Metro COG believes that a few factors may play into the traffic data obtained in location 1 including, very wide driving lanes (16-foot), straight roadway segment, limited access driveways,

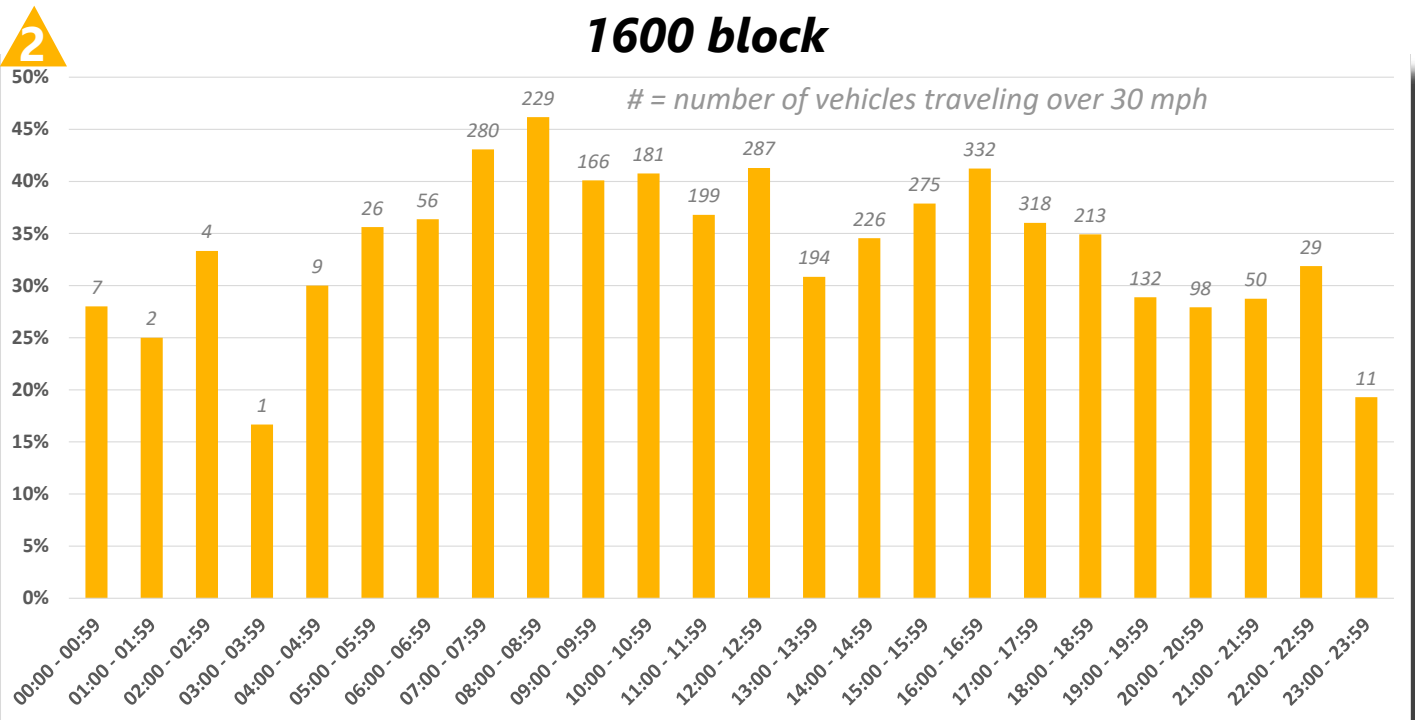
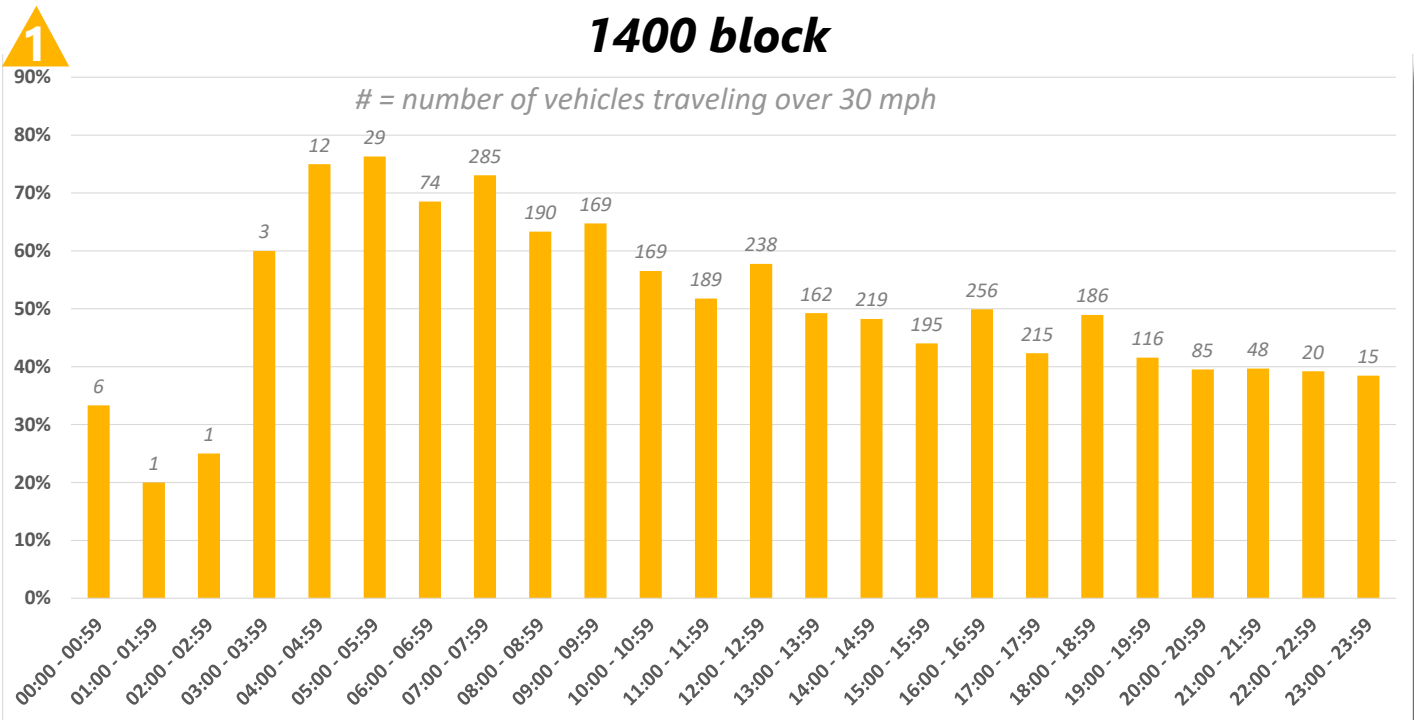
Map



and street parking. What is interesting about the on-street parking in the 1400 block is that based on site visit observations, on-street parking is well utilized in front of the apartment buildings on the west side of the street, which may be causing the disparity between NB and SB speeding.

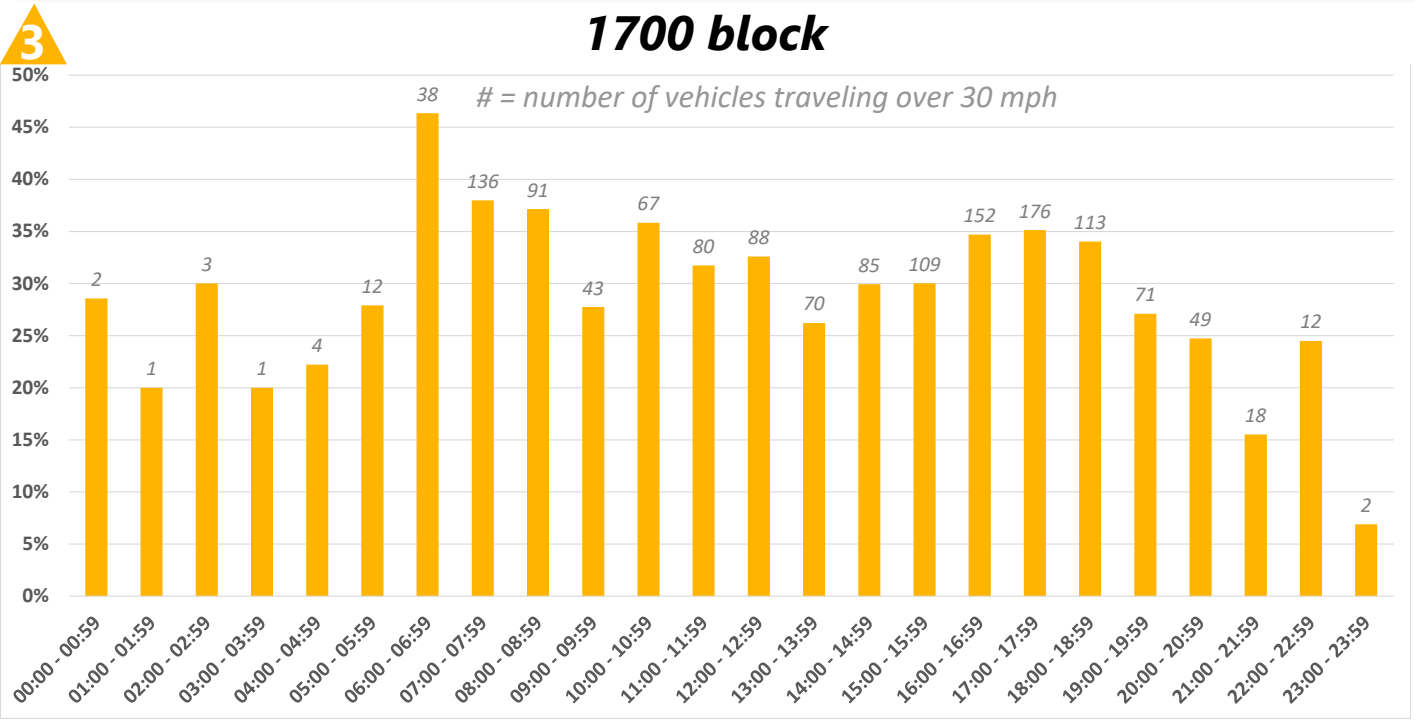
Location 2 in the 1600 block and location 3 in the 1700 block show similar traffic data however speeding in these locations is more prevalent in the SB direction. One interesting characteristic about 16th St E is that the corridor has very few access driveways or homes that front onto the corridor. This

Percent of vehicles traveling above 30 mph by location



may lead to underutilized on-street parking, which essentially makes the roadway feel like two (2) 20-foot driving lanes which would accomodate higher speeds.

Over 3/4 of the traffic (85.5%) is considered cut-through traffic, which indicates that 16th St E may be functioning well as a collector roadway, which is the current functional classification. The street network in this area of West Fargo offers few alternative parrallel routes, with few streets running continuously between 13th Ave E and 19th Ave E. 16th St E is obviously serving more than

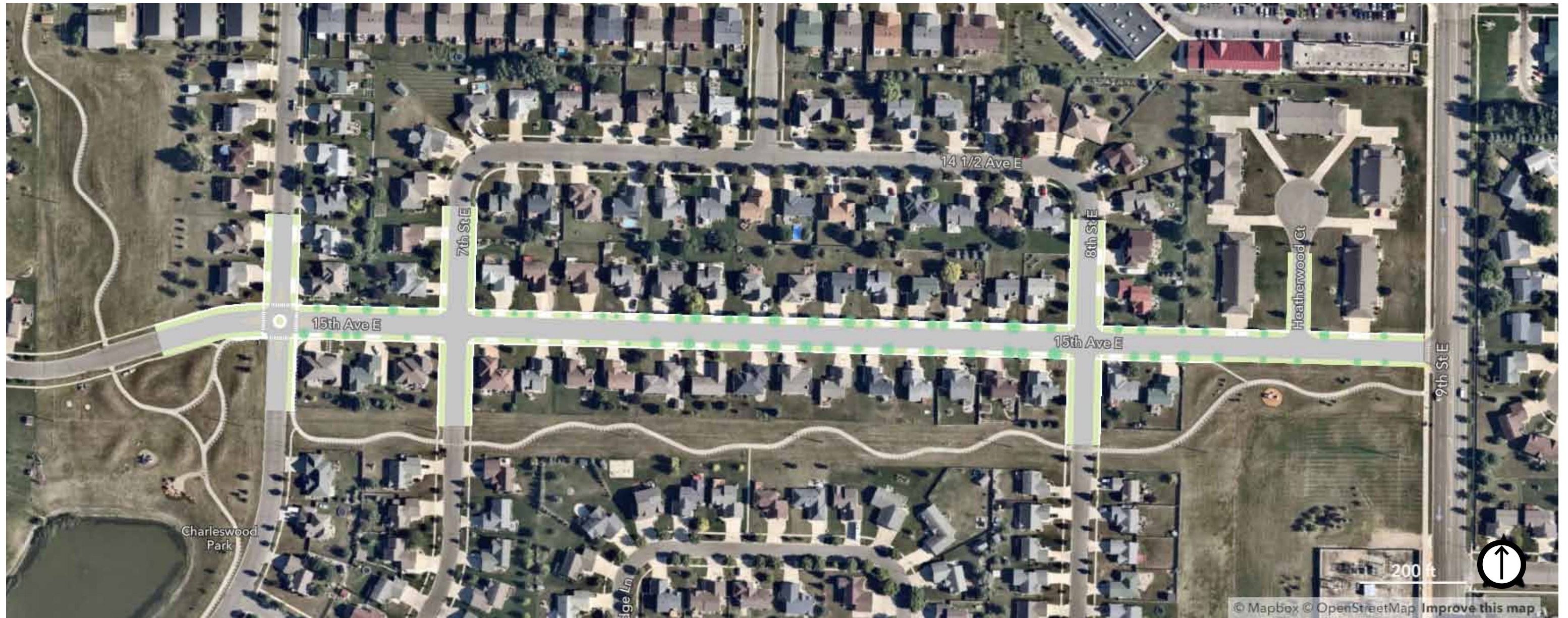


just local trips from adjacent property owners and may be a critical route for the entire neighborhood to travel between major roadways including, 13th Ave E on the north, 45th St S on the east, and 9th St E on the west. The classification of 16th St E is collector except between 16th and 19th Ave E where it is classified as a local roadway.

15th Avenue East - *between 6th and 9th Street E*

Scenario 1 - Existing/Do Nothing

\$0



15th Avenue East - *between 6th and 9th Street E*

Scenario 2 - Three Speed Tables

\$150,000

Speed Table

Change Yields to Stop Signs

Optional
Median/Neighborhood Gateway



Change Yields To Stop Signs

Speed Table

Speed Table

15th Avenue East - *between 6th and 9th Street E*

Scenario 3 - Two Speed Tables

\$130,000

Speed Table

Change Yields to Stop Signs

Optional
Median/Neighborhood Gateway



Change Yields To Stop Signs

Speed Table

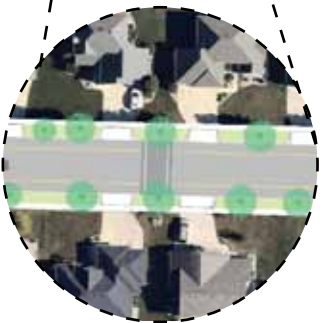
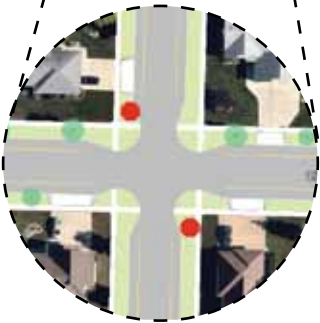
15th Avenue East - *between 6th and 9th Street E*

Scenario 4 - One Speed Hump & Curb Extensions

\$140,000

Curb Extensions & Change Yields to
Stop Signs

Optional
Median/Neighborhood Gateway



Curb Extensions & Change Yields to
Stop Signs

Speed Table

15th Avenue East - *between 6th and 9th Street E*

Existing Conditions

Summary

15th Ave E is a local road between 6th Street E, a collector on the west, and 9th Street E, a minor arterial on the east. The street is 40 feet wide with two 12-foot driving lanes and two 8-foot parking lanes.

Land Use & Neaby Destinations

The corridor is primarily single-family residential land use however, there is a development of townhomes on the northwest corner of the intersection of 15th Ave E and 9th St E. The southwest corner of said intersection is a park and open space. The intersection of 6th St E has a roundabout and the intersection of 9th St E has a stop sign for eastbound 15th Ave E traffic; crosstraffic on 9th St E does not stop. Yield signs are provided for traffic coming off of 17th and 18th St E. 15th Ave E provides an east-west connection between 6th St E and 9th St E. 6th St E serves as a north-south residential collector roadway and 9th St E is a very busy street that provides connections to regional commercial, industrial, residential, and institutional destinations. 9th St E has an intergchange with I-94 less than one-mile south of 15th Ave E.

Other Key Features

15th Ave E has virtually no existing roadway striping. There are striped crosswalks on 2nd St E at 6th and 9th St E which are in good condition. Boulevard trees are consistent and becoming larger in size. Driveway access points are numerous. There is a shared use path at 6th St E that connects to various parks and open spaces west of 6th St E and runs behind the southern properties along 15th Ave E, also providing a connection to the shared use path on 9th St E.

