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Road Safety Audit (RSA)

*SS4A Planning and Demonstration
City of Greeley*

Final Submittal
November 2025



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Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.***

Section 1 Introduction

The City of Greeley was awarded a federal grant through the Safe Streets and Roads for All (SS4A) program to implement multiple safety projects across the city. The goal of the overall SS4A Planning and Demonstration project is to rapidly plan and implement construction of quick-build infrastructure targeting locations on the City's High Injury Network (HIN) to effectively reduce crashes. The first phase of the project is to complete a safety study to document and justify the selected quick-build locations. The purpose of this report is to summarize the Road Safety Audits (RSA) conducted for each of the project locations. These RSAs look at the existing conditions of each project location and provide quick-build recommendations aimed at improving safety based on the unique needs of the location.

Section 2 RSA Process

RSAs are formal examinations of intersections or entire road corridors from a safety performance viewpoint. The concept of RSAs originated in the UK in the 1990s and has been adopted in many countries with much success. The RSA process has been developed based on the Road Safety Audit Guidelines published by the Federal Highway Administration (FHWA) in 2006.

All RSAs are performed by an independent multi-disciplinary team and are led by a person trained in performing RSAs. The RSA team considers the safety of all road users, qualitatively estimates and reports on potential road safety issues and identifies opportunities for safety improvement. The RSA team reviews crash history and conducts field observations. RSAs typically focus on identifying road safety solutions with the highest crash risk.

Project locations primarily selected for the RSA process were based on the Greeley on the Go Vision Zero Action Plan completed in February 2025. Preliminary quick-build recommendations provided in the City's action plan were more closely evaluated as part of the RSA process to determine if recommendations were justified. A Design Charrette was held on May 16, 2025, to discuss the preliminary quick-build recommendations and identify additional project locations.

A total of 123 projects along segments and intersections were identified for an RSA.

RSA Teams

RSA participants were broken into three multidisciplinary teams. To assess all 123 project locations, each project location was given a unique ID and associated with one of three teams. The first digit of the project ID assigns the team. For projects added after the field reviews were conducted, the first digit used was "4". The RSA teams were as follows:

Team 1

- BriAnne Turpin, PE, PTOE – Stanley Consultants, Team Lead
- Katie Guthrie, AICP – Stanley Consultants
- Hanna Feldmann – City of Greeley
- Scott Logan, PE, PTOE – City of Greeley
- Wade Corliss – Greeley-Evans School District 6

Team 2

- Micah Makaiwi, PE, PTOE – Stanley Consultants, Team Lead
- James McMackin, EIT – Stanley Consultants
- Jim Riesberg – Greeley Walks / Citizens' Transportation Advisory Board (CTAB)
- Jay Dinges - University of Northern Colorado

Team 3

- Natalie Carrick, PE, RSP1 – Stanley Consultants, Team Lead
- Zaw Soe – Stanley Consultants
- Hugo Labouriau-Lacerda, PE – City of Greeley, Deputy Project Manager
- Leroy Baca – City of Greeley

Additional Team Members

- Commander Mike Heck – City of Greeley Police
- Sergeant Steve Fisher – City of Greeley Police

Project Participants

- Steven Younkin, PE, PTOE, RSP1 – City of Greeley, Project Manager, Deputy Chief Engineer

Kick-Off Meeting

An RSA kick-off meeting was held on Monday, June 9, 2025, at 8:00 AM in person at the City of Greeley Public Works building. RSA team members met to discuss the RSA process and countermeasure toolkit. The kick-off meeting materials, including the RSA letter of intent and meeting presentation, are provided in **Appendix A**.

The kick-off meeting discussions are summarized below:

- Briefly discussed how maintenance will handle protected bike lanes and mini roundabouts. It was mentioned that the City is working on a system that can help locate and identify any vertical traffic calming improvements throughout the city.
- The City is using Leading Pedestrian Intervals (LPI) throughout the city to help improve pedestrian safety.
- Commander Mike Heck expressed that there is a need to evaluate how bike lanes and right-turn lanes interact at intersections with additional bike lanes.
- The RSA team was asked to look at the proper location of bike lanes. For example, switching positioning of bike lanes and on-street parking in relation to each other.
- It was mentioned that many safety improvements can be made through educational initiatives.
- There are several locations throughout the city where a school zone is split by a traffic signal or intersection. This has led to some confusion as traffic turning from the crossroads are not aware they have entered a school zone.

- Coordination with Xcel Energy may be required if recommending lighting improvements.
- It was recommended to use 12-inch beacons for any rapid rectangular flashing beacon (RRFB) improvements.
- There is a City project planned to reduce lanes along 14th Avenue between 9th Street and 2nd Street.
- The existing posts at 16th Street and 7th Avenue are not in good condition.

Natalie Carrick also described the type of quick-build countermeasures the RSA team would be considering. These countermeasures included the following:

- High-visibility crosswalks,
- Rapid rectangular flashing beacons (RRFB),
- Speed feedback signs,
- Raised crosswalks,
- Speed tables,
- Curb extensions or protected corners made with paint and posts,
- Mini roundabouts using rubber islands,
- Lane reconfigurations,
- Solar crosswalk lighting, and
- Chicanes made with paint and rubber curbing.

Section 3 Evaluation of Existing Characteristics

To better understand the unique needs of each project location, a variety of existing characteristics were examined. These characteristics are outlined below:

- Roadway characteristics include roadway classifications and cross sections. For intersections, the type of control is also noted. Data was obtained through the City's GIS database.
- Existing 2024 annual daily traffic (ADT) was provided by the City from their Replica data.
- Posted speed limit was determined using Google Street View and confirmed in the field during observations.
- Collected 2024 speed data was provided by the City from their Replica data and includes the 85th and 95th percentile speeds.
- Existing land use was obtained through the City's GIS database.
- Areas of persistent poverty were obtained through United States Census data.
- Existing transit, pedestrian, and bicycle facilities were obtained through the City's GIS database.
- Pavement rehabilitation projects describe completed or planned pavement projects within RSA locations. Data was obtained through the City's GIS database.
- Crash data presented includes whether the segment or intersection is on the City's High Injury Network (HIN) and the location's High Risk Network (HRN) status. The City's HIN and HRN can be found in the Greeley on the Go Vision Zero Action Plan. Total crashes, number of fatal crashes, and number of serious injury crashes are also reported. Crash data was obtained through the City's GIS database.

Existing characteristics evaluated at each project location are included in the RSA Field Notes presented in **Appendix B**.

Section 4 Recommendations

The RSA team reviewed a total of 128 project locations. Of these, 80 locations were also identified in the Greeley on the Go Vision Zero Action Plan (62.5%) and 48 were added as new locations (37.5%). Looking at the location of projects with recommendations (114), 53 (46.5%) are located within Ward I, 27 (23.7%) are located within Ward II, nine (7.9%) are located within Ward III, 14 (12.3%) are located within Ward IV, and 11 (9.6%) fell within more than one Ward.

Table 1 lists each project location with its initial Vision Zero Quick-Build Recommendation, if applicable, from the Greeley on the Go Vision Zero Action Plan and a revised quick-build recommendation based on the RSA field reviews.

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
1-1	14th Ave, A St to 5th St	Paint and post 4-lane to 3-lane cross section with delineator-protected bike lane	• Install raised crosswalk on north leg at 4th St intersection • Remove crosswalk on south leg at 4th St intersection • Modify lane configuration from a 4-lane to a 3-lane cross section south of 2nd St to 5th St
1-2	2nd St, 23rd Ave to 14th Ave	Chicane	• Modify lane configuration to reduce roadway width, remove on-street parking, and improve lane delineation • Install delineators adjacent to sidewalk on north side of 2nd St
1-3	5th St, 23rd Ave to 14th Ave	Paint and post to create protected bike lanes	Modify lane configuration to improve lane delineation from 23rd Ave to 21st Ave
1-4	5th St, 14th Ave to 8th Ave	• Paint and post intersection bulb-outs • Paint and post median/access control at 10th Ave with high visibility crosswalks	Paint and post protected corners at 10th Ave
1-4A	5th St and 9th Ave	Paint and post median/access control with high-visibility crosswalks and RRFBs	• Paint and post protected corners • Install high-visibility crosswalks on east and west legs
1-4B	5th St and 8th Ave	Not included in Vision Zero Quick-Build Recommendations	Install high-visibility crosswalks on all legs
1-5	14th Ave, 5th St to 9th St	Paint and post 4-lane to 3-lane with delineator-protected bike lanes	• Modify lane configuration from a 4-lane to a 3-lane cross section • Modify signal head alignment with lane reconfiguration
1-5A	14th Ave and 9th St	Paint and post to remove turn lane and add intersection bulb-outs	Paint and post curb extensions
1-6	14th Ave, 9th St to 16th St	Paint and post to create far right protected bike lane	No segment improvement recommended. Refer to Project 1-5A and 1-6A for intersection improvements.
1-6A	14th Ave and 10th St	Paint and post to remove turn lane and add intersection bulb-outs	Paint and post protected corners

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
1-7	15th St, 16th Ave Ct to 8th Ave	Paint and post to create far right protected bike lane or speed tables	• Install RRFBs at 15th Ave on east leg • Paint and post protected corners at 15th Ave
1-8	13th St, 8th Ave to US 85	• Paint and post to create far right bike lane • Paint and post bulb-outs and median refuge crossings with high visibility crosswalks	Paint and post protected corners at 4th Ave and 7th Ave
1-9	13th St, 23rd Ave to 14th Ave	• Paint and post to create far right protected bike lane • Paint and post bulb-outs and median refuge crossings with high visibility crosswalks	• Paint and post protected corners at 22nd Ave, 21st Ave, and 14th Ave • Install high-visibility crosswalk at 21st Ave on west leg • Install RRFBs and pedestrian push button post at 21st Ave on west leg
1-9A	13th St and 18th Ave	• Paint and post intersection bulb-outs • Stop sign visibility enhancements	Install mini-roundabout
1-9B	13th St and 23rd Ave	Bulb-Out/Mini Roundabout	Paint and post protected corners
1-10	13th St, 35th Ave to 23rd Ave	• Paint and post to create far right protected bike lane • Paint and post bulb-outs and median refuge crossings with high-visibility crosswalks	• Paint and post protected corners at 30th Ave • Modify lane configuration to improve lane delineation between 28th Ave and 35th Ave • Install RRFBs at 30th Ave school west leg crossing
1-10A	13th St and 28th Ave	Not included in Vision Zero Quick-Build Recommendations	Paint and post protected corners
1-10B	13th St and 31st Ave	Not included in Vision Zero Quick-Build Recommendations	Install mini-roundabout
1-10C	13th St and 35th Ave	Paint and post median refuge and left turn hardening on south leg of intersection	Install centerline hardening to southbound left turn
1-11	35th Ave, 4th St to 10th St	Paint and post 4-lane to 3-lane cross section with bike lane	• Install southbound speed feedback sign north of W 6th St • Install northbound speed feedback sign south of W 6th St • Modify lane configuration to improve lane delineation
1-12	4th Street and Greeley #3 Canal Trail (west of 26th Ave)	• RRFBs • Paint and post bulb-outs	Paint and post protected corners
1-13	4th St and 25th Ave	Not included in Vision Zero Quick-Build Recommendations	• Install westbound speed feedback sign east of intersection • Install eastbound speed feedback sign west of intersection • Paint and post protected corners • Install W2-2 warning sign for Boys and Girls Club driveway
1-14	28th Ave, 10th St to 20th St	Not included in Vision Zero Quick-Build Recommendations	• Install northbound and southbound speed feedback signs approaching curves near 12th St Rd • Modify lane configuration to remove on-street parking and improve lane delineation between 10th St and 13th St

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
1-15	16th St, 35th Ave to 23rd Ave	- Paint and post 4-lane to 3-lane cross section with delineator-protected bike lanes - Traffic signal improvements (left turn phasing and bike signal) at 28th Ave	- Modify lane configuration to improve lane delineation - Extend school zone - Install signage and markings to transition bicyclists from bike lane to path near 25th Ave - Install eastbound speed feedback sign east of 42nd Ave Ct - Install westbound speed feedback sign west of 36th Ave Ct
1-16	28th Ave, 20th St to Reservoir Rd	Bulb outs at select intersections near Meeker Elementary and the Montessori Academy	- Modify lane configuration to improve lane delineation where on-street parking can be removed - Paint and post protected corners at 22nd St Ln - Extend school zone to the south - Install RRFBs and pedestrian push button post at 22nd St Dr school crossing on south leg - Install chicanes between 22nd St Road and 24th St
1-16A	28th Ave and Reservoir Rd	Not included in Vision Zero Quick-Build Recommendations	Install RRFBs and pedestrian push button post at Reservoir Rd crossing on northeast leg
1-17	22nd St, 35th Ave to 28th Ave	Paint and post lane reconfiguration	- Install high-visibility crosswalk and crossing signs between Mountair Ln and 28th Ave Ct (requires new ADA ramps) - Modify lane configuration to improve lane delineation
1-18	Reservoir Rd, 27th St to 28th Ave	Restripe to 10-11 foot lanes, add posts	Install eastbound and westbound speed feedback signs on Reservoir Rd east of 28th Ave
1-19	17th Ave and 29th St Rd	Not included in Vision Zero Quick-Build Recommendations	Eliminate project location
1-20	17th Ave and 30th St Rd	Paint and post intersection bulb-outs	- Paint and post protected corners - Install speed table between 30th St and 30th St Rd
1-21	1st Ave, 18th St to 31st St	Paint and post of 4-lane to 3-lane cross section with delineator-protected bike lanes	Modify lane configuration from a 5-lane to a 3-lane cross section
1-22	20th St, Alpine Ave to Balsam Ave	Not included in Vision Zero Quick-Build Recommendations	- Paint and post curb extensions at Alpine Ave intersection - Install speed hump near Alpine Ave - Install raised crosswalk between Alpine Ave and Balsam Ave
1-23	Residential (Alpine Ave/22nd St/Aspen Ave/24th St)	Not included in Vision Zero Quick-Build Recommendations	- Install speed table on 22nd St between Ash Ave and Apricot Ave - Enhance sign visibility with reflective posts at 22nd St and Apple Ave, 23rd St Rd and Aspen Ave, and Aspen Ave and E 23rd St - Install high-visibility crosswalk at 22nd St and Apple Ave on east leg - Install high-visibility crosswalk and crossing signs at 24th St and 1st Ave on north leg (requires new ADA ramps)

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
1-24	24th St and Balsam Ave	Not included in Vision Zero Quick-Build Recommendations	Paint and post curb extensions
1-25	26th St and Ash Ave	Not included in Vision Zero Quick-Build Recommendations	• Install raised crosswalk on east leg • Install RRFBs on east leg
2-1	13th Ave, 2nd St to 9th St	Not included in Vision Zero Quick-Build Recommendations	No segment improvement recommended. Refer to Project 2-1A for intersection improvements.
2-1A	13th Ave and 5th St	Not included in Vision Zero Quick-Build Recommendations	• Install high-visibility crosswalks on north, south, and west legs • Install crossing signs on west leg
2-2	12th Ave, 2nd St to 20th St	Not included in Vision Zero Quick-Build Recommendations	• Install mini-roundabout at 12th St and 19th St • Install raised crosswalks at 8th St (east leg), 18th St (west leg), and Cranford PI (west leg) • Install high-visibility crosswalk and crossing signs at 16th St on east leg
2-3	8th St, 16th Ave to 10th Ave	• Paint and post intersection bulb-outs • Speed tables	• Install high-visibility crosswalks and stop bars at 16th Ave (east and west legs) and 12th Ave (north and south legs) • Paint and post protected corners at 16th Ave • Install raised crosswalks at 13th Ave on east leg • Install stop bars at 13th Ave on north and south legs
2-3A	8th St and 11th Ave	Paint and post intersection bulb-outs	Paint and post protected corners
2-4	9th St and 18th Ave	Paint and post intersection bulb-outs	Eliminate project location
2-4A	9th St and 21st Ave	Paint and post intersection bulb-outs	Eliminate project location
2-5	11th St, 19th Ave to 11th Ave	• Add striping to narrow travel lanes and buffer bike lanes • Stripe bike lane from 13th to 14th • Paint and post bulb-outs at intersections	• Install high-visibility crosswalks at 12th Ave on north, south, and east legs • Paint and post protected corners at 12th Ave • Modify lane configuration to improve lane delineation between 14th Ave and 13th Ave • Install centerline hardening at reverse curve near Greeley Ditch No. 3. • Install centerline striping between 19th Ave and 18th Ave • Install speed table near Greeley Ditch No. 3
2-5A	11th St and 13th Ave	Not included in Vision Zero Quick-Build Recommendations	• Install high-visibility crosswalks on north, south, and east legs • Install stop bars on north and south legs • Paint and post protected corners
2-6	11th St, 11th Ave to 9th Ave	• Restriping to narrow travel lanes and buffer bike lanes • Paint and post bulb-outs at 9th Ave and 11th Ave	• Install crossing signs at 10th Ave on north and south legs • Paint and post protected corners at 9th Ave
2-7	11th St, 9th Ave to 6th Ave	• Stripe buffered bike lanes and convert parking to back-in angle parking • Paint and post intersection bulb-outs at all three intersections	Install high-visibility crosswalk and crossing signs at 7th Ave on north leg

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
2-7A	11th St and 8th Ave	• Paint and post intersection bulb-outs • RRFBs and high-visibility crosswalk markings	Paint and post curb extensions
2-8	12th St, 11th Ave to 7th Ave	Paint and post intersection bulb-outs at all five intersections	• Install high-visibility crosswalks and warning signs at 11th Ave (south leg) and 7th Ave (north leg) • Install high-visibility crosswalk and stop bar at 7th Ave on east leg • Paint and post protected corners at 7th Ave
2-8A	12th St and 8th Ave	• Paint and post intersection bulb-outs • RRFBs and high-visibility crosswalk markings	Paint and post curb extensions
2-9	12th St, 14th Ave to 11th Ave	• Paint and post intersection bulb-outs • Speed humps or tables (hard plastic)	• Install high-visibility crosswalk and warning signs at 14th Ave on north leg • Paint and post protected corners at 14th Ave and 13th Ave
2-10	13th St, 14th Ave to 8th Ave	• Paint and post to create far right bike lane • Paint and post bulb-outs and median refuge crossings with high visibility crosswalks	• Paint and post protected corners at 12th Ave • Install high-visibility crosswalks at 12th Ave on north leg
2-10A	13th St and 13th Ave	• Paint and post intersection bulb-outs • Paint and post median refuge island • Install RRFBs • Stop sign visibility enhancements	• Paint and post protected corners • Install crossing sign on east leg for eastbound direction
2-10B	13th St and 9th Ave	Paint and post intersection bulb-outs	Paint and post protected corners
2-10C	13th St and 10th Ave	• Paint and post intersection bulb-outs • Retroreflective backplates	Paint and post protected corners
2-11	9th Ave, 12th St to 16th St	• Narrow lanes by adding buffered bike lanes • Intersection bulb-outs	Paint and post protected corners at 12th St
2-12	10th Ave, 12th St to 16th St	Paint and post intersection bulb-outs and high visibility crosswalks - Also a good candidate for moving bike lane to far right instead of on 9th	Paint and post protected corners at 12th St
2-13	8th Ave and 14th St	Paint and post intersection bulb-outs	• Install RRFBs and pedestrian push button post on south leg and south median refuge • Install high-visibility crosswalks on south leg
2-14	16th St, 8th Ave to 1st Ave	• Paint and post to create far right bike lane • Paint and post bulb-outs and stop sign visibility enhancements at 7th Ave and 6th Ave	• Install high-visibility crosswalks and crossing signs on uncontrolled approaches • Install stop bars where missing
2-14A	16th St and 7th Ave	• Paint and post median/access control with high-visibility pedestrian refuge crossings and bicycle cut-through access through the median • Stop sign visibility enhancements	• Install high-visibility crosswalks and crossing signs on east and west legs • Modify protected corner striping to include bike lanes
2-14B	16th St and 6th Ave	• Paint and post intersection bulb-outs • Stop sign visibility enhancements	• Install high-visibility crosswalks on east and west legs • Install stop bars on north and south legs
2-15	16th St and 13th Ave	Lane narrowing on intersection approach to make room for paint and post median refuge island crossing with RRFBs	Paint and post protected corners

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
2-16	8th Ave, 15th St to 22nd St	Paint and post 5-lane to 3-lane cross section with delineator-separated bike lanes (striped buffer north of 17th Street)	Modify lane configuration from a 5-lane to a 3-lane cross section north of 17th St
2-16A	8th Ave and 17th St	• Retroreflective backplates • Paint and post to remove turn lane	Eliminate project location
2-16B	8th Ave and 18th St	• Retroreflective backplates • High-visibility crosswalks	Install rubber median refuge on south crosswalk
2-17	17th St, 9th Ave to 6th Ave	Raised ped-crossings (hard plastic)	• Paint and post protected corners at 7th Ave and 6th Ave • Paint and post curb extensions at 9th Ave • Install RRFBs, pedestrian push button posts, and high-visibility crosswalk on south leg at 6th Ave • Install high-visibility crosswalk and stop bar on west leg at 6th Ave
2-18	18th St and 7th Ave	• Paint and post intersection bulb-outs • Paint and post median/access control with high-visibility pedestrian refuge crossings and bicycle cut-through access through median • Stop sign visibility enhancements	Paint and post protected corners
2-19	20th St, 11th Ave to 4th Ave	• Restripe to 10-11 foot lanes • Replace sharrows with buffered bike lanes • Stripe eastbound bike lane 11th Ave to 10th Ave • Paint and post bulb-outs and stop sign visibility enhancements at 6th Ave, 7th Ave and 9th Ave	• Install RRFBs and pedestrian push button posts at 9th Ave on east leg • Install stop bar at 7th Ave on west leg • Install high-visibility crosswalk and warning signs at 7th Ave on north leg • Install high-visibility crosswalks at 6th Ave on all legs • Install crossing signs at 6th Ave for north and south legs
2-20	19th St, 14th Ave to 10th Ave	Speed tables	• Paint and post protected corners at 13th Ave • Paint and post curb extensions at 11th Ave • Install speed table east of 13th Ave • Install high-visibility crosswalk and crossing signs at 14th Ave on north leg
2-21	Reservoir Rd/20th St, 17th Ave to 11th Ave	• Restripe to 10-11 foot lanes • Convert to delineator-protected bike lanes • Continue the eastbound bike lane through to 11th Ave	• Install eastbound speed feedback sign east of 17th Ave • Install westbound speed feedback sign east of 13th Ave • Modify lane configuration to move parking to south side of street and improve lane delineation
2-22	14th Ave, 16th St to 20th St	Paint and post to create far right protected bike lane	• Paint and post protected corners at 17th St and Cranford PI • Install high-visibility crosswalks at 18th St and 17th St on north and south legs • Install RRFBs and pedestrian push button post at Cranford PI on south leg
2-22A	14th Ave and 16th St	• Retroreflective back plates • Leading pedestrian intervals	Implement LPIs

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
2-23	17th Ave, Alles Dr to Reservoir Rd	- Paint and post 4-lane to 3-lane cross section with bike lanes - Paint and post to remove slip turn lanes at 17th Ave and Reservoir Rd	- Install delineators along south shoulder on Reservoir Road at 17th Ave - Modify lane configuration to improve lane delineation
2-24	25th St, 17th Ave to 11th Ave	Paint and post 4-lane to 3-lane cross section with delineator-protected bike lane	- Modify lane configuration from a 4-lane to a 3-lane cross section - Modify lane configuration to eliminate parking at 17th Ave to maintain westbound right-turn lane
2-25	10th Ave, 16th St to 25th St	- Lane narrowing by striping buffer for bike lane - Paint and post intersection bulb-outs and in-road pedestrian crossing signs along UNC campus	- Paint and post protected corners at Cranford Pl - Paint and post curb extensions at 17th St and 18th St - Install RRFBs and pedestrian push button posts at 21st St on south leg - Install mini-roundabout at 23rd St
2-25A	10th Ave and 25th St	Not included in Vision Zero Quick-Build Recommendations	- Paint and post protected corners - Install solar crosswalk lighting
2-26	9th Ave and 25th St	Not included in Vision Zero Quick-Build Recommendations	- Paint and post protected corners - Install high-visibility crosswalk on all legs - Install crossing signs on east and west legs - Install stop bars on north and south legs
2-27	9th Ave and 24th St	Not included in Vision Zero Quick-Build Recommendations	Paint and post protected corners
2-28	26th St, 11th Ave to 9th Ave	Paint and post intersection bulb-outs	- Install raised crosswalk at 10th Ave on west leg - Modify lane configuration from a 4-lane to a 3-lane cross section between 10th Ave Ct and 8th Ave
2-29	22nd St, 9th Ave to US 85	- Restripe to create wider buffered or protected bike lanes - At 22nd and 8th Ave, remove right turn lanes and add leading pedestrian intervals - Green conflict zone markings and bike signal protected from turns	- Paint and post protected corners at 4th Ave and 6th Ave - Install high-visibility crosswalk at 4th Ave on north leg, south leg, and crossing 22nd St
3-1	N 11th Ave, D St to 20th St	Paint and post of 4-lane to 3-lane cross section with delineator-protected bike lanes	- Modify lane configuration from a 4-lane to a 3-lane cross section - Paint and post protected corners at 13th St - Install high-visibility crosswalk and crossing signs between 10th St and 11th St (requires new ADA ramps)
3-1A	11th Ave and 10th St	Paint and post to remove turn lane and add intersection bulb-outs	Implement LPIs
3-1B	11th Ave and 9th St	Paint and post to remove turn lane and add intersection bulb-outs	Implement LPIs
3-2	10th Ave, 5th St to 12th St	- Paint and post intersection bulb outs - Remove turn lane at 8th St	- Paint and post protected corners at 8th St - Paint and post curb extensions at 6th St and 10th St
3-3	4th St, 14th Ave to 8th Ave	Not included in Vision Zero Quick-Build Recommendations	Modify lane configuration to improve lane delineation
3-3A	4th St and 10th Ave	Not included in Vision Zero Quick-Build Recommendations	- Paint and post protected corners - Install high-visibility crosswalks and stop bars on east and west legs - Install high-visibility crosswalk on north leg

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
3-3B	4th St and 9th Ave	Not included in Vision Zero Quick-Build Recommendations	• Paint and post protected corners • Install high-visibility crosswalks and stop bars on east and west legs • Install high-visibility crosswalk on north leg
3-4	Downtown Area (11th Ave/A St/8th Ave/6th St)	Not included in Vision Zero Quick-Build Recommendations	No recommendations within Downtown Area. See Projects 1-4, 1-4A, 1-4B, 3-1, 3-2, 3-3, 3-3A, 3-3B, 3-5, 3-9, and 3-10 for improvements.
3-5	8th Ave and 6th St	Not included in Vision Zero Quick-Build Recommendations	Install high-visibility crosswalk on south leg
3-6	8th Ave and 7th St	Retroreflective backplates	Install high-visibility crosswalks on all legs
3-7	8th Ave and 9th St	Retroreflective backplates	Install high-visibility crosswalks on all legs
3-8	8th Ave and 10th St	Retroreflective backplates	Install high-visibility crosswalks on all legs
3-9	9th Ave and A St	Not included in Vision Zero Quick-Build Recommendations	• Paint and post protected corners • Install RRFBs on west leg
3-10	A St, 14th Ave to 11th Ave	Paint and post 4-lane to 3-lane cross section with delineator protected bike lanes	Install raised crosswalk at N 12th Ave on east leg (requires new ADA ramps)
3-11	11th Ave, O St to D St	Paint and post 4-lane to 3-lane cross section with delineator separated bike lanes	Eliminate project location
3-11A	11th Ave and D St	• Paint and post intersection bulb-outs • Paint stop lines	Install RRFBs and pedestrian push button post on north leg
3-12	H St, O St to 11th Ave	Paint and post 5-lane to 3-lane cross section with delineator separated bike lanes	Modify lane configuration from a 5-lane to a 3-lane cross section
3-13	10th St, 71st Ave to 47th Ave	71st Ave to 59th Ave: High-visibility stop signs	Eliminate project location
3-13A	10th St and 71st Ave	Remove free right and acceleration lane	Eliminate project location
3-13B	10th St and 69th Ave	High-visibility stop signs	Eliminate project location
3-13C	10th St and 59th Ave	Remove free right and acceleration lane	Eliminate project location
3-13D	10th St and 47th Ave	• Retroreflective backplates • Remove free right and acceleration lane	Eliminate project location
3-14	Residential (63rd Ave/6th St/61st Ave/8th St)	Not included in Vision Zero Quick-Build Recommendations	• Install speed table on 6th St Rd between 61st Ave Ct and 61st Ave and on 8th St between 62nd Ave Ct and 61st Ave Ct • Install raised crosswalk at 6th St Rd and 62nd Ave (west leg) and 8th St and 61st Ave Ct (west leg) • Install mini-roundabouts on W 7th St at 62nd Ave and 62nd Ave Ct
3-15	54th Ave, 9th St to 6th St Rd	Not included in Vision Zero Quick-Build Recommendations	• Install northbound speed feedback sign south of W 7th St • Install southbound speed feedback sign north of W 7th St

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
3-16	4th St btwn 50th Ave Pl and 49th Ave	Not included in Vision Zero Quick-Build Recommendations	• Install eastbound speed feedback sign west of existing HAWK • Install westbound speed feedback sign east of existing HAWK • Install high-visibility crosswalk at exiting HAWK
3-17	4th St and 46th Ave	Not included in Vision Zero Quick-Build Recommendations	Install RRFBs and pedestrian push button post on west leg
3-18	43rd Ave, 4th St to 16th St	Not included in Vision Zero Quick-Build Recommendations	• Paint and post protected corners at 7th St • Modify lane configuration to adjust parking north of 10th St and remove parking south of 10th St • Install chicanes south of 42nd Ave/Ward Dr
3-19	Residential (42nd Ave/4th St/41st Ave/7th St)	Not included in Vision Zero Quick-Build Recommendations	Install raised crosswalk at W 7th St and 42nd Ave (west leg) and W 7th St and 41st Ave (east leg)
3-20	16th St, 47th Ave to 35th Ave	Paint and post of 4-lane to 3-lane cross section with delineator-protected bike lanes	• Modify lane configuration from a 4-lane to a 3-lane cross section • Install RRFBs and pedestrian push button post at 43rd Ave on east leg • Install RRFBs at 40th Ave on east leg
3-20A	16th St, E of 40th Ave	Not included in Vision Zero Quick-Build Recommendations	Install westbound speed feedback sign approaching curve
3-20B	16th St, W of 40th Ave	Not included in Vision Zero Quick-Build Recommendations	Install eastbound speed feedback sign approaching curve
3-21	20th St, 47th Ave to 35th Ave	Not included in Vision Zero Quick-Build Recommendations	• Modify lane configuration to narrow lane widths • Install eastbound speed feedback sign west of 44th Ave Ct • Install westbound speed feedback sign east of Homestead Rd
3-21A	20th St and 47th Ave	Not included in Vision Zero Quick-Build Recommendations	Install centerline hardening
3-22	13th St, 63rd Ave Ct to 60th Ave	Not included in Vision Zero Quick-Build Recommendations	• Install eastbound and westbound speed feedback signs • Paint and post a two-way multi-use path on north side of road • Install high-visibility crosswalk and crossing signs at 60th Ave on west leg
3-23	16th St and 65th Ave	Not included in Vision Zero Quick-Build Recommendations	Eliminate project location
3-24	18th St and 59th Ave	Not included in Vision Zero Quick-Build Recommendations	• Install RRFBs and high-visibility crosswalk on south leg • Install northbound and southbound speed feedback signs on 59th Ave • Install advance warning signs for 59th Ave crossing
3-25	18th St and 59th Ave	Not included in Vision Zero Quick-Build Recommendations	• Install RRFBs and high-visibility crosswalk on south leg • Install northbound and southbound speed feedback signs on 59th Ave • Install advance warning signs for 59th Ave crossing

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
3-26	59th Ave, 20th St to 21st St	Remove Southbound acceleration lane and stripe in a bike lane	• Paint and post protected corner on southwest corner at 20th St • Modify lane configuration to remove the southbound acceleration lane and begin southbound bike lane on southwest corner of 20th St • Modify lane configuration to remove outside northbound thru lane and continue northbound bike lane to 20th St
3-27	29th St, EOP to 47th Ave	Not included in Vision Zero Quick-Build Recommendations	• Install mini-roundabout at 31st St and west of 47th Ave • Install raised crosswalk at 58th Ave on east leg • Install speed table east of 58th Ave • Modify lane configuration to narrow roadway width at 47th Ave intersection • Install chicanes west of 53rd Ave
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)	Not included in Vision Zero Quick-Build Recommendations	• Install stop sign visibility enhancements with reflective posts at 29th St and 43rd Ave • Paint and post curb extensions at 29th St/30th St and 39th Ave, 30th St and 41st Ave, and 30th St and 43rd Ave • Paint and post protected corners at 30th St and 29th St • Install high-visibility crosswalk on 29th St at park crossing • Install speed hump on 30th St west of 40th Ave Ct and west of 35th Ave • Install westbound speed feedback sign west of 35th Ave • Install eastbound speed feedback sign east of 39th Ave
3-29	23rd St Rd and 42nd Ave	Not included in Vision Zero Quick-Build Recommendations	Paint and post protected corners
3-30	County Road 31 and County Road 66	• Stop sign visibility enhancements • Clear sight obstructions on northeast corner and/or consider conversion to all way stop	Install stop sign visibility enhancements with reflective posts
4-1	4th St, 47th Ave to 71st Ave	Not included in Vision Zero Quick-Build Recommendations	• Install speed feedback signs east and west of 63rd Ave • Install centerline hardening at 70th Ave
4-2	71st Ave and 12th St	Not included in Vision Zero Quick-Build Recommendations	Install RRFBs and pedestrian push button posts on south leg
4-3	71st Ave and Poudre River Trail Crossing	Not included in Vision Zero Quick-Build Recommendations	Install solar crosswalk lighting
4-4	County Road 27 and Poudre River Trail Crossing	Not included in Vision Zero Quick-Build Recommendations	Install solar crosswalk lighting
4-5	59th Ave and 16th St	Not included in Vision Zero Quick-Build Recommendations	Install high-visibility crosswalk and crossing signs on south leg (requires new ADA ramps)
4-6	29th St, W of 31st Ave	Not included in Vision Zero Quick-Build Recommendations	Install chicanes

Table 1: Summary of Recommendations

Project ID	Project Location	Vision Zero Quick-Build Recommendation	Revised Recommendation(s)
4-7	20th St, W of Birch Ave	Not included in Vision Zero Quick-Build Recommendations	Install chicanes

Section 5 Debriefing Meeting

The debriefing meeting was held virtually on Friday, July 11, 2025, with the RSA team and the City.