Context Photos

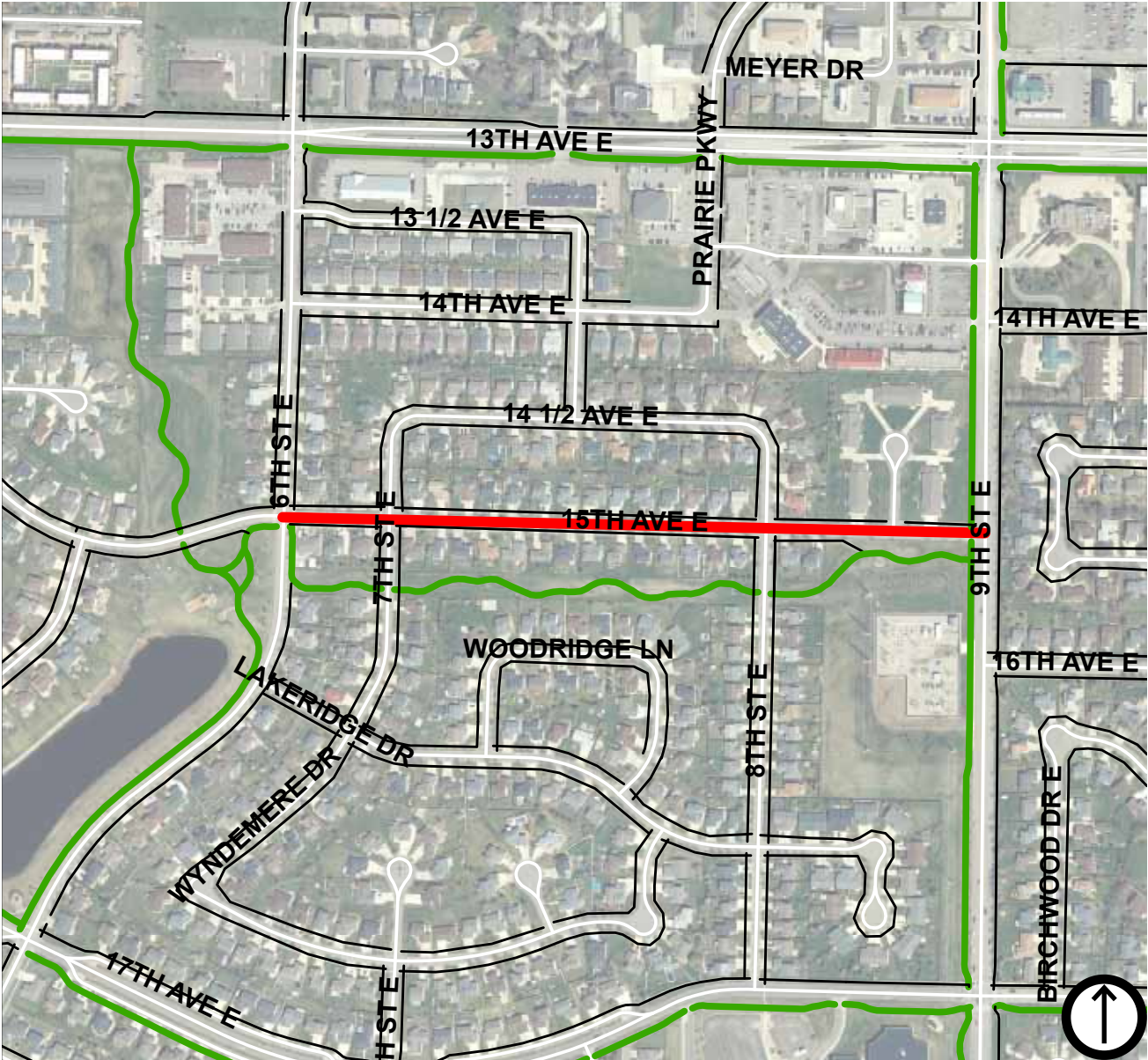


15th Avenue E looking west



15th Avenue E looking east

Map



Existing Typical Cross Section (may vary depending on location)



Map Key

- Study Area
- Sidewalk
- Shared Use Path
- On-street Bike Facility

Corridor Features

	Width	Speed limit (mph)	On-Street Parking? ¹	Right-of-way	Traffic Volume	% Above 30 mph	% Cut-through
15th Avenue E	40'	25	Both Sides	70'	893 - 913	26%	64.5%

¹Signs were posted on the side where parking is allowed stating “No Parking Wednesdays 8 a.m - 5 p.m.”

Traffic Conditions

Data was collected at two (2) locations, location 1 and 2, for a total of 72 hours between Monday, August 19, 2021 and Wednesday, August 21, 2019. Metro COG and the City of West Fargo used recently collected data in place of collecting new data because traffic patterns have not substantially changed.

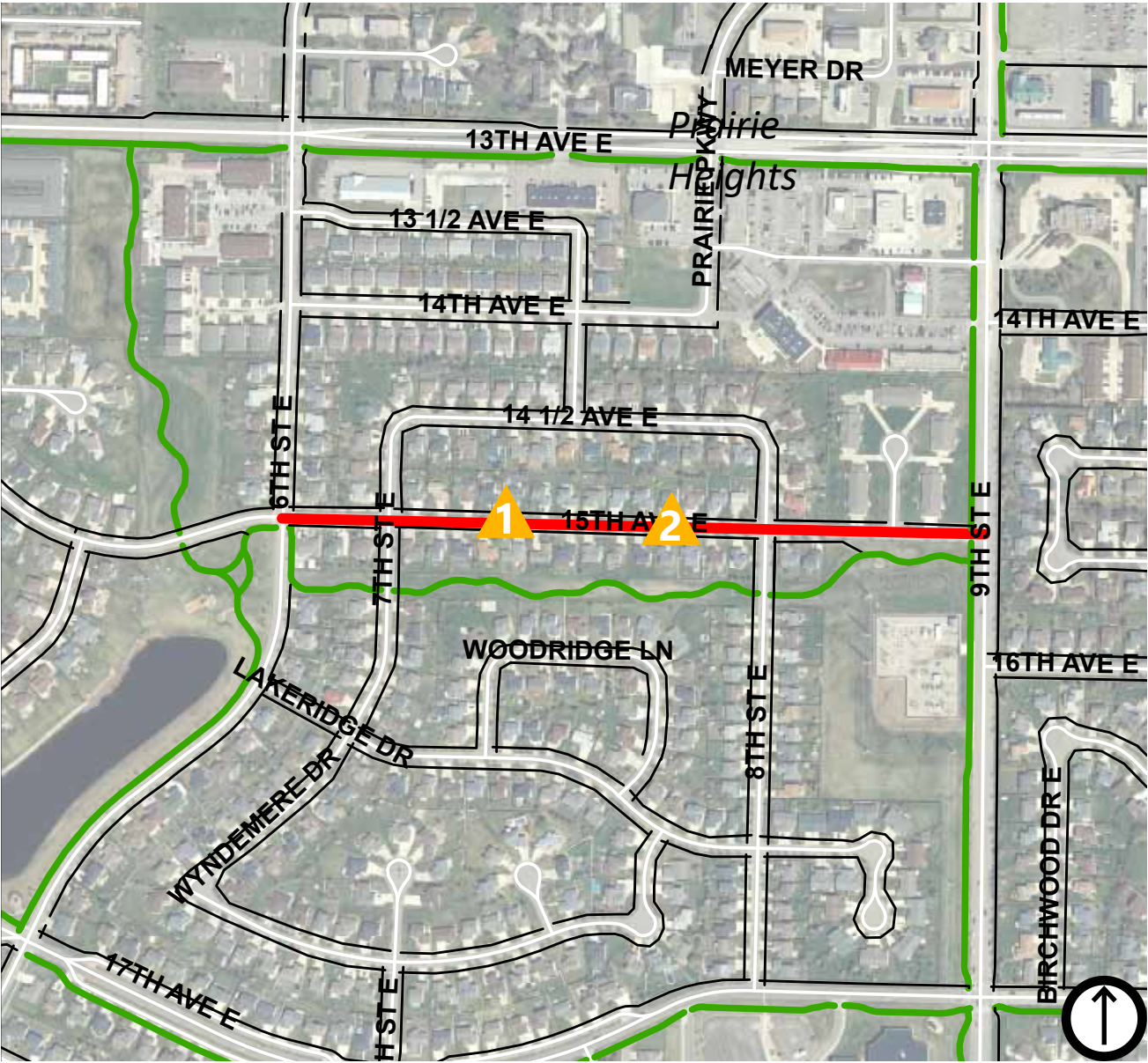
Corridor Traffic & Speed Data

2nd Street E	Average Daily Traffic	Above 25 mph			Above 30 mph
		WB	EB	Total	
location 1	904	71%	71%	71%	24%
location 2	881	74%	78%	76%	29%

Traffic Analysis

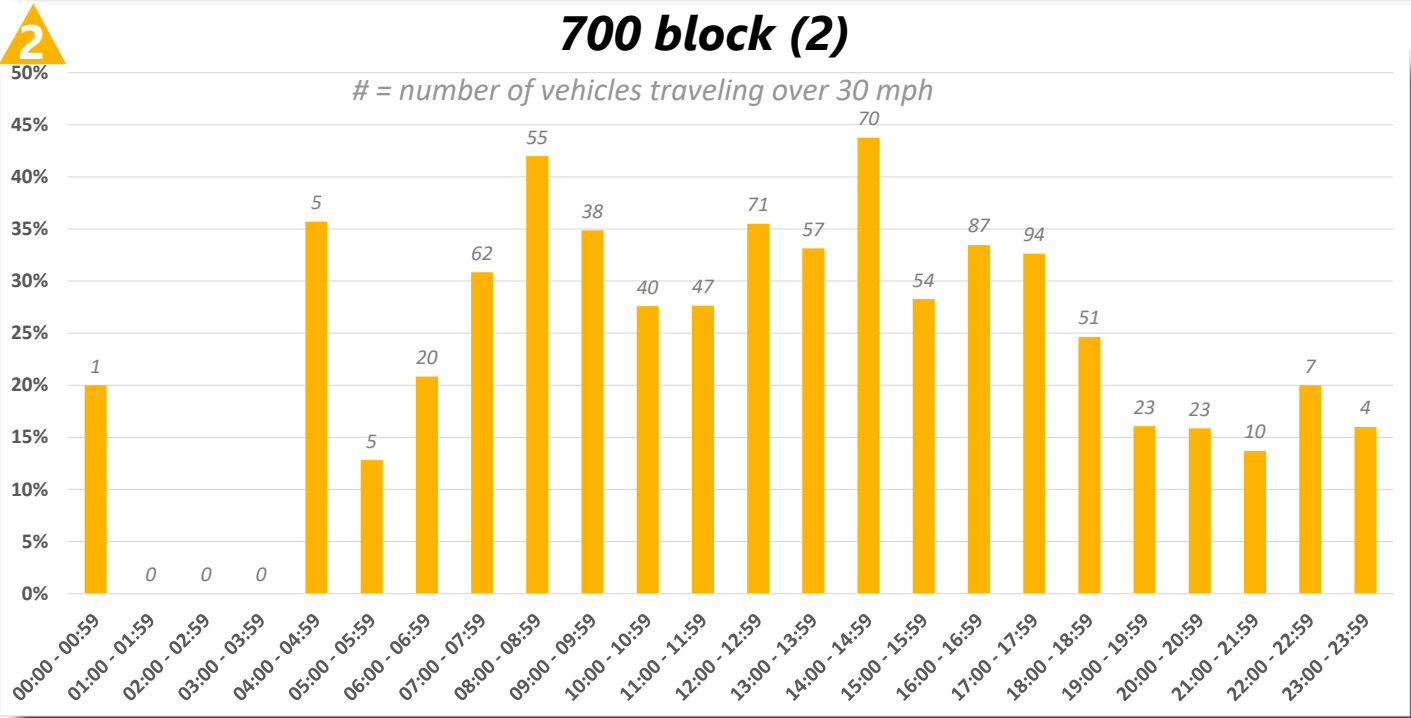
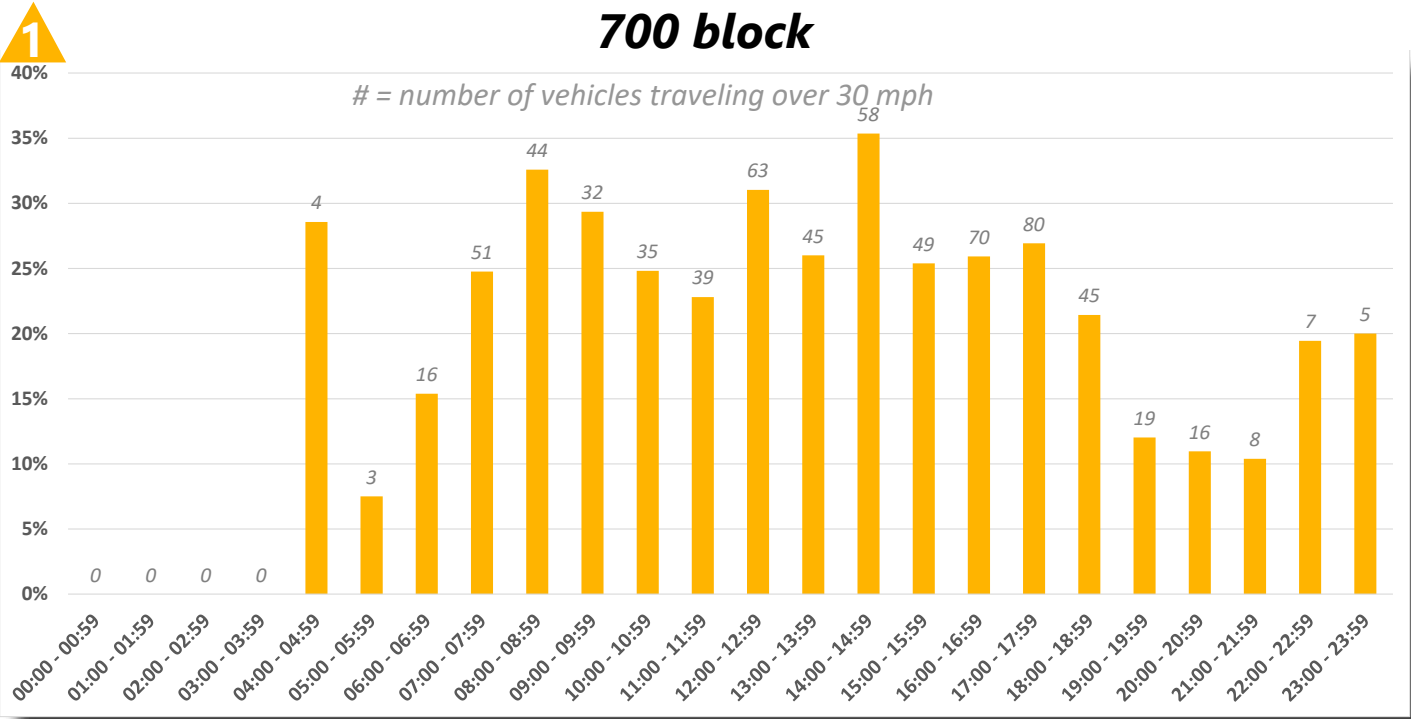
The City of West Fargo has received frequent complaints about speeding vehicles on 15th Avenue E and the traffic data suggests that speeding along the corridor is prevalent. One (1) of every four (4) vehicles is traveling along the corridor in excess of 30 mph. Collector locations 1 and 2, on the 700 block appear to have similar results. Metro COG believe that multiple factors may play into speeding at this location including, relatively wide driving lanes (12-foot), straight roadway segment, street network, and underutilized on-street parking. Over half of the traffic (64.5%) is considered cut-through traffic, which indicates that 15th Ave E may be functioning more as a collector than a local

Map



roadway. The street network in this area of West Fargo offers few alternative parrallel routes, with few streets running continuously between Sheyenne Street and 9th St E. 15th Avenue appears to be serving more than just local trips from adjacent property owners and may be a critical route for the entire neighborhood to travel between other major roadways including, 13th Ave E on the north, 9th St E on the east, and Sheyenne St on the west however, 15th Ave E does not have a direct connection with Sheyenne but ultimately connects to 3rd St W and 17th Ave W which has an intersection with Sheyenne.

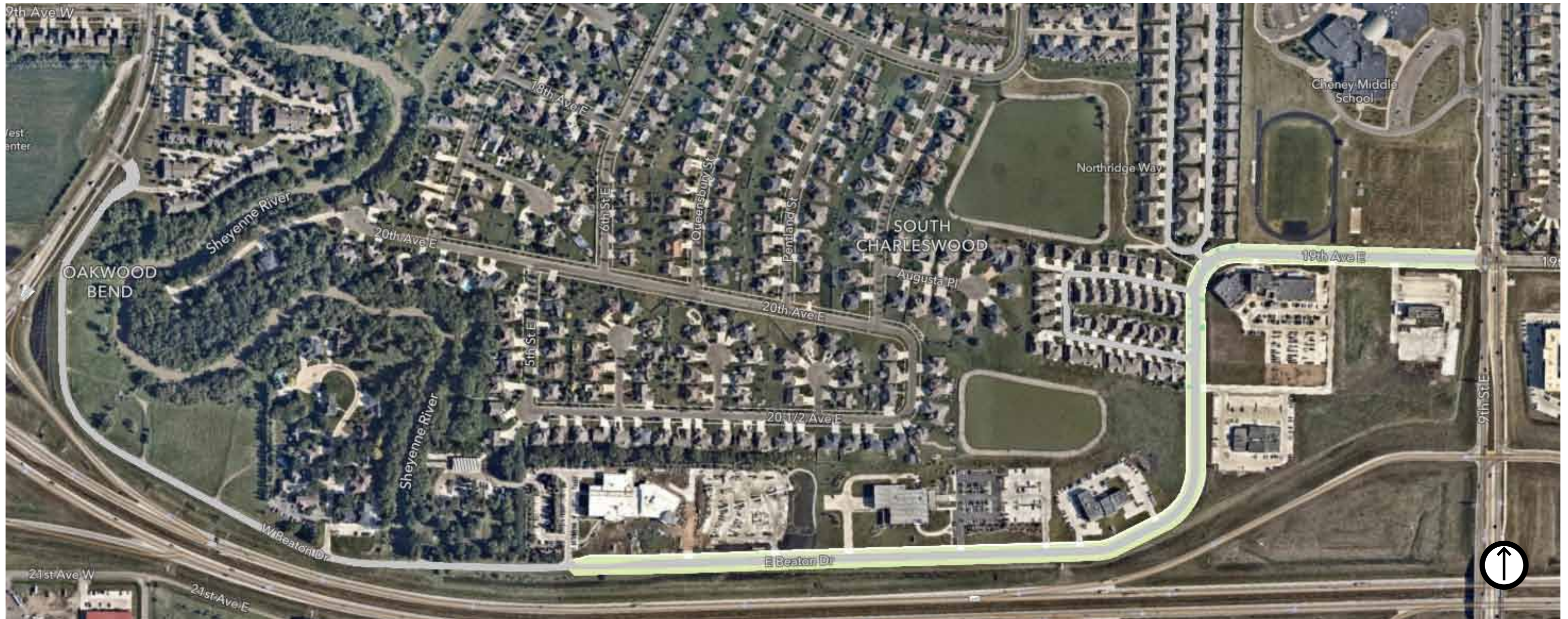
Percent of vehicles traveling above 30 mph by location



Beaton Drive - *between Sheyenne and 9th Street E*

Scenario 1 - Existing/Do Nothing

\$0



Beaton Drive - *between Sheyenne and 9th Street E*

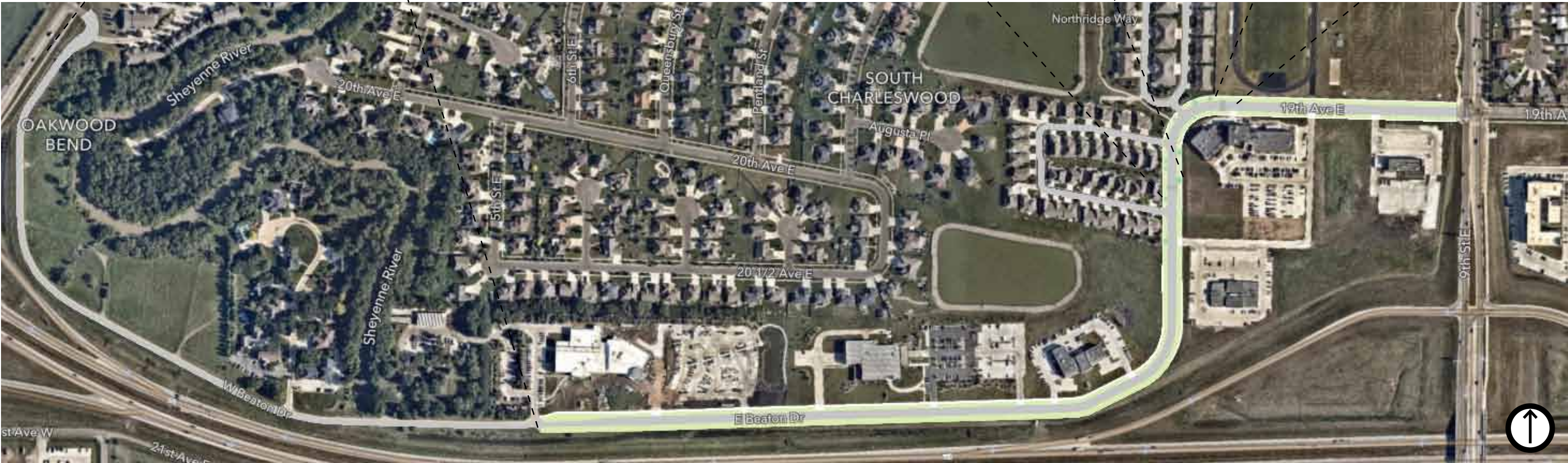
Scenario 2 - Two Speed Tables & Temporary Solutions

\$95,000

5' Bicycle/Pedestrian Zone & Other Signage/Striping*

Speed Table

Speed Table



*These are considered temporary traffic calming solutions. Traffic calming should be considered at time of redevelopment and/or urbanization of this segment.

Beaton Drive - *between Sheyenne and 9th Street E*

Existing Conditions

Summary

Beaton Dr is classified as a collector road between Sheyenne St, a minor arterial, and 9th St E, also a minor arterial. The street varies in width and there are three distinct segments of roadway along the study area of Beaton Dr:

1. between Sheyenne St and just south of the Pump Station
 - two 15-foot driving lanes, widens to include two turn lanes and two through lanes (4 lanes total) at Sheyenne St
2. between just south of the Pump Station to Bobcat Employee and Delivery Entrance
 - two 13.5-foot driving lanes
3. between Bobcat Employee and Delivery Entrance and 9th St E
 - two 18-foot driving lanes

Land Use & Neaby Destinations

The corridor is primarily commercial land use but includes areas of single-family residences and townhomes. Cheney Middle School is located on the north side of Beaton Dr near the 9th St E intersection however, no access to the school property is provided from Beaton Dr. Numerous commercial headquarters and commercial offices are located along the north side and there is a plasma donation business, hotel and event center, and restaurant located on the southeast side where Beaton Drive jogs north of the interstate. There is vacant and undeveloped land west of the Sheyenne River. The intersections of Beaton Dr and Sheyenne St and Beaton Dr and 9th St E are stop light controlled. Stop

signs are provided for traffic coming out of some but not all of the adjacent parking lots for commercial businesses. Beaton Dr provides an east-west connection between Sheyenne St and 9th St E, two of the busiest streets in West Fargo and both having nearby interchanges with I-94 just south of the study area.

Other Key Features

Beaton Drive has virtually no existing roadway striping. Boulevard Trees are limited but more prevalent on the east side of Beaton Dr. Driveway access points are limited. There is a sidewalk that ends just south of BioLife Plasma and the shared use path ends at Bobcat creating a bicycle and pedestrian gap.

Context Photos

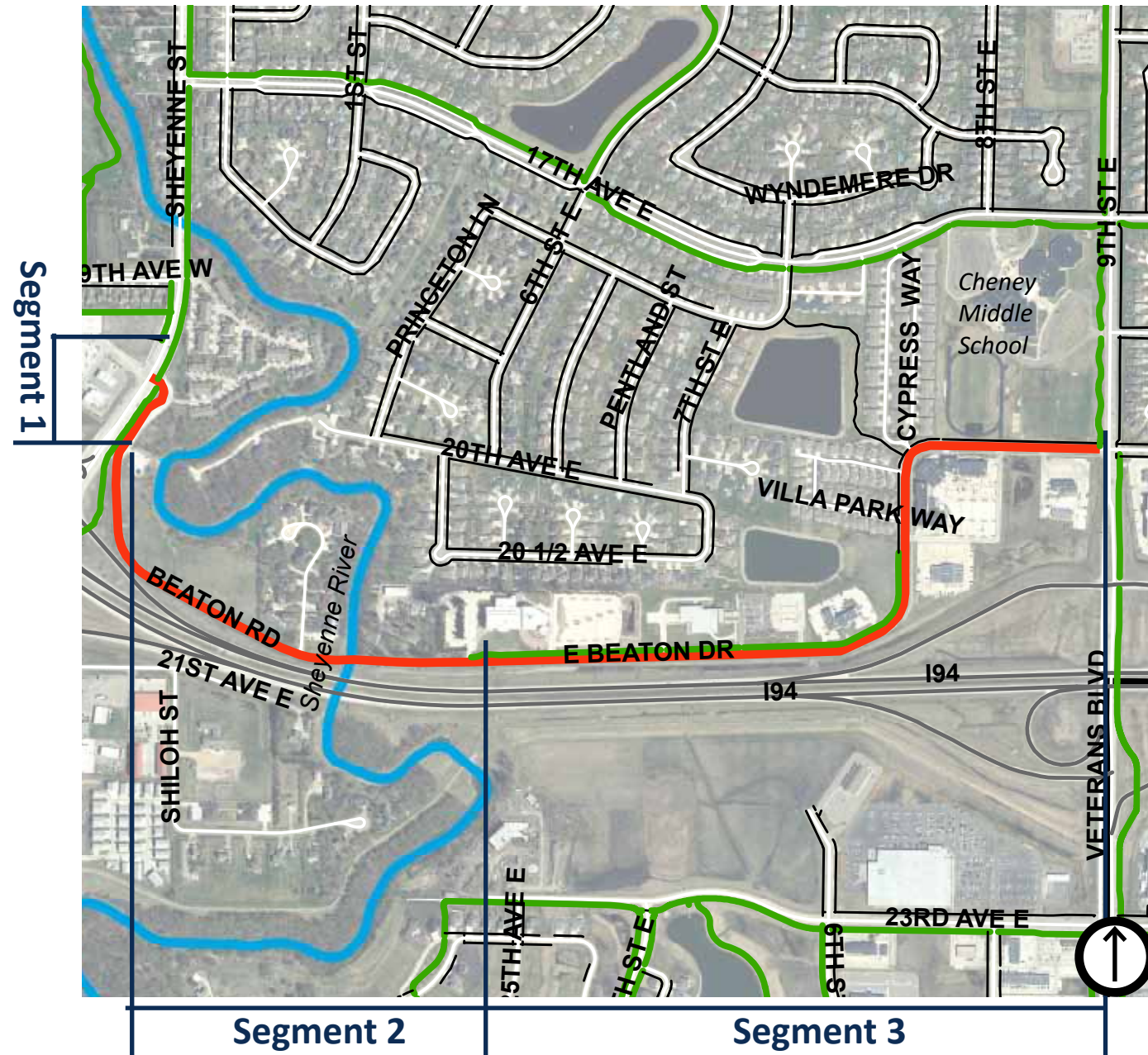


Beaton Drive looking south
-segment 2



200 block of Beaton Drive
looking east



Map



Existing Typical Cross Section (may vary depending on location)



Map Key

- Study Area
- Sidewalk
-  Shared Use Path
-  On-street Bike Facility

Corridor Features

Beaton Drive	Width	Speed limit (mph) ¹	On-Street Parking? ²	Right-of-way	Traffic Volume	% Above 30 mph	% Cut-through
<i>segment 1</i>	30'	25	None	80'	846 - 865	70% - 86%	60.7%
<i>segment 2</i>	27'	25	None	70-80'			
<i>segment 3</i>	36'	25	None	70-80'	1226 - 1455	57% - 86%	

Traffic Conditions

Data was collected at four (4) locations, location 1, location 2, location 3, and location 4, for a total of 72 hours between Tuesday, April 27, 2021 and Thursday, April 29, 2021.

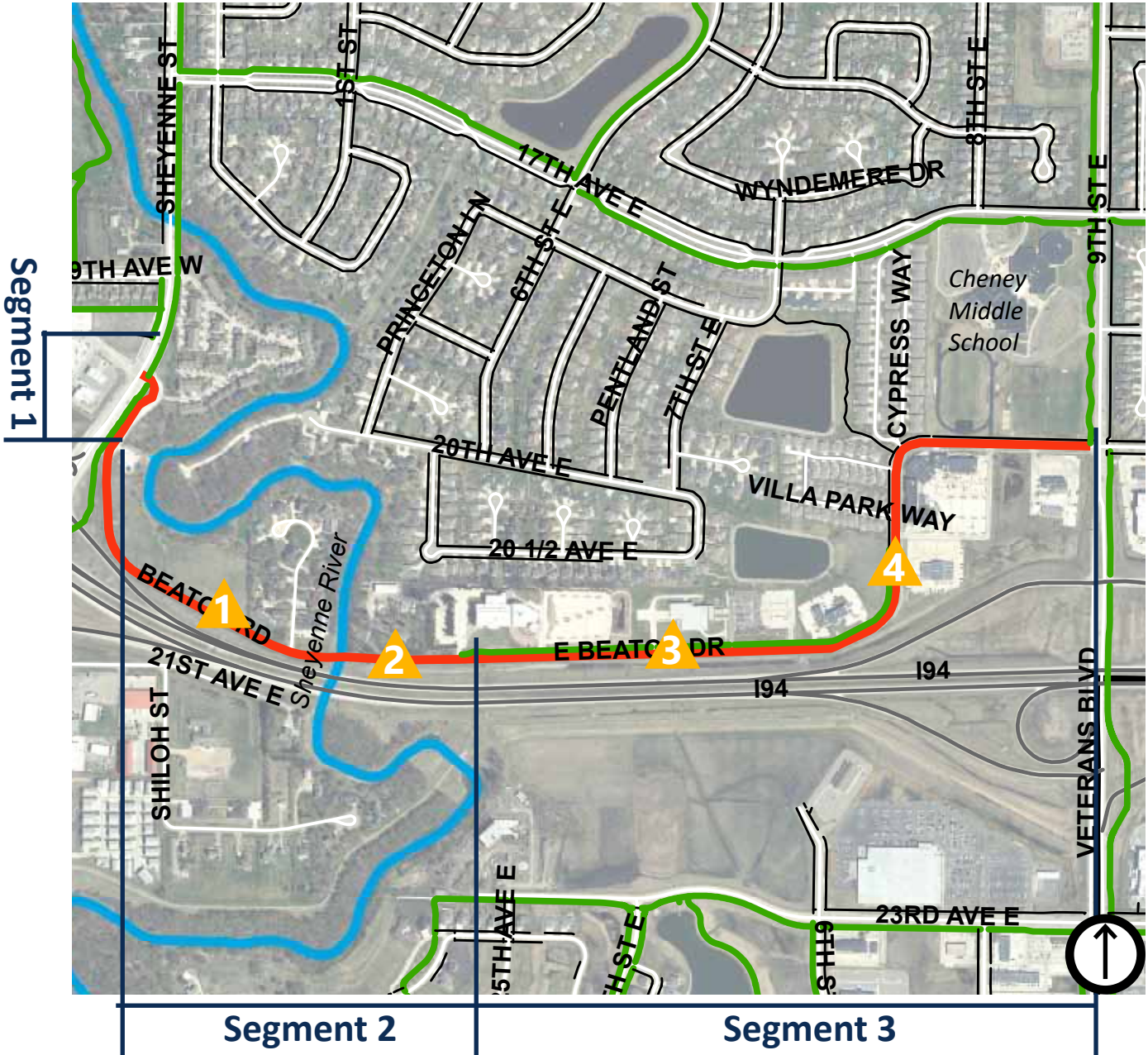
Corridor Traffic & Speed Data

10 th Street W	Average Daily Traffic	Above 25 mph			Above 30 mph
		NB	SB	Total	
location 1	846	98%	98%	98%	86%
location 2	865	93%	95%	94%	70%
location 3	1226	96%	98%	97%	86%
location 4	1455	83%	84%	84%	57%