Section 6 Tabular Summary of Countermeasures

Table 2 summarizes the final recommendations of this report with prioritization and approximate costs associated with each project location. Project locations where no improvements were recommended were not included in **Table 2**. Prioritization was determined based on existing safety data and input from the City and is classified as follows:

- Priority Level 1: Project location experienced at least one fatal crash, is on the City's HIN, or has a HRN status of high risk.
- Priority Level 2: Project location experienced at least one serious injury crash, is on the City's HIN, or has a HRN status of moderate risk.
- Priority Level 3: Project location has no fatal or serious injury crashes, is not on the City's HIN, or has a HRN status of low risk.

The following assumptions should be noted with regard the costs tabulated for each quick-build recommendation:

- High-visibility crosswalk costs include the cost of adding crossing sign assemblies and stop bars when included in the recommendation.
- Speed feedback and RRFB countermeasure costs include the complete assembly as illustrated by the typical details provided in **Appendix C**. Crosswalk striping is included when not existing at proposed RRFB locations.
- Costs associated with the removal of signs and pavement markings in conflict with the proposed design are noted separately by project in **Appendix D**. Costs to remove existing features in conflict with each recommendation are included in the total cost of each project located in **Table 2** but are not included in the cost tables for individual countermeasures.
- Costs to remove a countermeasure due to ineffectiveness or adverse impacts are not included in this report.
- No cost was associated with the recommendation for implementing LPIs. It was assumed that this cost would be internal to the City.
- Vertical delineation assumptions for preliminary design are listed below. Alternative options for vertical delineation may be utilized for specific project location needs during final design.
 - Flexible posts – Utilized for curb extensions, protected corners, lane delineation, and centerline hardening. Flexible post spacing is less than alternative delineation

- alternatives and therefore was determined to be a conservative choice for preliminary cost estimation.
 - Rubber curb with flexible posts – Utilized for chicane designs only.
 - Rubber roll curb - Utilized for centerline hardening for some project locations.
- Striping material assumptions include:
 - Waterborne paint was utilized for longitudinal striping, including lane lines, centerlines, and hatching, legends, and symbols. Waterborne paint was selected due to the temporary nature of the quick-build countermeasures.
 - Preformed thermoplastic was utilized for crosswalks and stop bars, consistent with permanent design requirements since these improvements will likely remain.
- Additional project costs that cannot be itemized are included below. These percentages are applied to larger constructions costs and are not appropriate for use with individual recommendations or projects.
 - Construction engineering – 10%
 - Mobilization & unidentified items – 15%
 - Traffic Control – 15%
 - Construction surveying – 5%
 - Contingency – 5%

The additional project costs provided at the bottom of **Table 2** are not included in the cost column for each individual project.

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
1-1	14th Ave, A St to 5th St	• Install raised crosswalk on north leg at 4th St intersection • Remove crosswalk on south leg at 4th St intersection • Modify lane configuration from a 4-lane to a 3-lane cross section south of 2nd St to 5th St	2	\$38,400
1-2	2nd St, 23rd Ave to 14th Ave	• Modify lane configuration to reduce roadway width, remove on-street parking, and improve lane delineation • Install delineators adjacent to sidewalk on north side of 2nd St	2	\$62,600
1-3	5th St, 23rd Ave to 14th Ave	Modify lane configuration to improve lane delineation from 23rd Ave to 21st Ave	2	\$41,600
1-4	5th St, 14th Ave to 8th Ave	Paint and post protected corners at 10th Ave	1	\$31,900
1-4A	5th St and 9th Ave	• Paint and post protected corners • Install high-visibility crosswalks on east and west legs	2	\$59,800
1-4B	5th St and 8th Ave	Install high-visibility crosswalks on all legs	2	\$16,800
1-5	14th Ave, 5th St to 9th St	• Modify lane configuration from a 4-lane to a 3-lane cross section • Modify signal head alignment with lane reconfiguration	2	\$50,900
1-5A	14th Ave and 9th St	Paint and post curb extensions	2	\$1,900
1-6A	14th Ave and 10th St	Paint and post protected corners	2	\$22,100
1-7	15th St, 16th Ave Ct to 8th Ave	• Install RRFBs at 15th Ave on east leg • Paint and post protected corners at 15th Ave	2	\$45,400

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
1-8	13th St, 8th Ave to US 85	Paint and post protected corners at 4th Ave and 7th Ave	1	\$110,800
1-9	13th St, 23rd Ave to 14th Ave	• Paint and post protected corners at 22nd Ave, 21st Ave, and 14th Ave • Install high-visibility crosswalk at 21st Ave on west leg • Install RRFBs and pedestrian push button post at 21st Ave on west leg	2	\$98,900
1-9A	13th St and 18th Ave	Install mini-roundabout	2	\$40,500
1-9B	13th St and 23rd Ave	Paint and post protected corners	2	\$9,300
1-10	13th St, 35th Ave to 23rd Ave	• Paint and post protected corners at 30th Ave • Modify lane configuration to improve lane delineation between 28th Ave and 35th Ave • Install RRFBs at 30th Ave school west leg crossing	1	\$99,600
1-10A	13th St and 28th Ave	Paint and post protected corners	2	\$9,500
1-10B	13th St and 31st Ave	Install mini-roundabout	2	\$17,500
1-10C	13th St and 35th Ave	Install centerline hardening to southbound left turn	1	\$1,800
1-11	35th Ave, 4th St to 10th St	• Install southbound speed feedback sign north of W 6th St • Install northbound speed feedback sign south of W 6th St • Modify lane configuration to improve lane delineation	1	\$55,500
1-12	4th Street and Greeley #3 Canal Trail (west of 26th Ave)	Paint and post protected corners	2	\$18,400
1-13	4th St and 25th Ave	• Install westbound speed feedback sign east of intersection • Install eastbound speed feedback sign west of intersection • Paint and post protected corners • Install W2-2 warning sign for Boys and Girls Club driveway	2	\$41,400
1-14	28th Ave, 10th St to 20th St	• Install northbound and southbound speed feedback signs approaching curves near 12th St Rd • Modify lane configuration to remove on-street parking and improve lane delineation between 10th St and 13th St	2	\$122,300
1-15	16th St, 35th Ave to 23rd Ave	• Modify lane configuration to improve lane delineation • Extend school zone • Install signage and markings to transition bicyclists from bike lane to path near 25th Ave • Install eastbound speed feedback sign east of 42nd Ave Ct • Install westbound speed feedback sign west of 36th Ave Ct	2	\$79,900

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
1-16	28th Ave, 20th St to Reservoir Rd	- Modify lane configuration to improve lane delineation where on-street parking can be removed - Paint and post protected corners at 22nd St Ln - Extend school zone to the south - Install RRFBs and pedestrian push button post at 22nd St Dr school crossing on south leg - Install chicanes between 22nd St Road and 24th St	2	\$145,500
1-16A	28th Ave and Reservoir Rd	Install RRFBs and pedestrian push button post at Reservoir Rd crossing on northeast leg	3	\$30,800
1-17	22nd St, 35th Ave to 28th Ave	- Install high-visibility crosswalk and crossing signs between Mountair Ln and 28th Ave Ct (requires new ADA ramps) - Modify lane configuration to improve lane delineation	3	\$40,200
1-18	Reservoir Rd, 27th St to 28th Ave	Install eastbound and westbound speed feedback signs on Reservoir Rd east of 28th Ave	3	\$24,000
1-20	17th Ave and 30th St Rd	- Paint and post protected corners - Install speed table between 30th St and 30th St Rd	3	\$44,000
1-21	1st Ave, 18th St to 31st St	Modify lane configuration from a 5-lane to a 3-lane cross section	1	\$77,400
1-22	20th St, Alpine Ave to Balsam Ave	- Paint and post curb extensions at Alpine Ave intersection - Install speed hump near Alpine Ave - Install raised crosswalk between Alpine Ave and Balsam Ave	3	\$49,800
1-23	Residential (Alpine Ave/22nd St/Aspen Ave/24th St)	- Install speed table on 22nd St between Ash Ave and Apricot Ave - Enhance sign visibility with reflective posts at 22nd St and Apple Ave, 23rd St Rd and Aspen Ave, and Aspen Ave and E 23rd St - Install high-visibility crosswalk at 22nd St and Apple Ave on east leg - Install high-visibility crosswalk and crossing signs at 24th St and 1st Ave on north leg (requires new ADA ramps)	3	\$27,200
1-24	24th St and Balsam Ave	Paint and post curb extensions	3	\$21,900
1-25	26th St and Ash Ave	- Install raised crosswalk on east leg - Install RRFBs on east leg	3	\$44,200
2-1A	13th Ave and 5th St	- Install high-visibility crosswalks on north, south, and west legs - Install crossing signs on west leg	2	\$12,700
2-2	12th Ave, 2nd St to 20th St	- Install mini-roundabout at 12th St and 19th St - Install raised crosswalks at 8th St (east leg), 18th St (west leg), and Cranford Pl (west leg) - Install high-visibility crosswalk and crossing signs at 16th St on east leg	2	\$128,700

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
2-3	8th St, 16th Ave to 10th Ave	- Install high-visibility crosswalks and stop bars at 16th Ave (east and west legs) and 12th Ave (north and south legs) - Paint and post protected corners at 16th Ave - Install raised crosswalks at 13th Ave on east leg	2	\$61,000
2-3A	8th St and 11th Ave	Paint and post protected corners	2	\$36,500
2-5	11th St, 19th Ave to 11th Ave	- Install high-visibility crosswalks at 12th Ave on north, south, and east legs - Paint and post protected corners at 12th Ave - Modify lane configuration to improve lane delineation between 14th Ave and 13th Ave - Install centerline hardening at reverse curve near Greeley Ditch No 3. - Install centerline striping between 19th Ave and 18th Ave - Install speed table near Greeley Ditch No. 3	2	\$98,500
2-5A	11th St and 13th Ave	- Install high-visibility crosswalks on north, south, and east legs - Install stop bars on north and south legs - Paint and post protected corners	3	\$57,000
2-6	11th St, 11th Ave to 9th Ave	- Install crossing signs at 10th Ave on north and south legs - Paint and post protected corners at 9th Ave	3	\$24,200
2-7	11th St, 9th Ave to 6th Ave	Install high-visibility crosswalk and crossing signs at 7th Ave on north leg	3	\$6,300
2-7A	11th St and 8th Ave	Paint and post curb extensions	3	\$11,400
2-8	12th St, 11th Ave to 7th Ave	- Install high-visibility crosswalks and warning signs at 11th Ave (south leg) and 7th Ave (north leg) - Install high-visibility crosswalk and stop bar at 7th Ave on east leg - Paint and post protected corners at 7th Ave	1	\$48,700
2-8A	12th St and 8th Ave	Paint and post curb extensions	1	\$9,000
2-9	12th St, 14th Ave to 11th Ave	- Install high-visibility crosswalk and warning signs at 14th Ave on north leg - Paint and post protected corners at 14th Ave and 13th Ave	2	\$71,800
2-10	13th St, 14th Ave to 8th Ave	- Paint and post protected corners at 12th Ave - Install high-visibility crosswalks at 12th Ave on north leg	2	\$38,800
2-10A	13th St and 13th Ave	- Paint and post protected corners - Install crossing sign on east leg for eastbound direction	2	\$50,000
2-10B	13th St and 9th Ave	Paint and post protected corners	2	\$52,800
2-10C	13th St and 10th Ave	Paint and post protected corners	2	\$40,500
2-11	9th Ave, 12th St to 16th St	Paint and post protected corners at 12th St	2	\$33,800
2-12	10th Ave, 12th St to 16th St	Paint and post protected corners at 12th St	2	\$33,600
2-13	8th Ave and 14th St	- Install RRFBs and pedestrian push button post on south leg and south median refuge - Install high-visibility crosswalks on south leg	2	\$47,300
2-14	16th St, 8th Ave to 1st Ave	- Install high-visibility crosswalks and crossing signs on uncontrolled approaches - Install stop bars where missing	2	\$30,700

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
2-14A	16th St and 7th Ave	- Install high-visibility crosswalks and crossing signs on east and west legs - Modify protected corner striping to include bike lanes	2	\$55,800
2-14B	16th St and 6th Ave	- Install high-visibility crosswalks on east and west legs - Install stop bars on north and south legs	2	\$9,600
2-15	16th St and 13th Ave	Paint and post protected corners	2	\$26,700
2-16	8th Ave, 15th St to 22nd St	Modify lane configuration from a 5-lane to a 3-lane cross section north of 17th St	1	\$57,300
2-16B	8th Ave and 18th St	Install rubber median refuge on south crosswalk	2	\$300
2-17	17th St, 9th Ave to 6th Ave	- Paint and post protected corners at 7th Ave and 6th Ave - Paint and post curb extensions at 9th Ave - Install RRFBs, pedestrian push button posts, and high-visibility crosswalk on south leg at 6th Ave - Install high-visibility crosswalk and stop bar on west leg at 6th Ave	2	\$93,000
2-18	18th St and 7th Ave	Paint and post protected corners	1	\$44,600
2-19	20th St, 11th Ave to 4th Ave	- Install RRFBs and pedestrian push button posts at 9th Ave on east leg - Install stop bar at 7th Ave on west leg - Install high-visibility crosswalk and warning signs at 7th Ave on north leg - Install high-visibility crosswalks at 6th Ave on all legs - Install crossing signs at 6th Ave for north and south legs	2	\$54,900
2-20	19th St, 14th Ave to 10th Ave	- Paint and post protected corners at 13th Ave - Paint and post curb extensions at 11th Ave - Install speed table east of 13th Ave - Install high-visibility crosswalk and crossing signs at 14th Ave on north leg	3	\$76,400
2-21	Reservoir Rd/20th St, 17th Ave to 11th Ave	- Install eastbound speed feedback sign east of 17th Ave - Install westbound speed feedback sign east of 13th Ave - Modify lane configuration to move parking to south side of street and improve lane delineation	2	\$63,400
2-22	14th Ave, 16th St to 20th St	- Paint and post protected corners at 17th St and Cranford Pl - Install high-visibility crosswalks at 18th St and 17th St on north and south legs - Install RRFBs and pedestrian push button post at Cranford Pl on south leg	2	\$112,500
2-22A	14th Ave and 16th St	Implement LPIs	2	\$0
2-23	17th Ave, Alles Dr to Reservoir Rd	- Install delineators along south shoulder on Reservoir Road at 17th Ave - Modify lane configuration to improve lane delineation	2	\$6,800

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
2-24	25th St, 17th Ave to 11th Ave	- Modify lane configuration from a 4-lane to a 3-lane cross section - Modify lane configuration to eliminate parking at 17th Ave to maintain westbound right-turn lane	2	\$44,100
2-25	10th Ave, 16th St to 25th St	- Paint and post protected corners at Cranford PI - Paint and post curb extensions at 17th St and 18th St - Install RRFBs and pedestrian push button posts at 21st St on south leg - Install mini-roundabout at 23rd St	2	\$95,000
2-25A	10th Ave and 25th St	- Paint and post protected corners - Install solar crosswalk lighting	2	\$58,700
2-26	9th Ave and 25th St	- Paint and post protected corners - Install high-visibility crosswalk on all legs - Install crossing signs on east and west legs - Install stop bars on north and south legs	3	\$59,700
2-27	9th Ave and 24th St	Paint and post protected corners	3	\$53,200
2-28	26th St, 11th Ave to 9th Ave	- Install raised crosswalk at 10th Ave on west leg - Modify lane configuration from a 4-lane to a 3-lane cross section between 10th Ave Ct and 8th Ave	3	\$47,500
2-29	22nd St, 9th Ave to US 85	- Paint and post protected corners at 4th Ave and 6th Ave - Install high-visibility crosswalk at 4th Ave on north leg, south leg, and crossing 22nd St	2	\$92,400
3-1	N 11th Ave, D St to 20th St	- Modify lane configuration from a 4-lane to a 3-lane cross section - Paint and post protected corners at 13th St - Install high-visibility crosswalk and crossing signs between 10th St and 11th St (requires new ADA ramps)	2	\$216,700
3-1A	11th Ave and 10th St	Implement LPIs	1	\$0
3-1B	11th Ave and 9th St	Implement LPIs	1	\$0
3-2	10th Ave, 5th St to 12th St	- Paint and post protected corners at 8th St - Paint and post curb extensions at 6th St and 10th St	2	\$19,600
3-3	4th St, 14th Ave to 8th Ave	Modify lane configuration to improve lane delineation	2	\$23,000
3-3A	4th St and 10th Ave	- Paint and post protected corners - Install high-visibility crosswalks and stop bars on east and west legs - Install high-visibility crosswalk on north leg	3	\$29,400
3-3B	4th St and 9th Ave	- Paint and post protected corners - Install high-visibility crosswalks and stop bars on east and west legs - Install high-visibility crosswalk on north leg	2	\$59,600
3-5	8th Ave and 6th St	Install high-visibility crosswalk on south leg	2	\$6,900
3-6	8th Ave and 7th St	Install high-visibility crosswalks on all legs	2	\$10,400
3-7	8th Ave and 9th St	Install high-visibility crosswalks on all legs	1	\$7,900
3-8	8th Ave and 10th St	Install high-visibility crosswalks on all legs	2	\$11,200

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
3-9	9th Ave and A St	- Paint and post protected corners - Install RRFBs on west leg	3	\$68,400
3-10	A St, 14th Ave to 11th Ave	Install raised crosswalk at N 12th Ave on east leg (requires new ADA ramps)	1	\$21,400
3-11A	11th Ave and D St	Install RRFBs and pedestrian push button post on north leg		\$30,600
3-12	H St, O St to 11th Ave	Modify lane configuration from a 5-lane to a 3-lane cross section	2	\$132,900
3-14	Residential (63rd Ave/6th St/61st Ave/8th St)	- Install speed table on 6th St Rd between 61st Ave Ct and 61st Ave and on 8th St between 62nd Ave Ct and 61st Ave Ct - Install raised crosswalk at 6th St Rd and 62nd Ave (west leg) and 8th St and 61st Ave Ct (west leg) - Install mini-roundabouts on W 7th St at 62nd Ave and 62nd Ave Ct	3	\$105,700
3-15	54th Ave, 9th St to 6th St Rd	- Install northbound speed feedback sign south of W 7th St - Install southbound speed feedback sign north of W 7th St	3	\$24,000
3-16	4th St btwn 50th Ave Pl and 49th Ave	- Install eastbound speed feedback sign west of existing HAWK - Install westbound speed feedback sign east of existing HAWK - Install high-visibility crosswalk at exiting HAWK	2	\$27,400
3-17	4th St and 46th Ave	Install RRFBs and pedestrian push button post on west leg	2	\$30,800
3-18	43rd Ave, 4th St to 16th St	- Paint and post protected corners at 7th St - Modify lane configuration to adjust parking north of 10th St and remove parking south of 10th St - Install chicanes south of 42nd Ave/Ward Dr	2	\$108,600
3-19	Residential (42nd Ave/4th St/41st Ave/7th St)	Install raised crosswalk at W 7th St and 42nd Ave (west leg) and W 7th St and 41st Ave (east leg)	3	\$31,500
3-20	16th St, 47th Ave to 35th Ave	- Modify lane configuration from a 4-lane to a 3-lane cross section - Install RRFBs and pedestrian push button post at 43rd Ave on east leg - Install RRFBs at 40th Ave on east leg	2	\$116,200
3-20A	16th St, E of 40th Ave	Install westbound speed feedback sign approaching curve	2	\$12,200
3-20B	16th St, W of 40th Ave	Install eastbound speed feedback sign approaching curve	2	\$12,000
3-21	20th St, 47th Ave to 35th Ave	- Modify lane configuration to narrow lane widths - Install eastbound speed feedback sign west of 44th Ave Ct - Install westbound speed feedback sign east of Homestead Rd	2	\$31,700
3-21A	20th St and 47th Ave	Install centerline hardening	2	\$58,800

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
3-22	13th St, 63rd Ave Ct to 60th Ave	• Install eastbound and westbound speed feedback signs • Paint and post a two-way multi-use path on north side of road • Install high-visibility crosswalk and crossing signs at 60th Ave on west leg	3	\$46,700
3-24 / 3-25	18th St and 59th Ave	• Install RRFBs and high-visibility crosswalk on south leg • Install northbound and southbound speed feedback signs on 59th Ave • Install advance warning signs for 59th Ave crossing	2	\$55,400
3-26	59th Ave, 20th St to 21st St	• Paint and post protected corner on southwest corner at 20th St • Modify lane configuration to remove the southbound acceleration lane and begin southbound bike lane on southwest corner of 20th St • Modify lane configuration to remove outside northbound thru lane and continue northbound bike lane to 20th St	2	\$15,100
3-27	29th St, EOP to 47th Ave	• Install mini-roundabout at 31st St and west of 47th Ave • Install raised crosswalk at 58th Ave on east leg • Install speed table east of 58th Ave • Modify lane configuration to narrow roadway width at 47th Ave intersection • Install chicanes west of 53rd Ave	2	\$158,700
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)	• Install stop sign visibility enhancements with reflective posts at 29th St and 43rd Ave • Paint and post curb extensions at 29th St/30th St and 39th Ave, 30th St and 41st Ave, and 30th St and 43rd Ave • Paint and post protected corners at 30th St and 29th St • Install high-visibility crosswalk on 29th St at park crossing • Install speed hump on 30th St west of 40th Ave Ct and west of 35th Ave • Install westbound speed feedback sign west of 35th Ave • Install eastbound speed feedback sign east of 39th Ave	3	\$93,700
3-29	23rd St Rd and 42nd Ave	Paint and post protected corners	3	\$24,400
3-30	County Road 31 and County Road 66	Install stop sign visibility enhancements with reflective posts	1	\$200
4-1	4th St, 47th Ave to 71st Ave	• Install speed feedback signs east and west of 63rd Ave • Install centerline hardening at 70th Ave	1	\$29,500
4-2	71st Ave and 12th St	Install RRFBs and pedestrian push button posts on south leg	2	\$33,800
4-3	71st Ave and Poudre River Trail Crossing	Install solar crosswalk lighting	3	\$3,500
4-4	County Road 27 and Poudre River Trail Crossing	Install solar crosswalk lighting	2	\$3,500

Table 2: Recommendation Prioritization and Cost

Project ID	Project Location	Recommendation(s)	Priority	Cost
4-5	59th Ave and 16th St	Install high-visibility crosswalk and crossing signs on south leg (requires new ADA ramps)	2	\$6,600
4-6	29th St, W of 31st Ave	Install chicanes	2	\$27,100
4-7	20th St, W of Birch Ave	Install chicanes	3	\$16,800
Subtotal				\$5,238,900
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)				\$2,619,500
Total				\$7,858,400

Of the 113 total project locations listed in **Table 2**, 25 included only one countermeasure and did not overlap with any other project locations. The remaining 88 project locations included either multiple countermeasures or could be combined with other project locations to form countermeasure groupings. This breakdown has been summarized in tables found in **Appendix E**.

Tables summarizing the locations and costs associated with each quick-build recommendation are included in **Appendix D**. Miscellaneous improvements that are considered “quick-build” but are not associated with the main quick-build countermeasures are also summarized in **Appendix D**.

Section 7 Conclusion

The intent of this report is to summarize the RSAs conducted for each of the project locations and provide quick-build recommendations aimed at improving safety of all roadway users based on the unique needs and characteristics of each location. The primary countermeasures utilized for recommendations included the following:

- High-visibility crosswalks,
- Rapid rectangular flashing beacons (RRFB),
- Speed feedback signs,
- Raised crosswalks,
- Speed tables,
- Curb extensions or protected corners made with paint and posts,
- Mini roundabouts using rubber islands,
- Lane reconfigurations,
- Solar crosswalk lighting, and
- Chicanes made with paint and rubber curbing.

These quick-build countermeasures aim to improve safety throughout the City of Greeley by reducing speeds and enhancing visibility and delineation of vulnerable user facilities. Through the RSA process, the RSA team was able to identify and develop preliminary designs for over 100 different locations that would benefit from the implementation of the countermeasures.

Next Steps

Following this RSA, the process to obtain National Environmental Policy Act (NEPA) clearances required for the federal funding being utilized by this project will begin.

The public will also be engaged through the City's "Speak Up Greeley" webpage and pop-up events held at nine locations throughout the city. Pop-up events will be four hours long and focus on providing education on the quick-build countermeasures, identifying the public's general approval or disapproval for recommendations, and soliciting feedback for recommendation modifications or additional locations.

After obtaining NEPA clearances and engaging with the public, project recommendations will be progressed to final design and construction.

The project will also study the effectiveness of the quick-build countermeasures by conducting before and after studies. As part of the before study, data will be obtained and evaluated highlighting the safety performance of project locations.

Appendix A Kick-Off Meeting Materials



Project Memorandum

To: RSA Project Participants
RSA Team Members

From: Natalie Carrick, PE, RSP₁

Subject: Greeley SS4A Planning and Demonstration Project
Road Safety Audits
Intent of RSA and RSA Team Expectations

Date: May 23, 2025

INTRODUCTION

The City of Greeley was awarded a federal grant through the Safe Streets and Roads for All (SS4A) program to implement multiple safety projects across the City. The goal of the overall SS4A Planning and Demonstration project is to rapidly plan and implement construction of quick-build infrastructure targeting locations on the City's High Injury Network to effectively reduce crashes. The first phase of the project will complete a safety study (RSA) to document and justify the selected quick-build locations. The purpose of this memorandum is to inform you of the Road Safety Audits (RSA) and your role on the project. RSA Participants are expected to review the information package and participate in the kick-off meeting and the debrief meeting. RSA Team members are expected to review the RSA information package, participate in the RSA field reviews, and review the draft RSA report.

The field reviews and debriefing (findings meeting) for the study location are scheduled to take place on the following days:

- Kick-off or Briefing Meeting – Monday, June 9, 2025
- Perform Field Reviews – Monday, May 9, 2025 through Wednesday, June 11, 2025
- Debriefing Meeting – TBD (held virtually via Teams Meeting)

The following sections will explain the reason for this RSA and the purpose of the RSA Team in addition to providing you with the project schedule and contact information for the RSA participants and Team members involved with this project.

RSAs AT INTERSECTIONS & CORRIDORS

Road Safety Audits are formal examinations of intersections or entire road corridors from a safety performance viewpoint. The concept of RSAs originated in the UK in the 1990s and has been adopted in many countries with much success. The RSA process has been developed based on the Road Safety Audit Guidelines published by the Federal Highway Administration (FHWA) in 2006.

All RSAs are performed by an independent multi-disciplinary team and is led by a person trained in performing RSAs. The RSA team considers the safety of all road users, qualitatively estimates and reports on potential road safety issues and identifies opportunities for safety improvement. The RSA team reviews crash history and conducts field observations during various times of the day such as day/night and peak/non-peak hours. RSAs typically focus on identifying road safety solutions with the highest crash risk.



PROJECT PARTICIPANTS

Steven Younkin, PE – City of Greeley, Project Manager, Deputy Chief Engineer
970.373.6281
steven.younkin@greeleygov.com

RSA TEAM MEMBERS

Name and Role	Contact Information
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Micah Makaiwi, PE, PTOE Stanley Consultants - RSA Team Leader 3	makaiwimicah@stanleygroup.com 773-714-2011
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Katie Guthrie, AICP Stanley Consultants - RSA Team Member	GuthrieKatie@stanleygroup.com 720-460-4740
Zaw Soe Stanley Consultants - RSA Team Member	SoeZaw@stanleygroup.com
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Jay Dinges University of Northern Colorado – RSA Team Member	Jay.Dinges@unco.edu
Bob Hutson Greeley Resident / Business owner – RSA Team Member	bhutson1967@gmail.com
Shannon Dominguez Trucking/Logistics Company – RSA Team Member	SDominguez@1888is.com



SCHEDULE

The RSA field reviews are scheduled for three full days beginning Monday, June 9, 2025. A kick-off meeting will be held at 8:00 am Monday morning to review the RSA objectives and goals. Following the kick-off meeting, we will split into three teams to conduct the RSA field reviews.

A detailed schedule for the three field review days that provides locations and times will be sent out prior to the kick-off meeting. Not all RSA team members will be required to attend every location; however we ask that all team members set aside time Monday, June 9 through Wednesday, June 11 to be available for field reviews until the detailed schedule is completed.