Traffic Analysis

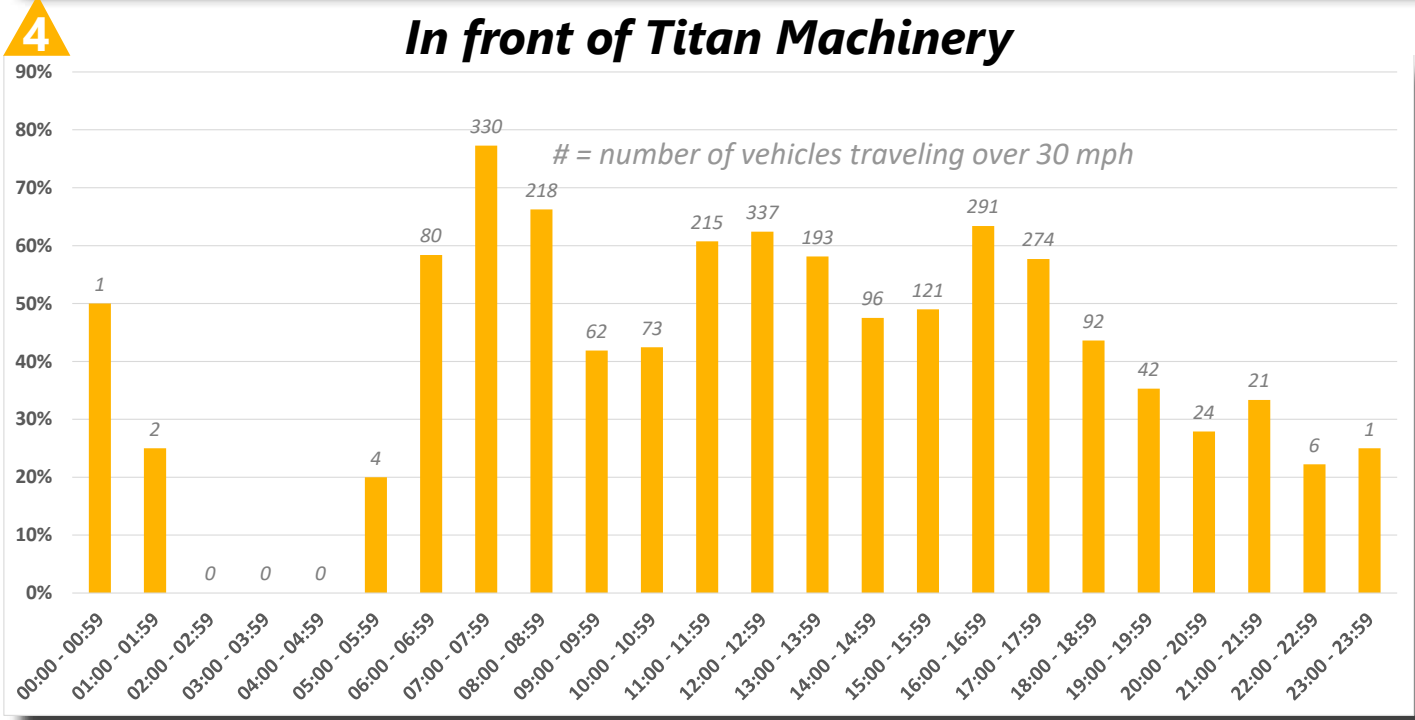
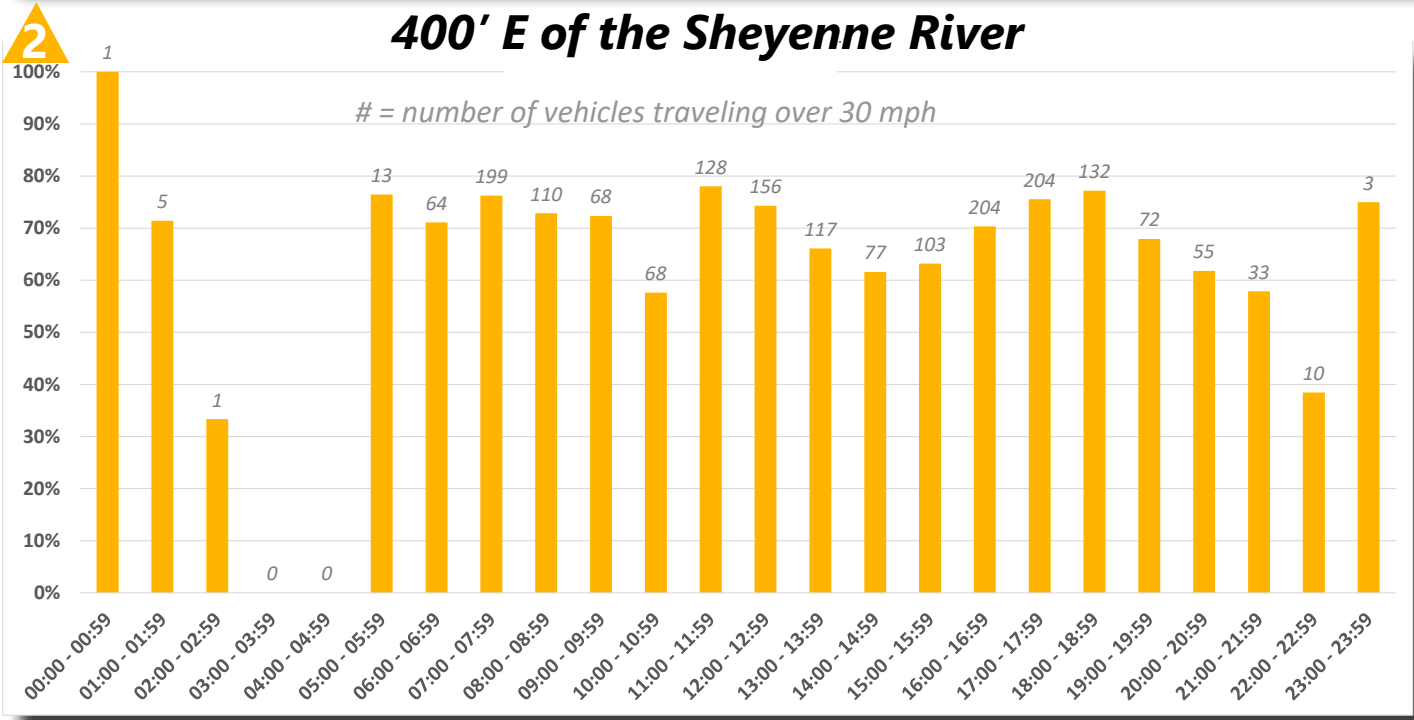
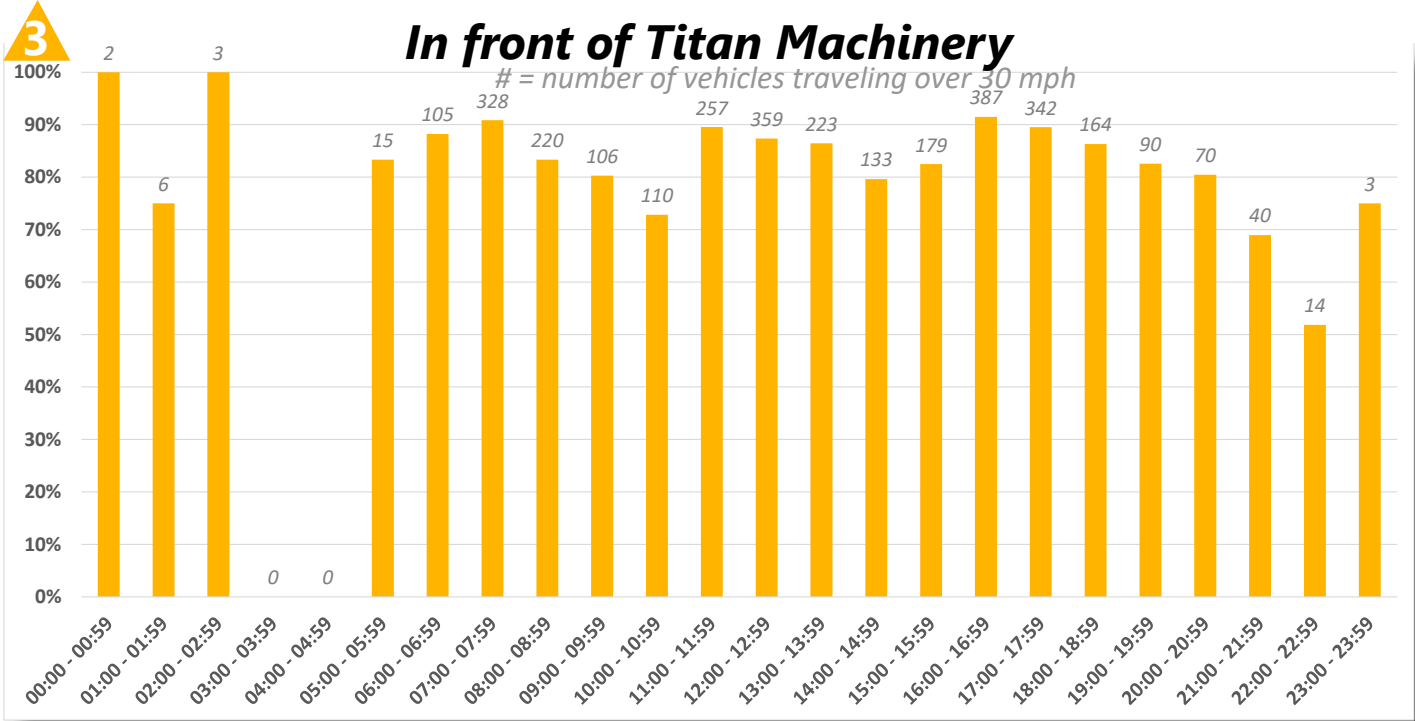
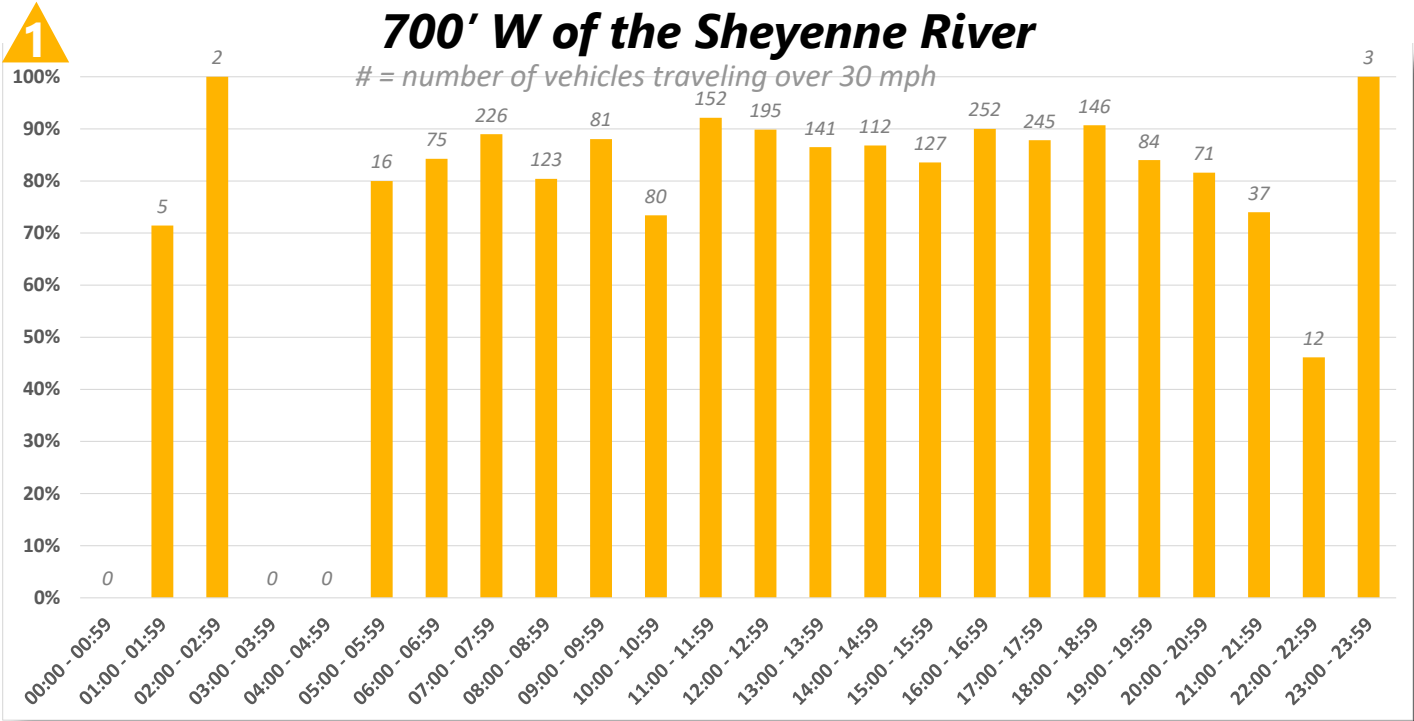
The City of West Fargo has received frequent complaints about speeding vehicles on Beaton Drive and the traffic data indicates a strong prevalence of speeding. Every location showed a vast majority of speeding and at least one (1) of every two (2) vehicles traveling above 30 mph. Metro COG believes that a few factors may play into the traffic data obtained at the four (4) locations including, very wide driving lanes (ranging from 13.5-foot to 18-foot), straight roadway segment, wide sight lines, limited access driveways, and no on-street parking.

Map



West of the Sheyenne River, there is no development which gives the corridor a rural character with wide open sight lines. Except for the eastern side of segment 3, the southern side of Beaton Drive is adjacent to I-94 and there is virtually no development or access points on the south. This limited access and character of development along Beaton Drive may be certainly contributing to the prevalence of speeding. The wide travel lanes throughout and open sight lines are obviously contributing to a comfort level of drivers that is above the posted speed limit and certainly above the critical 30 mph mark. This is also concerning for bicyclists and pedestrians

Percent of vehicles traveling above 30 mph by location



whom have to share the roadway with vehicles in segments 1 and 2, which contributes to an unsafe environment for people using alternative modes of transportation.

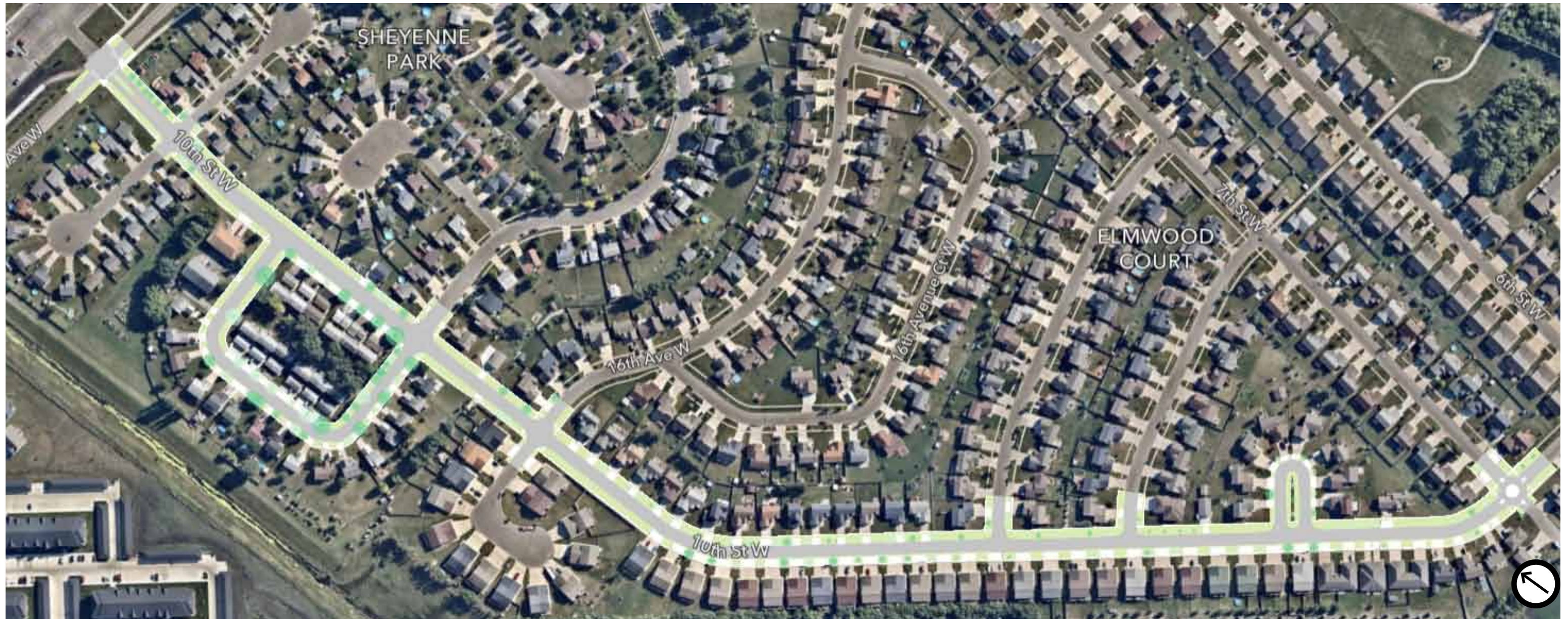
Over 1/2 of the traffic (60.7%) is considered cut-through traffic, which indicates

that Beaton Drive may be operating well as a collector roadway. Beaton Drive appears is likely serving as an alternate east/west route between Sheyenne St on the West and 9th St E on the east, both of which have interchanges with I-94 just south of the corridor however, the speeding is definitely an issue on the corridor.

10th Street West - *between 13th and 19th Avenue W*

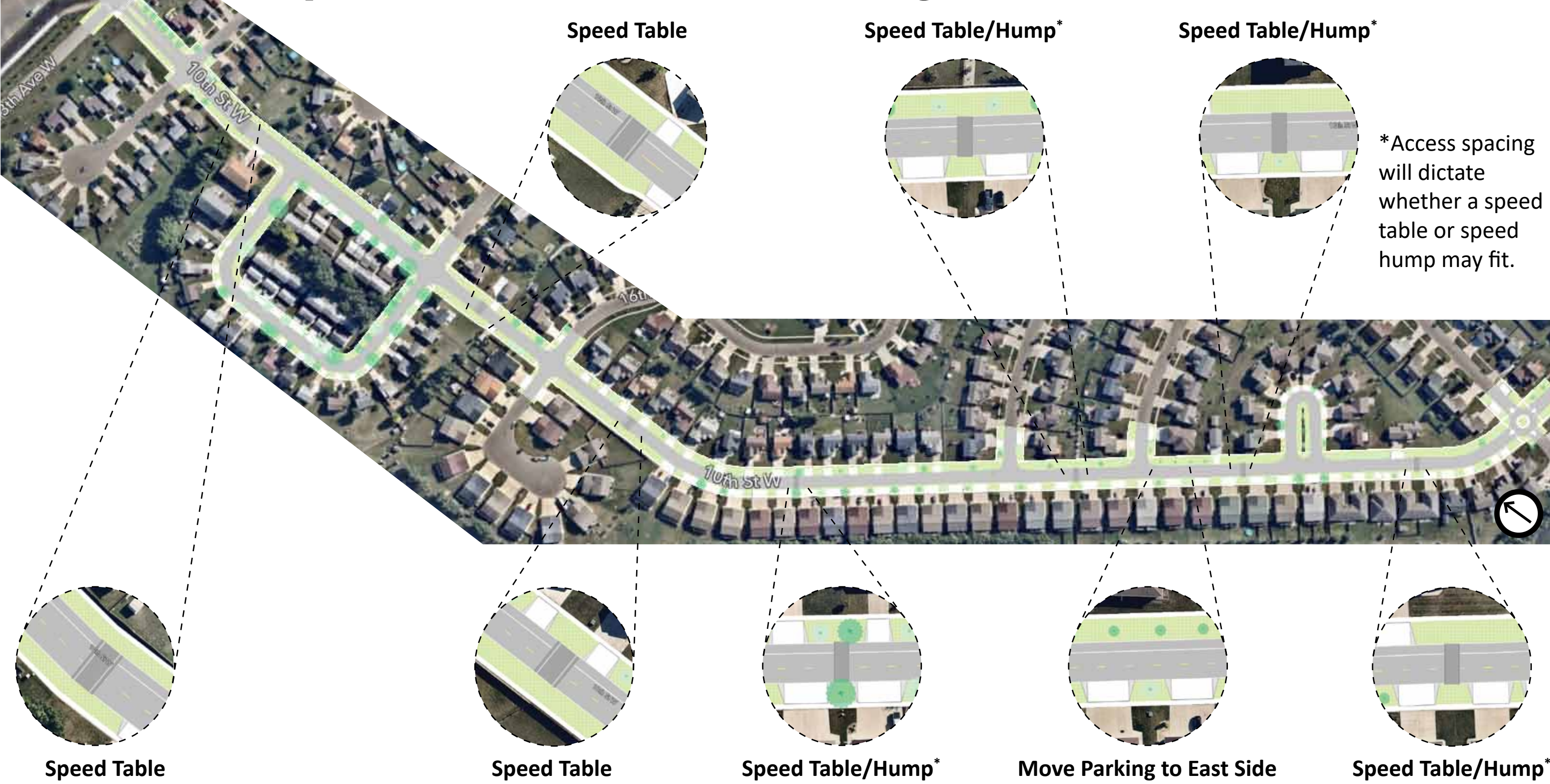
Scenario 1 - Existing/Do Nothing

\$0



10th Street West - *between 13th and 19th Avenue W*

Scenario 2 - Speed Tables & Move Parking to East-side \$235,000



10th Street West - *between 13th and 19th Avenue W*

Scenario 3 - Curb Extensions & Move Parking to East-side \$150,000



10th Street West - *between 13th and 19th Avenue W*

Existing Conditions

Summary

The 10th Street W study area is from 13th Ave W to 19th Ave W. 10th Street W is classified as a local road between 13th Avenue E, a minor arterial, and 19th Avenue W, a local road. The street is 40 feet wide however, there is one segment that differs from the rest of the corridor:

1. between 14th and 15th Ave W
 - two 12-foot driving lanes, one 8-foot parking lanes on both sides of street

Land Use & Neaby Destinations

The corridor is primarily single-family residential land use including twin homes and townhomes along the west side of 10th St W between 14th Ave W and 19th Ave W. Scheel's Soccer Complex is located on the north side of the intersection of 10th St W and 13th Ave W. The Gateway West Shopping Center is located just south of the intersection of 10th St W and 19th Ave W. There is a stop sign for traffic coming onto 13th Ave W from 10th St W. There is a roundabout located at the intersection of 10th St W and 19th Ave W. There are no stop signs for traffic coming onto 10th St W along the corridor from cross streets except at 16th Ave W and the east side of 15th Ave W where there are stops. 10th St W provides a north-south connection between 13th Ave W and 19th Ave W. 13th Ave W provides connections to regional destinations and 19th Ave W ultimately provides connection to Sheyenne St which also connects to regional destinations and has a nearby interchange with I-94.

Other Key Features

10th St W has roadway striping. There is a striped crosswalk on 10th St W at the 13th Ave W intersection which is in poor condition and one at the 19th Ave W intersection which is in good condition. Boulevard trees are inconsistent and vary in size including some trees that resemble shrubs. Some property owners have not yet planted trees in the boulevard and some property owners have double-fronting lots where no boulevard trees are planted on the "back boulevard". Driveway access points are numerous. I-94 borders the western edge of the adjacent neighborhood so there are limited vehicle, bicycle, and pedestrian connections on the west side of 10th St W.

Context Photos

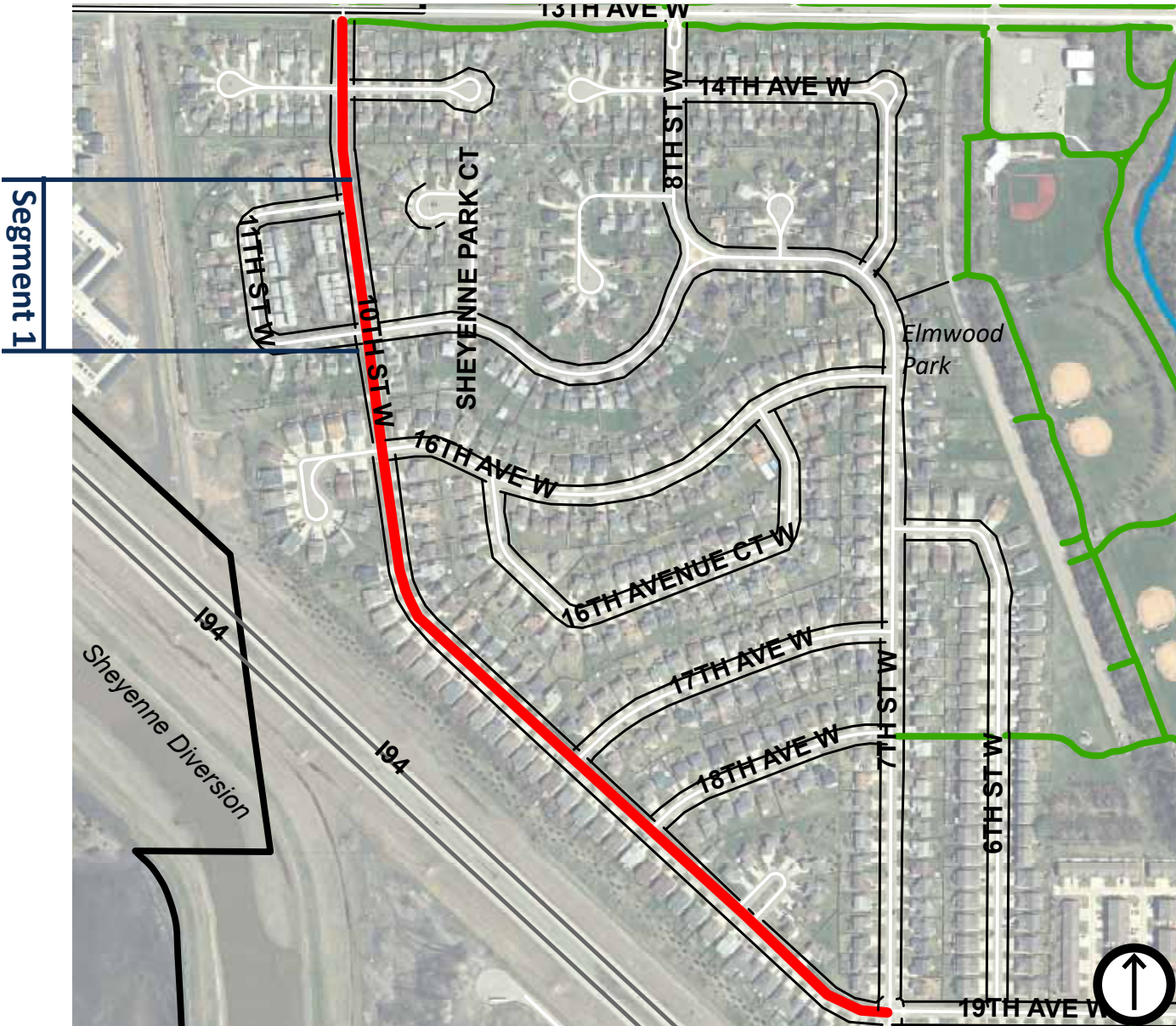


10th Street W looking southeast

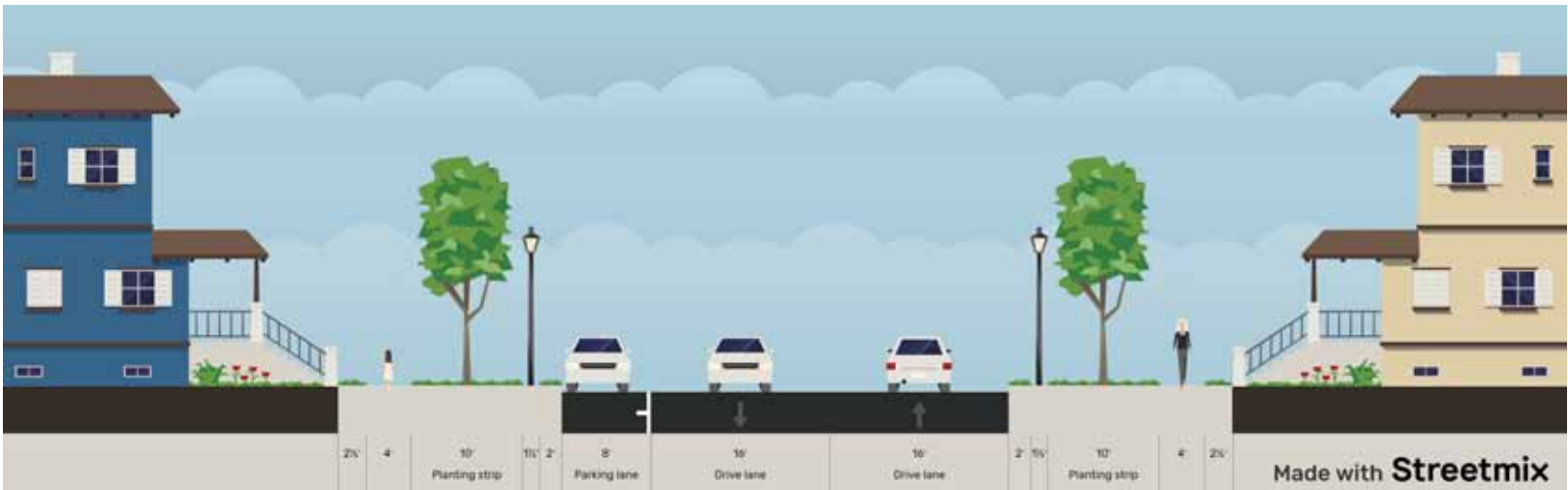


1400 block of 10th Ave W looking south

Map



Existing Typical Cross Section (mary vary depending on location)



Map Key

- Study Area
- Sidewalk
- Shared Use Path
- On-street Bike Facility

Corridor Features

	Width	Speed limit (mph) ¹	On-Street Parking? ²	Right-of-way	Traffic Volume	% Above 30 mph	% Cut-through
10 th Street W	40'	25	West side only	80'	1058 - 1215	19% - 35%	69.8%
segment 1	40'	25	Both sides	80'			

¹No posted speed limit along study area

²Signs were posted on the side where parking is allowed stating “No Parking Wednesdays 8 a.m - 5 p.m.”

Traffic Conditions

Data was collected at three (3) locations, location 1, location 2, and location 3, for a total of 72 hours between Tuesday, May 18, 2021 and Thursday, May 20, 2021.

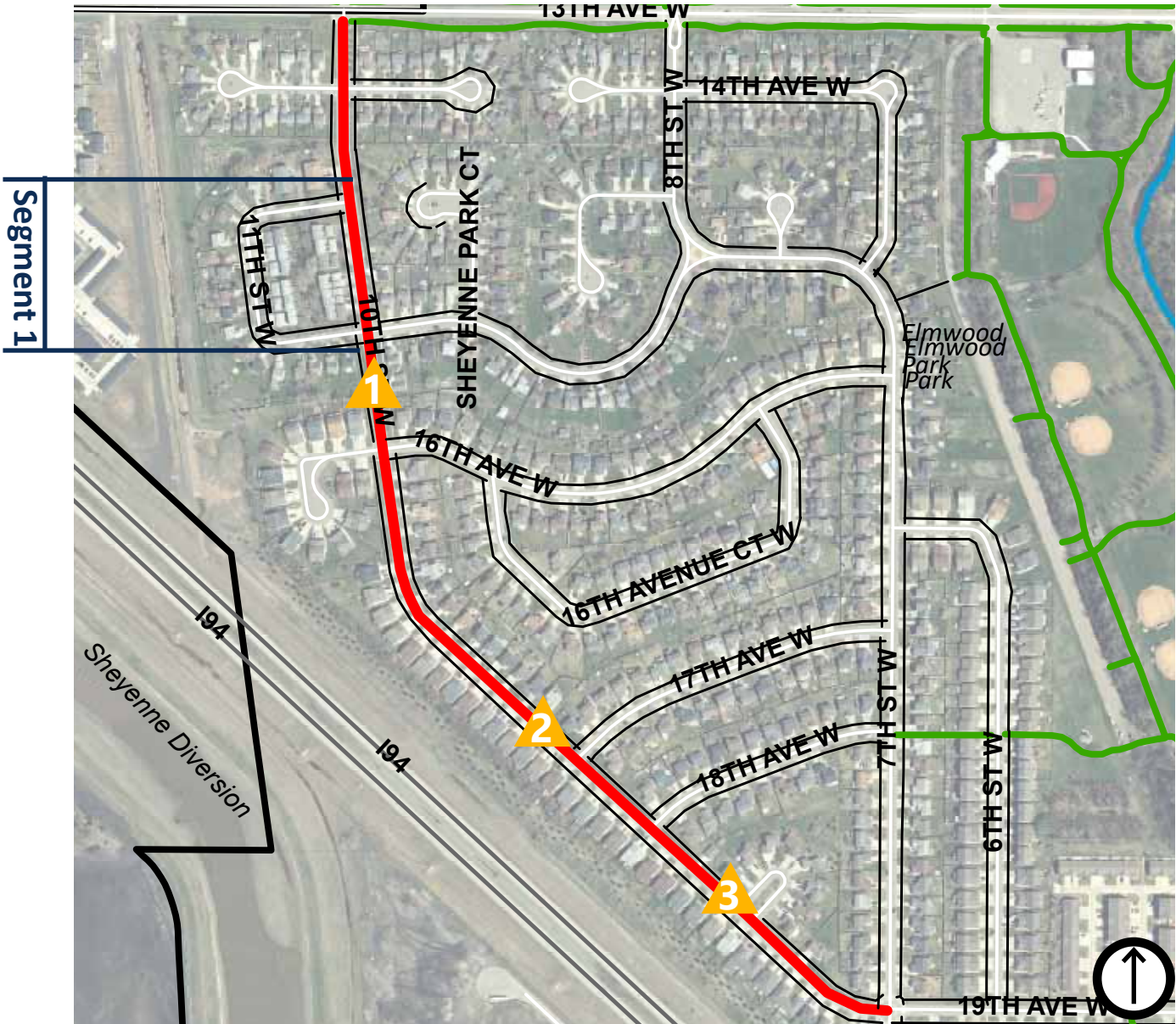
Corridor Traffic & Speed Data

10 th Street W	Average Daily Traffic	Above 25 mph			Above 30 mph
		NB	SB	Total	
location 1	1058	64%	56%	59%	19%
location 2	1082	74%	60%	66%	23%
location 3	1215	78%	80%	79%	35%

Traffic Analysis

The City of West Fargo has received frequent complaints about speeding vehicles on 10th Street W and the traffic data suggests that although speeding is prevalent along the corridor, critical speeds above 30 mph are not quite as prevalent. Not all collection locations along 10th St W are the same however, the data suggests that the further south along the corridor, the more speeding that occurs. Metro COG believes that a few factors may play into the traffic data obtained at the three (3) locations including, relatively wide driving lanes (12-foot and 16-foot), straight roadway segment, wide sight lines, and on-street parking utilization.

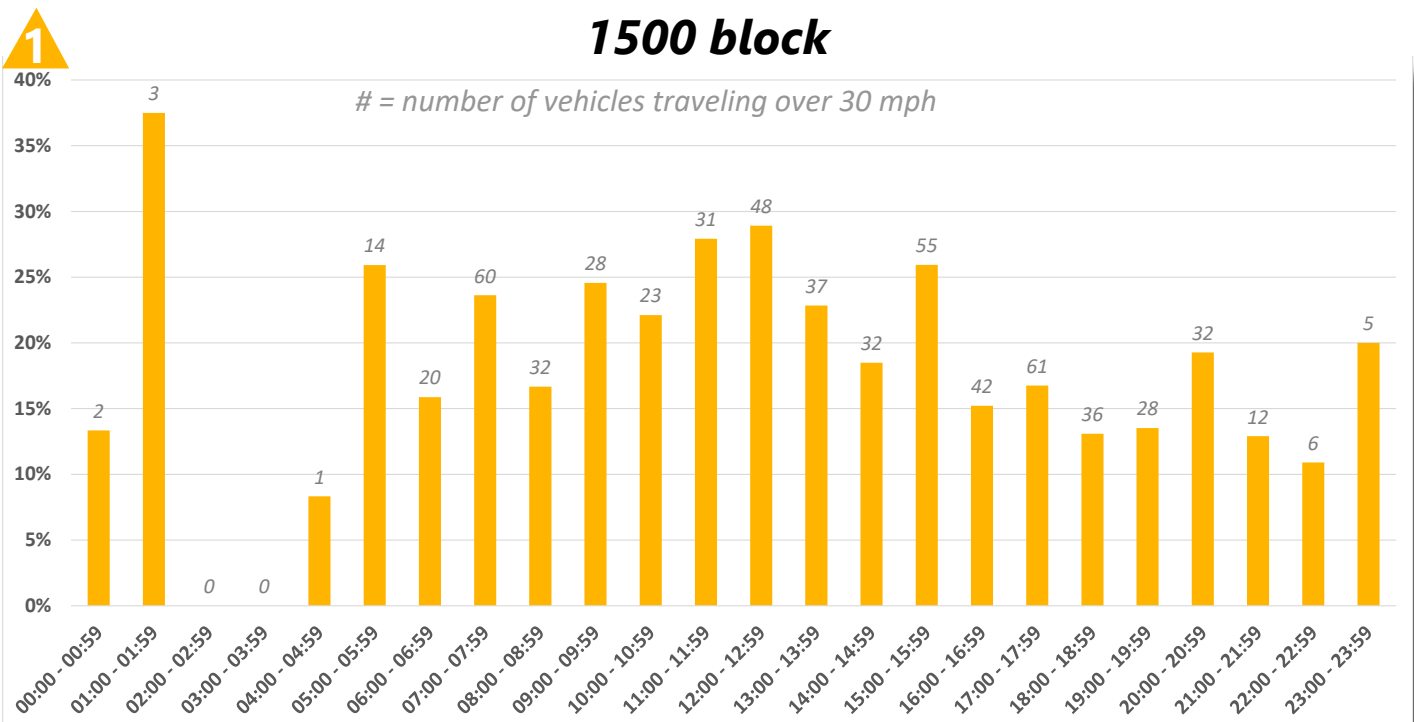
Map



What is interesting about location 1 is that this location is adjacent to a dynamic speed sign which displays how fast people are going and indicates to a vehicle if it is traveling above the speed limit. The sign faces southbound traffic and the data suggests that it is having some impact, as the southbound traffic at location 1 had the least amount of speeding of the 10th St W study area.

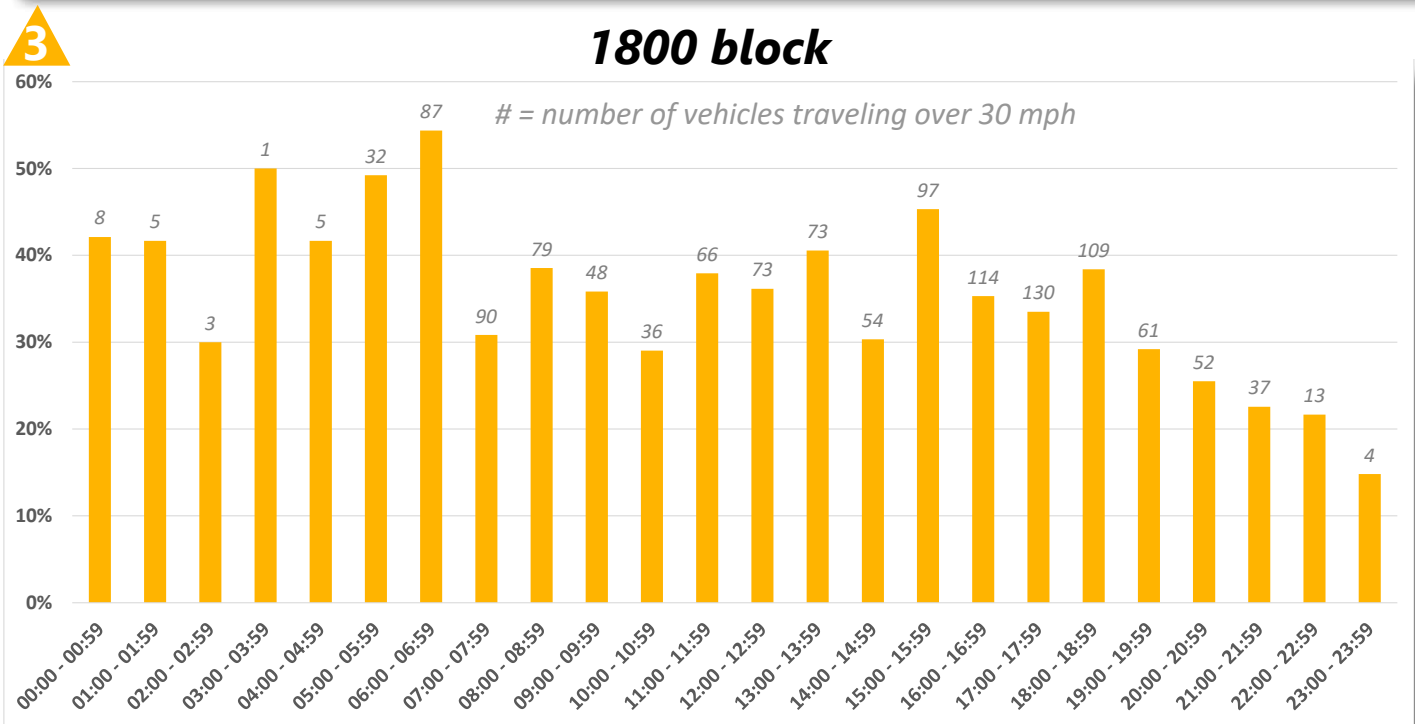
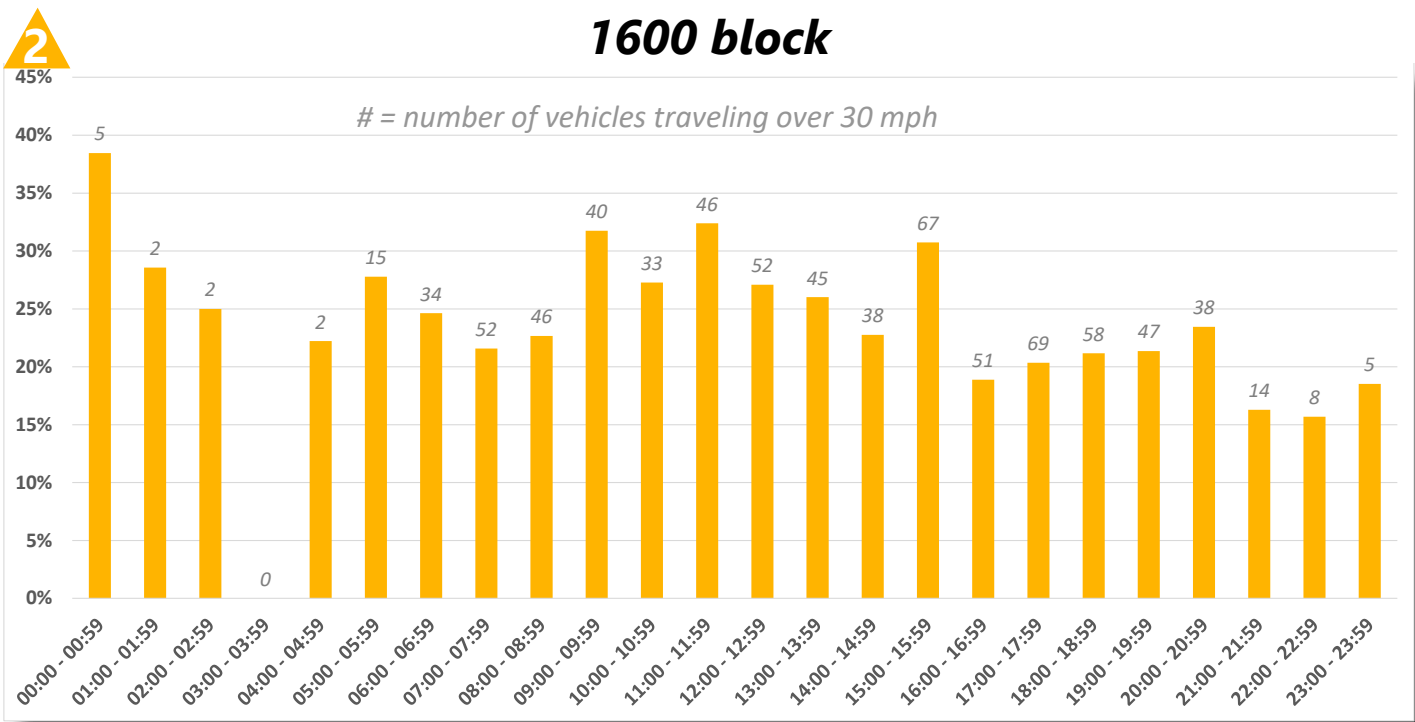
Location 3, in the 1800 block of 10th St W has the highest prevalence of speeding with more than one (1) out of every three (3) vehicles traveling

Percent of vehicles traveling above 30 mph by location



over 30 mph. This may be in part because this area of the corridor is very straight and there are numerous driveway access points that not only make on-street parking sparse and underutilized but also the boulevard trees along 10th St W in this location are inconsistent, providing for straight and wide sight lines which can contribute to higher speeds. The travel lanes at location 3 are 16-feet wide which is considered a very wide for a local roadway and may also be contributing to higher speeds.