Greeley Safe Streets and Roads for All (SS4A)

Road Safety Audits

June 9-11, 2025

Kick-Off Meeting

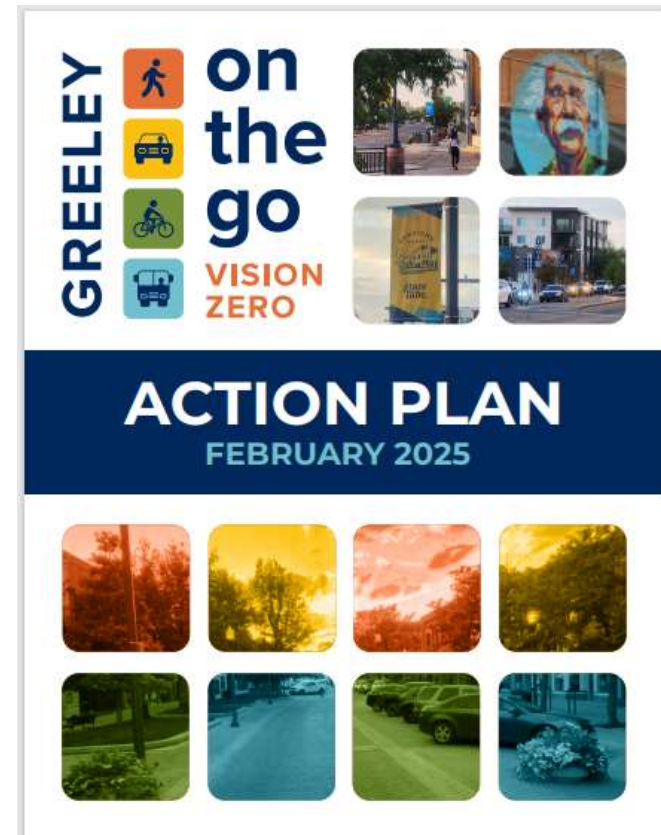
Outline of Meeting

- Introductions
- Project Overview
- RSA process
- Exchange of information
- Schedule



Project Overview

- Greeley on the Go Vision Zero Action Plan
- 2024 SS4A Planning and Demonstration Grant



RSA Procedure

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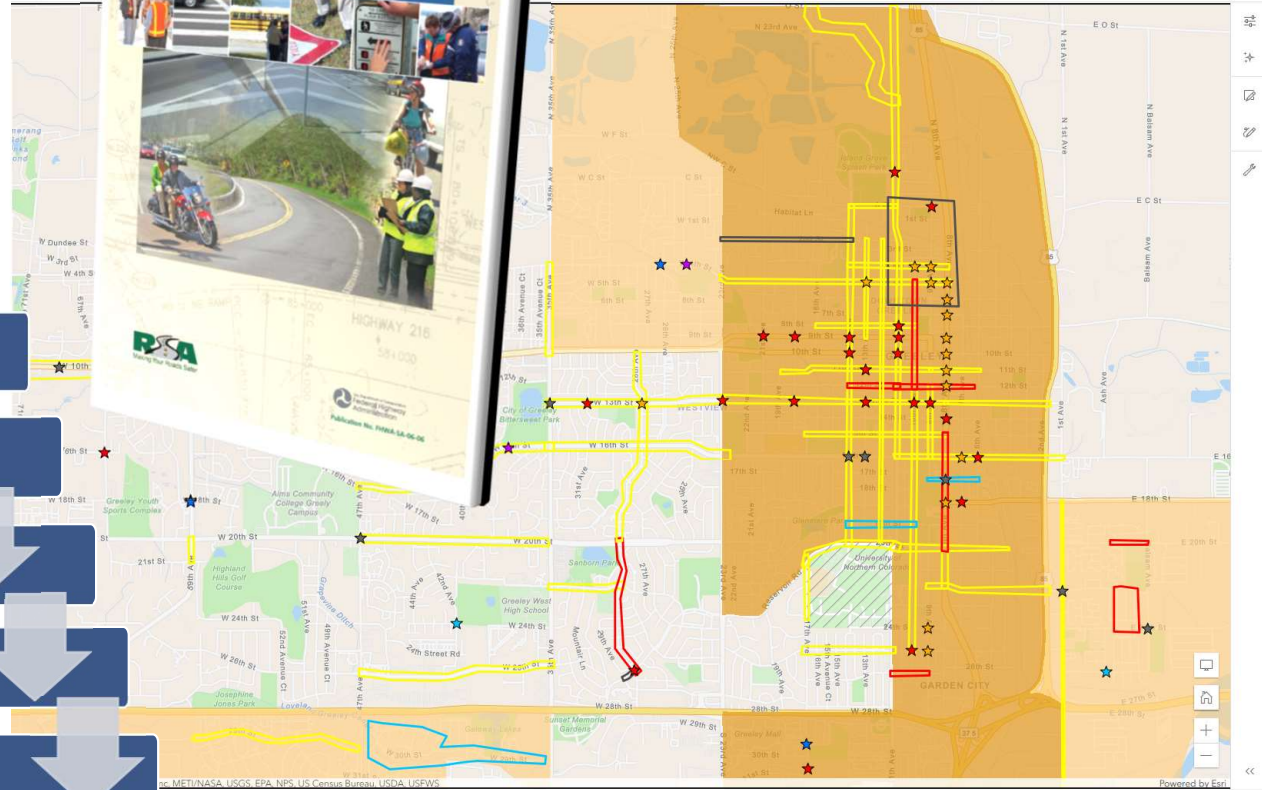
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Step 3: Kick-Off Meeting

- Review Countermeasure Toolkit
- Field Map App
 - Project locations
 - Traffic Volumes
 - Crash History
- Information Sharing
 - Constraints
 - Challenges
 - Known issues



Step 4: Perform Field Reviews

- Drive project corridors
- Observe road user characteristics
- Observe linked points to the adjacent transportation network
- Observe surrounding land uses
- Identify and note issues
 - Field Maps App
 - Physical note sheets



Step 5: RSA Analysis

- Workshop setting
- Review information
- Identify, prioritize and mitigate safety issues
- Consider the Safe System Approach
 - Reduce vehicular travel speeds
 - Reduce conflict points
 - Anticipate human error



Source: U.S. DOT



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Step 6: Presentation of Findings



- RSA team, City of Greeley
- Discuss preliminary findings and proposed countermeasures
- Use results to write RSA report



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Step 7: Prepare Formal Response

- Prepared by the City of Greeley
- For each project location, identifies what action will (or will not) be taken with a brief explanation



Questions about the RSA Process?



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Countermeasure Toolkit for Quick-build Safety Improvements

- Lane reconfigurations using paint and posts
- Intersection bulb outs or mini-roundabouts



Intersection bulb-outs, curb extensions, and turn radius reductions

Source: Denver Streets Partnership



Pedestrian midblock or median-refuge island crossings

Paint-and-post lane reconfigurations

Source: Smart Growth America



Mini Roundabout

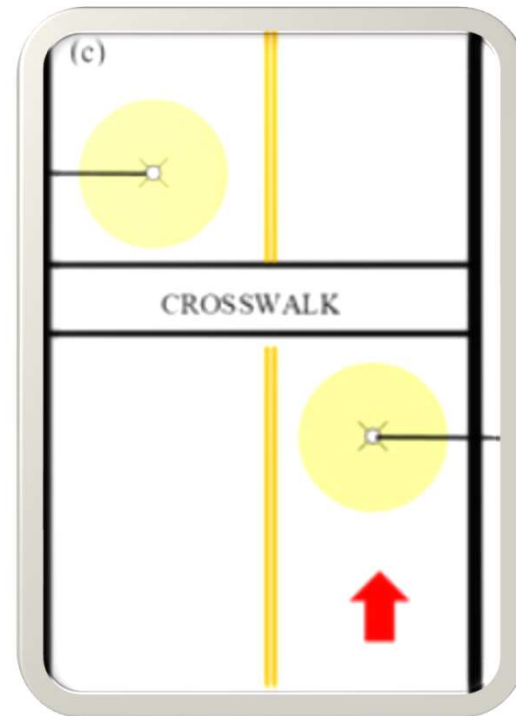
Countermeasure Toolkit for Quick-build Safety Improvements

- **Raised pedestrian crossings or speed tables**
- **Paint high visibility crosswalk markings**



Countermeasure Toolkit for Quick-build Safety Improvements

- **Dynamic Speed Feedback Signs**
- **Rapid rectangular flashing beacons**
- **Lighting used at mid-block crossings**



Open Discussion of Concerns and Known Issues

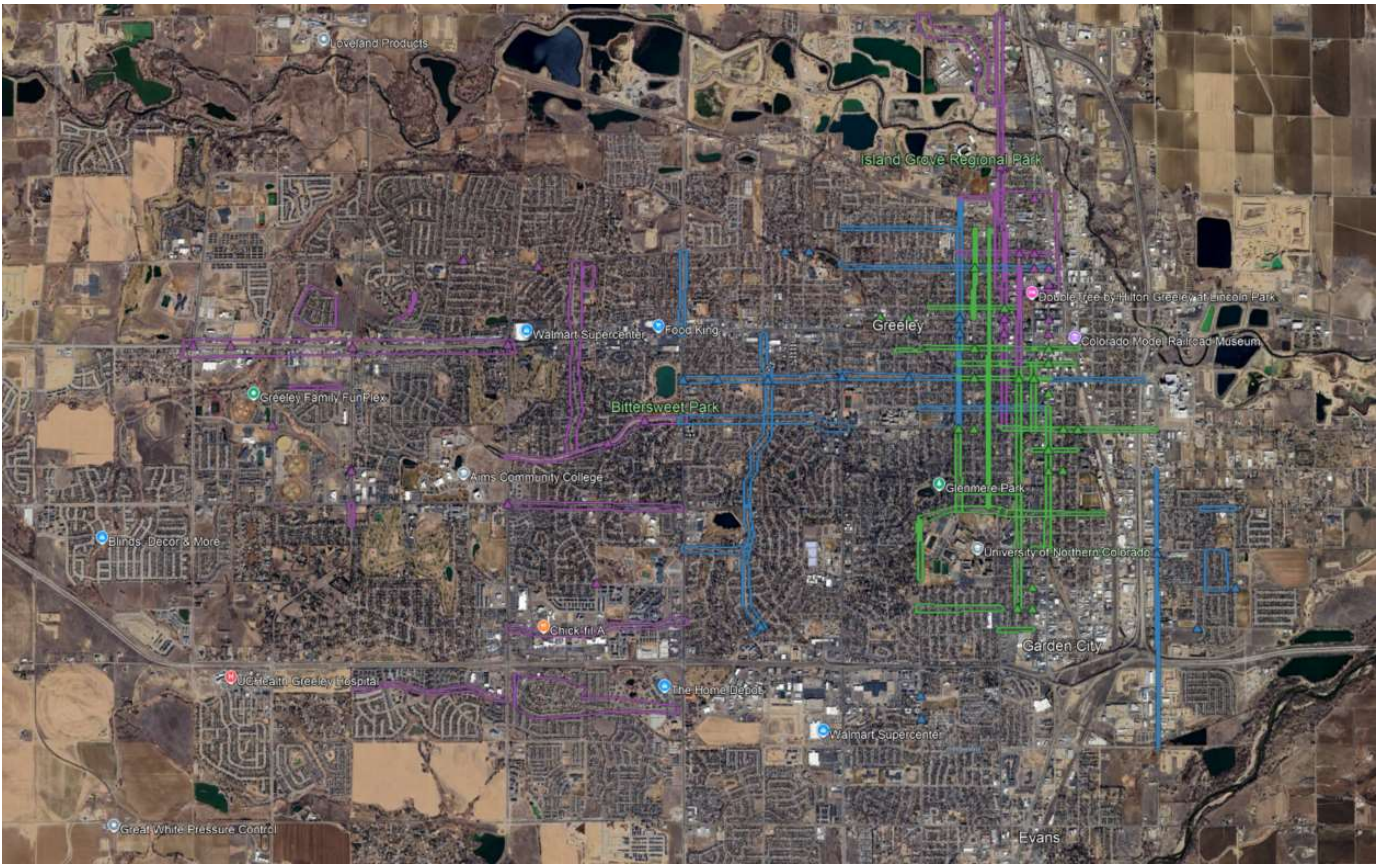


RSA Teams

Team 1 - Schools	Team 2 - UNC	Team 3 – West & North Area
BriAnne Turpin (602) 769-2696	Micah Makaiwi (719) 332-6970	Natalie Carrick (602) 920-5607
Katie Guthrie	James McMackin / Alicia Rohr	Zaw Soe
Hanna Feldmann	Jim Riesberg	Hugo Labouriau-Lacerda
Scott Logan	Tanvir Iqbal	Leroy Baca
Wade Corliss	Jay Dinges	Shannon Dominguez
Kristen Wilkinson City of Greeley - CPRD, Culture Parks and Rec, Natural Areas and Trails		
Jill Matlock , Health Education Specialist, HEAL Coordinator, Weld County		
Chris Ellmer & Tim Logston City of Greeley Fire		
Commander Mike Heck & Sgt. Steve Fisher City of Greeley Police		

RSA Teams

- Team 1 – Blue
- Team 2- Green
- Team 3 - Purple



Schedule

- **Monday June 9, 2025**
 - 8:00 am to 9:00 am – Kick-off Meeting
 - 9:00 am to 12:00 pm – Morning Field Reviews
 - 12:00 pm to 1:00 pm – Lunch break
 - 1:00 pm to 5:00 pm – Afternoon Field Reviews
- **Tuesday June 10, 2025**
 - 8:00 am to 12:00 pm – Morning Field Reviews
 - 12:00 pm to 1:00 pm – Lunch break
 - 1:00 pm to 5:00 pm – Afternoon Field Reviews
- **Wednesday June 11, 2025**
 - 8:00 am to 12:00 pm – Morning Field Reviews
 - 12:00 pm to 1:00 pm – Lunch break
 - 1:00 pm to 5:00 pm – Afternoon Field Reviews



Appendix B RSA Field Notes

14th Ave, A St to 5th St (ID 1-1)



Existing Characteristics

- A St to 2nd St: Minor Collector, 4-lane cross section
- 2nd St to 5th St: Minor Arterial, 4-lane cross section
- ADT: 1000-2300vpd
- Posted speed limit: After railroad to 2nd St=20mph, Rest= 35mph
- School Zone from 2nd St to 6th St with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 18-32mph, 95th Pct: 23-36mph
- Ped/bike/transit facilities: On-street bike lanes from A St to 2nd St
- 2 bus stops at 1st St (Route 3)
-
- Land use: Residential, Commercial, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk

- Total crashes: 11
- Fatalities (K): 0
- Serious Injuries (A): 1 (2019)

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane cross section with delineator-protected bike lane

Observations

- Need to maintain 4 lanes from A St to 2nd St due to events at Island Grove Regional Park
- Only the north crosswalk at 4th St is manned. Recommend making the north crosswalk raised or adding a RRFB and removing the second crosswalk.

Revised Recommendations

- Install raised crosswalk on north leg at 4th St intersection
- Remove crosswalk on south leg at 4th St intersection
- Modify lane configuration from a 4-lane to a 3-lane cross section south of 2nd St to 5th St

2nd St, 23rd Ave to 14th Ave (ID 1-2)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 2000-2400vpd
- Posted speed limit: 30mph
- School Zone from 14th Ave to 19th Ave with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 20-41mph, 95th Pct: 26-45mph
- Ped/bike/transit facilities: 2 bus stops at 18th Ave (Route 3)
- 2 bus stops at 21st Ave PI (Route 3)
- Land use: Residential, Commercial, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk
- Total crashes: 20
- Fatalities (K): 0
- Serious Injuries (A): 1 (2015)

Vision Zero Recommendations

- Chicane

Observations

- No existing sidewalk along the south side of the road
- Sidewalk on the north side is flush with the roadway - recommend adding delineators adjacent to sidewalk
- Chicanes are not feasible due to existing transit route
- Consider wider edge lines on both sides
- School bus stop location at 18th Ave
- Road widens near the Pine Meadows Apartments in from of the bus stop - Recommend using delineators and paint to narrow the roadway width and restrict parking in front of the apartments to prevent cars from blocking the bus stop
- Existing raised crosswalk east of 16th Ave

Revised Recommendations

- Modify lane configuration to reduce roadway width, remove on-street parking, and improve lane delineation
- Install delineators adjacent to sidewalk on north side of 2nd St

5th St, 23rd Ave to 14th Ave (ID 1-3)



Existing Characteristics

- Minor Arterial, 2-lane cross section
- ADT: 5000-5300vpd
- Posted speed limit: 35mph
- School Zone from 14th Ave to 15th Ave Ct with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 26-41mph, 95th Pct: 30-45mph
- Ped/bike/transit facilities:
- Land use: Residential, Commercial
- Pavement rehab projects: Rejuvenate (2025) - south leg at 16th Ave; south leg at 15th Ave Ct
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Moderate risk
- Total crashes: 31
- Fatalities (K): 0
- Serious Injuries (A): 2 (2019 and 2021)

Vision Zero Recommendations

- Paint and post to create protected bike lanes

Observations

- Limited visibility due to vertical and horizontal curves near 23rd Ave - City is planning on cutting back trees to improve visibility
- City recently added white edge line, creating on-street parking near 21st Ave. They don't appear to be enough room to install bike lanes as well. May need to limit on-street parking to one side of the road. Need bike lanes to connect to existing bike lanes both west of 23rd Ave and east of 14th Ave.
- Existing high visibility crosswalk with light poles located on far side of crosswalk in both directions at 16th Ave Ct.
- Existing high visibility crosswalk with light pole located over crosswalk at 15th Ave Ct

Revised Recommendations

- Modify lane configuration to improve lane delineation from 23rd Ave to 21st Ave

5th St, 14th Ave to 8th Ave (ID 1-4)



Existing Characteristics

- Minor Arterial, 3-lane cross section
- ADT: 200-7200vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 22-34mph, 95th Pct: 26-37mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Moderate risk
- Total crashes: 54
- Fatalities (K): 1 (2019)
- Serious Injuries (A): 4 (2017, 2019, 2020, and 2022)

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- Paint and post median/access control at 10th Ave with high visibility crosswalks

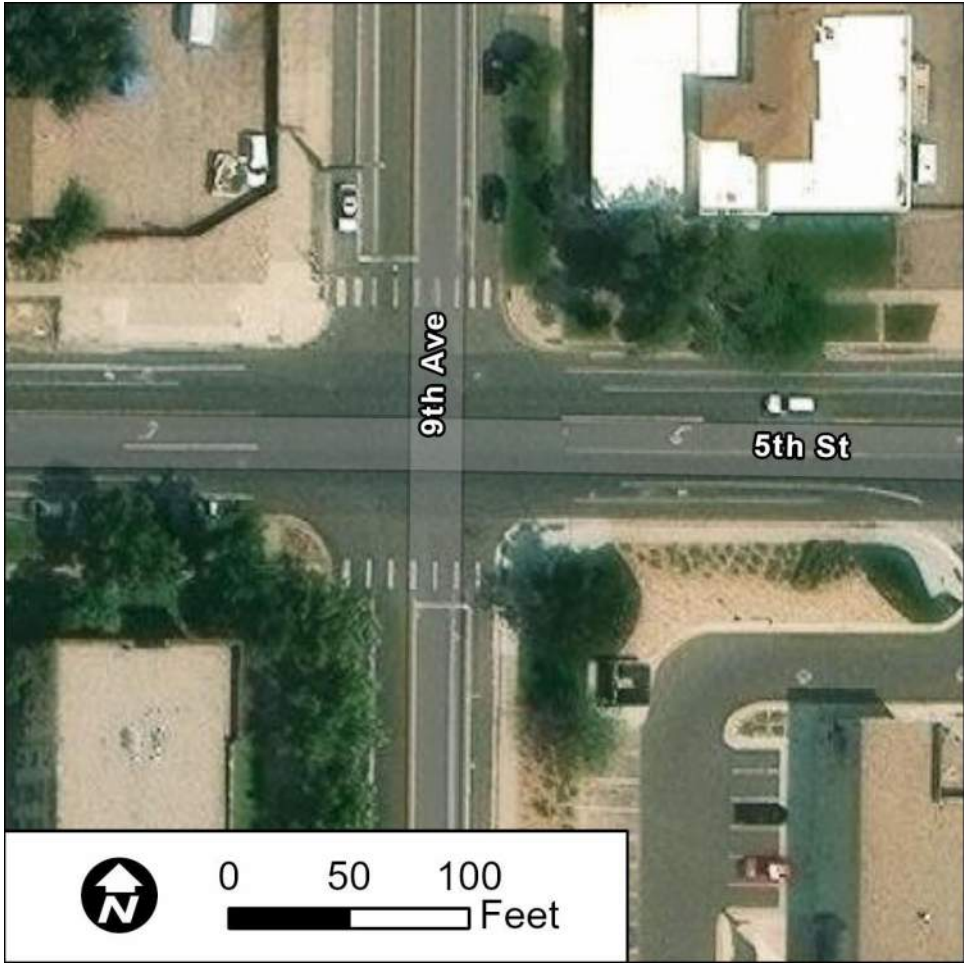
Observations

- No crosswalk or stop bar at 13th Ave
- 10th Ave intersection is a good location for bulb-outs
- Median/access control is not recommended at 10th Ave
- Recommend bulb-out to end parking sooner and improve pedestrian and bike visibility at 9th Ave
- Proper signage is also needed if high visibility crosswalk is installed across 5th St at 9th Ave
- Recommend cleaning colored crosswalks and repainting at 8th Ave

Revised Recommendations

- Paint and post protected corners at 10th Ave

5th St and 9th Ave (ID 1-4A)



Existing Characteristics

- Unsignalized, 2-way stop control
- 5th St: Minor Arterial, 3-lane cross section
- 9th Ave: Local Road, 2-lane cross section
- ADT: 5th St=7200vpd, 9th Ave=200-450vpd
- Posted speed limit: 5th St=35mph, 9th Ave=20mph
- Observed speeds: North leg - 85th Pct: 24mph, 95th Pct: 27mph
- West leg - 85th Pct: 34mph, 95th Pct: 37mph
- East leg - 85th Pct: 35mph, 95th Pct: 38mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 5th St, low risk along 9th Ave
- Total crashes: 5
- Fatalities (K): 0
- Serious Injuries (A): 1 (2020)

Vision Zero Recommendations

- Paint and post median/access control with high-visibility crosswalks and RRFBs

Observations

- Recommend bulb-out to end parking sooner and improve pedestrian and bike visibility
- Proper signage is also needed if high visibility crosswalk is installed across 5th St.

Revised Recommendations

- Paint and post protected corners
- Install high-visibility crosswalks on east and west legs

5th St and 8th Ave (ID 1-4B)



Existing Characteristics

- Signalized
- 5th St: Minor Arterial, 3-lane cross section
- 8th Ave: Major Arterial, 4-lane divided cross section
- ADT: 5th St=6600-7000vpd, 8th Ave=10600-11700vpd
- Posted speed limit: 35mph
- Observed speeds: North leg - 85th Pct: 34mph, 95th Pct: 40mph
- South leg - 85th Pct: 34mph, 95th Pct: 40mph
- West leg - 85th Pct: 27mph, 95th Pct: 31mph
- East leg - 85th Pct: 26mph, 95th Pct: 31mph
- Ped/bike/transit facilities: On-street bike lanes on west leg
- Land use: Commercial, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 5th St, high risk along 8th Ave
- Total crashes: 12
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Recommend cleaning colored crosswalks and repainting

Revised Recommendations

- Install high-visibility crosswalks on all legs

14th Ave, 5th St to 9th St (ID 1-5)



Existing Characteristics

- Minor Collector, 4-lane cross section
- ADT: 2300-3000vpd
- Posted speed limit: 30mph
- School Zone from 5th St to 6th St with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 25-35mph, 95th Pct: 31-40mph
- Ped/bike/transit facilities: Shared bike lanes
- 1 bus stops at 9th St (Route 1)
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Moderate risk
- Total crashes: 39

- Fatalities (K): 0
- Serious Injuries (A): 2 (2019 and 2020)

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane with delineator-protected bike lanes

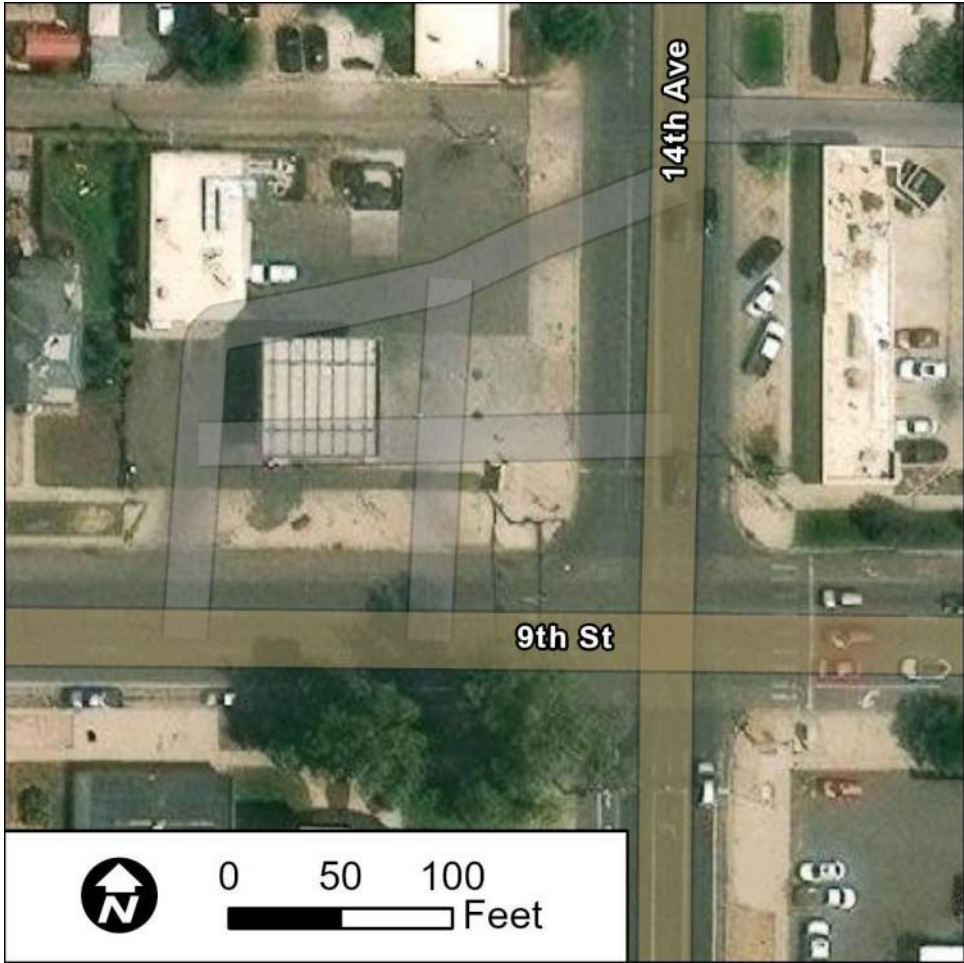
Observations

- No access to Kiwanis Park from the east side
- Existing bulb-outs and LED stop signs at 8th St
- Mini-roundabout is not recommend at 9th St due to number of lanes in the WB direction and existing signal

Revised Recommendations

- Modify lane configuration from a 4-lane to a 3-lane cross section
- Modify signal head alignment with lane reconfiguration

14th Ave and 9th St (ID 1-5A)



Existing Characteristics

- Signalized
- 14th Ave: Minor Collector, 4-lane cross section
- 9th St: Major Arterial, 3 lanes (one way)
- ADT: 14th Ave=3000vpd, 9th St=4500vpd
- Posted speed limit: 14th Ave=20mph, 9th St=40mph
- Observed speeds: North leg - 85th Pct: 25mph, 95th Pct: 31mph
- South leg - 85th Pct: 27mph, 95th Pct: 32mph
- West leg - 85th Pct: 36mph, 95th Pct: 40mph
- East leg - 85th Pct: 37mph, 95th Pct: 40mph
- Ped/bike/transit facilities: On-street bike lanes on south leg
- 1 bus stops at 9th St (Route 1)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 14th Ave, high risk along 9th St
- Total crashes: 17
- Fatalities (K): 0
- Serious Injuries (A): 1 (2020)

Vision Zero Recommendations

- Paint and post to remove turn lane and add intersection bulb-outs

Observations

- Mini-roundabout is not recommend due to number of lanes in the WB direction and existing signal

Revised Recommendations

- Paint and post curb extensions

14th Ave, 9th St to 16th St (ID 1-6)



Existing Characteristics

- 9th St to 13th St: Minor Collector, 3-lane cross section
- 13th St to 16th St: Major Collector, 3-lane cross section
- ADT: 2200vpd
- Posted speed limit: 30mph
- School Zone from 13th St to 16th St with School Zone Speed limit of 20mph
- Observed speeds: 85th Pct: 22-35mph, 95th Pct: 28-38mph
- Ped/bike/transit facilities: On-street bike lanes
- 1 bus stop at 10th St (Route1)
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Moderate risk
- Total crashes: 66

- Fatalities (K): 0
- Serious Injuries (A): 4 (2017x2 and 2020x2)

Vision Zero Recommendations

- Paint and post to create far right protected bike lane

Observations

- Mini-roundabout is not recommend at 9th St due to number of lanes in the WB direction and existing signal
- Mini-roundabout is not recommend at 10th St due to number of lanes in the EB direction and existing signal
- Existing delineators at 14th St mark the severe change along the outside
- Moving bike lane to the inside is not recommended near 15th St due to severe cross slope, gutters in poor condition, grates in the gutter, and trash pickup. Would need to take width from the lanes to make a larger bike lane.
- high volume ped crossing at 16th St & 14th Ave

Revised Recommendations

- No segment improvement recommended. Refer to Project 1-5A and 1-6A for intersection improvements.

14th Ave and 10th St (ID 1-6A)



Existing Characteristics

- Signalized
- 14th Ave: Minor Collector, 3-lane cross section
- 10th St: Major Arterial, 3 lanes (one way)
- ADT: 14th Ave=2000vpd, 10th St=7200vpd
- Posted speed limit: 14th Ave=30mph, 10th St=35mph
- Observed speeds: North leg - 85th Pct: 28mph, 95th Pct: 32mph
- South leg - 85th Pct: 28mph, 95th Pct: 32mph
- West leg - 85th Pct: 36mph, 95th Pct: 40mph
- East leg - 85th Pct: 36mph, 95th Pct: 40mph
- Ped/bike/transit facilities: On-street bike lanes along 14th Ave
- 1 bus stop at 10th St (Route1)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 14th Ave, high risk along 10th St
- Total crashes: 12
- Fatalities (K): 0
- Serious Injuries (A): 1 (2017)

Vision Zero Recommendations

- Paint and post to remove turn lane and add intersection bulb-outs

Observations

- Mini-roundabout is not recommend due to number of lanes in the EB direction and existing signal

Revised Recommendations

- Paint and post protected corners

15th St, 16th Ave Ct to 8th Ave (ID 1-7)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 200-700vpd
- Posted speed limit: 20mph
- School Zone from 12th Ave to 16th Ave with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 20-35mph, 95th Pct: 23-38mph
- Ped/bike/transit facilities: On-street bike lanes
- 2 bus stops at 10th Ave (Route 5)
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total crashes: 25
- Fatalities: 0

- Serious Injuries: 1 (2017)

Vision Zero Recommendations

- Paint and post to create far right protected bike lane or speed tables

Observations

- Recommend a raised crosswalk or RRFB at 15th Ave - fatal pedestrian crash within last 5 years
- Moving bike lane to the inside is not recommended near 14th Ave due to severe cross slope, gutters in poor condition, grates in the gutter, and trash pickup. Would need to take width from the lanes to make a larger bike lane.
- Drainage issues at curb returns at 12th Ave
- A trail is planned along the #3 Ditch in this area in the next 10-20 years. 10th Ave and 15th St may be a future trail crossing.

Revised Recommendations

- Install RRFBs at 15th Ave on east leg
- Paint and post protected corners at 15th Ave

13th St, 8th Ave to US 85 (ID 1-8)



Existing Characteristics

- Minor Collector, 3-lane cross section
- ADT: 3600vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 23-38mph, 95th Pct: 28-42mph
- Ped/bike/transit facilities: On-street bike lanes
- 2 bus stops at 5th Ave (Route 4)
- 2 bus stops at 7th Ave (Route 4)
-
- Land use: Residential, Commercial, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 8th Ave to 7th Ave is on HIN
- HRN Status: Moderate risk
- Total Crashes: 30
- Fatalities: 1 (2019)

- Serious Injuries: 1 (2020)

Vision Zero Recommendations

- Paint and post to create far right bike lane
- Paint and post bulb-outs and median refuge crossings with high visibility crosswalks

Observations

- Existing angled parking on the south side of the road between 7th Ave and 6th Ave
- Roadway narrows over the railroad tracks
- Existing signed crosswalk at 4th Ave. Bulb-outs can be installed at the crossing.
- Recommend maintaining only one crossing of 13th St
- Gutters appear to be in good shape with no grates along the corridor.
- Trash pickup along the corridor would block bike lane if the bike lane is switched to the far right
- Bike lane ends prior to the 2nd Ave intersection

Revised Recommendations

- Paint and post protected corners at 4th Ave and 7th Ave

13th St, 23rd Ave to 14th Ave (ID 1-9)



Existing Characteristics

- 23rd Ave to 16th Ave: Major Collector, 3-lane cross section
- 16th Ave to 14th Ave: Local Road, 3-lane cross section
- ADT: 3300-3800vpd
- Posted speed limit: 30mph
- School Zone from 19th Ave to 23rd Ave with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 23-38mph, 95th Pct: 28-42mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 16th Ave to 14th Ave is on HIN
- HRN Status: Moderate risk
- Total Crashes: 31
- Fatalities: 0
- Serious Injuries: 1 (2021)

Vision Zero Recommendations

- Paint and post to create far right protected bike lane
- Paint and post bulb-outs and median refuge crossings with high visibility crosswalks

Observations

- Recommend bulb-outs at 22nd Ave
- Intersection at 21st Ave needs crosswalks restriped and would be a good location for bulb-outs
- Consider extending school zone to 21st Ave
- Possible candidate for mini roundabout at 18th Ave if we figure out how to handle bike lane through it
- A trail is planned along the #3 Ditch in this area in the next 10-20 years. 14th Ave and 13th St may be a future trail crossing.

Revised Recommendations

- Paint and post protected corners at 22nd Ave, 21st Ave, and 14th Ave
- Install high-visibility crosswalk at 21st Ave on west leg
- Install RRFBs and pedestrian push button post at 21st Ave on west leg

13th St and 18th Ave (ID 1-9A)



- HRN Status: Moderate risk along 13th St, low risk along 18th Ave
- Total Crashes: 3
- Fatalities: 0
- Serious Injuries: 1 (2021)

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- Stop sign visibility enhancements

Observations

- Possible candidate for mini roundabout if we figure out how to handle bike lane through it

Revised Recommendations

- Install mini-roundabout

Existing Characteristics

- Unsignalized, 2-way stop control
- 13th St: Major Collector, 3-lane cross section
- 18th Ave: Local Road, 2-lane cross section
- ADT: 13th St=72vpd, 18th Ave=3600vpd
- Posted speed limit: 30mph
- Observed speeds: West leg - 85th Pct: 38mph, 95th Pct: 42mph
- East leg - 85th Pct: 36mph, 95th Pct: 39mph
- Ped/bike/transit facilities: On-street bike lanes along 13th St
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

13th St and 23rd Ave (ID 1-9B)



Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 13th St and 23rd Ave
- Total Crashes: 17
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Bulb-Out/Mini Roundabout

Observations

- Existing signalized intersection

Revised Recommendations

- Paint and post protected corners

Existing Characteristics

- Signalized
- 13th St: Major Collector, 3-lane cross section
- 23rd Ave: Minor Arterial, 5-lane cross section
- ADT: 13th St=3300-3800vpd, 23rd Ave=9000vpd
- Posted speed limit: 30mph
- Observed speeds: North leg - 85th Pct: 37mph, 95th Pct: 41mph
- South leg - 85th Pct: 36mph, 95th Pct: 40mph
- West leg - 85th Pct: 25mph, 95th Pct: 28mph
- East leg - 85th Pct: 23mph, 95th Pct: 28mph
- Ped/bike/transit facilities: On-street bike lanes along 13th St
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

13th St, 35th Ave to 23rd Ave (ID 1-10)



Existing Characteristics

- 35th Ave to 30th Ave: Major Collector, 3-lane cross section
- 30th Ave to 28th Ave: Local Road, 3-lane cross section
- 28th Ave to 23rd Ave: Major Collector, 3-lane cross section
- ADT: 2680-3280vpd
- Posted speed limit: 30mph
- School Zone from 28th Ave to 30th Ave with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 21-39mph, 95th Pct: 26-43mph
- Ped/bike/transit facilities: On-street bike lanes
- 2 bus stops at 35th Ave (Route 3)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment from 30th Ave to 26th Ave is on HIN
- HRN Status: Moderate risk
- Total Crashes: 41
- Fatalities: 1 (2020)
- Serious Injuries: 1 (2022)

Vision Zero Recommendations

- Paint and post to create far right protected bike lane
- Paint and post bulb-outs and median refuge crossings with high-visibility crosswalks

Observations

- Witnessed vehicles making a tight WB to SB left turn if no vehicle was in the inside SB lane. If vehicle stopped in inside left lane, vehicles making WB to SB left turn will take a wider turn. Hardening of SB left turn will be beneficial.
- Possible location for a mini-roundabout at 31st Ave - would need to be elongated to account for intersection skew. Did not witness a lot of traffic coming from or going to 31st Ave. If mini-roundabout is being recommended for speed reduction, chicanes may be a better option
- School crossing location at 30th Ave - would be a good location for bulb-outs
- WB crossing sign at 30th Ave is installed at the stop bar
- Lose bike lane at 28th Ave intersection - depending on volumes, right turn lane may not be needed
- Existing grates in the gutter at 26th Ave and 27th Ave
- Segment between 14th Ave and 35th Ave would be a good candidate for parking protected bike lanes

Revised Recommendations

- Paint and post protected corners at 30th Ave
- Modify lane configuration to improve lane delineation between 28th Ave and 35th Ave
- Install RRFBs at 30th Ave school west leg crossing

13th St and 28th Ave (ID 1-10A)



Existing Characteristics

- Signalized
- 13th St: Major Collector, 3-lane cross section
- 28th Ave: Major Collector, 3-lane cross section
- ADT: 13th St=2600-3000vpd, 28th Ave=2200-2700vpd
- Posted speed limit: 13th St=35mph(E) and 20mph(W), 28th Ave=35mph
- Observed speeds: North leg - 85th Pct: 23mph, 95th Pct: 28mph
- South leg - 85th Pct: 27mph, 95th Pct: 30mph
- West leg - 85th Pct: 30mph, 95th Pct: 34mph
- East leg - 85th Pct: 29mph, 95th Pct: 33mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 13th St and 28th Ave
- Total Crashes: 3
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Lose bike lane at 28th Ave intersection - depending on volumes, right turn lane may not be needed
- Median refuge is not needed due to signalization

Revised Recommendations

- Paint and post protected corners

13th St and 31st Ave (ID 1-10B)



- HRN Status: Moderate risk along 13th St, low risk along 31st Ave
- Total Crashes: 3
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Possible location for a mini-roundabout - would need to be elongated to account for intersection skew

Revised Recommendations

- Install mini-roundabout

Existing Characteristics

- Unsignalized, 2-way stop control
- 13th St: Major Collector, 3-lane cross section
- 31st Ave: Local Road, 2-lane cross section
- ADT: 13th St=2600-2700vpd, 31st Ave=40-75vpd
- Posted speed limit: 35mph
- Observed speeds: West leg - 85th Pct: 38mph, 95th Pct: 42mph
- East leg - 85th Pct: 35mph, 95th Pct: 38mph
- Ped/bike/transit facilities: On-street bike lanes along 13th St
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN

13th St and 35th Ave (ID 1-10C)



Existing Characteristics

- Signalized
- 13th St: Major Collector, 3-lane cross section
- 35th Ave: Major Arterial, 5-lane cross section
- ADT: 35th Ave=15000vpd, 13th St=2000vpd
- Posted speed limit: 30mph
- Observed speeds: North leg - 85th Pct: 41mph, 95th Pct: 44mph
- South leg - 85th Pct: 41mph, 95th Pct: 44mph
- East leg - 85th Pct: 21mph, 95th Pct: 26mph
- Ped/bike/transit facilities: On-street bike lanes along 13th St
- 2 bus stops at 35th Ave (Route 3)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 13th St, high risk along 35th Ave
- Total Crashes: 9
- Fatalities: 1 (2020)
- Serious Injuries: 0

Vision Zero Recommendations

- Paint and post median refuge and left turn hardening on south leg of intersection

Observations

- Witnessed vehicles making a tight WB to SB left turn if no vehicle was in the inside SB lane. If vehicle stopped in inside left lane, vehicles making WB to SB left turn will take a wider turn. Hardening of SB left turn will be beneficial.

Revised Recommendations

- Install centerline hardening to southbound left turn

35th Ave, 4th St to 10th St (ID 1-11)



Existing Characteristics

- Major Arterial, 4-lane cross section
- ADT: 8000-9000vpd
- Posted speed limit: 40mph
- School Zone from 7thSt to 9th St with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 23-41mph, 95th Pct: 29-44mph
- Ped/bike/transit facilities: On/Off-street shared use path
- 2 Bus Stops at 5th St (Route 3)
- 2 Bus Stops at 7th St (Route 3)
- 2 Bus Stops at 10th St (Route 3)
- Land use: Residential, Commercial
- Pavement rehab projects: Overlay (2025) - east leg at 6th St
- Overlay (2026) - east leg at 7th St/31st Ave
- Areas of persistent poverty: Possible high poverty area

Crash Data

- Segment is on HIN
- HRN Status: High risk
- Total Crashes: 74
- Fatalities: 0
- Serious Injuries: 2 (2014 and 2018)

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane cross section with bike lane

Observations

- North of 4th St is widened to accommodate 4 lanes with TWLTL and bike lanes. Speed limit on this segment increases to 45 MPH - good candidate for speed feedback signs
- Homes front 35th Ave along the west side within segment
- High existing AADT includes heavy trucks along this segment
- SB outside lane is wide and can accommodate on-street parking
- Suggest reducing lane widths to accommodate striped bike lane while maintaining 4 lanes to be consistent with segment to the south and north
- Existing HAWK at 8th St
- Bus and parent pickup/drop-off entrance at 9th St

Revised Recommendations

- Install southbound speed feedback sign north of W 6th St
- Install northbound speed feedback sign south of W 6th St
- Modify lane configuration to improve lane delineation

4th Street and Greeley #3 Canal Trail (west of 26th Ave) (ID 1-12)



- HRN Status: Moderate risk along 4th St, low risk along 26th Ave
- Total Crashes: 6
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- RRFBs
- Paint and post bulb-outs

Observations

- There is an existing HAWK at this location and an RRFB is not needed

Revised Recommendations

- Paint and post protected corners

Existing Characteristics

- Unsignalized, 2-way stop control
- 4th St: Minor Arterial, 2-lane cross section
- 26th Ave: Local Road, 2-lane cross section
- ADT: 7200vpd
- Posted speed limit: School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 37mph, 95th Pct: 40mph
- Ped/bike/transit facilities: On-street bike lanes along 4th St
- Canal #3/Broadview Acres Trail crossing 4th St
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- Intersection is not on HIN

4th St and 25th Ave (ID 1-13)



- HRN Status: Moderate risk along 4th St, low risk along 25th Ave
- Total Crashes: 1
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Existing light pole on NWC with mast arm aimed diagonally into the intersection
- Missing sidewalk on south side of street, east of crosswalk
- Existing school flasher may be a good location for a speed feedback sign

Revised Recommendations

- Install westbound speed feedback sign east of intersection
- Install eastbound speed feedback sign west of intersection
- Paint and post protected corners
- Install W2-2 warning sign for Boys and Girls Club driveway

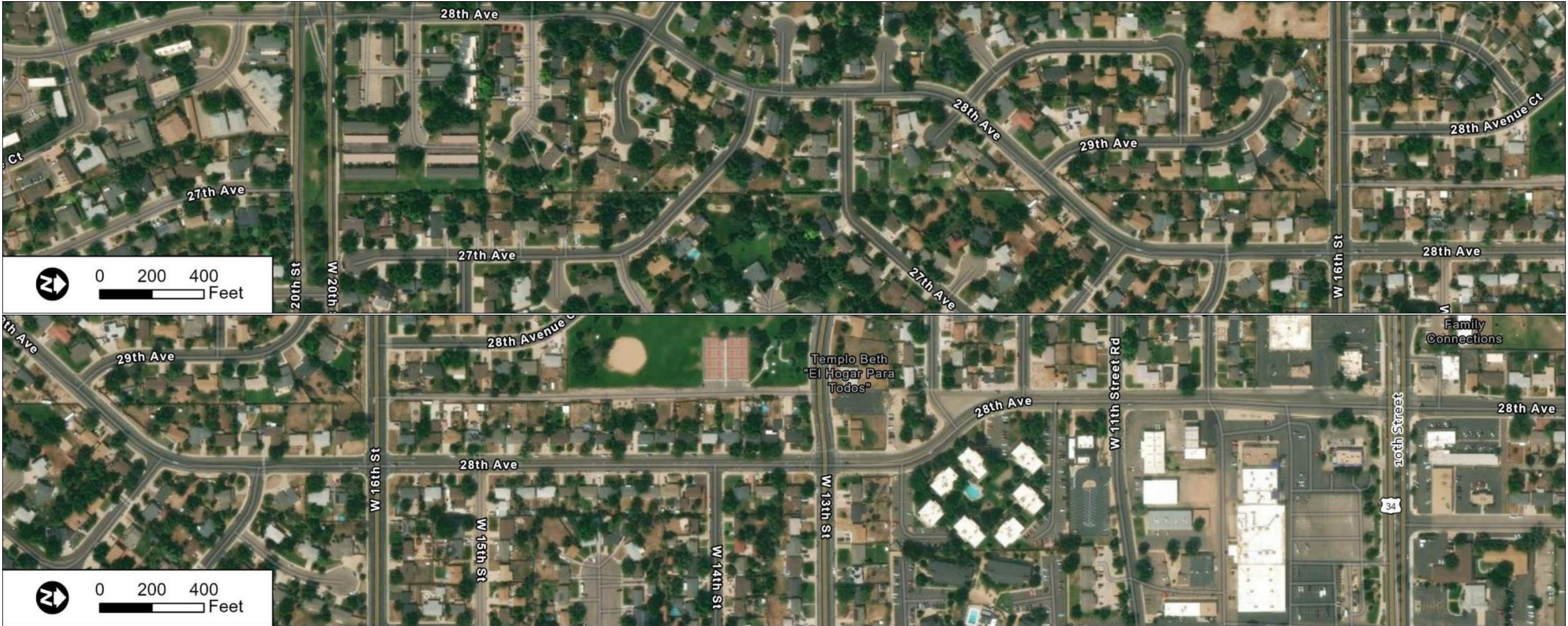
Existing Characteristics

- Unsignalized, 2-way stop control
- 4th St: Minor Arterial, 2-lane cross section
- 25th Ave: Local Road, 2-lane cross section
- ADT: 4th St=7000-7500vpd, 25th Ave=756vpd
- Posted speed limit: School Zone Speed Limit of 20mph; 30 mph outside of school zone
- Observed speeds: 86th Pct: 39mph, 95th Pct: 44mph
- Ped/bike/transit facilities: On-street bike lanes along 4th St
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- Intersection is not on HIN

28th Ave, 10th St to 20th St (ID 1-14)



Existing Characteristics

- Major Collector, 3-lane cross section from 10th St to 16th St, 2-lane cross section from 16th St to 20th St
- ADT: 1700-2400vpd
- Posted speed limit: 10th St to 11th St Rd=20mph, Rest 35mph
- Observed speeds: 85th Pct: 19-36mph, 95th Pct: 25-41mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk
- Total Crashes: 31
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations



Observations

- Corridor widens just after 10th St only to narrow down again - recommend restriping for right-turn lane into development and remove 2 lanes
- Suggest speed feedback signs prior to curve at 12th St
- Recommend buffering the bike lane adjacent to the reverse curve near 12th St Rd
- Potentially narrow lane width and median width south of 12 St Rd to widen existing bike lane
- Potentially remove right turn lane at 13th St so bike lane can be carried through the intersection

- High-visibility crosswalks exist crossing 13th St but crosswalk striping crossing 28th Ave seems more spread out
- Lose bike lane at 16th St and 20th St intersections

Revised Recommendations

- Install northbound and southbound speed feedback signs approaching curves near 12th St Rd
- Modify lane configuration to remove on-street parking and improve lane delineation between 10th St and 13th St

16th St, 35th Ave to 23rd Ave (ID 1-15)



Existing Characteristics

- Minor Arterial, 4-lane cross section
- ADT: 8200-9000vpd
- Posted speed limit: 30mph
- School Zone from 23rd Ave to 25th Ave with School Zone Speed Limit of 20mph
- School Zone from 29th Ave to 33rd Ave with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 26-40mph, 95th Pct: 32-43mph
- Ped/bike/transit facilities: On-street bike lanes from 35th Ave to west of 25th Ave
- On/Off-street bike lanes/shared use path from west of 25th Ave to 25th Ave
- On/Off-street shared use path from 25th Ave to 23rd Ave
- 2 bus stops at 35th Ave (Route 3)
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: Overlay (2026) - south leg at 23rd Ave
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment from 35th Ave to 30th Ave and 27th Ave to 23rd Ave is on HIN
- HRN Status: Moderate risk
- Total Crashes: 65
- Fatalities: 0
- Serious Injuries: 3 (2014, 2018, and 2022)

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane cross section with delineator-protected bike lanes

- Traffic signal improvements (left turn phasing and bike signal) at 28th Ave

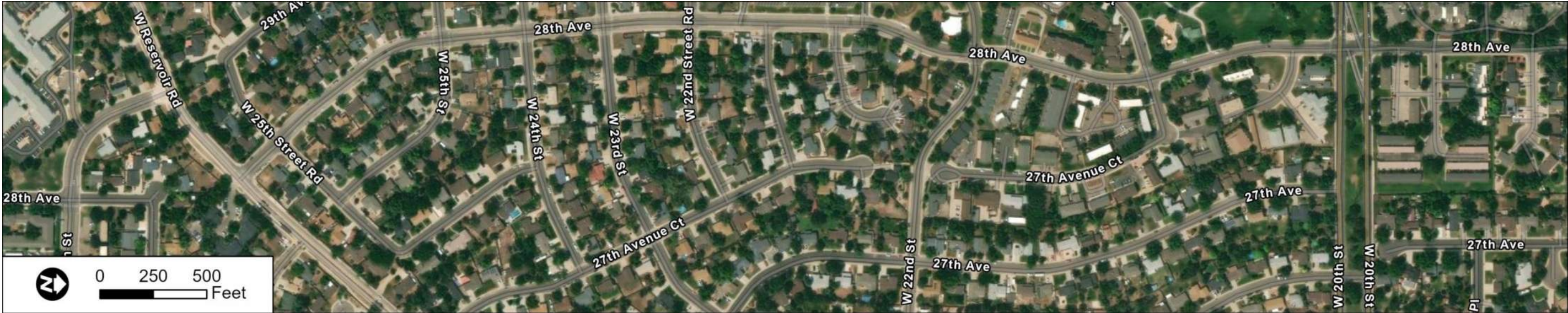
Observations

- East of 35th Ave, corridor has high volumes that are expected to increase with new developments to the west. Hospital and high school are located to the east. Lane reduction is not recommended. Reduced lane widths with delineator-protected bikes lanes is more appropriate.
- Possible raised crosswalk location at 31st Ave - existing light on the NWC
- Speeding concerns between 30th Ave and 29th Ave Ct
- Vertical change from 35th Ave to 29th Ave
- Lose bike lane at 28th Ave intersection - depending on volumes, right turn lane may not be needed
- Bike lane ends west of 25th Ave and transitions to widened sidewalk and asphalt path - recommend adding markings or signage to inform bicyclists
- Witnessed students crossing 23rd Ave intersection diagonally to get from bus stop to school. Also witnessed pedestrians become impatient and cross against the light.
- Consider extending school zone east across the intersection at 23rd Ave

Revised Recommendations

- Modify lane configuration to improve lane delineation
- Extend school zone
- Install signage and markings to transition bicyclists from bike lane to path near 25th Ave
- Install eastbound speed feedback sign east of 42nd Ave Ct
- Install westbound speed feedback

28th Ave, 20th St to Reservoir Rd (ID 1-16)



Existing Characteristics

- Major Collector, 2-lane cross section
- ADT: 700-1500vpd
- Posted speed limit: 30mph
- School Zone from 20th St to 22nd St Rd with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 16-35mph, 95th Pct: 22-39mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk from 20th St to W 25th St, low risk from W 25th St to Reservoir Rd
- Total Crashes: 9
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Bulb outs at select intersections near Meeker Elementary and the Montessori Academy

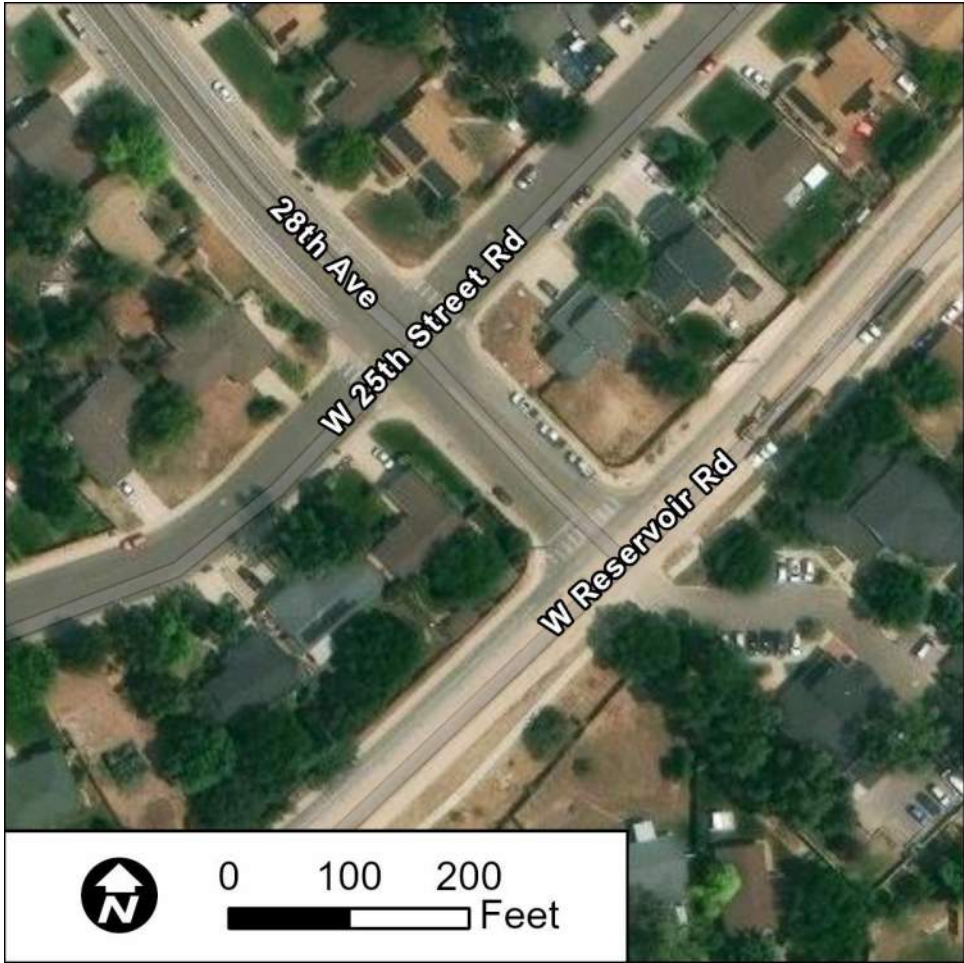
Observations

- Loose bike lane at 20th St intersection
- Sharrows throughout corridor
- 28th Ave is used as a cut through to avoid 35th Ave or 23rd Ave - there are speeding issues and the corridor is a good candidate for parking protected bike lanes
- School-manned crosswalk at W 22nd St Dr - City is planning on installed a raised crosswalk in late summer 2025
- Parents make U-turns at W 22nd St Ln - use delineators to narrow lane width
- Need to determine if crosswalk at W 23rd St is used and manned by the school - may need to extend school zone
- Sight visibility issues due to property fences on both side of the road at Reservoir Rd.
- Need to determine how much Stephen's Farm residents use crosswalks across Reservoir Rd.
- Mini roundabout can help 28th Ave right turn movement at Reservoir Rd, but need to determine pedestrian volumes as well as how to manage bike lane.
- RRFB may be utilized for Reservoir Rd crossing.
- There are existing speeding issues along Reservoir Rd, so speed feedback signs east of 28th Ave is worth looking into.

Revised Recommendations

- Modify lane configuration to improve lane delineation where on-street parking can be removed
- Paint and post protected corners at 22nd St Ln
- Extend school zone to the south
- Install RRFBs and pedestrian push button post at 22nd St Dr school crossing on sout

28th Ave and Reservoir Rd (ID 1-16A)



Existing Characteristics

- Unsignalized, 2-way stop control
- 28th Ave: Major Collector, 2-lane cross section
- Reservoir Rd: Minor Collector, 2-lane cross section
- ADT: 28th Ave=720vpd, Reservoir Rd=2300vpd
- Posted speed limit: 30mph
- Observed speeds: NW leg - 85th Pct: 18mph, 95th Pct: 22mph
- NE leg - 85th Pct: 39mph, 95th Pct: 44mph
- SW leg - 85th Pct: 34mph, 95th Pct: 37mph
- Ped/bike/transit facilities: On-street bike lanes on all 3 legs
- Reservoir Trail along Reservoir Rd
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 28th St and Reservoir Rd
- Total Crashes: 1
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Sight visibility issues due to property fences on both side of the road.
- Need to determine how much Stephen's Farm residents use crosswalks across Reservoir Rd.
- Mini roundabout can help 28th Ave right turn movement, but need to determine pedestrian volumes as well as how to manage bike lane.
- RRFB may be utilized for Reservoir Rd crossing.
- There are existing speeding issues along Reservoir Rd, so speed feedback signs east of 28th Ave is worth looking into.

Revised Recommendations

- Install RRFBs and pedestrian push button post at Reservoir Rd crossing on northeast leg

22nd St, 35th Ave to 28th Ave (ID 1-17)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 1800vpd
- Posted speed limit: School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 18-42mph, 95th Pct: 24-46mph
- Ped/bike/transit facilities: On/Off-street bike lanes/shared use path
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total Crashes: 19
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Paint and post lane reconfiguration

Observations

- Propose removing on-street parking where homes are not facing the road and replace with buffered bike lanes
- Greeley West High School and full-service grocery store create bike demand
- Residents have requested a raised crosswalk at Mountair Ln - no ramp on the north side
- Between Mountair Ln and 28th Ave Ct is a hill crest with no marked bike lanes - vertical elevation changes are challenging for bikes to manage within the travel lane
- There is a fence opening for students to exit school between Mountair Ln and 28th Ave Ct but no crosswalk location
- Crosswalk is removed at 28th Ave Ct
- Sharrows throughout the corridor

Revised Recommendations

- Install high-visibility crosswalk and crossing signs between Mountair Ln and 28th Ave Ct (requires new ADA ramps)
- Modify lane configuration to improve lane delineation

Reservoir Rd, 27th St to 28th Ave (ID 1-18)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 2680vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 34mph, 95th Pct: 37mph
- Ped/bike/transit facilities: On-street bike lanes
- Reservoir Trail
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total Crashes: 1
- Fatalities: 0

- Serious Injuries: 0

Vision Zero Recommendations

- Restripe to 10-11 foot lanes, add posts

Observations

- Sight visibility issues due to property fences on both side of the road.
- Need to determine how much Stephen's Farm residents use crosswalks across Reservoir Rd.
- Mini roundabout can help 28th Ave right turn movement, but need to determine pedestrian volumes as well as how to manage bike lane.
- RRFB may be utilized for Reservoir Rd crossing.
- There are existing speeding issues along Reservoir Rd, so speed feedback signs east of 28th Ave is worth looking into.

Revised Recommendations

- Install eastbound and westbound speed feedback signs on Reservoir Rd east of 28th Ave

17th Ave and 29th St Rd (ID 1-19)



- HRN Status: Moderate risk along 17th Ave, low risk along 29th St Rd
- Total Crashes: 1
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Install crossing at entrance to Copper Platte rather than at 29th St once ADA ramps are installed. New apartments have been constructed and students can access UNC via underpass at 15th Ave Ct. This location is also at a crest of the hill.
- Hwy 34 bypass is southern boundary for SPIN.

Revised Recommendations

- Eliminate project location

Existing Characteristics

- Unsignalized, 2-way stop control
- 17th Ave: Major Collector, 2-lane cross section
- 29th St Rd: Local Road, 2-lane cross section
- ADT: 17th Ave=4700-4800vpd, 29th St Rd=52vpd
- Posted speed limit: 30mph
- Observed speeds: North leg - 85th Pct: 38mph, 95th Pct: 41mph
- South leg - 85th Pct: 38mph, 95th Pct: 42mph
- Ped/bike/transit facilities: On-street bike lanes along 17th Ave
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

17th Ave and 30th St Rd (ID 1-20)



Existing Characteristics

- Unsignalized, 2-way stop control
- 17th Ave: Major Collector, 3-lane cross section
- 30th St: Local Road, 2-lane cross section
- ADT: 17th Ave=4200-4400vpd, 30th St Rd=35vpd
- Posted speed limit: 30th St Rd=20mph, 17th Ave=30mph
- Observed speeds: North leg - 85th Pct: 37mph, 95th Pct: 41mph
- South leg - 85th Pct: 37mph, 95th Pct: 41mph
- Ped/bike/transit facilities: On-street bike lanes along 17th Ave
- 2 Bus Stops at 30th St (Route 5)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 17th Ave, low risk along 30th St Rd
- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs

Observations

- Team looked at 30th St since packet stated 30th St, not 30th St Rd.
- Possibly candidate for mini roundabout
- Bike lanes exist south of intersection
- Can remove existing SB RTL with mini roundabout;
- There is transit that come from the south and turn and head west on 30th St Rd, need to make sure transit vehicles can operate through roundabout.
- City did say that transit route will be relocated within the next 2 years.