Over 2/3 of the traffic (69.8%) is considered cut-through traffic, which indicates

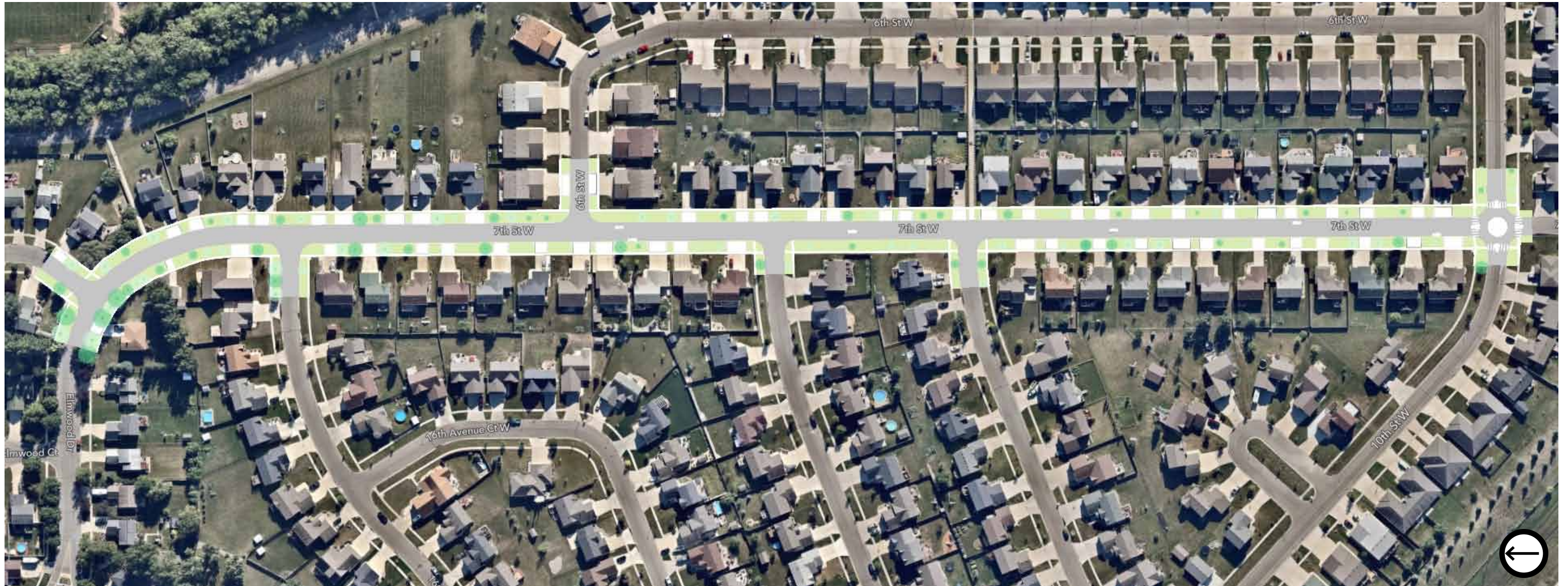


that 10th St W may also have a cut-through traffic problem in addition to a speeding problem. Because of the connection to the Gateway West Shopping Center to the south of this corridor and the limited north south parallel routes, cut-through traffic may be contributing to complaints from adjacent residents, similarly to 7th St W, a parallel corridor just to the east.

7th Street West - *between 15th and 19th Avenue W*

Scenario 1 - Existing/Do Nothing

\$0

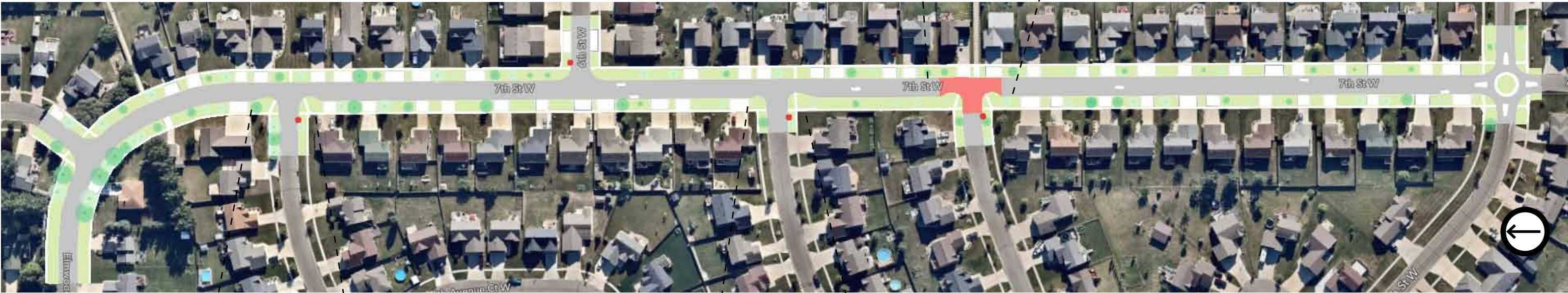
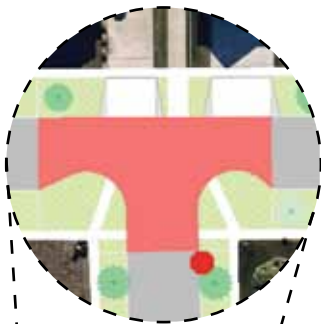


7th Street West - *between 15th and 19th Avenue W*

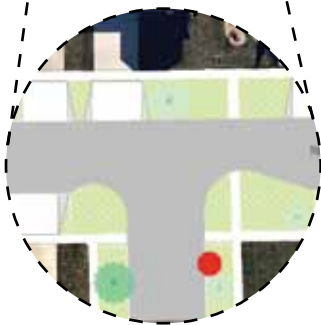
Scenario 2 - Curb Extensions

\$150,000

Curb Extensions & Pavement Material



Curb Extenstions & Connection Improvements



Curb Extensions

7th Street West - *between 15th and 19th Avenue W*

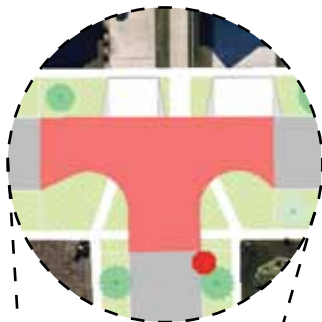
Scenario 3 - Speed Tables

\$270,000

Speed Table



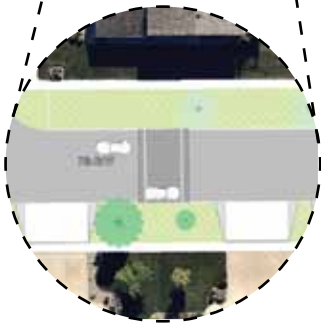
Optional
Curb Extensions & Pavement Material



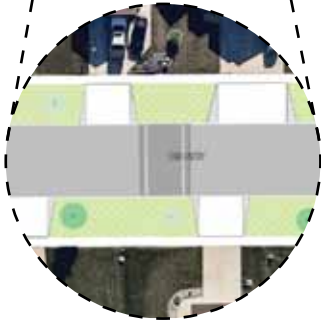
Speed Table



Speed Table



Speed Table



7th Street West - *between 15th and 19th Avenue W*

Existing Conditions

Summary

7th St W is a local road between 15th Ave W (Elmwood Drive W), a local road on the north, and 19th Ave W, a local road on the south. Elmwood Dr W ultimately provides connection to 13th Ave W, a minor arterial to the north, 19th Ave W ultimately provides connection to Sheyenne Street, a minor arterial to the east. The street is 32 feet wide with two 12-foot driving lanes and one 8-foot parking lane.

Land Use & Neaby Destinations

The corridor is primarily single-family residential land use including adjacent twin homes along 6th St W. The intersection of 19th Ave W has a roundabout however, no intersection control is provided at the intersections of 7th St W and 18th Ave W, 17th Ave W, or 16th Ave W. 7th St W provides a north-south connection between Elmwood Dr W and 19th Ave W. Elmwood Dr W is a local residential road that ultimately connects to 13th Ave W a busy street that provides connections to regional destinations. 19th Ave W is a local street that provides connection to Sheyenne St which also connects to regional destinations and has a nearby interchange with I-94. Elmwood Park, a regional park, is located just east of the 7th St W corridor, with neighborhood path connections in two locations along 7th St W. 7th St W provides a direct connection to a large newly developed grocery store and commercial center, the Gateway West Shopping Center, south of 19th Ave W.

Other Key Features

7th St W has virtually no existing roadway striping. There is one striped crosswalk on 7th St W at 19th Ave W which is in good condition. Boulevard trees are inconsistent and it appears that some property owners have not yet planted trees in the boulevard while other properties have larger trees. Driveway access points are numerous. There are shared use path connections near the intersection of 7th St W and 18th Ave W and in the 1500 block of 7th St W, both of which connect east to Elmwood Park.

Context Photos

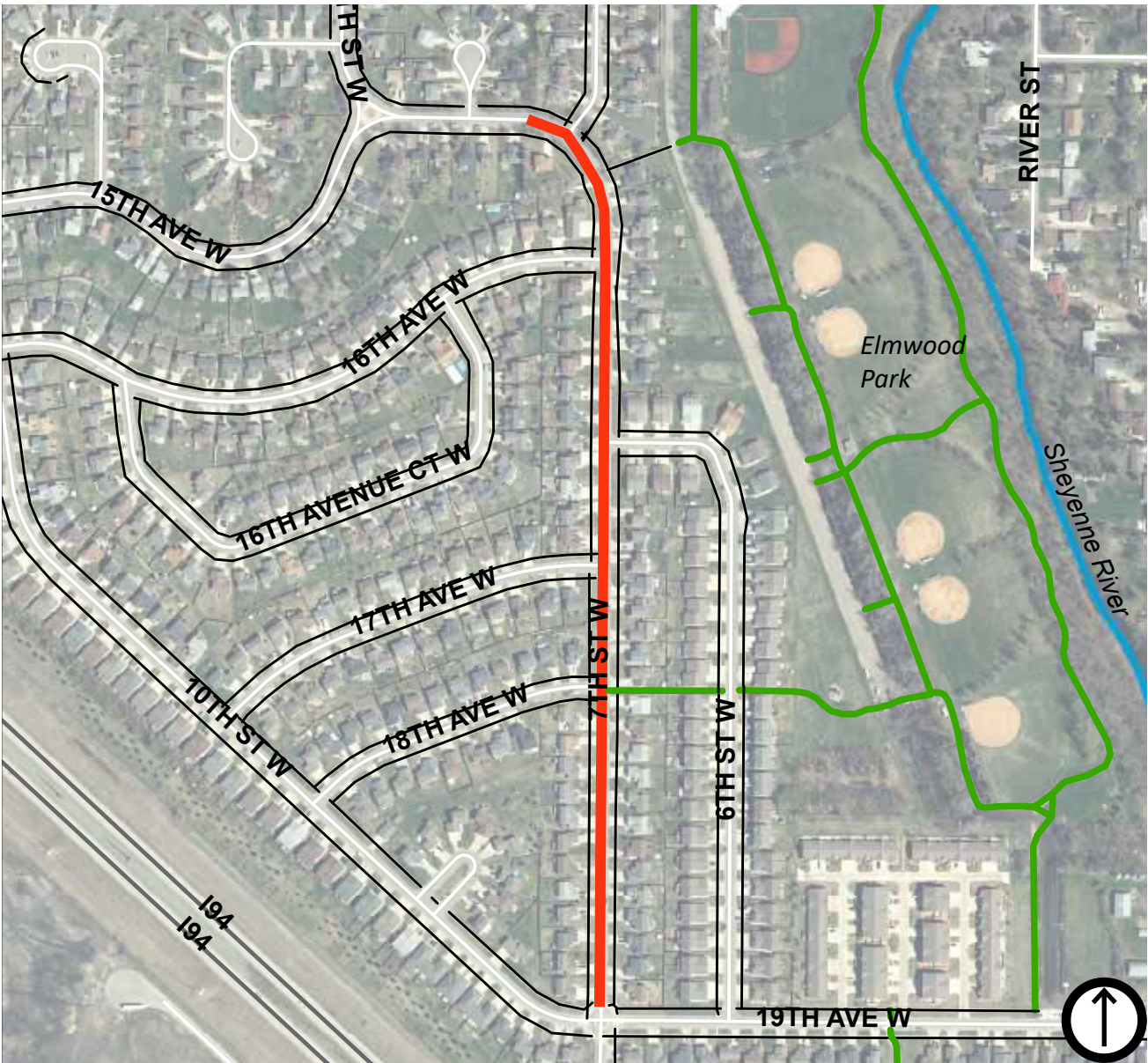


7th Street W looking south



7th Street W looking south at 16th Ave W

Map



Existing Typical Cross Section (mary vary depending on location)



Map Key

- Study Area
- Sidewalk
- Shared Use Path
- On-street Bike Facility

Corridor Features

	Width	Speed limit (mph)	On-Street Parking? ¹	Right-of-way	Traffic Volume	% Above 30 mph	% Cut-through
7 th Street W	32'	25	West side only	80'	1421 - 1423	11% - 12%	73.2%

¹Signs were posted on the side where parking is allowed stating “No Parking Wednesdays 8 a.m - 5 p.m.”

Traffic Conditions

Data was collected at two (2) locations, location 1 and location 2, for a total of 48 hours between Wednesday, April 21, 2021 and Thursday, April 22, 2021.

Corridor Traffic & Speed Data

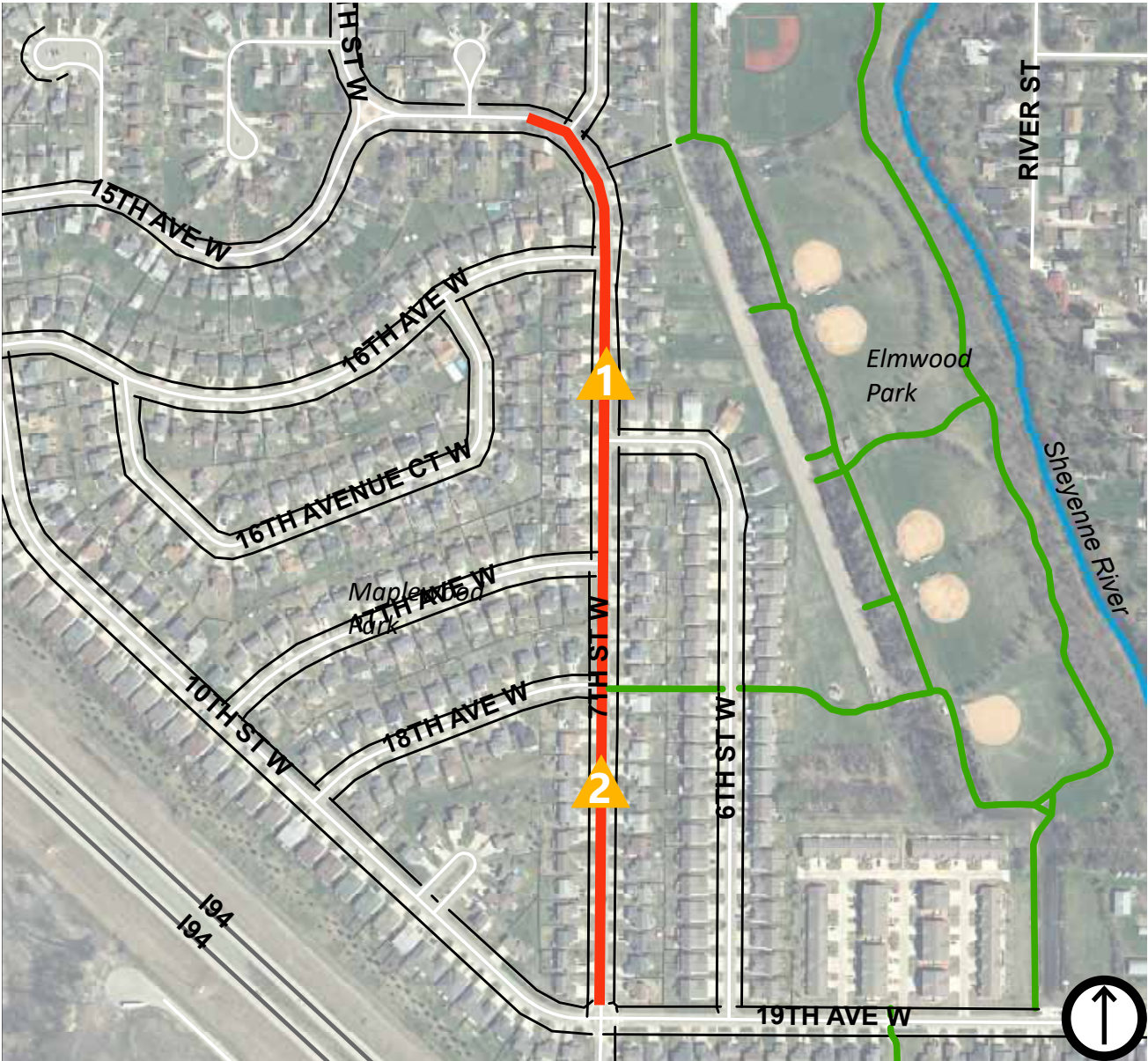
7 th Street W	Average Daily Traffic	Above 25 mph			Above 30 mph
		NB	SB	Total	
location 1	1423	58%	44%	51%	12%
location 2	1421	53%	58%	56%	11%

Traffic Analysis

The City of West Fargo has received frequent complaints about speeding vehicles on 7th Street W and the traffic data suggests that although speeding is prevalent along the corridor, critical speeds or those over 30 mph are only about one (1) of every 10 vehicles. Both collection locations along 7th St W provide similar results. Metro COG believes that a few factors may play into the traffic data obtained in both locations including, relatively wide driving lanes (12-foot), straight roadway segment, and on-street parking utilization.