Revised Recommendations

- Paint and post protected corners
- Install speed table between 30th St and 30th St Rd

1st Ave, 18th St to 31st St (ID 1-21)



Existing Characteristics

- Major Collector, 5-lane cross section
- ADT: 2800-5200vpd
- Posted speed limit: 30mph
- School Zone from 25th St to 26th St with School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 26-47mph, 95th Pct: 31-52mph
- Ped/bike/transit facilities: On/Off-street shared use path
- 2 Bus Stops at 23rd St (Route 2)
- 2 Bus Stops at Boys and Girls Club (Route 2)
- 2 Bus Stops at 26th St (Route 2)

- 2 Bus Stops at 29th St (Route 2)
- 2 Bus Stops at 30th St (Route 2)
- Land use: Residential, Commercial, Industrial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- Segment from 18th St to 22nd St is on HIN
- HRN Status: Moderate risk



- Total Crashes: 27
- Fatalities: 2 (2016 and 2022)
- Serious Injuries: 3 (2014, 2019, and 2022)

Vision Zero Recommendations

- Paint and post of 4-lane to 3-lane cross section with delineator-protected bike lanes

Observations

- North of 18th St there is a 3-lane cross section with bike lanes and parking

- There is a long green time at E 22nd St to reduce back ups on US 85 - need to make sure 1st Ave can operate with 1 lane in each direction
- Near E 26th St Rd: school zone; future regional active transportation improvements planned in the area; current need for bike lanes due to low car ownership rates in the area; buffer are needed for bike lanes due to heavy vehicle traffic
- 28th St is the only access for the community south of the highway

Revised Recommendations

- Modify lane configuration from a 5-lane to a 3-lane cross section

20th St, Alpine Ave to Balsam Ave (ID 1-22)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 500vpd
- Posted speed limit: School Zone Speed Limit of 20mph
- Observed speeds: 85th Pct: 15-26mph, 95th Pct: 19-30mph
- Ped/bike/transit facilities: On-street shared lanes/bike lanes
- Connection to subdivision trail west of Balsam Ave
- Land use: Residential, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total Crashes: 0
- Fatalities: 0

- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Bulb-outs would be good at Alpine Ave
- Add a speed bump near Alpine Ave
- Add a raised crosswalk between Alpine Ave and Balsam Ave

Revised Recommendations

- Paint and post curb extensions at Alpine Ave intersection
- Install speed hump near Alpine Ave
- Install raised crosswalk between Alpine Ave and Balsam Ave

Residential (Alpine Ave/22nd St/Aspen Ave/24th St) (ID 1-23)



Existing Characteristics

- 24th St/22nd St: Minor Collector, 2-lane cross section
- All other roadways: Local Road, 2-lane cross section
- ADT: 22nd St=2000vpd, 24th St=<1000vpd, Alpine Ave=35vpd
- Posted speed limit: 22nd St and 24th St=35mph, Rest=20mph
- Observed speeds: 85th Pct: 27mph, 95th Pct: 30-31mph
- Ped/bike/transit facilities: 22nd St: On-street bike lanes, connection to subdivision trail near Apple Ave
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- No segments on HIN
- HRN Status: Low risk
- Total Crashes: 3
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Potential speed hump location at 22nd St and Apricot Ave
- Warning sign at 22nd St and Apple Ave is blocked by a tree
- Existing crosswalk at 22nd St and Apple Ave could be improved with a high-visibility crosswalk
- Potential all-way stop location at 23rd St Rd and Alpine Ave
- Opportunity to improve stop sign visibility at 23rd St Rd and Aspen Ave
- Missing ramp and crosswalk markings for crosswalk sign at 24th St and 1st Ave
- No sidewalk on the south side at 24th St and 1st Ave
- Stop sign is not visible at E 23rd St
- Existing raised crosswalk at 24th St and Alpine Ave works well

Revised Recommendations

- Install speed table on 22nd St between Ash Ave and Apricot Ave
- Enhance sign visibility with reflective posts at 22nd St and Apple Ave, 23rd St Rd and Aspen Ave, and Aspen Ave and E 23rd St
- Install high-visibility crosswalk at 22nd St and Apple Ave on east

24th St and Balsam Ave (ID 1-24)



Existing Characteristics

- Unsignalized, all-way stop control
- 24th St: Minor Collector, 2-lane cross section
- Balsam Ave: Minor Collector, 2-lane cross section
- ADT: 24th St=900-1600vpd, Balsam Ave=225-1000vpd
- Posted speed limit: 24th St=30mph(E) and 35mph(W), Balsam Ave=30mph(N) and 35mph(S)
- Observed speeds: North leg - 85th Pct: 16mph, 95th Pct: 20mph
- South leg - 85th Pct: 22mph, 95th Pct: 27mph
- West leg - 85th Pct: 21mph, 95th Pct: 24mph
- East leg - 85th Pct: 27mph, 95th Pct: 30mph
- Ped/bike/transit facilities: On/Off-street bike lanes/shared use path on north and east legs
- On/Off-street shared use path on south leg
- Land use: Residential, Conservation District
- Pavement rehab projects: None

- Areas of persistent poverty: Possible high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 24th St and Balsam Ave
- Total Crashes: 2
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Bulb-outs are a possibility
- Removing left turns may enhance the protected intersection option

Revised Recommendations

- Paint and post curb extensions

26th St and Ash Ave (ID 1-25)



- HRN Status: Low risk along 26th St and Ash Ave
- Total Crashes: 1
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Raised crosswalk is a good possibility
- Sign visibility issues - possibly add mountain sign to back of sign on south side

Revised Recommendations

- Install raised crosswalk on east leg
- Install RRFBs on east leg

Existing Characteristics

- Unsignalized, 2-way stop control
- 26th St: Local Road, 2-lane cross section
- Ash Ave: Local Road, 2-lane cross section
- ADT: 26th St=430-900vpd, Ash Ave=136vpd
- Posted speed limit: School Zone Speed Limit of 20mph
- Observed speeds: North leg - 85th Pct: 18mph, 95th Pct: 21mph
- West leg - 85th Pct: 27mph, 95th Pct: 30mph
- Ped/bike/transit facilities: On-street bike lanes along 26th St
- Land use: Residential, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- Intersection is not on HIN

13th Ave, 2nd St to 9th St (ID 2-1)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 20vpd
- Posted speed limit: 20mph
- Observed speeds: 85th Pct: 18mph, 95th Pct: 20mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, Commercial, Industrial
- Pavement rehab projects: Rejuvenate (2025) - 2nd St to 5th St; 6th St to 9th St; along 3rd St, 4th St, and 6th St
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk

- Total crashes: 11
- Fatalities (K): 0
- Serious Injuries (A): 1 (2022)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- High crowns on 13th Avenue, would be dangerous for bikes to ride closer to the curbs.
- Angled parking on some blocks
- Missing crosswalk markings and signage on uncontrolled crosswalks.

Revised Recommendations

- No segment improvement recommended. Refer to Project 2-1A for intersection improvements.

13th Ave and 5th St (ID 2-1A)



- HRN Status: Low risk along 13th Ave, moderate risk along 5th St
- Total crashes: 3
- Fatalities (K): 0
- Serious Injuries (A): 1 (2022)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Missing crosswalk markings and signage on uncontrolled crosswalks

Revised Recommendations

- Install high-visibility crosswalks on north, south, and west legs
- Install crossing signs on west leg

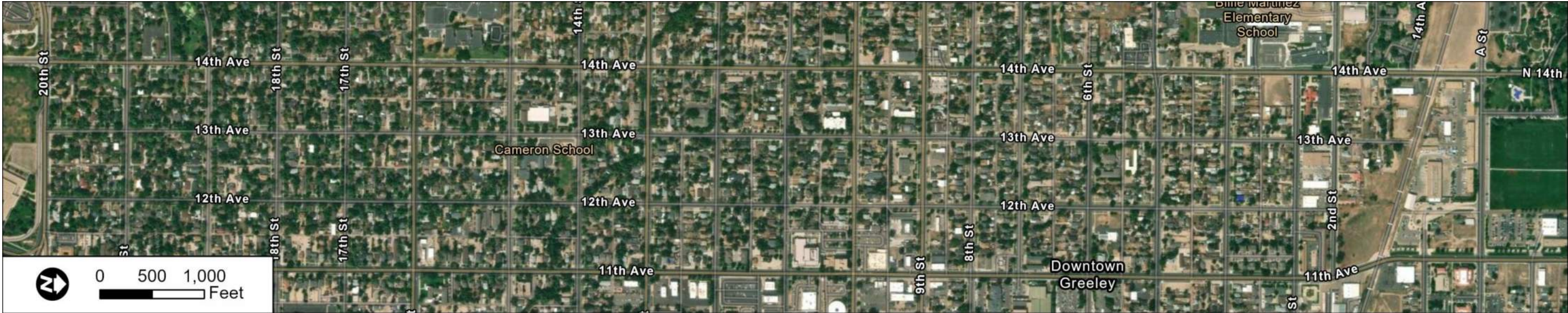
Existing Characteristics

- Unsignalized, 2-way stop control
- 13th Ave: Local Road, 2-lane cross section
- 5th St: Minor Arterial, 3-lane cross section
- ADT: 13th Ave=20vpd, 5th St=4800vpd
- Posted speed limit: 13th Ave=20mph, 5th St=35mph
- Observed speeds: West leg - 85th Pct: 33mph, 95th Pct: 35mph
- East leg - 85th Pct: 32mph, 95th Pct: 35mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- Land use: Residential
- Pavement rehab projects: Rejuvenate (2025) - north leg
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

12th Ave, 2nd St to 20th St (ID 2-2)



Existing Characteristics

- Local Road, 2-lane cross section (unstriped north of 8th St)
- ADT: 2-180vpd
- Posted speed limit: 20mph
- Observed speeds: 85th Pct: 16mph, 95th Pct: 19mph
- Ped/bike/transit facilities: On-street bike lanes from 8th St to 11th St and Cranford Pl to 20th St
- Land use: Residential, Commercial, Industrial, PUD
- Pavement rehab projects: Rejuvenate (2025) - 5th St to 9th St; 10th St to 13th St; along 3rd St, 4th St, 6th St, 17th St, and 18th St
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total crashes: 30
- Fatalities (K): 0
- Serious Injuries (A): 1 (2017)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Severe crown at 12th St - speed tables are not feasible except for on the east leg, no bike lanes
- 12th St intersection is a good candidate for a mini-roundabout
- 15th St has drainage issues at the curb returns
- It is highly uncomfortable to cross 16th St without markings
- Could do speed tables at 18th St due to minimal crown
- Dip sign is missing for westbound direction at 18th St
- Consider angled parking instead of adding a bike lane near 18th St
- Crosswalks are unmarked at Cranford Pl - speed tables would be beneficial here
- Resident information received at 19th St intersection - preference for all-way stop control and preference for armadillos over flex posts
- 19th St may be a good location for a mini-roundabout
- Bike lane swap at 19th St might work
- A trail is planned along the #3 Ditch in this area in the next 10-20 years. 12th Ave and 14th St may be a future trail crossing.

Revised Recommendations

- Install mini-roundabout at 12th St and 19th St
- Install raised crosswalks at 8th St (east leg), 18th St (west leg), and Cranford Pl (west leg)
- Install high-visibility crosswalk and crossing signs at 16th St on east leg

8th St, 16th Ave to 10th Ave (ID 2-3)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 200-300vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 15-26mph, 95th Pct: 18-32mph
- Ped/bike/transit facilities: On-street bike lanes
- 2 bus stops at 11th Ave (Poudre Express)
- 2 bus stops at 10th Ave (Routes 1 and 5)
- Land use: Residential, Commercial
- Pavement rehab projects: Rejuvenate (2025) - along 16th Ave, 15th Ave, 13th Ave, and 12th Ave
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 14th Ave to 10th Ave is on HIN
- HRN Status: Low risk
- Total crashes: 23
- Fatalities (K): 0
- Serious Injuries (A): 1 (2015)

Vision Zero Recommendations

- Paint and post intersection bulb-outs

- Speed tables

Observations

- Missing crosswalk markings at 16th Ave
- Existing dip on 16th Ave
- Bulb-outs are possible at 16th Ave
- Buffered bike lane at 15th Ave Ct - probably doesn't need bulb-outs or speed tables
- 14th Ave intersection has existing bulb-out and LED stop signs
- 13th Ave intersection would be ok for raised crosswalks on the north and east legs
- Missing stop bars and high-visibility crosswalk at 13th Ave
- 12th Ave has no markings and is relatively flat - consider speed tables
- A mini-roundabout is not feasible at 11th Ave due to transit, bike lanes, and number of travel lanes
- Consider bulb-outs or median refuge at 11th Ave
- Bulb-outs are not recommended at 10th Ave due to the existing bus stop

Revised Recommendations

- Install high-visibility crosswalks and stop bars at 16th Ave (east and west legs) and 12th Ave (north and south legs)
- Paint and post protected corners at 16th Ave
- Install raised crosswalks at 13th Ave on east leg

8th St and 11th Ave (ID 2-3A)



Existing Characteristics

- Unsignalized, 2-way stop control
- 8th St: Minor Collector, 2-lane cross section
- 11th Ave: Minor Arterial, 4-lane cross section
- ADT: 8th St=270vpd, 11th Ave=4800vpd
- Posted speed limit: 8th St=35mph, 11th Ave=20mph
- Observed speeds: North leg - 85th Pct: 31mph, 95th Pct: 34mph
- South leg - 85th Pct: 29mph, 95th Pct: 32mph
- West leg - 85th Pct: 21mph, 95th Pct: 22mph
- East leg - 85th Pct: 15mph, 95th Pct: 18mph
- Ped/bike/transit facilities: On-street bike lanes along 8th St
- Poudre Express route along 11th Ave (2 bus stops at intersection)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 8th St, high risk along 11th Ave
- Total crashes: 11
- Fatalities (K): 0
- Serious Injuries (A): 1 (2015)

Vision Zero Recommendations

- Paint and post intersection bulb-outs

Observations

- A mini-roundabout is not feasible due to transit, bike lanes, and number of travel lanes
- Consider bulb-outs or median refuge

Revised Recommendations

- Paint and post protected corners

9th St and 18th Ave (ID 2-4)



- HRN Status: High risk along 9th St, low risk along 18th Ave
- Total crashes: 11
- Fatalities (K): 0
- Serious Injuries (A): 2 (2014 and 2016)

Vision Zero Recommendations

- Paint and post intersection bulb-outs

Observations

- Bulb-outs are not appropriate at this locations
- Existing bus stop and no crosswalk
- Future HAWK may be appropriate

Revised Recommendations

- Eliminate project location

Existing Characteristics

- Unsignalized, 2-way stop control
- 9th St: Major Arterial, 3 lanes (one way)
- 18th Ave: Local Road, 2-lane cross section
- ADT: 9th St=6000vpd, 18th Ave=200-450vpd
- Posted speed limit: E 9th St=40mph, W 9th St=35mph, 18th Ave=20mph
- Observed speeds: West leg - 85th Pct: 41mph, 95th Pct: 44mph
- East leg - 85th Pct: 41mph, 95th Pct: 45mph
- Ped/bike/transit facilities: 1 Bus Stop at the intersection (Route 1)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

9th St and 21st Ave (ID 2-4A)



Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 9th St, low risk along 21st Ave
- Total crashes: 4
- Fatalities (K): 0
- Serious Injuries (A): 1 (2020)

Vision Zero Recommendations

- Paint and post intersection bulb-outs

Observations

- Might be a good HAWK location
- Existing RRFBs are present but there is a major speed problem along 9th St
- A trail is planned along the #3 Ditch west of 21st Ave in the next 10-20 years.

Revised Recommendations

- Eliminate project location

Existing Characteristics

- Unsignalized, 2-way stop control
- 10th St: Major Arterial, 3 lanes (one way)
- 21st Ave: Minor Collector, 2-lane cross section
- ADT: 9th St=6500vpd, 21st Ave=470vpd
- Posted speed limit: 9th St=40mph, 21st Ave=35mph
- Observed speeds: North leg - 85th Pct: 17mph, 95th Pct: 27mph
- South leg - 85th Pct: 17mph, 95th Pct: 27mph
- West leg - 85th Pct: 40mph, 95th Pct: 44mph
- East leg - 85th Pct: 40mph, 95th Pct: 44mph
- Ped/bike/transit facilities: Shared lanes along 21st Ave
- 1 Bus Stop at the intersection (Route 1)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

11th St, 19th Ave to 11th Ave (ID 2-5)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 50-150vpd
- Posted speed limit: 30mph
- Observed speeds: No data
- Ped/bike/transit facilities: On-street bike lanes from 13th Ave to 11th Ave
- Land use: Residential, Commercial
- Pavement rehab projects: Rejuvenate (2025) - along 12th Ave
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 18th Ave to 11th Ave is on HIN
- HRN Status: Low risk
- Total crashes: 24
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Add striping to narrow travel lanes and buffer bike lanes

- Stripe bike lane from 13th to 14th
- Paint and post bulb-outs at intersections

Observations

- Consider adding an LPI at 11th Ave
- Existing minor bulb-out at 11th Ave
- Add high-visibility crosswalks and bulb-outs at 12th Ave
- Missing markings at 13th Ave
- Bulb-outs would be better than a mini-roundabout due to bike lanes and moderate crown at 13th Ave
- Minimal opportunity west of 14th Ave due to narrow road width - maybe add centerline striping
- A striped bike lane makes sense at 14th Ave
- Minimal opportunity at 18th Ave - maybe stripe the centerline to 19th Ave
- A trail is planned along the #3 Ditch east of 18th Ave in the next 10-20 years.

Revised Recommendations

- Install high-visibility crosswalks at 12th Ave on north, south, and east legs
- Paint and post protected corners at 12th Ave
- Modify lane configuration to improve lane delineation between 14th Ave and 13th Ave
- Install centerline hardening at reverse curve ne

11th St and 13th Ave (ID 2-5A)



- HRN Status: Low risk along 11th St and 13th Ave
- Total crashes: 4
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Missing markings
- Bulb-outs would be better than a mini-roundabout due to bike lanes and moderate crown

Revised Recommendations

- Install high-visibility crosswalks on north, south, and east legs
- Install stop bars on north and south legs
- Paint and post protected corners

Existing Characteristics

- Unsignalized, 2-way stop control
- 11th St: Local Road, 2-lane cross section
- 13th Ave: Local Road, 2-lane cross section
- ADT: 11th St=141vpd, 13th Ave=56vpd
- Posted speed limit: 20mph
- Observed speeds: No data
- Ped/bike/transit facilities: On-street bike lanes on north, east, and south legs
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

11th St, 11th Ave to 9th Ave (ID 2-6)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 300vpd
- Posted speed limit: 20mph
- Observed speeds: No data
- Ped/bike/transit facilities: On-street bike lanes from 11th Ave to 9th Ave
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Low risk
- Total crashes: 10
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Restriping to narrow travel lanes and buffer bike lanes
- Paint and post bulb-outs at 9th Ave and 11th Ave

Observations

- Only three intersections along the segment
- Consider adding an LPI at 11th Ave
- Existing minor bulb-out at 11th Ave
- Existing bulb-outs at 10th Ave but missing warning signs
- Significant crown at 9th Ave
- Lane drop with no signs near 9th Ave

Revised Recommendations

- Install crossing signs at 10th Ave on north and south legs
- Paint and post protected corners at 9th Ave

11th St, 9th Ave to 6th Ave (ID 2-7)



Existing Characteristics

- Local Road, 4-lane cross section
- ADT: 50-270vpd
- Posted speed limit: 20mph
- Observed speeds: 85th Pct: 19mph, 95th Pct: 25mph
- Ped/bike/transit facilities:
- Land use: Commercial, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 9th Ave to RR is on HIN
- HRN Status: Low risk
- Total crashes: 16
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Stripe buffered bike lanes and convert parking to back-in angle parking
- Paint and post intersection bulb-outs at all three intersections

Observations

- Significant crown at 9th Ave
- Lane drop with no signs near 9th Ave
- West of 8th Ave, ramps are non-ADA compliant, handicap parking is present, and traffic does not seem to justify a 4-lane cross section
- Consider a refuge area with no parking or signs at 8th Ave
- Consider bulb-outs out onto 8th Ave to help with poor visibility due to parking
- Missing markings and signs on 7th Ave
- Curb isn't great for bike lanes at 7th Ave
- Segment doesn't need a 4-lane cross section at 7th Ave

Revised Recommendations

- Install high-visibility crosswalk and crossing signs at 7th Ave on north leg

11th St and 8th Ave (ID 2-7A)



- HRN Status: Low risk along 11th St, high risk along 8th Ave
- Total crashes: 13
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- RRFBs and high-visibility crosswalk markings

Observations

- Consider a refuge area with no parking or signs
- Consider bulb-outs out onto 8th Ave to help with poor visibility due to parking

Revised Recommendations

- Paint and post curb extensions

Existing Characteristics

- Unsignalized, 2-way stop control
- 11th St: Local Road, 4-lane cross section
- 8th Ave: Major Arterial, 4-lane divided cross section
- ADT: 11th St=200vpd, 8th Ave=5700vpd
- Posted speed limit: 11th St=20mph, 8th Ave=35mph
- Observed speeds: North leg - 85th Pct: 33mph, 95th Pct: 36mph
- South leg - 85th Pct: 33mph, 95th Pct: 36mph
- Ped/bike/transit facilities:
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

12th St, 11th Ave to 7th Ave (ID 2-8)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 36-108vpd
- Posted speed limit: 20mph
- Observed speeds: No data
- Ped/bike/transit facilities:
- Land use: Commercial, Industrial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Low risk
- Total crashes: 18
- Fatalities (K): 1 (2020)
- Serious Injuries (A): 3 (2016, 2017, and 2019)

Vision Zero Recommendations

- Paint and post intersection bulb-outs at all five intersections

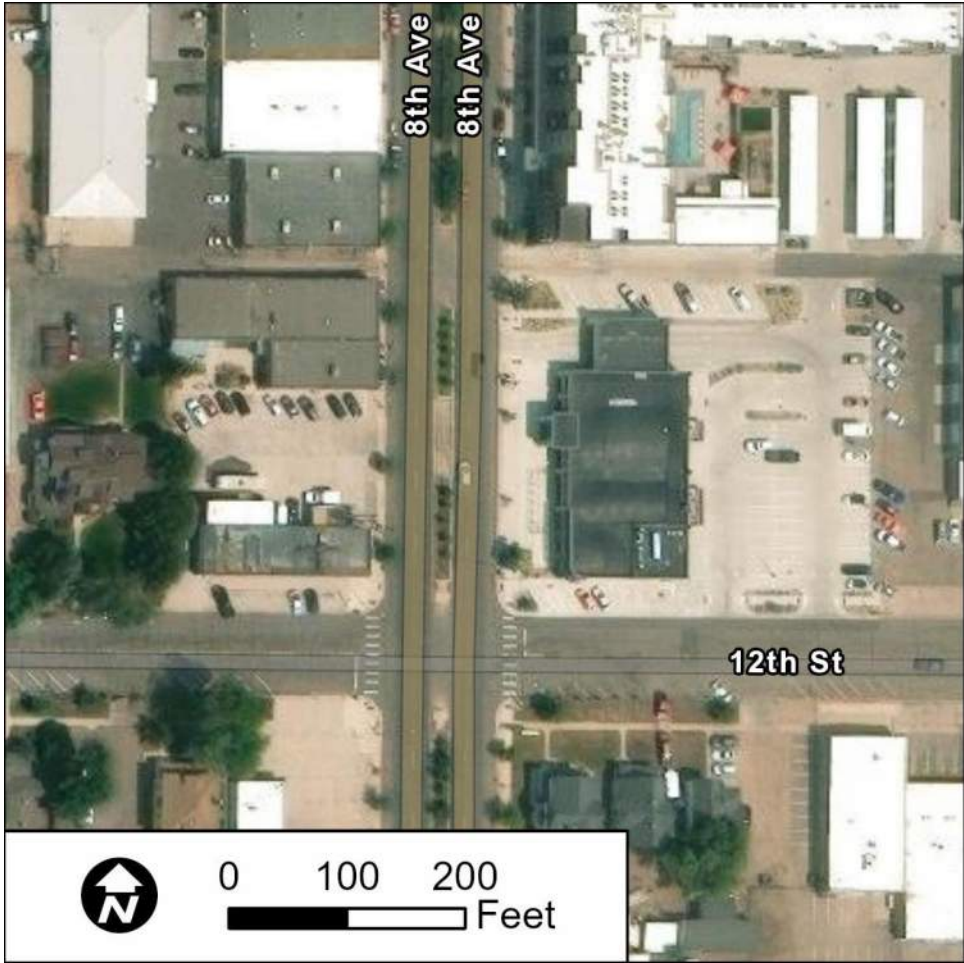
Observations

- Severe crown and wide parking at 11th Ave
- Missing markings and signs on 11th Ave
- Weird striped out area near the fire department. Maybe replace with hatching for don't block the box. Do not recommend parking in front of the fire department.
- Severe crown and wide parking at 10th Ave - could bulb-out
- Severe crown and wide parking at 9th Ave - could bulb-out
- Need to keep bikes away from the curb at 9th Ave due to the steep crown near the gutters
- Existing crosswalk signs are present at 9th Ave
- Consider bulb-outs at 8th Ave - maybe 1 lane on 8th Ave
- Bulb-outs and high-visibility crosswalks would be beneficial at 7th Ave

Revised Recommendations

- Install high-visibility crosswalks and warning signs at 11th Ave (south leg) and 7th Ave (north leg)
- Install high-visibility crosswalk and stop bar at 7th Ave on east leg
- Paint and post protected corners at 7th Ave

12th St and 8th Ave (ID 2-8A)



- HRN Status: Low risk along 12th St, high risk along 8th Ave
- Total crashes: 5
- Fatalities (K): 1 (2020)
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- RRFBs and high-visibility crosswalk markings

Observations

- Consider bulb-outs - maybe 1 lane on 8th Ave

Revised Recommendations

- Paint and post curb extensions

Existing Characteristics

- Unsignalized, 2-way stop control
- 12th St: Local Road, 2-lane cross section
- 8th Ave: Major Arterial, 4-lane divided cross section
- ADT: 12th St=102vpd, 8th Ave=5000vpd
- Posted speed limit: 12th St=20mph, 8th Ave=35mph
- Observed speeds: North leg - 85th Pct: 33mph, 95th Pct: 36mph
- South leg - 85th Pct: 34mph, 95th Pct: 37mph
- Ped/bike/transit facilities:
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

12th St, 14th Ave to 11th Ave (ID 2-9)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 36vpd
- Posted speed limit: 20mph
- Observed speeds: No data
- Ped/bike/transit facilities:
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: Rejuvenate (2025) - along 12th Ave
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 12th Ave to 11th Ave is on HIN
- HRN Status: Low risk
- Total crashes: 11
- Fatalities (K): 0
- Serious Injuries (A): 2 (2016 and 2019)

Vision Zero Recommendations

- Paint and post intersection bulb-outs

- Speed humps or tables (hard plastic)

Observations

- Ramp does not line up on the south end at 14th Ave
- Missing signs and crosswalk across 14th Ave
- Could do speed tables or bulb-outs at 14th Ave - need to lower the existing crown
- At 13th Ave, the crown is too steep for speed tables but bulb-outs could work
- Need to keep bikes away from the curb at 13th Ave due to the steep crown near the gutters
- Severe crown at 12th Ave - can't do speed tables except on the east leg
- No bike lanes at 12th Ave
- 12th Ave is a good candidate for a mini-roundabout
- Severe crown and wide parking at 11th Ave
- Missing markings and signs on 11th Ave

Revised Recommendations

- Install high-visibility crosswalk and warning signs at 14th Ave on north leg
- Paint and post protected corners at 14th Ave and 13th Ave

13th St, 14th Ave to 8th Ave (ID 2-10)



Existing Characteristics

- Minor Collector, 3-lane cross section
- ADT: 3000-4500vpd
- Posted speed limit: 11th Ave to 14th Ave=35mph, Rest=30mph
- Observed speeds: 85th Pct: 21-34mph, 95th Pct: 26-38mph
- Ped/bike/transit facilities: On-street bike lanes
-
- Land use: Residential, Commercial
- Pavement rehab projects: Rejuvenate (2025) - north leg at 12th Ave
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Moderate risk
- Total crashes: 56
- Fatalities (K): 0
- Serious Injuries (A): 2 (2014 and 2020)

Vision Zero Recommendations

- Paint and post to create far right bike lane

- Paint and post bulb-outs and median refuge crossings with high visibility crosswalks

Observations

- 13th Ave intersection is better suited for bulb-outs than a mini-roundabout
- Move or add a crossing sign to the other side of the 13th Ave intersection
- Ramps on the south side of the road are not in great condition at 13th Ave
- Consider incorporating an EB bike lane on the west leg at 13th Ave
- Could add bulb-outs to 13th St at 11th Ave but there may not be enough space to put them on 11th Ave
- Non-ADA compliant ramps at 11th Ave
- Not recommended to move the bike lane at 10th Ave - consider green bike markings and bike boxes at intersection
- Bulb-outs are a good option at 10th Ave
- 9th Ave intersection is better suited for bulb-outs than a mini-roundabout. Ramps on southeast corner have been updated.
- A trail is planned along the #3 Ditch in this area in the next 10-20 years. 14th Ave and 13th St may be a future trail crossing.

Revised Recommendations

- Paint and post protected corners at 12th Ave
- Install high-visibility crosswalks at 12th Ave on north leg

13th St and 13th Ave (ID 2-10A)



- HRN Status: Moderate risk along 13th St, low risk along 13th Ave
- Total crashes: 9
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- Paint and post median refuge island
- Install RRFBs
- Stop sign visibility enhancements

Observations

- Intersection is better suited for bulb-outs than a mini-roundabout
- Move or add a crossing sign to the other side of the intersection
- Ramps on the south side of the road are not in great condition
- Consider incorporating an EB bike lane on the west leg

Revised Recommendations

- Paint and post protected corners
- Install crossing sign on east leg for eastbound direction

Existing Characteristics

- Unsignalized, 2-way stop control
- 13th St: Major Collector, 3-lane cross section
- 13th Ave: Local Road, 2-lane cross section
- ADT: 13th St=3600vpd, 13th Ave=70vpd
- Posted speed limit: 13th St=35mph, 13th Ave=20mph
- Observed speeds: West leg - 85th Pct: 34mph, 95th Pct: 37mph
- East leg - 85th Pct: 34mph, 95th Pct: 37mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

13th St and 9th Ave (ID 2-10B)



Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 13th St, low risk along 9th Ave
- Total crashes: 8
- Fatalities (K): 0
- Serious Injuries (A): 1 (2014)

Vision Zero Recommendations

- Paint and post intersection bulb-outs

Observations

- Intersection is better suited for bulb-outs than a mini-roundabout. Ramps on southeast corner have been updated.

Revised Recommendations

- Paint and post protected corners

Existing Characteristics

- Unsignalized, 2-way stop control
- 13th St: Minor Collector, 3-lane cross section
- 9th Ave: Local Road, 2-lane cross section
- ADT: 13th St=4200vpd, 9th Ave=400vpd
- Posted speed limit: 13th St=30mph, 9th Ave=20mph
- Observed speeds: North leg - 85th Pct: 23mph, 95th Pct: 26mph
- South leg - 85th Pct: 24mph, 95th Pct: 28mph
- West leg - 85th Pct: 32mph, 95th Pct: 35mph
- East leg - 85th Pct: 31mph, 95th Pct: 35mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

13th St and 10th Ave (ID 2-10C)



Existing Characteristics

- Signalized
- 13th St: Minor Collector, 3-lane cross section
- 10th Ave: Minor Collector, 3-lane cross section
- ADT: 13th St=4200vpd, 9th Ave=720vpd
- Posted speed limit: 30mph
- Observed speeds: North leg - 85th Pct: 23mph, 95th Pct: 26mph
- South leg - 85th Pct: 25mph, 95th Pct: 27mph
- West leg - 85th Pct: 30mph, 95th Pct: 33mph
- East leg - 85th Pct: 30mph, 95th Pct: 34mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- 2 Bus Stop along 10th Ave of the intersection (Route 5)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 13th St and 10th Ave
- Total crashes: 7
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- Retroreflective backplates

Observations

- Not recommended to move the bike lane - consider green bike markings and bike boxes at intersection
- Bulb-outs are a good option

Revised Recommendations

- Paint and post protected corners

9th Ave, 12th St to 16th St (ID 2-11)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 336vpd
- Posted speed limit: 20mph
- Observed speeds: 85th Pct: 19-31mph, 95th Pct: 23-35mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 12th Ave to 13th Ave and 14th Ave to 16th Ave is on HIN
- HRN Status: Low risk
- Total crashes: 22
- Fatalities (K): 0

- Serious Injuries (A): 2 (2014 and 2017)

Vision Zero Recommendations

- Narrow lanes by adding buffered bike lanes
- Intersection bulb-outs

Observations

- Severe crown at 12th St - could use bulb-outs
- Need to keep bikes out of the gutter area due to severe grades
- Crosswalk signs are present at 12th St

Revised Recommendations

- Paint and post protected corners at 12th St

10th Ave, 12th St to 16th St (ID 2-12)



Existing Characteristics

- Minor Collector, 3-lane cross section
- ADT: 690vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 19-34mph, 95th Pct: 22-38mph
- Ped/bike/transit facilities: On-street bikes lanes
- 2 Bus Stops at 13th St (Route 5)
- 2 Bus Stops at 15th St(Route 5)
- 1 Bus Stop at 16th St (Route 4)
- 2 Bus Bus Stops along 10th Ave at the intersection of 16th St and 10th Ave (Route 5)
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN

- HRN Status: Moderate risk
- Total crashes: 26
- Fatalities (K): 0
- Serious Injuries (A): 2 (2017 and 2018)

Vision Zero Recommendations

- Paint and post intersection bulb-outs and high visibility crosswalks - Also a good candidate for moving bike lane to far right instead of on 9th

Observations

- Severe crown at 12th St - could use bulb-outs
- Not recommended to move the bike lane - consider green bike markings and bike boxes at intersections
- Bulb-outs are a good option at 13th St

Revised Recommendations

- Paint and post protected corners at 12th St

8th Ave and 14th St (ID 2-13)



Existing Characteristics

- Unsignalized, 2-way stop control
- 8th Ave: Major Arterial, 4-lane divided cross section
- 14th St: Local Road, 2-lane cross section
- ADT: 8th Ave=5400vpd, 14th St=64vpd
- Posted speed limit: 8th Ave=35mph, 14th St=20mph
- Observed speeds: North leg - 85th Pct: 33mph, 95th Pct: 36mph
- South leg - 85th Pct: 33mph, 95th Pct: 36mph
- Ped/bike/transit facilities: 2 Bus Stops at 8th Ave, not at the intersection but the route affecting along 8th Ave (Route 4)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 8th Ave, low risk along 14th St
- Total crashes: 5
- Fatalities (K): 0
- Serious Injuries (A): 1 (2018)

Vision Zero Recommendations

- Paint and post intersection bulb-outs

Observations

- Add high-visibility crosswalk
- Maybe add RRFB and posts to 8th Ave

Revised Recommendations

- Install RRFBs and pedestrian push button post on south leg and south median refuge
- Install high-visibility crosswalks on south leg

16th St, 8th Ave to 1st Ave (ID 2-14)



Existing Characteristics

- Minor Arterial, 3-lane cross section
- ADT: 2900-3200vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 22-38mph, 95th Pct: 27-42mph
- Ped/bike/transit facilities: On-street bikes lanes from 8th Ave to 1st Ave
- 2 Bus Stops at 8th Ave, not inside the project area but the bus route is affecting 16th St (Route 4)
-
- Land use: Residential, Commercial, Industrial, Mixed Use
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 8th Ave to 2nd Ave is on HIN
- HRN Status: Moderate risk
- Total crashes: 48
- Fatalities (K): 0
- Serious Injuries (A): 5 (2014, 2019, 2021, and 2022x2)

Vision Zero Recommendations

- Paint and post to create far right bike lane
- Paint and post bulb-outs and stop sign visibility enhancements at 7th Ave and 6th Ave

Observations

- Unable to make observations at 10th Ave and 9th Ave due to City roundabout projects currently under construction
- Poor curb conditions between 7th Ave and 6th Ave
- Striping was never finished at 7th Ave
- At 7th Ave, need crosswalk markers across 16th St, added edge lines, and hatching in the bulb-out
- A trail is planned along the #3 Ditch in this area in the next 10-20 years. 9th Ave and 16th St may be a future trail crossing.

Revised Recommendations

- Install high-visibility crosswalks and crossing signs on uncontrolled approaches
- Install stop bars where missing

16th St and 7th Ave (ID 2-14A)



Existing Characteristics

- Unsignalized, 2-way stop control
- 16th St: Minor Arterial, 3-lane cross section
- 7th Ave: Minor Collector, 2-lane cross section
- ADT: 16th St=3200vpd, 7th Ave=470vpd
- Posted speed limit: 30mph
- Observed speeds: North leg - 85th Pct: 16mph, 95th Pct: 21mph
- South leg - 85th Pct: 16mph, 95th Pct: 21mph
- West leg - 85th Pct: 28mph, 95th Pct: 31mph
- East leg - 85th Pct: 30mph, 95th Pct: 33mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- Land use: Residential, Commercial, Mixed Use
- Pavement rehab projects: Rejuvenate (2025) - south leg
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 16th St, low risk along 7th Ave
- Total crashes: 8
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post median/access control with high-visibility pedestrian refuge crossings and bicycle cut-through access through the median
- Stop sign visibility enhancements

Observations

- Striping was never finished
- Need crosswalk markers across 16th St, added edge lines, and hatching in the bulb-out

Revised Recommendations

- Install high-visibility crosswalks and crossing signs on east and west legs
- Modify protected corner striping to include bike lanes

16th St and 6th Ave (ID 2-14B)



- HRN Status: Moderate risk along 16th St, low risk along 6th Ave
- Total crashes: 6
- Fatalities (K): 0
- Serious Injuries (A): 1 (2014)

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- Stop sign visibility enhancements

Observations

Revised Recommendations

- Install high-visibility crosswalks on east and west legs
- Install stop bars on north and south legs

Existing Characteristics

- Unsignalized, 2-way stop control
- 16th St: Minor Arterial, 3-lane cross section
- 6th Ave: Minor Collector, 2-lane cross section
- ADT: 16th St=3000vpd, 6th Ave=450vpd
- Posted speed limit: 16th St=35mph, 6th Ave=30mph
- Observed speeds: West leg - 85th Pct: 33mph, 95th Pct: 36mph
- East leg - 85th Pct: 34mph, 95th Pct: 37mph
- Ped/bike/transit facilities: On-street bike lanes along 16th St
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

16th St and 13th Ave (ID 2-15)



Existing Characteristics

- Unsignalized, 2-way stop control
- 16th St: Minor Arterial, 4-lane cross section
- 13th Ave: Local Road, 2-lane cross section
- ADT: 16th St=9700vpd, 13th Ave=105vpd
- Posted speed limit: 16th St=35mph, 13th Ave=20mph
- Observed speeds: North leg - 85th Pct: 19mph, 95th Pct: 21mph
- South leg - 85th Pct: 23mph, 95th Pct: 29mph
- West leg - 85th Pct: 35mph, 95th Pct: 38mph
- East leg - 85th Pct: 36mph, 95th Pct: 39mph
- Ped/bike/transit facilities: On-street bike lanes along 13th Ave
- 2 Bus Stops at the intersection (Route 4)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 16th St, low risk along 13th Ave
- Total crashes: 9
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Lane narrowing on intersection approach to make room for paint and post median refuge island crossing with RRFBs

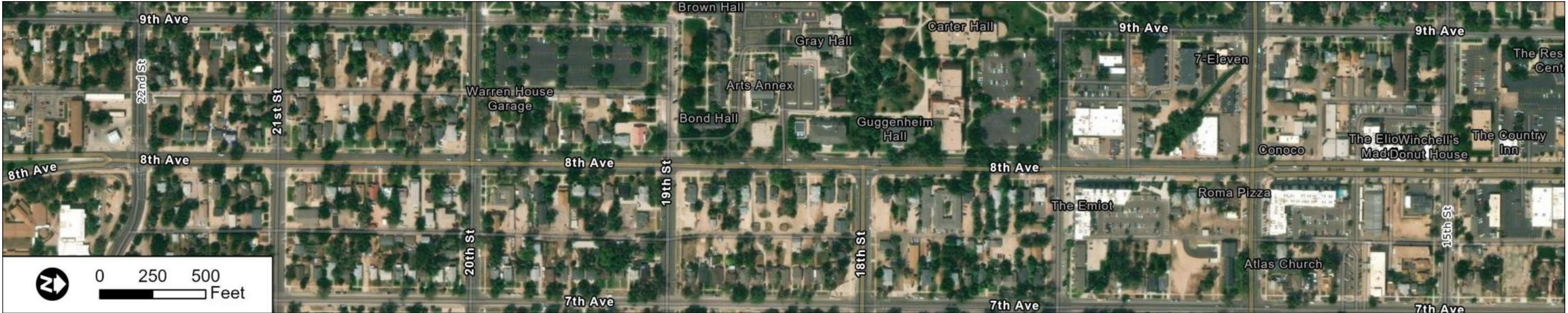
Observations

- Traffic from the high school backs up to 14th Ave
- There are e-buses on 16th St
- Resident reported lots of stop sign runs, never seeing cars parked on 16th St, lot of T-bone crashes, and loving the recently redone corners
- May be a mini-roundabout candidate

Revised Recommendations

- Paint and post protected corners

8th Ave, 15th St to 22nd St (ID 2-16)



Existing Characteristics

- Major Arterial, 5-lane cross section
- ADT: 2500-15000vpd
- Posted speed limit: 15th St to 10th St=35mph, Rest=30mph
- Observed speeds: 85th Pct: 28-37mph, 95th Pct: 32-41mph
- Ped/bike/transit facilities: 2 Bus Stops at 16th St(Route 4)
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: High risk
- Total crashes: 86

- Fatalities (K): 0
- Serious Injuries (A): 7 (2014, 2015, 2017x2, 2019x2, and 2022)

Vision Zero Recommendations

- Paint and post 5-lane to 3-lane cross section with delineator-separated bike lanes (striped buffer north of 17th Street)

Observations

- Removing turn lane at 17th St is not recommended as it is likely preventing cut through traffic
- High-visibility crosswalks are already present at 18th St
- A trail is planned along the #3 Ditch between 16th St and 17th St in the next 10-20 years.

Revised Recommendations

- Modify lane configuration from a 5-lane to a 3-lane cross section north of 17th St

8th Ave and 17th St (ID 2-16A)



Existing Characteristics

- Unsignalized, 2-way stop control
- 8th Ave: Major Arterial, 4-lane divided cross section
- 17th St: Local Road, 2-lane cross section
- ADT: 17th St=1000vpd, 8th Ave=12000vpd
- Posted speed limit: 17th St=20mph, 8th Ave=30mph
- Observed speeds: North leg - 85th Pct: 33mph, 95th Pct: 36mph
- South leg - 85th Pct: 34mph, 95th Pct: 37mph
- West leg - 85th Pct: 21mph, 95th Pct: 24mph
- Ped/bike/transit facilities:
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 8th Ave, low risk along 17th St
- Total crashes: 9
- Fatalities (K): 0
- Serious Injuries (A): 1 (2017)

Vision Zero Recommendations

- Retroreflective backplates
- Paint and post to remove turn lane

Observations

- Removing turn lane is not recommended as it is likely preventing cut through traffic

Revised Recommendations

- Eliminate project location

8th Ave and 18th St (ID 2-16B)



Existing Characteristics

- Unsignalized, 2-way stop control
- 8th Ave: Major Arterial, 4-lane divided cross section
- 18th St: Local Road, 2-lane cross section
- ADT: 18th St=2500vpd, 8th Ave=12000vpd
- Posted speed limit: 18th St=20mph, 8th Ave=30mph
- Observed speeds: North leg - 85th Pct: 35mph, 95th Pct: 39mph
- South leg - 85th Pct: 35mph, 95th Pct: 39mph
- East leg - 85th Pct: 20mph, 95th Pct: 25mph
- Ped/bike/transit facilities:
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 8th Ave, moderate risk along 18th St
- Total crashes: 15
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Retroreflective backplates
- High-visibility crosswalks

Observations

- High-visibility crosswalks are already present

Revised Recommendations

- Install rubber median refuge on south crosswalk

17th St, 9th Ave to 6th Ave (ID 2-17)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 60-600vpd
- Posted speed limit: 20mph
- Observed speeds: 85th Pct: 18-22mph, 95th Pct: 21-24mph
- Ped/bike/transit facilities:
- Land use: Residential, Commercial
- Pavement rehab projects: Rejuvenate (2025) - along 7th Ave
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total crashes: 15
- Fatalities (K): 0
- Serious Injuries (A): 1 (2017)

Vision Zero Recommendations

- Raised ped-crossings (hard plastic)

Observations

- 9th Ave intersection is a good location for bulb-outs to help define turning paths better
- Potential mini-roundabout location at 7th Ave
- Severe grades and limited visibility between 7th Ave and 6th Ave
- 6th Ave intersection is very large and the crown is too steep for raised crosswalks

Revised Recommendations

- Paint and post protected corners at 7th Ave and 6th Ave
- Paint and post curb extensions at 9th Ave
- Install RRFBs, pedestrian push button posts, and high-visibility crosswalk on south leg at 6th Ave
- Install high-visibility crosswalk and stop bar on west leg

18th St and 7th Ave (ID 2-18)



Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 18th St, low risk along 7th Ave
- Total crashes: 7
- Fatalities (K): 1(2020)
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- Paint and post median/access control with high-visibility pedestrian refuge crossings and bicycle cut-through access through median
- Stop sign visibility enhancements

Observations

- Residents want all-way stop control and reported request stop sign running, poor visibility due to sun glare, and poor lighting at night

Revised Recommendations

- Paint and post protected corners

Existing Characteristics

- Unsignalized, 2-way stop control
- 18th St: Local Road, 3-lane cross section
- 7th Ave: Minor Collector, 2-lane cross section
- ADT: 18th St=2300vpd, 7th Ave=405vpd
- Posted speed limit: 18th St=30mph, 7th Ave=35mph
- Observed speeds: North leg - 85th Pct: 22mph, 95th Pct: 27mph
- West leg - 85th Pct: 33mph, 95th Pct: 35mph
- East leg - 85th Pct: 33mph, 95th Pct: 36mph
- Ped/bike/transit facilities: On-street bike lanes on north, east, and south legs
- Land use: Residential
- Pavement rehab projects: Rejuvenate (2025) - north leg
- Areas of persistent poverty: High poverty area

20th St, 11th Ave to 4th Ave (ID 2-19)



Existing Characteristics

- Local Road, 3-lane cross section
- ADT: 3600-4500vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 21-30mph, 95th Pct: 25-34mph
- Ped/bike/transit facilities: Shared lanes from 11th Ave to 7th Ave
- 2 Bus Routes going from 11th Ave to 10th Ave (Route 5)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 11th Ave to 6th Ave is on HIN
- HRN Status: Moderate risk from 11th Ave to 8th Ave, low risk from 8th Ave to 4th Ave
- Total crashes: 42
- Fatalities (K): 0
- Serious Injuries (A): 3 (2016, 2019, and 2021)

Vision Zero Recommendations

- Restripe to 10-11 foot lanes

- Replace sharrows with buffered bike lanes
- Stripe eastbound bike lane 11th Ave to 10th Ave
- Paint and post bulb-outs and stop sign visibility enhancements at 6th Ave, 7th Ave and 9th Ave

Observations

- Off-street bike lane at 10th Ave
- Unsigned mid-block crossing near 9th Ave - consider installing a RRFB
- Intersection at 9th Ave has a large hiss and a major grate in the WB direction
- 7th Ave intersection has an uncontrolled crossing without signs or markings
- 7th Ave intersection is missing a stop bar and receiving ramp on the south side and poor visibility
- 6th Ave intersection has pull-in angled parking and a crossing that is unmarked and unsigned
- Ramps at 6th Ave are non-ADA compliant
- Evidence of curb hits at 4th Ave
- Consider adding chevron signs in curve at 4th Ave

Revised Recommendations

- Install RRFBs and pedestrian push button posts at 9th Ave on east leg
- Install stop bar at 7th Ave on west leg
- Install high-visibility crosswalk and warning signs at 7th Ave on north leg
- Install high-visibility crosswalks at 6th Ave on all legs
- Install cro

19th St, 14th Ave to 10th Ave (ID 2-20)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 20-72vpd
- Posted speed limit: 20mph
- Observed speeds: No data
- Ped/bike/transit facilities:
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total crashes: 8
- Fatalities (K): 0

- Serious Injuries (A): 0

Vision Zero Recommendations

- Speed tables

Observations

- Blind two-way stop control
- Corridor could use narrowing

Revised Recommendations

- Paint and post protected corners at 13th Ave
- Paint and post curb extensions at 11th Ave
- Install speed table east of 13th Ave
- Install high-visibility crosswalk and crossing signs at 14th Ave on north leg

Reservoir Rd/20th St, 17th Ave to 11th Ave (ID 2-21)



Existing Characteristics

- Reservoir Rd: Major Collector, 3-lane cross section
- 20th St: Local Road, 3-lane cross section
- ADT: 3000-5200vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 27-38mph, 95th Pct: 31-42mph
- Ped/bike/transit facilities: On/Off-street reservoir trail from 17th Ave to 14th Ave
- On-street bike lanes from 14th Ave to 11th Ave
- Land use: Residential, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 14th Ave to 11th Ave is on HIN
- HRN Status: Moderate risk
- Total crashes: 20
- Fatalities (K): 0
- Serious Injuries (A): 2 (2016 and 2021)

Vision Zero Recommendations

- Restripe to 10-11 foot lanes
- Convert to delineator-protected bike lanes
- Continue the eastbound bike lane through to 11th Ave

Observations

- Sidewalk ends between 14th Ave and 13th Ave
- Parking appears to be unutilized - might be worth moving to south side
- Construction along 20th St for new building
- Very high speeds observed near 12 Ave

Revised Recommendations

- Install eastbound speed feedback sign east of 17th Ave
- Install westbound speed feedback sign east of 13th Ave
- Modify lane configuration to move parking to south side of street and improve lane delineation

14th Ave, 16th St to 20th St (ID 2-22)



Existing Characteristics

- Major Collector, 3-lane cross section
- ADT: 2300vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 21-37mph, 95th Pct: 26-40mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential
- Pavement rehab projects: Rejuvenate (2025) - east leg at 17th St; east leg at 18th St
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk

- Total crashes: 14
- Fatalities (K): 0
- Serious Injuries (A): 2 (2020)

Vision Zero Recommendations

- Paint and post to create far right protected bike lane

Observations

Revised Recommendations

- Paint and post protected corners at 17th St and Cranford Pl
- Install high-visibility crosswalks at 18th St and 17th St on north and south legs
- Install RRFBs and pedestrian push button post at Cranford Pl on south leg

14th Ave and 16th St (ID 2-22A)



Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 14th Ave and 16th St west of intersection, high risk along 16th St east of intersection
- Total crashes: 7
- Fatalities (K): 0
- Serious Injuries (A): 1 (2020)

Vision Zero Recommendations

- Retroreflective back plates
- Leading pedestrian intervals

Observations

Revised Recommendations

- Implement LPIs

Existing Characteristics

- Signalized
- 14th Ave: Major Collector, 3-lane cross section
- 16th St: Minor Arterial, 4-lane cross section
- ADT: 16th St=9800vpd, 14th Ave=2300vpd
- Posted speed limit: School Zone with the School Zone Limit of 20mph
- Observed speeds: North leg - 85th Pct: 22mph, 95th Pct: 28mph
- South leg - 85th Pct: 27mph, 95th Pct: 31mph
- West leg - 85th Pct: 33mph, 95th Pct: 37mph
- East leg - 85th Pct: 33mph, 95th Pct: 37mph
- Ped/bike/transit facilities: On-street bike lanes along 14th Ave
- 4 Bus Stops not at the intersection but bus route affecting the intersection (Route 4)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

17th Ave, Alles Dr to Reservoir Rd (ID 2-23)



Existing Characteristics

- Minor Collector, 4-lane cross section from Reservoir Rd to 14th Ave, 2-lane cross section from 14th Ave to Alles Dr
- ADT: Reservoir Rd=5000vpd, Rest=900vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 29-36mph, 95th Pct: 33-39mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area/Data not available

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk
- Total crashes: 4

- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane cross section with bike lanes
- Paint and post to remove slip turn lanes at 17th Ave and Reservoir Rd

Observations

- Intersection probably needs reconstruction to fix some issues. Could add flex posts in striped shoulder. Potential to remove NB right channelized. Bike lanes short distance to south.

Revised Recommendations

- Install delineators along south shoulder on Reservoir Road at 17th Ave
- Modify lane configuration to improve lane delineation

25th St, 17th Ave to 11th Ave (ID 2-24)



Existing Characteristics

- Minor Collector, 4-lane cross section
- ADT: 2500vpd
- Posted speed limit: 30mph
- School Zone from 13th St to 16th St with School Zone Speed limit of 20mph
- Observed speeds: 85th Pct: 22-40mph, 95th Pct: 26-44mph
- Ped/bike/transit facilities:
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment from 13th Ave to 11th Ave is on HIN
- HRN Status: Moderate to low risk
- Total crashes: 19
- Fatalities (K): 0

- Serious Injuries (A): 1 (2016)

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane cross section with delineator-protected bike lane

Observations

- No cars parked on the street near 17th Ave
- Possible speed bump location near 17th Ave
- Road diet would work well here
- Need to find mid-block crossing locations

Revised Recommendations

- Modify lane configuration from a 4-lane to a 3-lane cross section
- Modify lane configuration to eliminate parking at 17th Ave to maintain westbound right-turn lane

10th Ave, 16th St to 25th St (ID 2-25)



Existing Characteristics

- Minor Collector, 3-lane cross section
- ADT: 700-1500vpd
- Posted speed limit: 25mph
- Observed speeds: 85th Pct: 18-35mph, 95th Pct: 21-39mph
- Ped/bike/transit facilities: Off-street campus trail from 16th St to 20th St
- On-street bikes lanes from 20th St to 25th St
- 1 Bus Stop at 16th St intersection (Route 4)
- 2 Bus Stops at 16th St intersection (Route 5)
- 2 Bus Stops at 18th St (Route 5)
- 1 Bus Stop at Gunter Hall (Route 7)
- 1
- Land use: Residential, Commercial
- Pavement rehab projects: Rejuvenate (2025) - along 17th St and 18th St
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 16th St to 17th St is on HIN
- HRN Status: Moderate risk
- Total crashes: 32
- Fatalities (K): 0
- Serious Injuries (A): 2 (2017 and 2018)

Vision Zero Recommendations

- Lane narrowing by striping buffer for bike lane
- Paint and post intersection bulb-outs and in-road pedestrian crossing signs along UNC campus

Observations

- Recommend bulb-outs at 17th St
- Can't use flex posts at 18th St due to bus stop but bulb-out may be an option
- Existing bus stop at Canford Pl - consider bulb-outs
- Off-street bike lane at 20th St
- Bulb-outs are not recommended at 20th St due to deliveries - consider RRFB
- Lighting may be an issue at 22nd St
- Consider a mini-roundabout at 23rd St
- Major school bus pickup zone near 23rd St Rd
- Mini-roundabout would work at 25th St

Revised Recommendations

- Paint and post protected corners at Cranford Pl
- Paint and post curb extensions at 17th St and 18th St
- Install RRFBs and pedestrian push button posts at 21st St on south leg
- Install mini-roundabout at 23rd St

10th Ave and 25th St (ID 2-25A)



Existing Characteristics

- Unsignalized, 2-way stop control
- 10th Ave: Minor Collector, 3-lane cross section
- 25th St: Minor Collector, 3-lane cross section
- ADT: 10th Ave=745vpd, 25th St=2630vpd
- Posted speed limit: 10th Ave=35mph, 25th St=30mph (E) and 35mph(W)
- Observed speeds: North leg - 85th Pct: 22mph, 95th Pct: 25mph
- South leg - 85th Pct: 20mph, 95th Pct: 22mph
- West leg - 85th Pct: 33mph, 95th Pct: 36mph
- East leg - 85th Pct: 35mph, 95th Pct: 38mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- 1 Bus Stop at 9th Ave and 25th St, not near the project point but the intersection affected by the bus route(Route 2)
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 10th Ave north of intersection and along 25th St, low risk along 10th Ave south of intersection
- Total crashes: 4
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Mini-roundabout would work except for bike lanes

Revised Recommendations

- Paint and post protected corners
- Install solar crosswalk lighting

9th Ave and 25th St (ID 2-26)



Existing Characteristics

- Unsignalized, 2-way stop control
- 9th Ave: Local Road, 2-lane cross section
- 25th St: Minor Collector, 3-lane cross section
- ADT: 9th Ave=200vpd, 25th St=2630vpd
- Posted speed limit: 9th Ave=20mph, 25th St=30mph(E) and 35mph(W)
- Observed speeds: West leg - 85th Pct: 35mph, 95th Pct: 38mph
- East leg - 85th Pct: 34mph, 95th Pct: 37mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- 1 Bus Stop at 9th Ave and 25th St (Route 2)
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 9th Ave, moderate risk along 25th St
- Total crashes: 1
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Poor visibility from parked cars - Consider bulb-outs and crossing signs

Revised Recommendations

- Paint and post protected corners
- Install high-visibility crosswalk on all legs
- Install crossing signs on east and west legs
- Install stop bars on north and south legs

9th Ave and 24th St (ID 2-27)



- Total crashes: 3
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Consider bulb-outs

Revised Recommendations

- Paint and post protected corners

Existing Characteristics

- Unsignalized, 2-way stop control
- 9th Ave: Local Road, 2-lane cross section
- 25th St: Local Road, 2-lane cross section
- ADT: 9th Ave=200-340vpd, 24th St=360-480vpd
- Posted speed limit: 20mph
- Observed speeds: North leg - 85th Pct: 20mph, 95th Pct: 23mph
- Ped/bike/transit facilities: On-street bike lanes on all 4 legs
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 9th Ave and 24th St

26th St, 11th Ave to 9th Ave (ID 2-28)



Existing Characteristics

- Local Road, 4-lane cross section
- ADT: 1800vpd
- Posted speed limit: 20mph
- Observed speeds: 85th Pct: 19-33mph, 95th Pct: 24-37mph
- Ped/bike/transit facilities: 1 Bus Stop at 9th Ave (Route 2)
- 1 Bus Stop at 11th Ave(Route 2)
- 2 Bus Stop at 11th Ave and 26th St Intersection, not in the project area but bus route affecting the intersection (Route 5)
- Land use: Residential, Commercial
- Pavement rehab projects: Overlay (2025) - 11th Ave to 9th Ave
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN

- HRN Status: Low risk
- Total crashes: 23
- Fatalities (K): 0
- Serious Injuries (A): 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs

Observations

- Bus route is along this segment
- Consider a road diet or speed tables

Revised Recommendations

- Install raised crosswalk at 10th Ave on west leg
- Modify lane configuration from a 4-lane to a 3-lane cross section between 10th Ave Ct and 8th Ave

22nd St, 9th Ave to US 85 (ID 2-29)



Existing Characteristics

- 9th Ave to 4th Ave: Local Road, 3-lane cross section
- 4th Ave to US 85: Major Collector, 3-lane cross section
- ADT: 3000vpd
- Posted speed limit: 4th Ave to US 85=35mph, 9th Ave to 4th Ave=20mph
- Observed speeds: 85th Pct: 14-37mph, 95th Pct: 19-40mph
- Ped/bike/transit facilities: On-street bike lanes from 9th Ave to 8th Ave and 7th Ave to US 85
- On/Off-street bike lanes/shared lane from 8th Ave to 7th Ave
- 2 Bus Stops at 7th Ave (Route 2)
- 2 Bus Stops at 5th Ave (Route 2)
- 2 Bus Stops at US 85 (Route 2)
- Land use: Residential, Commercial, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN

- HRN Status: Low risk from 9th Ave to 8th Ave, moderate risk from 8th Ave to US 85
- Total crashes: 68
- Fatalities (K): 0
- Serious Injuries (A): 9 (2014x3, 2017, 2018, 2019x2, 2021, and 2022)

Vision Zero Recommendations

- Restripe to create wider buffered or protected bike lanes
- At 22nd and 8th Ave, remove right turn lanes and add leading pedestrian intervals
- Green conflict zone markings and bike signal protected from turns

Observations

Revised Recommendations

- Paint and post protected corners at 4th Ave and 6th Ave
- Install high-visibility crosswalk at 4th Ave on north leg, south leg, and crossing 22nd St

N 11th Ave, D St to 20th St (ID 3-1)



Existing Characteristics

- Minor Arterial, 4 lane cross section
- ADT: 4200-6300vpd
- Posted speed limit: 9th St to 13th St=25mph, Rest=30mph
- Observed speeds: 85th Pct: 22-40mph, 95th Pct: 28-45mph
- Ped/bike/transit facilities: On/Off-street shared use path from D St to RR crossing
- On-street bike lanes from RR crossing to 5th St
- 2 Bus Stops at B St (Route 6)
- 1 Bus Stop at 1st St (CDOT Outrider)
- 2 Bus Stops at 3rd St (Route 1 and 5)
- 2 Bus Stops at 6th St (Route 1 and 5)
- 2 Bus St
- Land use: Residential, Industrial, Commercial, PUD, Conservation District
- Pavement rehab projects: Rejuvenate (2025) - east leg at A St
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 3rd St to 7th St and 8th St to 19th St is on HIN
- HRN Status: Moderate risk from D St to 1st St, high risk from 1st St to 16th St
- Total Crashes: 148
- Fatalities: 0
- Serious Injuries: 7 (2015, 2016x2, 2017x2, 2019, and 2022)

Vision Zero Recommendations

- Paint and post of 4-lane to 3-lane cross section with delineator-protected bike lanes

Observations

- Leading pedestrian intervals may be beneficial at 9th St and 10th St
- Bulb-outs or a median refuge would be more appropriate at 8th St than a roundabout due to buses and bike lanes
- Mid-block crossing south of 10th St could help with pedestrians currently crossing between City buildings
- Severe crown, missing pavement markings and signs, and wide parking at 12th St
- At 13th St, bulb-outs might only fit on 13th St and not 11th Ave
- Non-ADA compliant ramps at 13th St
- Pedestrians observed to struggle crossing with wheelchairs due to roadway grade
- Dual lefts and split phasing at 9th St may be a good opportunity for bulb-outs
- Need to identify how to design buffered bike lanes with bus route stops along the corridor
- Recreational center generates significant foot traffic
- 3-lane cross section is a viable option for this corridor

Revised Recommendations

- Modify lane configuration from a 4-lane to a 3-lane cross section
- Paint and post protected corners at 13th St
- Install high-visibility crosswalk and crossing signs between 10th St and 11th St (requires new ADA ramps)

11th Ave and 10th St (ID 3-1A)



Existing Characteristics

- Signalized
- 11th Ave: Minor Arterial, 4 lane cross section
- 10th St: Major Arterial, 3 lanes (one way)
- ADT: 11th Ave=5000-5300vpd, 10th St=4700-6000vpd
- Posted speed limit: 11th Ave=25mph, 10th St=35mph
- Observed speeds: North leg - 85th Pct: 27mph, 95th Pct: 31mph
- South leg - 85th Pct: 28mph, 95th Pct: 32mph
- West leg - 85th Pct: 32mph, 95th Pct: 36mph
- East leg - 85th Pct: 32mph, 95th Pct: 36mph
- Ped/bike/transit facilities: 1 Bus Stop near Intersection (Route 1 and Poudre Express)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 11th Ave and 10th St
- Total Crashes: 11
- Fatalities: 0
- Serious Injuries: 1 (2022)

Vision Zero Recommendations

- Paint and post to remove turn lane and add intersection bulb-outs

Observations

- Leading pedestrian intervals may be beneficial

Revised Recommendations

- Implement LPIs

11th Ave and 9th St (ID 3-1B)