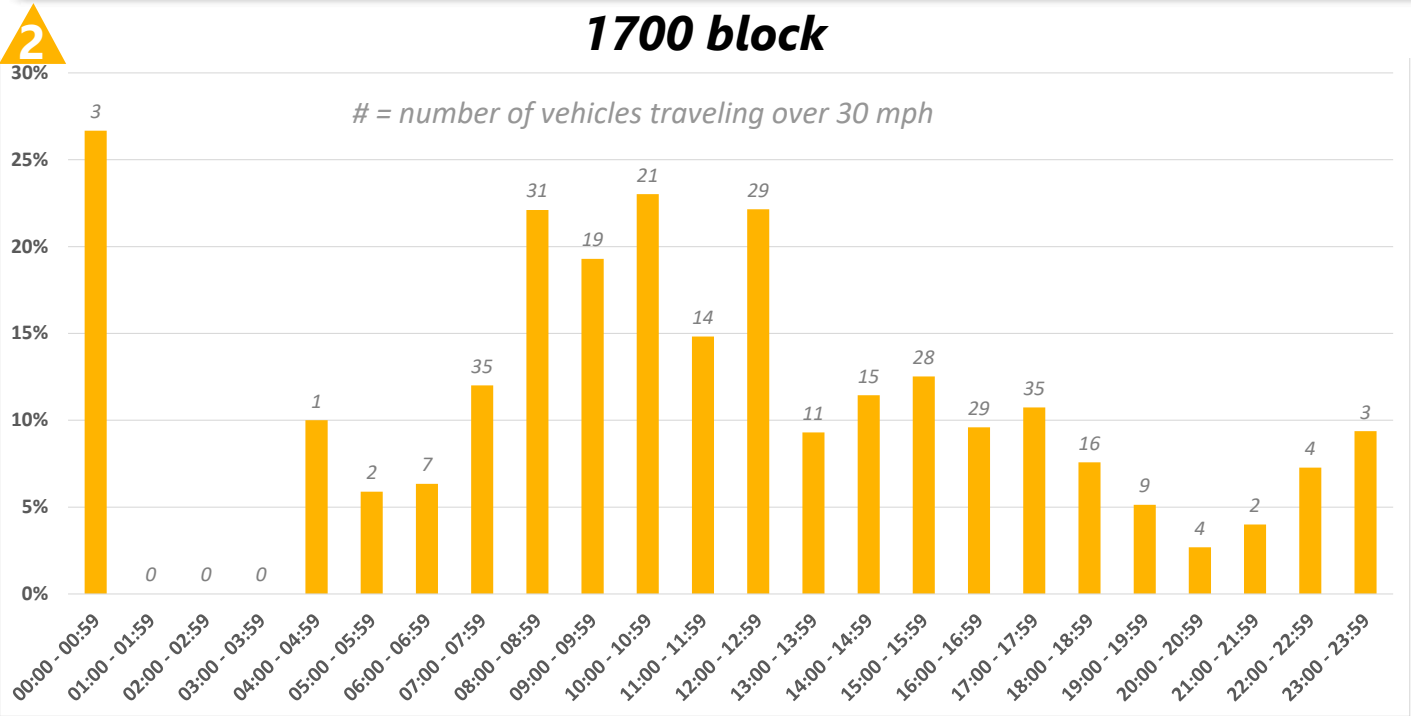
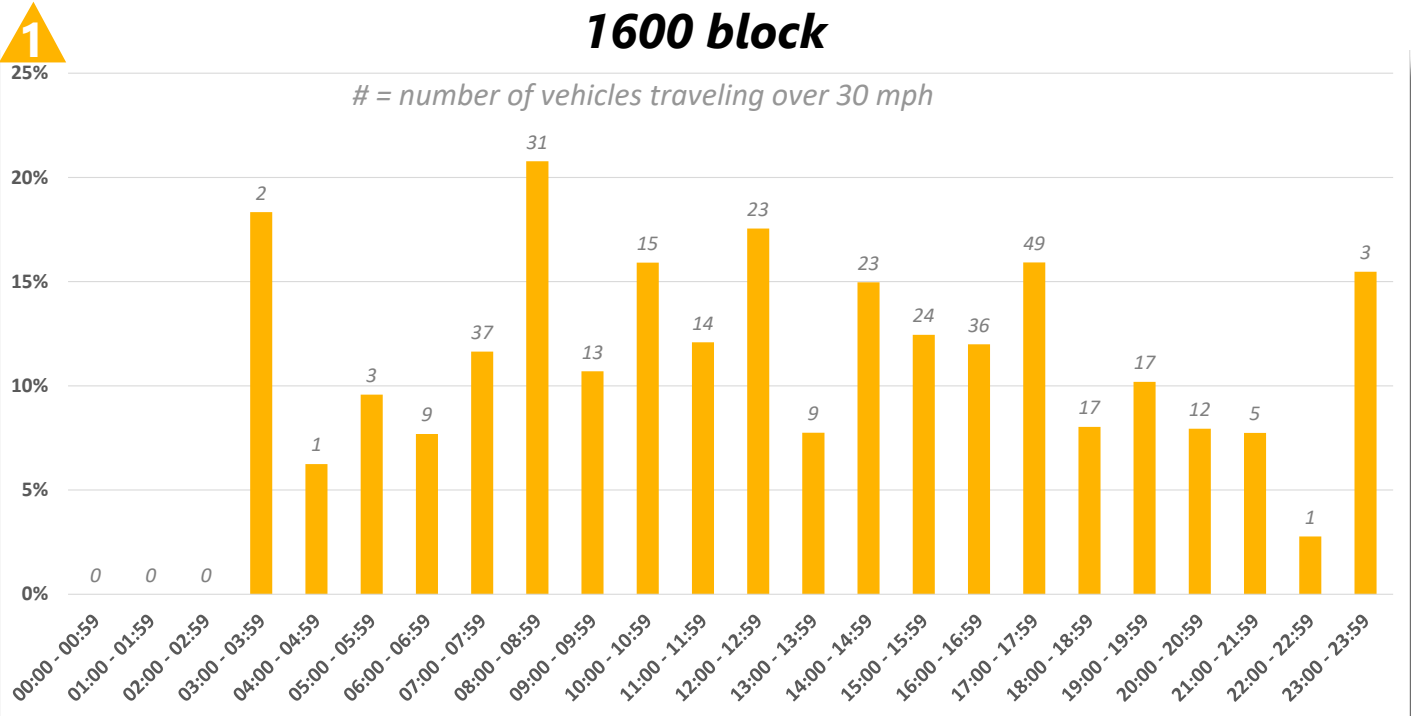
Nearly 3/4 of the traffic (73.2%) is considered cut-through traffic, which

Map



indicates that 7th St W may have more of a cut-through traffic problem than a speeding problem. Because of the direct connection to the Gateway West Shopping Center to the south of this corridor and the limited north south parallel routes, cut-through traffic is obviously occurring. 7th St W may be a route that people take living north of 13th Ave W which may be contributing to the complaints from adjacent property owners in the study area. The street network in this area of West Fargo offers few alternative parallel routes, with few streets running continuously between 13th Ave W and 19th Ave W. 7th Ave W is obviously serving more than just local trips

Percent of vehicles traveling above 30 mph by location

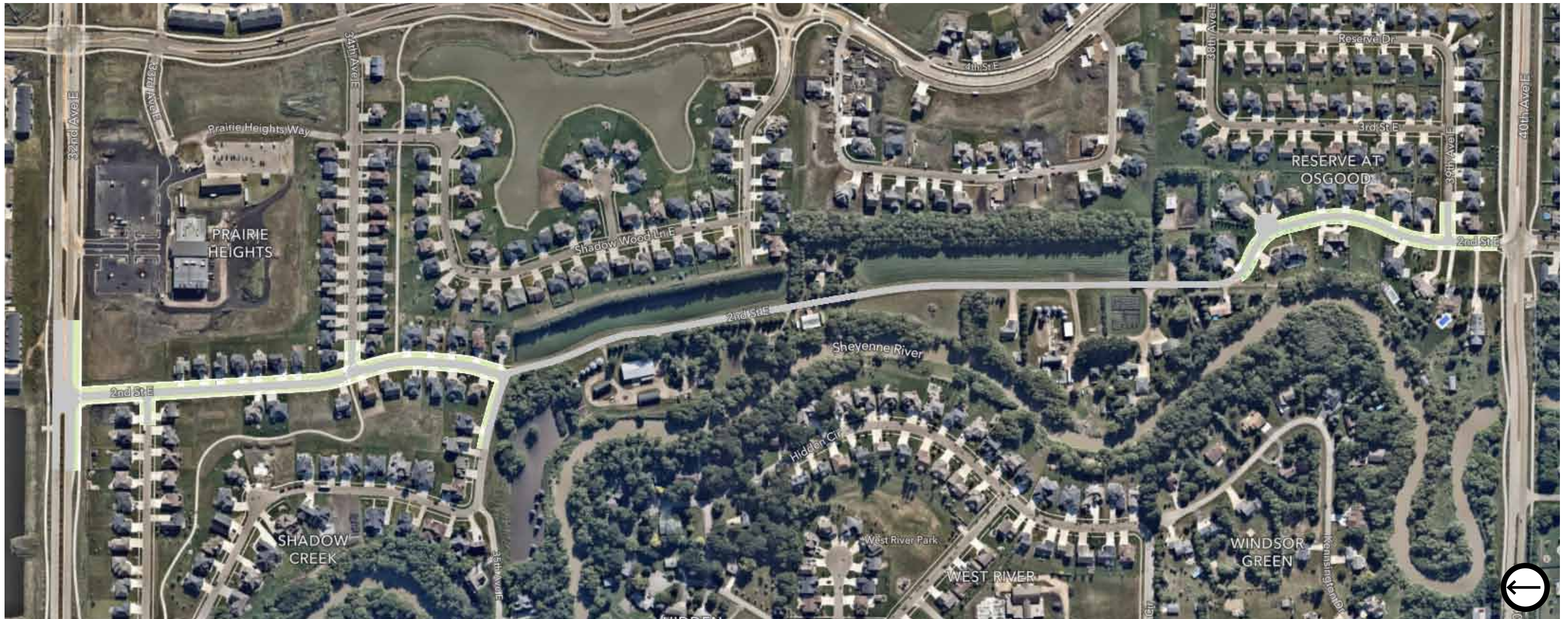


from adjacent property owners and may be a popular route for neighborhoods north of 13th Ave W to travel to and from the Gateway West Shopping Center or even as an ultimate north/south connection to and from Sheyenne St.

2nd Street East - *between 32nd and 40th Avenue E*

Scenario 1 - Existing/Do Nothing

\$0



2nd Street East - *between 32nd and 40th Avenue E*

Scenario 2 - Speed Tables

\$300,000

Pavement Material & Crossing Improvements



Pavement Material



Optional
Median Island



Median Island
Optional



Pavement Material

2nd Street East - *between 32nd and 40th Avenue E*

Scenario 3 - Signage/Striping* **\$5,000**

Signage/Striping



Signage/Striping

*These are considered temporary traffic calming solutions. Traffic calming should be considered at time of redevelopment and/or urbanization of this segment.

2nd Street East - *between 32nd and 40th Avenue E*

Existing Conditions

Summary

2nd Street E is a local road just east of the Sheyenne River between 32nd Avenue E, a minor arterial on the north, and 40th Avenue E, a minor arterial on the south. There are three distinct segments of roadway with varying widths along the study area of 2nd Street E:

1. between 32nd and 35th Ave E
 - two 12-foot driving lanes, one 8-foot parking lane on the west side of the street
2. between 35th Ave E & the 3800 block, which is gravel pavement section
 - two 12-foot driving lanes
3. between the start of the 3800 block and 40th Ave E
 - two 9.5-foot driving lanes and one 8-foot parking lane on the east side of the street

Land Use & Neaby Destinations

The corridor is primarily single-family residential land use. The gravel section has some commercial and agricultural land uses. There is a large religious institution, Prairie Heights Church, on the southeast corner of the intersection of 2nd St and 32nd Ave E. 2nd St E provides a north-south connection between 32nd Ave E and 40th Ave E, both of which are busy streets serving a variety of popular destinations in West Fargo and Fargo.

Other Key Features

2nd St E has virtually no existing roadway striping. There are striped crosswalks on 2nd St E at 32nd and 40th Ave E which are in good condition. The crosswalks striped at 34th Ave E are in poor condition. Yellow painted curbs exist at intersection bulb outs at 33rd, 34th, and 35th Ave E. Boulevard trees are young and not every property has planted trees in the boulevard. Driveway access points are numerous except along the gravel section of 2nd St E where access is much more limited. There are shared use paths along both 32nd and 40th Ave E including a path connection that goes through the neighborhood from 32nd Ave E to 4th St E, crossing 2nd St E at 34th Ave E.

Context Photos

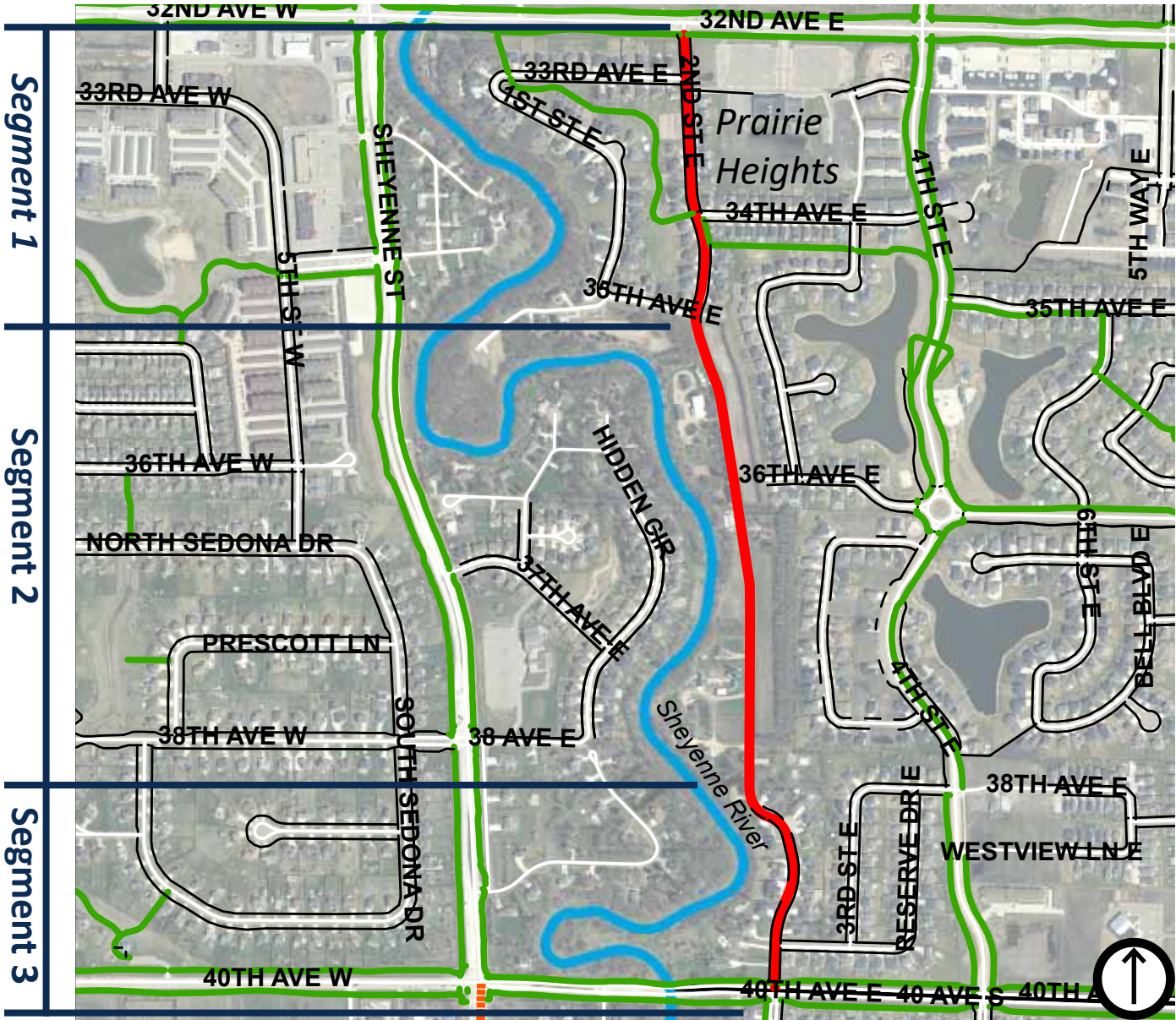


2nd Street E looking south at 32nd Avenue E



2nd Street E looking east at 34th Avenue E

Map



Existing Typical Cross Section (mary vary depending on location)



Map Key

- Study Area
- Sidewalk
- Shared Use Path
- On-street Bike Facility

Corridor Features

2nd Street E	Width	Speed limit (mph) ¹	On-Street Parking? ²	Right-of-way	Traffic Volume	% Above 30 mph	% Cut-through
segment 1	32'	25	West side only	70'	415 - 649	2% - 9%	50.0%
segment 2	24'	25	N/A	40'	208	31%	
segment 3	27'	25	East side only	62'	282	4%	

¹No posted speed limit along study area

²Signs were posted on the side where parking is allowed stating “No Parking Fridays 8 a.m - 5 p.m.”