Existing Characteristics

- Signalized
- 11th Ave: Minor Arterial, 4 lane cross section
- 9th St: Major Arterial, 3 lanes (one way)
- ADT: 11th Ave=5000vpd, 9th St=2500-4400vpd
- Posted speed limit: 9th St=40mph, 11th Ave=25mph
- Observed speeds: North leg - 85th Pct: 22mph, 95th Pct: 28mph
- South leg - 85th Pct: 25mph, 95th Pct: 29mph
- West leg - 85th Pct: 31mph, 95th Pct: 35mph
- East leg - 85th Pct: 31mph, 95th Pct: 35mph
- Ped/bike/transit facilities: 1 Bus Stop near Intersection(Route 1)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 11th Ave and 9th St
- Total Crashes: 11
- Fatalities: 0
- Serious Injuries: 1 (2016)

Vision Zero Recommendations

- Paint and post to remove turn lane and add intersection bulb-outs

Observations

- Leading pedestrian intervals may be beneficial

Revised Recommendations

- Implement LPIs

10th Ave, 5th St to 12th St (ID 3-2)



Existing Characteristics

- 5th St to 9th St: Minor Collector, 2-lane cross section
- 9th St to 10th St: Local Road, 3-lane cross section
- 10th St to 12th St: Minor Collector, 3-lane cross section
- ADT: 700-2000vpd
- Posted speed limit: 9th St to 10th St=20mph, Rest=30mph
- Observed speeds: 85th Pct: 12-32mph, 95th Pct: 14-35mph
- Ped/bike/transit facilities: On-street bike lanes from 11th St to 12th St
- 2 Bus Stops at 8th St(Route 1 and 5)
- 2 Bus stops at 10th St(Route 5)
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk from 5th St to 6th St, moderate risk from 6th St to 12th St
- Total Crashes: 17
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Paint and post intersection bulb outs
- Remove turn lane at 8th St

Observations

- 5th St intersection is well-suited for bulb-outs on all four corners
- Median/access control is not recommended along 10th Ave
- Bulb-outs could be added to the NW and NE corners at 6th St to complement the bulb-outs provided by on-street parking to the south
- Bulb-outs could be added to the SW corner of the 8th St intersection
- Bulb-outs for the north/south crossings at 9th St are not feasible with right-turn lanes
- Missing bulb-outs could be added at the 10th St intersection
- 11th St intersection is missing warning signs
- Severe crown at 12th St

Revised Recommendations

- Paint and post protected corners at 8th St
- Paint and post curb extensions at 6th St and 10th St

4th St, 14th Ave to 8th Ave (ID 3-3)



Existing Characteristics

- Local Road, 2-lane cross section
- ADT: 20-420vpd
- Posted speed limit: 20mph
- Observed speeds: No data
- Ped/bike/transit facilities:
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total Crashes: 5
- Fatalities: 0

- Serious Injuries: 1 (2017)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Only the north crosswalk at 14th Ave is manned. Recommend making the north crosswalk raised or adding a RRFB and removing the second crosswalk.
- Bulb outs are a possibility (10th Ave and 9th Ave)
- High-visibility crosswalks on the stop controlled approach and add stop bars (10th Ave and 9th Ave)
- Stripe roadway to add bike lanes and on-street parking (10th Ave)
- West of 8th Ave, add striping for interior parking with outer bike lanes

Revised Recommendations

- Modify lane configuration to improve lane delineation

4th St and 10th Ave (ID 3-3A)



- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Bulb outs are a possibility
- High-visibility crosswalks on the stop controlled approach and add stop bars
- Stripe roadway to add bike lanes and on-street parking

Revised Recommendations

- Paint and post protected corners
- Install high-visibility crosswalks and stop bars on east and west legs
- Install high-visibility crosswalk on north leg

Existing Characteristics

- Unsignalized, 2-way stop control
- 4th St: Local Road, 2-lane cross section
- 10th Ave: Minor Collector, 2-lane cross section
- ADT: 10th Ave=27vpd, 4th St=45vpd
- Posted speed limit: 10th Ave=30mph, 4th St=20mph
- Observed speeds: No data
- Ped/bike/transit facilities:
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 4th St and 10th Ave

4th St and 9th Ave (ID 3-3B)



- HRN Status: Low risk along 4th St and 9th Ave
- Total Crashes: 1
- Fatalities: 0
- Serious Injuries: 1 (2017)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Bulb outs are a possibility
- High-visibility crosswalks on the stop controlled approach and add stop bars

Revised Recommendations

- Paint and post protected corners
- Install high-visibility crosswalks and stop bars on east and west legs
- Install high-visibility crosswalk on north leg

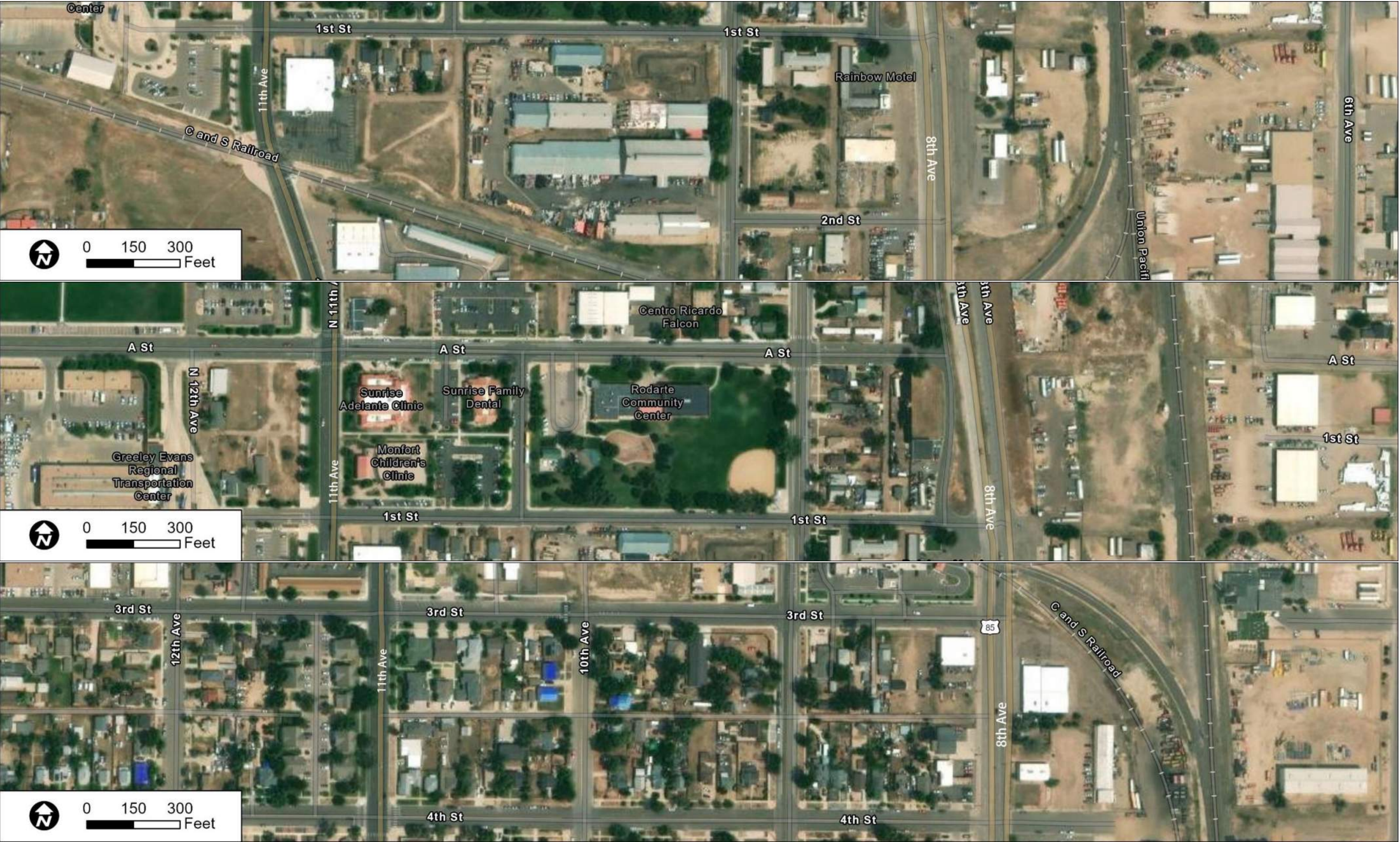
Existing Characteristics

- Unsignalized, 2-way stop control
- 4th St: Local Road, 2-lane cross section
- 9th Ave: Local Road, 2-lane cross section
- ADT: 9th Ave=420vpd, 4th St=132vpd
- Posted speed limit: 4th St=20mph, 9th Ave=20mph
- Observed speeds: North leg - 85th Pct: 31mph, 95th Pct: 34mph
- South leg - 85th Pct: 26mph, 95th Pct: 31mph
- Ped/bike/transit facilities: On-street bike lanes along 9th Ave
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

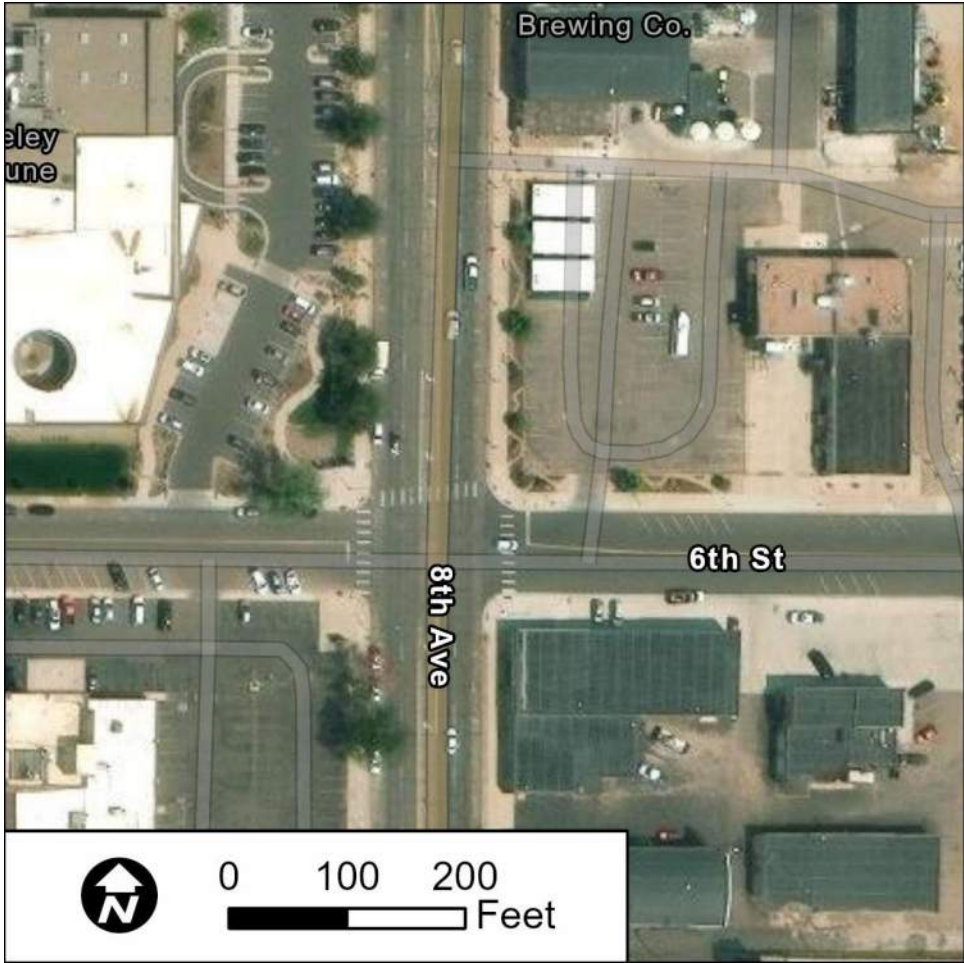
Crash Data

- Intersection is not on HIN

Downtown Area (11th Ave/A St/8th Ave/6th St) (ID 3-4)



8th Ave and 6th St (ID 3-5)



- HRN Status: High risk along 8th Ave, low risk along 6th St
- Total Crashes: 3
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Missing high-visibility crosswalk on the south leg

Revised Recommendations

- Install high-visibility crosswalk on south leg

Existing Characteristics

- Unsignalized, 2-way stop control
- 8th Ave: Major Arterial, 5-lane cross section
- 6th St: Local Road, 2-lane cross section
- ADT: 8th Ave=11000vpd, 6th St=300vpd
- Posted speed limit: 8th Ave=35mph, 6th St=20mph
- Observed speeds: North leg - 85th Pct: 35mph, 95th Pct: 38mph
- South leg - 85th Pct: 35mph, 95th Pct: 38mph
- Ped/bike/transit facilities: 2 Bus Stops near the intersection (Route 4)
- Land use: Commercial
- Pavement rehab projects: Rejuvenate (2025) - east leg
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN

8th Ave and 7th St (ID 3-6)



Existing Characteristics

- Signalized
- 8th Ave: Major Arterial, 4-lane divided cross section
- 7th St (west leg): Local Road, 4-lane cross section
- 7th St (east leg): Local Road, 2-lane cross section
- ADT: 7th St=700vpd, 8th Ave=11000vpd
- Posted speed limit: 7th St=20mph, 8th Ave=35mph
- Observed speeds: North leg - 85th Pct: 31mph, 95th Pct: 35mph
- South leg - 85th Pct: 29mph, 95th Pct: 33mph
- West leg - 85th Pct: 21mph, 95th Pct: 24mph
- Ped/bike/transit facilities: No bus stops at the intersection but 2 Bus Routes affecting the intersection (Rooute 4)
- Land use: Commercial
- Pavement rehab projects: Rejuvenate (2025) - east leg
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 8th Ave, low risk along 7th St
- Total Crashes: 4
- Fatalities: 0
- Serious Injuries: 1 (2019)

Vision Zero Recommendations

- Retroreflective backplates

Observations

- Split phasing is challenging for pedestrians
- High-visibility crosswalks are needed on all legs - the existing brick color blends into the pavement

Revised Recommendations

- Install high-visibility crosswalks on all legs

8th Ave and 9th St (ID 3-7)



Existing Characteristics

- Signalized
- 8th Ave: Major Arterial, 4-lane divided cross section
- 9th St (west leg): Local Road, 1 lane (one way)
- 9th St (east leg): commercial driveway
- ADT: 9th St=900vpd, 8th Ave=11000vpd
- Posted speed limit: 9th St=20mph, 8th Ave=35mph
- Observed speeds: North leg - 85th Pct: 29mph, 95th Pct: 33mph
- South leg - 85th Pct: 30mph, 95th Pct: 34mph
- West leg - 85th Pct: 12mph, 95th Pct: 15mph
- East leg - 85th Pct: 12mph, 95th Pct: 17mph
- Ped/bike/transit facilities: 1 Bus Stop at 9th St (Route 4)
- Land use: Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 8th Ave, low risk along 9th St
- Total Crashes: 2
- Fatalities: 1
- Serious Injuries: 1 (2018)

Vision Zero Recommendations

- Retroreflective backplates

Observations

- High-visibility crosswalks are needed on all legs - the existing brick color blends into the pavement

Revised Recommendations

- Install high-visibility crosswalks on all legs

8th Ave and 10th St (ID 3-8)



Existing Characteristics

- Signalized
- 8th Ave: Major Arterial, 4-lane divided cross section
- 10th St (west leg): Major Arterial, 5-lane cross section
- 10th St (east leg): Local Road, 3-lane cross section
- ADT: 8th Ave=9500-12000vpd, 10th St=1300-4400vpd
- Posted speed limit: 8th Ave=35mph, 10th St (east leg)=20mph, 10th St (west leg)=35mph
- Observed speeds: North leg - 85th Pct: 30mph, 95th Pct: 33mph
- South leg - 85th Pct: 29mph, 95th Pct: 33mph
- West leg - 85th Pct: 22mph, 95th Pct: 26mph
- East leg - 85th Pct: 19mph, 95th Pct: 25mph
- Ped/bike/transit facilities: No bus stops at the intersection but 2 Bus Routes affecting the intersection (Route 4)
- Land use: Commercial
- Pavement rehab projects: None

- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: High risk along 8th Ave and 10th St west of intersection, low risk along 10th St east of intersection
- Total Crashes: 7
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Retroreflective backplates

Observations

- High-visibility crosswalks are needed on all legs - the existing brick color blends into the pavement

Revised Recommendations

- Install high-visibility crosswalks on all legs

9th Ave and A St (ID 3-9)



Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 9th Ave and A St
- Total Crashes: 3
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Bulb-outs and green paint may be beneficial
- Transit route takes a NB left at the intersection

Revised Recommendations

- Paint and post protected corners
- Install RRFBs on west leg

Existing Characteristics

- Unsignalized, 2-way stop control
- 9th Ave: Local Road, 2-lane cross section
- A St: Local Road, 2-lane cross section on west leg, 4-lane cross section on east leg
- ADT: 9th Ave=10-90vpd, A St=30-120vpd
- Posted speed limit: 9th Ave=20mph, A St=20mph
- Observed speeds: No data
- Ped/bike/transit facilities: On-street bike lanes on north, west, and south legs
- 1 Bus Stop at A St (Route 4)
- Land use: Residential, Industrial
- Pavement rehab projects: Rejuvenate (2025) - A St
- Areas of persistent poverty: High poverty area

A St, 14th Ave to 11th Ave (ID 3-10)



Existing Characteristics

- Local Road, 4-lane cross section
- ADT: 1300-1600vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 16-30mph, 95th Pct: 21-35mph
- Ped/bike/transit facilities: On-street bike lanes
- Subdivision trail
- Land use: Industrial
- Pavement rehab projects: Rejuvenate (2025) - east leg at A St
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is on HIN
- HRN Status: Low risk
- Total Crashes: 10
- Fatalities: 1 (2018)
- Serious Injuries: 0

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane cross section with delineator protected bike lanes

Observations

- This stretch of roadway has experienced drag racing.
- There is a high need for parking - potentially on the south side of the road.
- The Stampede event generates lots of traffic.
- Majority of traffic enters from 14th St to park.
- May be challenging to reduce the number of lanes.
- Potential opportunity for a raised crosswalk at N 12th Ave
- Large number of pedestrian crossings

Revised Recommendations

- Install raised crosswalk at N 12th Ave on east leg (requires new ADA ramps)

11th Ave, O St to D St (ID 3-11)



Existing Characteristics

- Minor Arterial, 4-lane cross section
- ADT: 200-3900vpd
- Posted speed limit: 40mph
- Observed speeds: 85th Pct: 24-45mph, 95th Pct: 29-49mph
- Ped/bike/transit facilities: On/Off-street shared use path from M St to D St
- Poudre River Trail from river crossing to D St
- 2 Bus Stops at Island Grove Regional Park(Route 6)
- 2 Bus Stops at JBS/H St (Route 6)
- 1 Bus Stop at Weld County Clerk and Recorder(Route 6)
- 1 Bus Stop at Guadalu
- Land use: PUD, Commercial, Industrial, Conservation District
- Pavement rehab projects: Rejuvenate (2025) - east leg at C St
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN

- HRN Status: Moderate risk
- Total Crashes: 29
- Fatalities: 0
- Serious Injuries: 1 (2016)

Vision Zero Recommendations

- Paint and post 4-lane to 3-lane cross section with delineator separated bike lanes

Observations

- Speed limit changes from 30 mph to 40 mph at D St
- The Stampede even has primary access off of 11th Ave - a lane reduction may not be suitable with event traffic

Revised Recommendations

- Eliminate project location

11th Ave and D St (ID 3-11A)



Existing Characteristics

- Unsignalized, 2-way stop control
- 11th Ave: Minor Arterial, 4-lane cross section
- D St: Minor Collector, 2-lane cross section
- ADT: 11th Ave=3900-4200vpd, D St=230-500vpd
- Posted speed limit: 35mph
- Observed speeds: North leg - 85th Pct: 41mph, 95th Pct: 45mph
- South leg - 85th Pct: 39mph, 95th Pct: 44mph
- West leg - 85th Pct: 19mph, 95th Pct: 23mph
- East leg - 85th Pct: 15mph, 95th Pct: 19mph
- Ped/bike/transit facilities: On/Off-street shared use path along 11th Ave
- On/Off-street bike lanes/shared use path on west leg
- Poudre River Trail along north leg
- 2 Bus Stops at Island Grove Regional Park(Route 6)
- Land use: Commercial, Industrial, Conservation District
- Pavement rehab projects: None

- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk along 11th Ave, low risk along D St
- Total Crashes: 5
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Paint and post intersection bulb-outs
- Paint stop lines

Observations

- Speed limit changes from 30 mph to 40 mph at D St. Painted stop bars exist for eastbound and westbound D Street.

Revised Recommendations

- Install RRFBs and pedestrian push button post on north leg



H St, O St to 11th Ave (ID 3-12)



Existing Characteristics

- Minor Collector, 5-lane cross section
- ADT: 850-1600vpd
- Posted speed limit: 25mph
- Observed speeds: 85th Pct: 22-39mph, 95th Pct: 28-42mph
- Ped/bike/transit facilities: 1 Bus Stop at ICCS(Route 6)
- 1 Bus Stop at Weld County Clerk and Recorder(Route 6)
- 1 Bus Stop at North Range Behavioral (Route 6)
- 1 Bus Stop at Weld County Assessor's Office(Route 6)
- 1 Bus Stop at O St (Route 6)
- Land use: PUD, Industrial
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment from 12th Ave to 11th Ave is on HIN

- HRN Status: Moderate risk from O St to M St, low risk from M St to 11th Ave
- Total Crashes: 21
- Fatalities: 0
- Serious Injuries: 1 (2016)

Vision Zero Recommendations

- Paint and post 5-lane to 3-lane cross section with delineator separated bike lanes

Observations

- Good potential for lane reduction
- Could use a shared bike/bus stop or incorporate a floating island to address interaction between bike lanes and bus stops
- Sidewalks are narrow

Revised Recommendations

- Modify lane configuration from a 5-lane to a 3-lane cross section

10th St, 71st Ave to 47th Ave (ID 3-13)



Existing Characteristics

- Major Arterial, 5-lane cross section from 71st Ave to 59th Ave, 6-lane cross section from 59th Ave to 47th Ave
- ADT: 20000-27000vpd
- Posted speed limit: 55mph
- Observed speeds: 85th Pct: 45-58mph, 95th Pct: 49-61mph
- Ped/bike/transit facilities: On/Off-street shared use path
- Sheep Draw Trail crossing west of 63rd Ave`
- 1 Bus Stop at 47th Ave (Route 1)
- 1 Bus Stops at 48th Ave (Route 1)

- 2 Bus Stops at 50th Ave (Route 1)
- 2 Bus Stops at 59th Ave (Route 1)
- 2 Bus Stops at 63rd Ave (Route 1)
- 2 Bus Stops at a
- Land use: Residential, Commercial, Industrial, PUD, Holding Agriculture
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is on HIN



- HRN Status: High risk
- Total Crashes: 195
- Fatalities: 4 (2015, 2018, 2021, and 2022)
- Serious Injuries: 11 (2014x2, 2017x3, 2018, 2019, 2020, 2021x2, and 2022)

Vision Zero Recommendations

- 71st Ave to 59th Ave: High-visibility stop signs

Observations

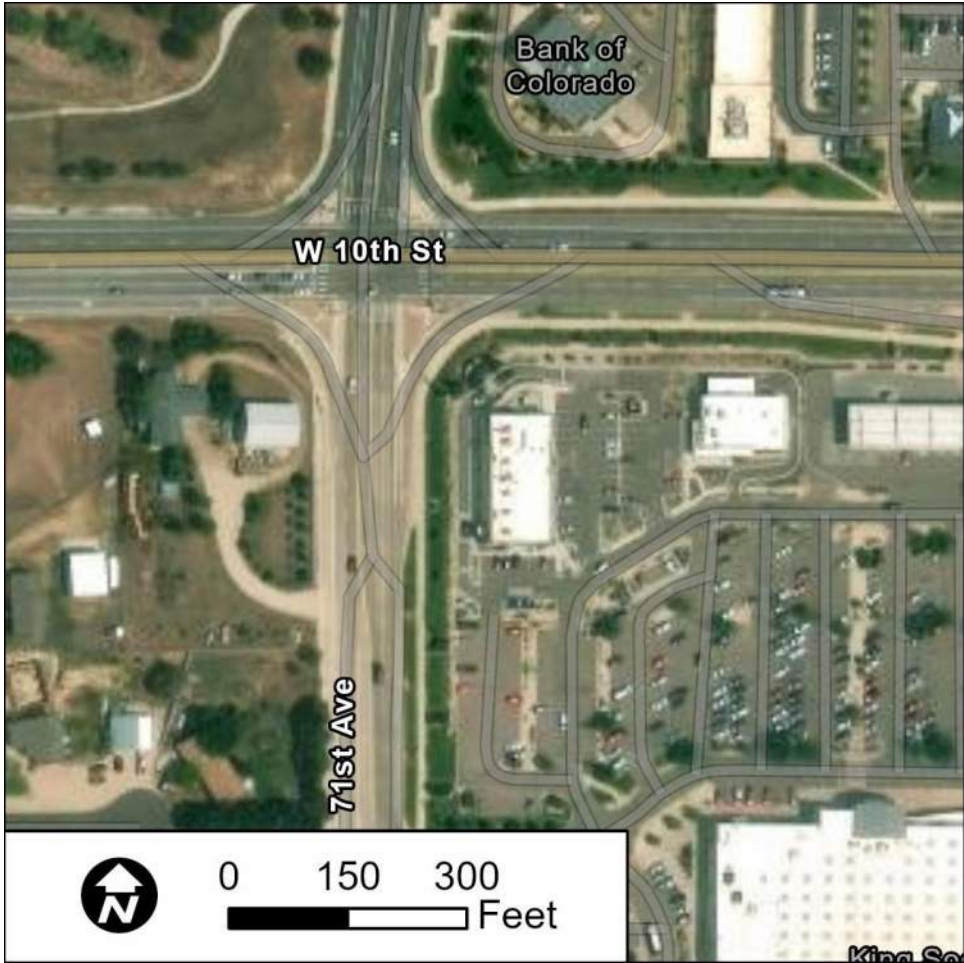
- SB to WB free right at 71st Ave is an add lane and should remain.

- NB to EB acceleration lane at 71st Ave needs more analysis to determine if removing it is appropriate
- 10th St and 69th Ave is signalized so high-visibility stop signs are not needed
- SB to WB acceleration lane at 59th Ave operates well and is not recommended to be removed
- NB to EB acceleration lane at 59th Ave operates well and is not recommended to be removed
- Consider adding posts for access control west of 54th Ave
- Posted speed is 55 mph and the collected speed data does not exceed 60.

Revised Recommendations

- Eliminate project location

10th St and 71st Ave (ID 3-13A)



Existing Characteristics

- Signalized
- 10th St: Major Arterial, 5-lane cross section
- 71st Ave: Minor Arterial, 4-lane divided cross section
- ADT: 10th St=19000-20000vpd, 71st Ave=7700-16000vpd
- Posted speed limit: 71st Ave=40mph, 10th St=55mph
- Observed speeds: North leg - 85th Pct: 26mph, 95th Pct: 33mph
- South leg - 85th Pct: 29mph, 95th Pct: 34mph
- West leg - 85th Pct: 54mph, 95th Pct: 59mph
- East leg - 85th Pct: 53mph, 95th Pct: 58mph
- Ped/bike/transit facilities: On-street bike lanes on south leg
- On/Off-street bike lane/shared used path on north leg
- On/Off-street shared used path on east leg
- 1 Bus Stops at 9th St near the intersection (Route 1)
- 2 Bus Stops at 11th St near the intersection (Route 1)
- Land use: Residential, Commercial, Industrial, PUD, Holding Agriculture

- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is on HIN
- HRN Status: High risk along 10th St, moderate risk along 71st St
- Total Crashes: 27
- Fatalities: 1 (2015)
- Serious Injuries: 1 (2022)

Vision Zero Recommendations

- Remove free right and acceleration lane

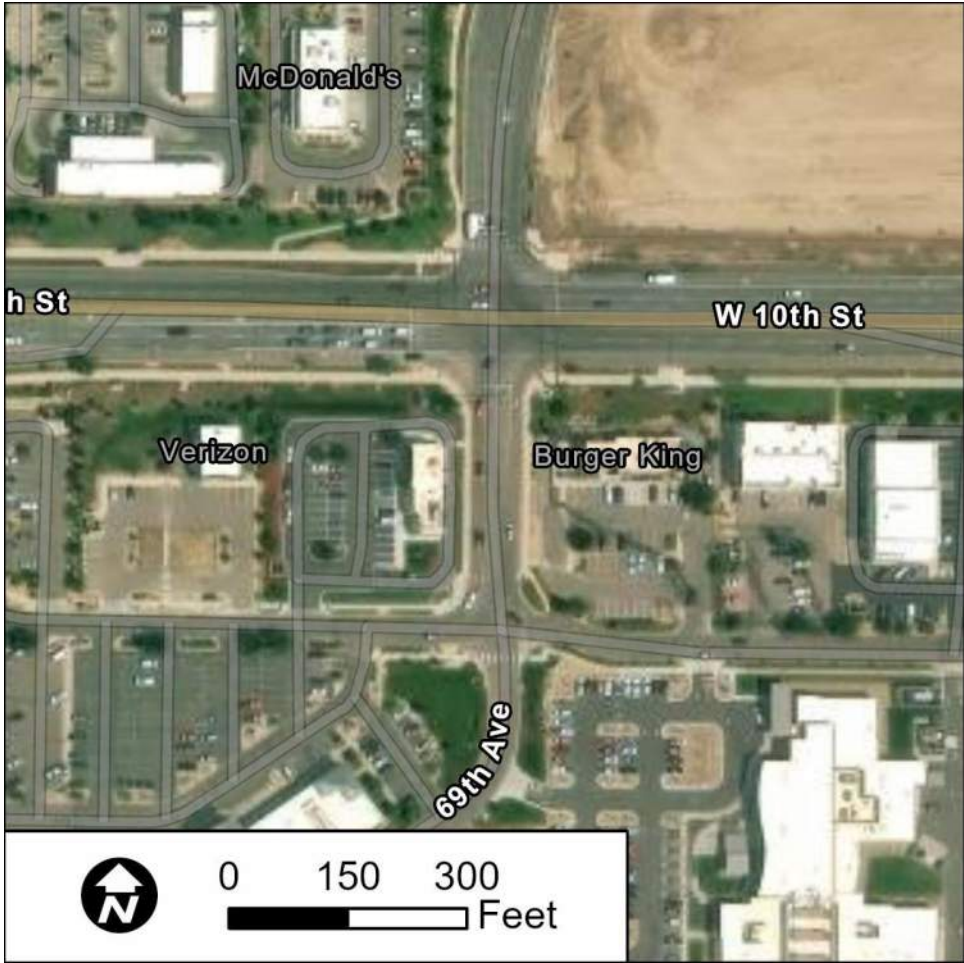
Observations

- SB to WB free right is an add lane and should remain
- NB to EB acceleration lane needs more analysis to determine if removing it is appropriate

Revised Recommendations

- Eliminate project location

10th St and 69th Ave (ID 3-13B)



- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is on HIN
- HRN Status: High risk along 10th St, low risk along 69th St
- Total Crashes: 18
- Fatalities: 1 (2018)
- Serious Injuries: 1 (2014)

Vision Zero Recommendations

- High-visibility stop signs

Observations

- The intersection is signalized so high-visibility stop signs are not needed

Revised Recommendations

- Eliminate project location

Existing Characteristics

- Signalized
- 10th St: Major Arterial, 5-lane cross section
- 69th Ave: Local Road, 2-lane cross section
- ADT: 10th St=25000-28000vpd, 69th Ave=3000-4400vpd
- Posted speed limit: 10th St=55mph, 69th Ave=20mph
- Observed speeds: North leg - 85th Pct: 28mph, 95th Pct: 33mph
- South leg - 85th Pct: 18mph, 95th Pct: 25mph
- West leg - 85th Pct: 52mph, 95th Pct: 56mph
- East leg - 85th Pct: 52mph, 95th Pct: 56mph
- Ped/bike/transit facilities: On/Off-street bike lane/shared used path on north leg
- On/Off-street shared used path along 10th St
- 2 Bus Stops at 69th Ave (Route 1 and Poudre Express)
- Land use: Commercial, Industrial
- Pavement rehab projects: None