Traffic Conditions

Data was collected at four (4) locations, with locations 1 and 2 being collected for a total of 48 hours on Wednesday, April 21, 2021 and Thursday, April 22, 2021. Locations 3 and 4 were collected for a total of 72 hours between Tuesday, May 25, 2021 and Thursday, May 27, 2021.

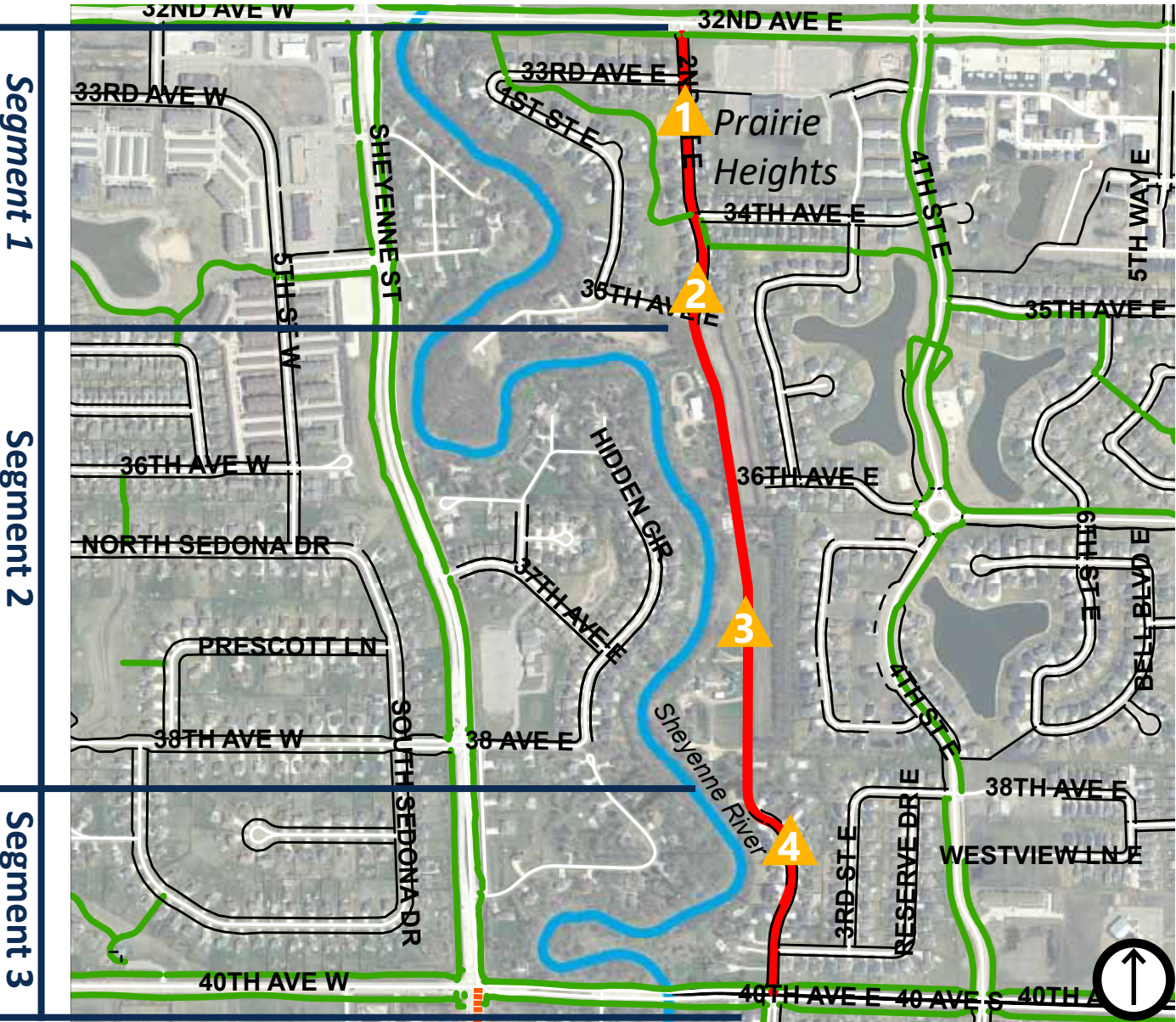
Corridor Traffic & Speed Data

2nd Street E	Average Daily Traffic	Above 25 mph			Above 30 mph
		NB	SB	Total	
location 1	649	48%	39%	43%	9%
location 2	419	27%	18%	22%	2%
location 3	208	54%	64%	59%	31%
location 4	282	26%	16%	21%	4%

Traffic Analysis

Although the City of West Fargo has received frequent complaints about speeding vehicles on 2nd Street E, the traffic data suggests that speeding along the corridor is not a widespread issue. Collector location 1, on the 3300 block and location 3, on the 3600 block or gravel roadway section appear to have the most speeding along 2nd St E. This may be due in part to less driveway access near location 1 and 3 which allows drivers to confidently drive above the speed limit without having to watch for any conflicting movements from vehicles entering or exiting driveways. Location 1 however, only has slightly fewer access points compared to other paved portions of 2nd St which leads

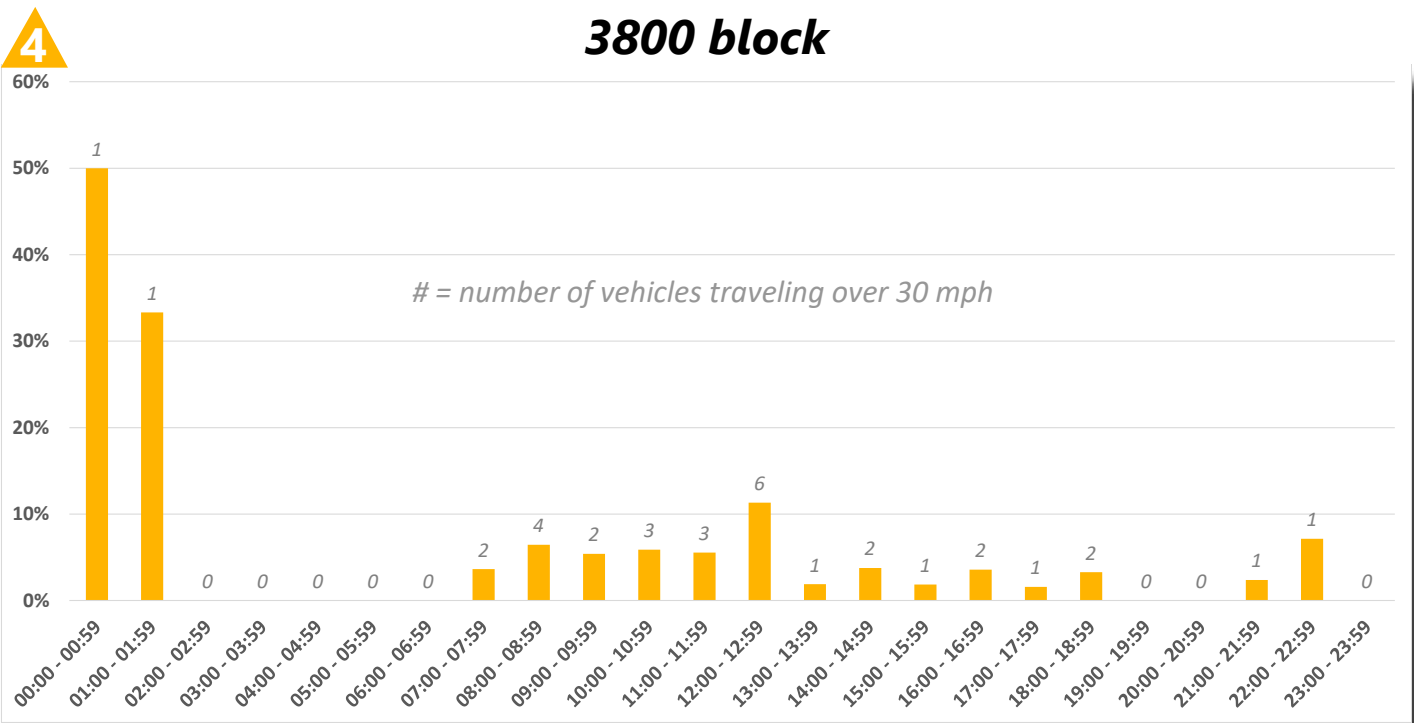
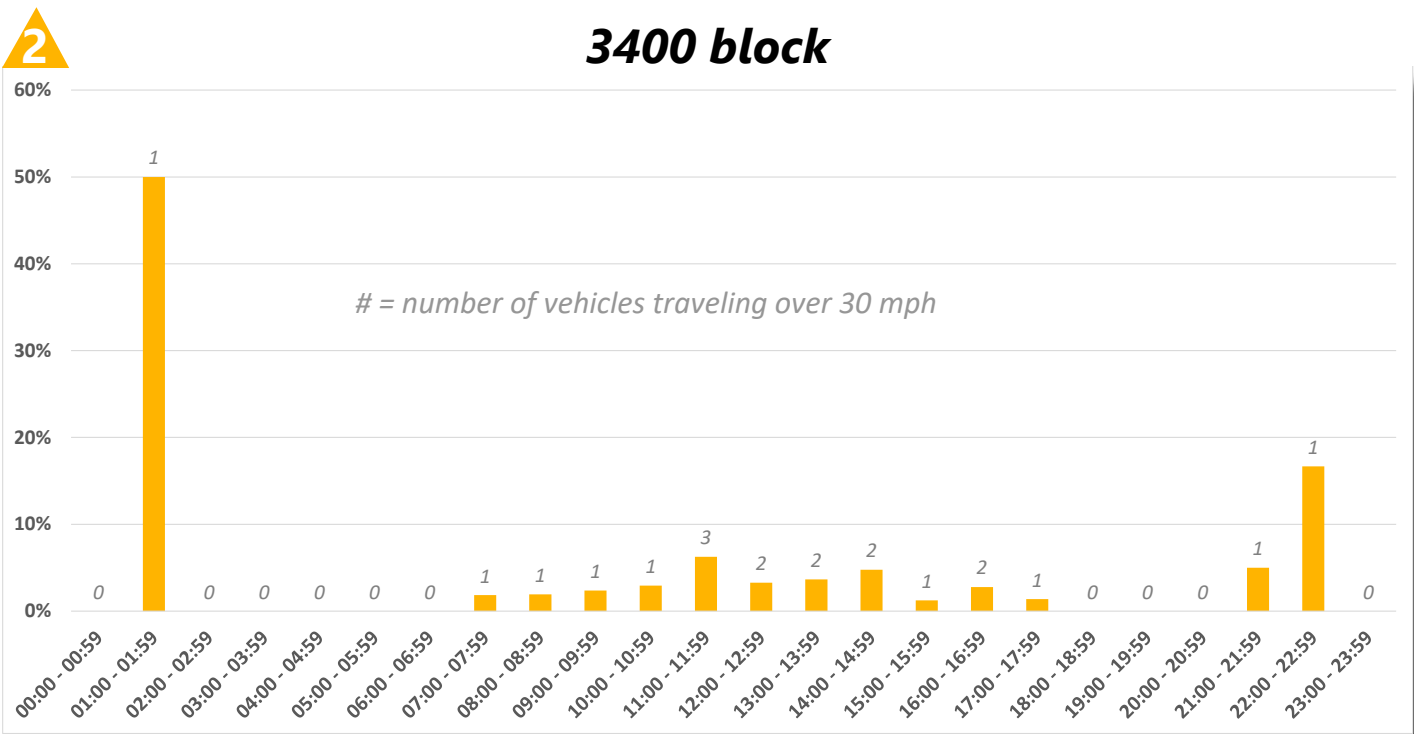
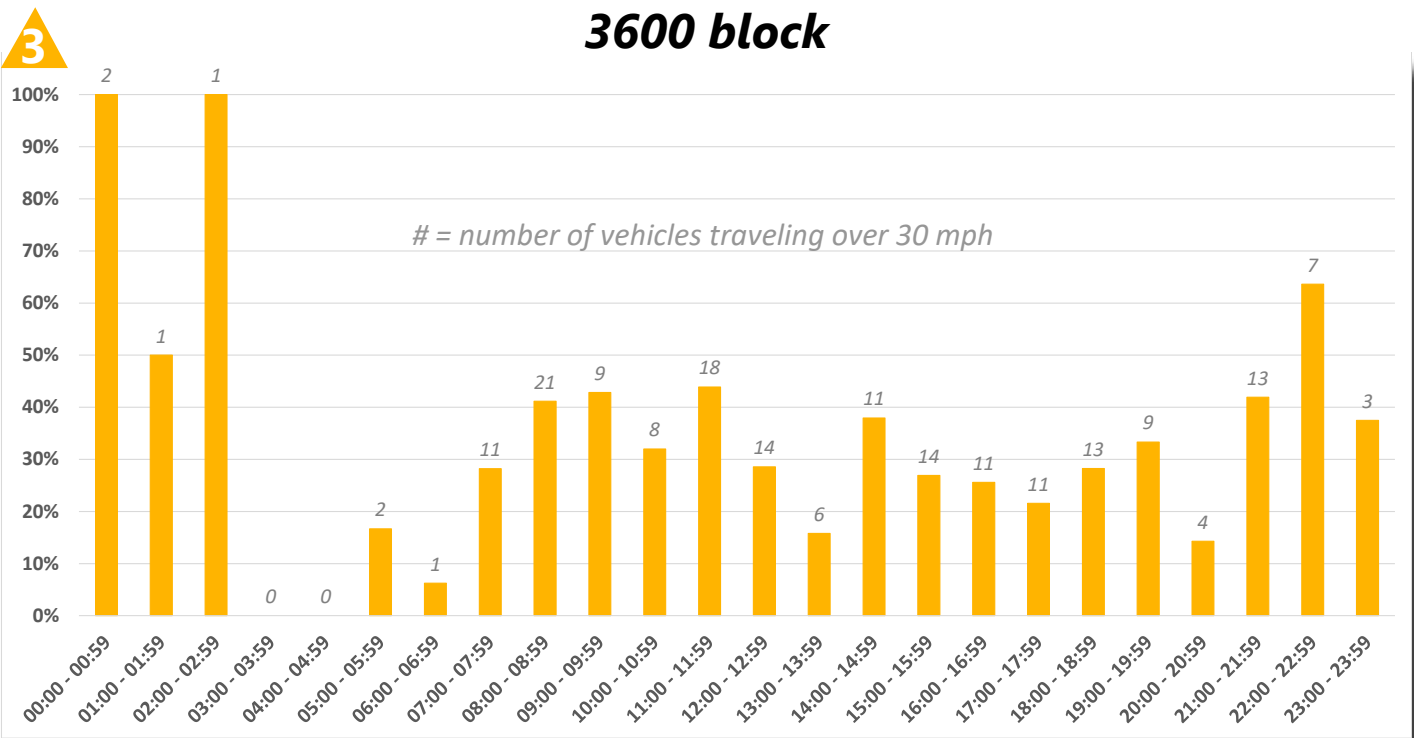
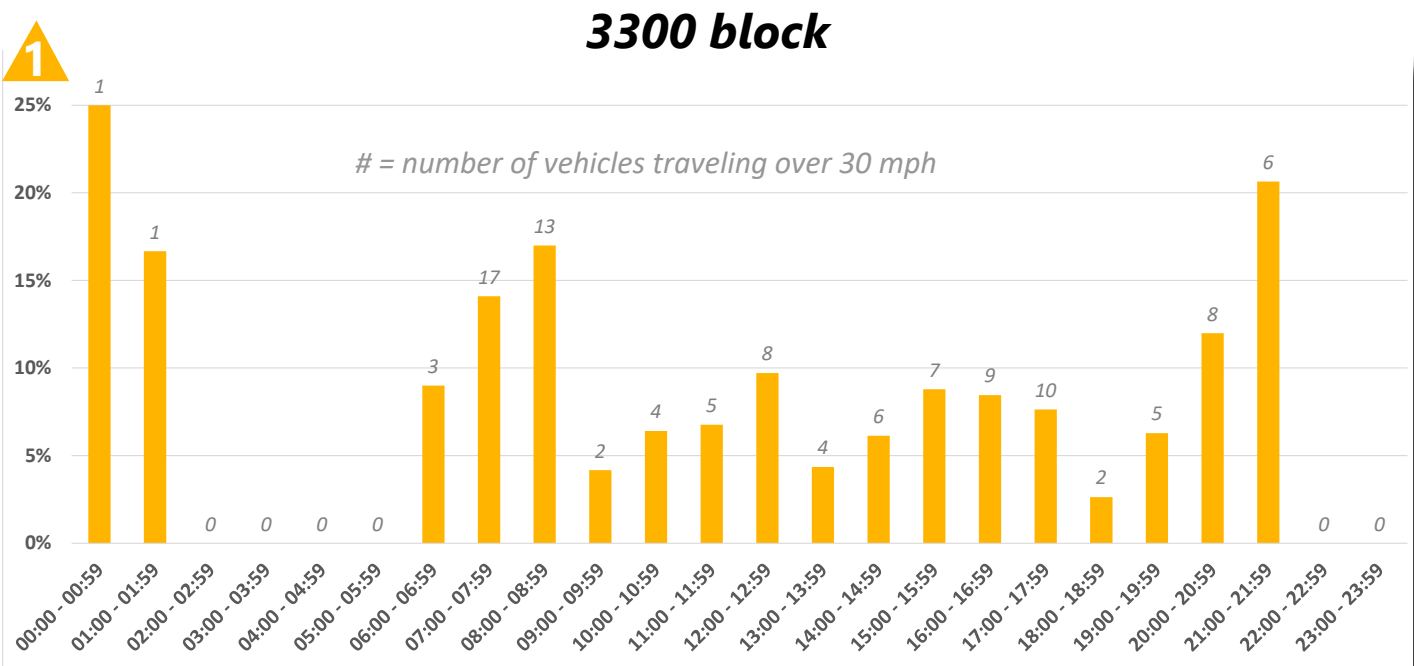
Map



Metro COG to believe that multiple factors may play into speeding at this location including, relatively wide driving lanes (12-foot), straight roadway segment, and underutilized on-street parking.

Location 3, located on segment 2 of 2nd Street E or the gravel portion of the corridor, has the highest prevalence of speeding. This corresponds with numerous comments from residents about vehicles traveling too fast on the gravel roadway section. People often noted the transition from pavement to gravel or vice versa as being the problem areas however these

Percent of vehicles traveling above 30 mph by location



transition areas are the most visible sections of the gravel roadway, leading to more complaints. It is obvious why speeding may occur on the gravel segment as there are only a handful of driveway access points along the 1/2 mile long segment. Other factors may play into why speeding is more prevalent on segment 2 including, rural character, relatively wide driving lanes (12-foot), no

on-street parking, and straight sight-lines.

It should also be noted that there is no posted speed limit along the entire portion of the study area of 2nd St E.