10th St and 59th Ave (ID 3-13C)



Existing Characteristics

- Signalized
- 10th St: Major Arterial, 6-lane cross section
- 59th Ave: Minor Arterial, 4-lane cross section
- ADT: 10th St=25000vpd, 59th Ave=8000vpd
- Posted speed limit: 10th St=55mph, 59th Ave=40mph
- Observed speeds: North leg - 85th Pct: 26mph, 95th Pct: 35mph
- South leg - 85th Pct: 31mph, 95th Pct: 36mph
- West leg - 85th Pct: 47mph, 95th Pct: 51mph
- East leg - 85th Pct: 47mph, 95th Pct: 51mph
- Ped/bike/transit facilities: On/Off-street shared used path on all four legs
- 2 Bus Stops near the intersection (Route 1)
- Land use: Commercial, Holding Agriculture
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is on HIN
- HRN Status: High risk along 10th St, moderate risk along 59th St
- Total Crashes: 42
- Fatalities: 1 (2022)
- Serious Injuries: 2 (2017 and 2018)

Vision Zero Recommendations

- Remove free right and acceleration lane

Observations

- SB to WB acceleration lane operates well and is not recommended to be removed
- NB to EB acceleration lane operates well and is not recommended to be removed

Revised Recommendations

- Eliminate project location

10th St and 47th Ave (ID 3-13D)



Existing Characteristics

- Signalized
- 10th St: Major Arterial, 6-lane cross section
- 47th Ave: Minor Arterial, 4-lane cross section
- ADT: 10th St=23000vpd, 47th Ave=10000vpd
- Posted speed limit: 10th St=45mph, 47th Ave=40mph
- Observed speeds: North leg - 85th Pct: 25mph, 95th Pct: 33mph
- South leg - 85th Pct: 29mph, 95th Pct: 34mph
- West leg - 85th Pct: 46mph, 95th Pct: 50mph
- East leg - 85th Pct: 47mph, 95th Pct: 50mph
- Ped/bike/transit facilities: On/Off-street shared used path on all four legs
- 2 Bus Stops at 47th Ave (Route 1)
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is on HIN
- HRN Status: High risk along 10th St, moderate risk along 47th St
- Total Crashes: 51
- Fatalities: 0
- Serious Injuries: 4 (2014, 2019, and 2021x2)

Vision Zero Recommendations

- Retroreflective backplates
- Remove free right and acceleration lane

Observations

Revised Recommendations

- Eliminate project location

Residential (63rd Ave/6th St/61st Ave/8th St) (ID 3-14)



Existing Characteristics

- 63rd Ave: Minor Collector, 2-lane cross section
- All other roads: Local Road, 2-lane cross section
- ADT: <100vpd
- Posted speed limit: 20mph
- Observed speeds: No data
- Ped/bike/transit facilities: On-street bike lanes and Sheep Draw Trail Alternative alone 63rd Ave
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- No segments are on HIN
- HRN Status: Low risk
- Total Crashes: 0
- Fatalities: 0

- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- If chicanes are installed, they need to consider mail box locations and parking for mail pick-up
- It may be difficult to install chicanes with residential driveways
- Possible speed bump location on W 7th St between 62nd Ave and 61st Ave Ct

Revised Recommendations

- Install speed table on 6th St Rd between 61st Ave Ct and 61st Ave and on 8th St between 62nd Ave Ct and 61st Ave Ct
- Install raised crosswalk at 6th St Rd and 62nd Ave (west leg) and 8th st and 61st Ave Ct (west leg)
- Install mini-roundabouts on W 7th St at

54th Ave, 9th St to 6th St Rd (ID 3-15)



Existing Characteristics

- Minor Collector, 3-lane cross section
- ADT: 800-1000vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 16-34mph, 95th Pct: 21-36mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total Crashes: 2

- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- NB speed feedback location between 9th St and W 7th St
- SB speed feedback location north of W 7th St

Revised Recommendations

- Install northbound speed feedback sign south of W 7th St
- Install southbound speed feedback sign north of W 7th St

4th St btwn 50th Ave Pl and 49th Ave (ID 3-16)



- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Add a high-visibility crosswalk
- Install speed feedback signs for crossing approaches on either side of crossing

Revised Recommendations

- Install eastbound speed feedback sign west of existing HAWK
- Install westbound speed feedback sign east of existing HAWK
- Install high-visibility crosswalk at exiting HAWK

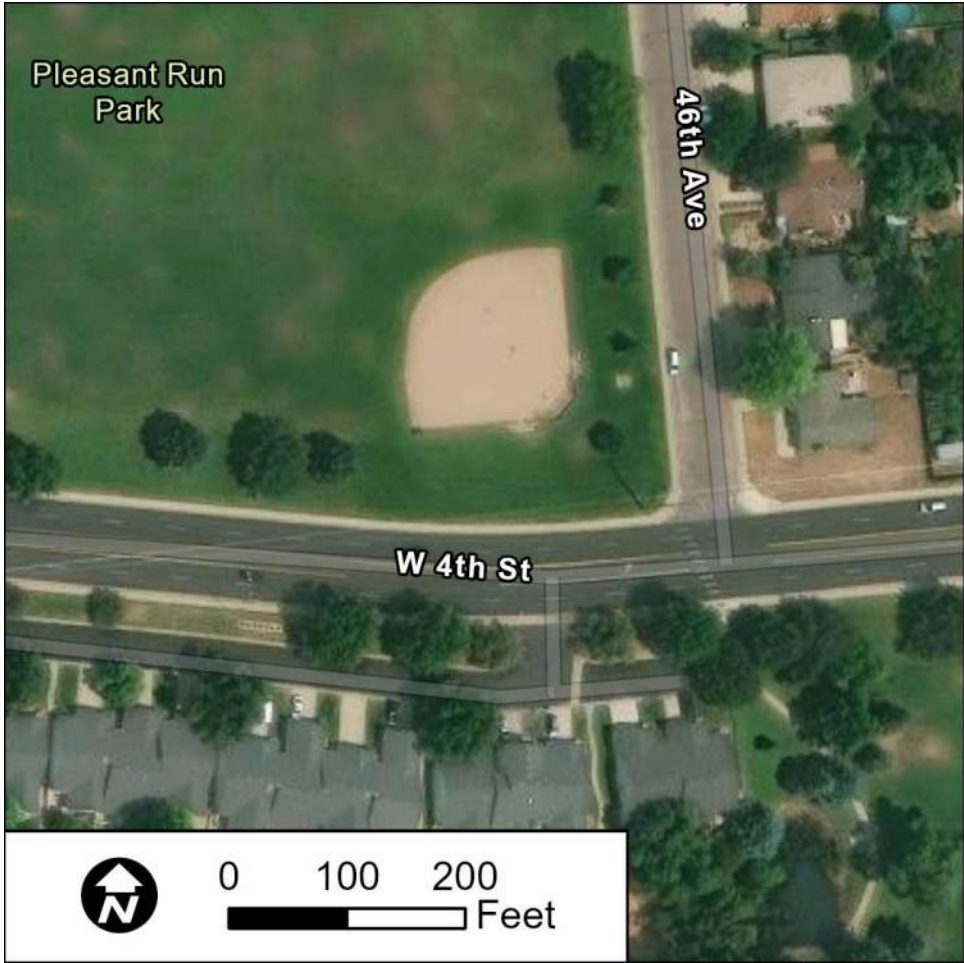
Existing Characteristics

- Minor Arterial, 4-lane cross section
- ADT: 8800vpd
- Posted speed limit: 40mph
- Observed speeds: 85th Pct: 45mph, 95th Pct: 48mph
- Ped/bike/transit facilities: On/Off-street shared use path
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk
- Total Crashes: 0
- Fatalities: 0

4th St and 46th Ave (ID 3-17)



- HRN Status: Moderate risk along 4th St, low risk along 46th Ave
- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- NWC ramp does not meet ADA standards
- Good location for a RRFB

Revised Recommendations

- Install RRFBs and pedestrian push button post on west leg

Existing Characteristics

- Unsignalized, 2-way stop control
- 4th St: Minor Arterial, 5-lane cross section
- 46th Ave: Local Road, 2-lane cross section
- ADT: 4th St=9996vpd, 46th Ave=60vpd
- Posted speed limit: 4th St=35mph, 46th Ave=20mph
- Observed speeds: West leg - 85th Pct: 43mph, 95th Pct: 46mph
- East leg - 85th Pct: 45mph, 95th Pct: 48mph
- Ped/bike/transit facilities:
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN

43rd Ave, 4th St to 16th St (ID 3-18)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 700-1000vpd
- Posted speed limit: 30mph
- School Zone from 4th St Rd to 8th St
- Observed speeds: 85th Pct: 19-39mph, 95th Pct: 23-42mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment from 8th St to 13th St is on HIN
- HRN Status: Low risk from 4th St to 10th St, moderate risk from 10th St to 16th St
- Total Crashes: 35
- Fatalities: 0
- Serious Injuries: 2 (2016 and 2019)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- W 7th St intersection may be a good location for a raised crosswalk - need to consider SRTS walking paths
- Possible speed hump location south of W 8th St
- Consider striping adjustments to continue bike lanes north and south of 10th St
- Parking lanes between 10th St and 16th St were not utilized during the field review
- Drivers were using the parking/bike lanes as a SB right-turn lane at 16th St

Revised Recommendations

- Paint and post protected corners at 7th St
- Modify lane configuration to adjust parking north of 10th St and remove parking south of 10th St
- Install chicanes south of 42nd Ave/Ward Dr

Residential (42nd Ave/4th St/41st Ave/7th St) (ID 3-19)



Existing Characteristics

- All roads: Local Road, 2-lane cross section
- ADT: 7th Street=200vpd, Rest=<25vpd
- Posted speed limit: School Zone with School Zone limit of 20mph
- Observed speeds: No data
- Ped/bike/transit facilities:
- Land use: Residential
- Pavement rehab projects: Overlay (2025) - 4th St Rd/41st Ave/42nd Ave
- Areas of persistent poverty: Not a high poverty area

Crash Data

- No segments are on HIN
- HRN Status: Low risk
- Total Crashes: 1

- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Need to review design standards for chicanes to determine if there is enough space between driveways to add chicanes
- Add high-visibility crosswalk and potentially a raised crosswalk at W 7th St and 42nd Ave

Revised Recommendations

- Install raised crosswalk at W 7th St and 42nd Ave (west leg) and W 7th St and 41st Ave (east leg)

16th St, 47th Ave to 35th Ave (ID 3-20)



Existing Characteristics

- Minor Arterial, 4-lane cross section from 47th Ave to 40th Ave, 4-lane divided cross section from 40th St to 35th St
- ADT: 2000-5000vpd
- Posted speed limit: 35mph, From 35th Ave to 40th Ave=30mph
- Observed speeds: 85th Pct: 28-47mph, 95th Pct: 34-52mph
- Ped/bike/transit facilities: On/Off-street bike lanes/shared use path
- 2 Bus Stops at 35th Ave (Route 3)
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: Overlay (2025) - 36th Ave Ct
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment from 42nd Ave Ct to 35th Ave is on HIN
- HRN Status: Moderate risk
- Total Crashes: 47

- Fatalities: 0
- Serious Injuries: 2 (2015 and 2022)

Vision Zero Recommendations

- Paint and post of 4-lane to 3-lane cross section with delineator-protected bike lanes

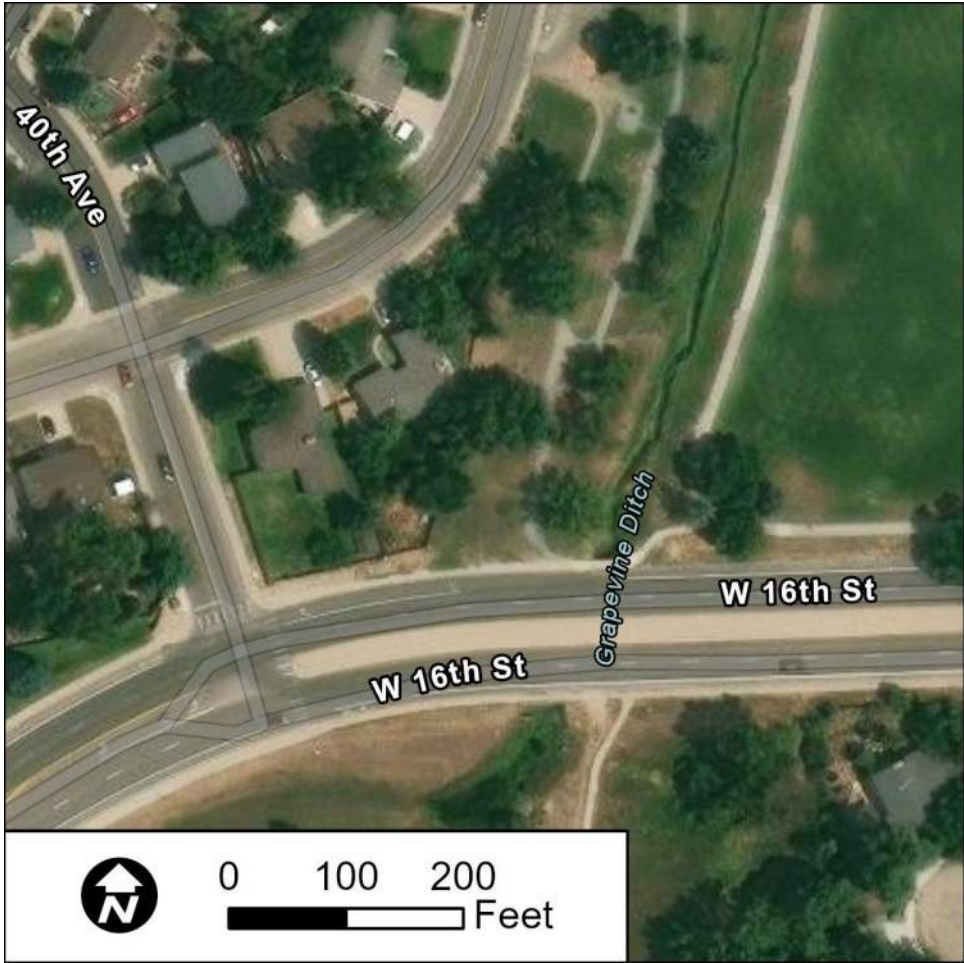
Observations

- Conversion to a 3-lane cross section with buffered bike lanes is a good option
- Add speed feedback signs approaching the curve near 40th Ave
- Drivers were using the parking/bike lanes as a SB right-turn lane at 43rd Ave

Revised Recommendations

- Modify lane configuration from a 4-lane to a 3-lane cross section
- Install RRFBs and pedestrian push button post at 43rd Ave on east leg
- Install RRFBs at 40th Ave on east leg

16th St, E of 40th Ave (ID 3-20A)



- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Add speed feedback signs approaching the curve

Revised Recommendations

- Install westbound speed feedback sign approaching curve

Existing Characteristics

- Minor Arterial, 4-lane divided cross section
- ADT: 5100vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 41-44mph, 95th Pct: 44-48mph
- Ped/bike/transit facilities: On/Off-street bike lanes/shared use path along 16th St
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk
- Total Crashes: 0

16th St, W of 40th Ave (ID 3-20B)



- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Add speed feedback signs approaching the curve

Revised Recommendations

- Install eastbound speed feedback sign approaching curve

Existing Characteristics

- Minor Arterial, 4-lane cross section
- ADT: 2000-3000vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 43mph, 95th Pct: 46mph
- Ped/bike/transit facilities: On/Off-street bike lanes/shared use path along 16th St
- Land use: PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk
- Total Crashes: 0

20th St, 47th Ave to 35th Ave (ID 3-21)



Existing Characteristics

- Minor Arterial, 4-lane cross section
- ADT: 9000vpd
- Posted speed limit: 40mph
- School Zone from 46th Ave to 47th Ave with School Zone Limit of 20mph
- Observed speeds: 85th Pct: 34-46mph, 95th Pct: 40-49mph
- Ped/bike/transit facilities: On/Off-street shared use path
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: Rejuvenate (2025) - south leg at 46th Ave
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment from 47th Ave to 42nd Ave is on HIN
- HRN Status: Moderate risk
- Total Crashes: 68

- Fatalities: 0
- Serious Injuries: 3 (2015, 2017, and 2022)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Centerline hardening at 47th Ave may not fit unless lanes were narrowed
- Narrow lanes to allow for a buffer between EB and WB travel lanes near 40th Ave

Revised Recommendations

- Modify lane configuration to narrow lane widths
- Install eastbound speed feedback sign west of 44th Ave Ct
- Install westbound speed feedback sign east of Homestead Rd

20th St and 47th Ave (ID 3-21A)



Existing Characteristics

- Signalized
- 20th St: Minor Arterial, 4-lane cross section
- 47th Ave: Minor Arterial, 5-lane cross section
- ADT: 20th St=9000vpd, 47th Ave=20000vpd
- Posted speed limit: School Zone with School Zone limit of 20mph
- Observed speeds: North leg - 85th Pct: 36mph, 95th Pct: 41mph
- South leg - 85th Pct: 36mph, 95th Pct: 41mph
- West leg - 85th Pct: 30mph, 95th Pct: 38mph
- East leg - 85th Pct: 34mph, 95th Pct: 40mph
- Ped/bike/transit facilities: On/Off-street shared use path on all four legs
- 2 Bus Stops at 47th Ave, not at the intersection but the route affecting the intersection (Route 1)
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is on HIN
- HRN Status: Moderate risk along 20th St and 47th Ave north of intersection, high risk along 47th Ave south of intersection
- Total Crashes: 26
- Fatalities: 0
- Serious Injuries: 1 (2022)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Centerline hardening may not fit unless lanes were narrowed

Revised Recommendations

- Install centerline hardening

13th St, 63rd Ave Ct to 60th Ave (ID 3-22)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 2300vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 42mph, 95th Pct: 45mph
- Ped/bike/transit facilities: On/Off-street shared use path
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Low risk
- Total Crashes: 0
- Fatalities: 0

- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

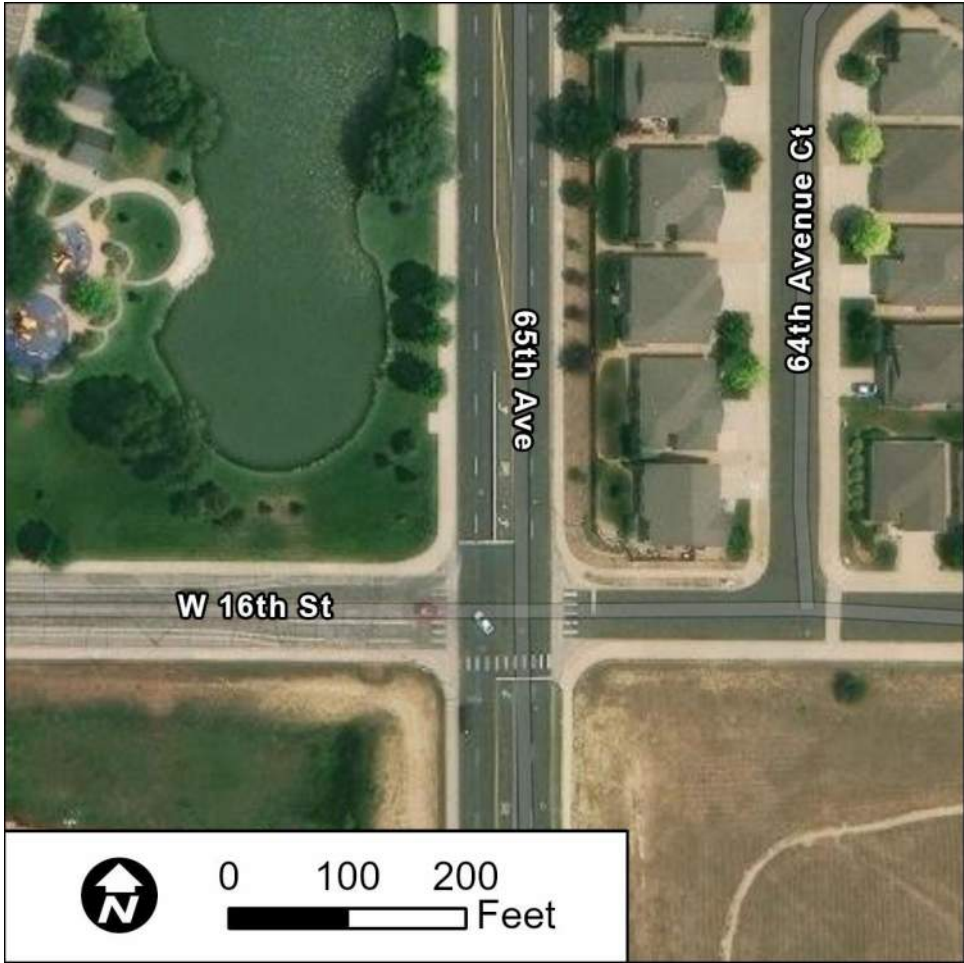
Observations

- Add speed feedback signs
- Consider a two-way multi-use path with pavement markings protected by flex posts on the north side of the segment

Revised Recommendations

- Install eastbound and westbound speed feedback signs
- Paint and post a two-way multi-use path on north side of road
- Install high-visibility crosswalk and crossing signs at 60th Ave on west leg

16th St and 65th Ave (ID 3-23)



Existing Characteristics

- Unsignalized, 2-way stop control
- 16th St: Minor Collector, 2-lane cross section
- 65th Ave: Major Collector, 5-lane cross section
- ADT: 16th St=1200vpd, 65th Ave=2000-2300vpd
- Posted speed limit: School Zone with School Zone Limit of 20mph
- Observed speeds: North leg - 85th Pct: 32mph, 95th Pct: 35mph
- South leg - 85th Pct: 31mph, 95th Pct: 35mph
- West leg - 85th Pct: 20mph, 95th Pct: 23mph
- Ped/bike/transit facilities: On/Off-street shared use path on north, east, and south legs
- On/Off-street bike lane/shared use path on west leg
- Land use: Residential
- Pavement rehab projects: Overlay (2026) - west leg of intersection
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 16th St and 65th Ave north of intersection, moderate risk along 65th Ave south of intersection
- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- A mini-roundabout is not feasible with a 4-lane roadway
- There is an existing RRFB on the south leg
- A lane reduction north of the intersection could increase feasibility of a mini-roundabout but could hinder school traffic, sports complex event traffic, and bus traffic

Revised Recommendations

- Eliminate project location

18th St and 59th Ave (ID 3-24)



Existing Characteristics

- Unsignalized, 2-way stop control
- 18th St: Local Road, 2-lane cross section
- 59th Ave: Minor Arterial, 5-lane cross section
- ADT: 59th Ave= 10000vpd, 18th St=200vpd
- Posted speed limit: 59th Ave=40mph, 18th St=20mph
- Observed speeds: North leg - 85th Pct: 46mph, 95th Pct: 50mph
- South leg - 85th Pct: 45mph, 95th Pct: 48mph
- West leg - 85th Pct: 28mph, 95th Pct: 32mph
- Ped/bike/transit facilities: On/Off-street shared use path along 59th Ave
- On/Off-street bike lane/shared use path on west leg
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 18th St, moderate risk along 59th Ave
- Total Crashes: 7
- Fatalities: 0
- Serious Injuries: 1 (2021)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- South leg is a good opportunity for a RRFB and high-visibility crosswalk
- Existing streetlight on south leg would help with lighting a crossing
- With a posted speed of 40 mph, speed feedback signs would be beneficial

Revised Recommendations

- Install RRFBs and high-visibility crosswalk on south leg
- Install northbound and southbound speed feedback signs on 59th Ave
- Install advance warning signs for 59th Ave crossing

18th St and 59th Ave (ID 3-25)



Existing Characteristics

- Unsignalized, 2-way stop control
- 18th St: Local Road, 2-lane cross section
- 59th Ave: Minor Arterial, 5-lane cross section
- ADT: 59th Ave= 10000vpd, 18th St=200vpd
- Posted speed limit: 59th Ave=40mph, 18th St=20mph
- Observed speeds: North leg - 85th Pct: 46mph, 95th Pct: 50mph
- South leg - 85th Pct: 45mph, 95th Pct: 48mph
- West leg - 85th Pct: 28mph, 95th Pct: 32mph
- Ped/bike/transit facilities: On/Off-street shared use path along 59th Ave
- On/Off-street bike lane/shared use path on west leg
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk along 18th St, moderate risk along 59th Ave
- Total Crashes: 7
- Fatalities: 0
- Serious Injuries: 1 (2021)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- South leg is a good opportunity for a RRFB and high-visibility crosswalk
- Existing streetlight on south leg would help with lighting a crossing
- With a posted speed of 40 mph, speed feedback signs would be beneficial

Revised Recommendations

- Install RRFBs and high-visibility crosswalk on south leg
- Install northbound and southbound speed feedback signs on 59th Ave
- Install advance warning signs for 59th Ave crossing

59th Ave, 20th St to 21st St (ID 3-26)



Existing Characteristics

- Minor Arterial, 3-lane cross section
- ADT: 9600vpd
- Posted speed limit: 40mph
- Observed speeds: 85th Pct: 34-42mph, 95th Pct: 39-45mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk
- Total Crashes: 18
- Fatalities: 0
- Serious Injuries: 1 (2021)

Vision Zero Recommendations

- Remove Southbound acceleration lane and stripe in a bike lane

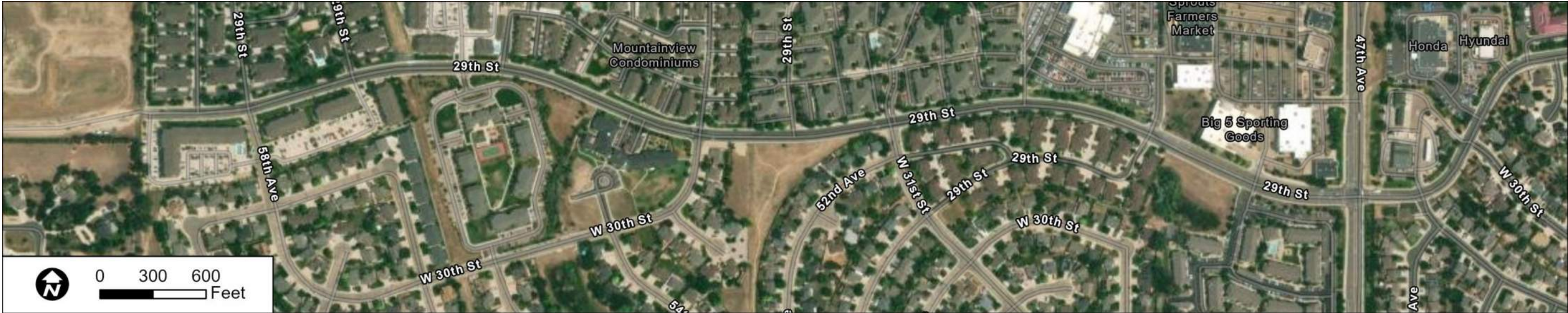
Observations

- Extend bike lane to the intersection
- Add NB right turn trap lane
- Possible bulb-out on SWC to reduce the crossing distance
- Need to consider how extending the SB bike lane would interact with the trap lane

Revised Recommendations

- Paint and post protected corner on southwest corner at 20th St
- Modify lane configuration to remove the southbound acceleration lane and begin southbound bike lane on southwest corner of 20th St
- Modify lane configuration to remove outside northbound thru l

29th St, EOP to 47th Ave (ID 3-27)



Existing Characteristics

- Minor Collector, 3-lane cross section
- ADT: 200-7200vpd
- Posted speed limit: 30mph
- Observed speeds: 85th Pct: 22-42mph, 95th Pct: 28-47mph
- Ped/bike/transit facilities: On-street bike lanes
- Land use: Residential, Commercial
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- Segment is not on HIN
- HRN Status: Moderate risk from EOP to 53rd Ave, low risk from 53rd Ave to 47th Ave
- Total Crashes: 10
- Fatalities: 0
- Serious Injuries: 1 (2016)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

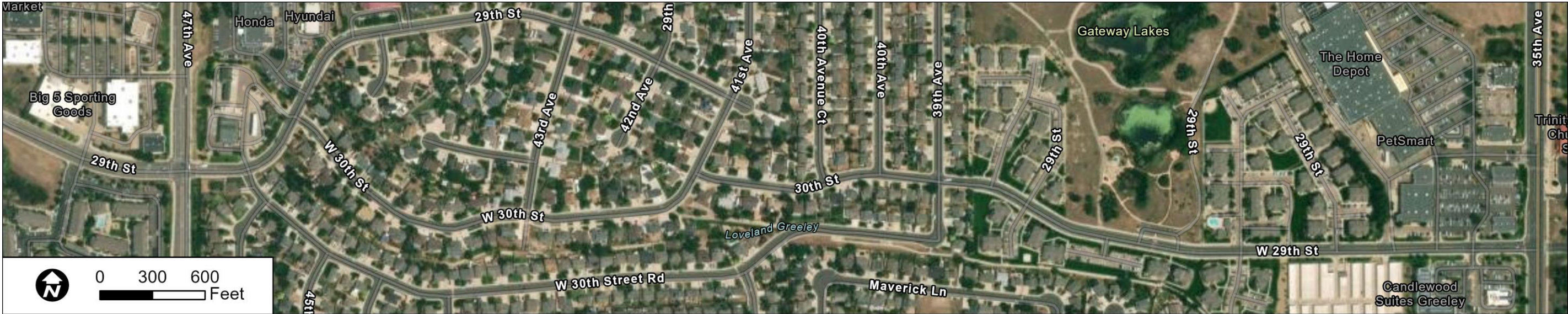
Observations

- Roadway is planned to extend further west by the end of summer
- Residents have voiced concerns about traffic and speeding
- 53rd Ave intersection has an existing raised crosswalk and speed feedback signs
- 31st St intersection is a possible location for a mini roundabout - need to be mindful with existing manholes in the road
- Roadway width west of 47th Ave is much wider than necessary
- Double yellow compliance issues west of 47th Ave

Revised Recommendations

- Install mini-roundabout at 31st St and west of 47th Ave
- Install raised crosswalk at 58th Ave on east leg
- Install speed table east of 58th Ave
- Modify lane configuration to narrow roadway width at 47th Ave intersection
- Install chicanes west of 53rd Ave

Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd) (ID 3-28)



Existing Characteristics

- W 30th St and 30th St: Minor Collector, 2-lane cross section
- W 29th St: Minor Collector, 3-lane cross section
- All other roads: Local Road, 2-lane cross section
- ADT: 300-1500vpd
- Posted speed limit: 30th St=25mph, Rest=20mph
- Observed speeds: 29th St - 85th Pct: 22-32mph, 95th Pct: 24-34mph
- W 30th St - 85th Pct: 22-23mph, 95th Pct: 23-24mph
- W 30th St Rd - 85th Pct: 21-30mph, 95th Pct: 24-34mph
- 30th St - 85th Pct: 22-33mph, 95th Pct: 24-36mph
- W 29th St - 85th Pct: 18-36mph, 95th Pct: 24-39mph
- Ped/bike/transit facilities: On-street bike lanes along 29th St, W 30th St, and W 30th St Rd
- On/Off-street bike lane/shared use path on W 29th St from 39th Ave to 35th Ave
- Land use: Residential, Commercial, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Possible high poverty area

Crash Data

- No segments are on HIN
- HRN Status: Low risk
- Total Crashes: 2
- Fatalities: 0

- Serious Injuries: 0

Vision Zero Recommendations

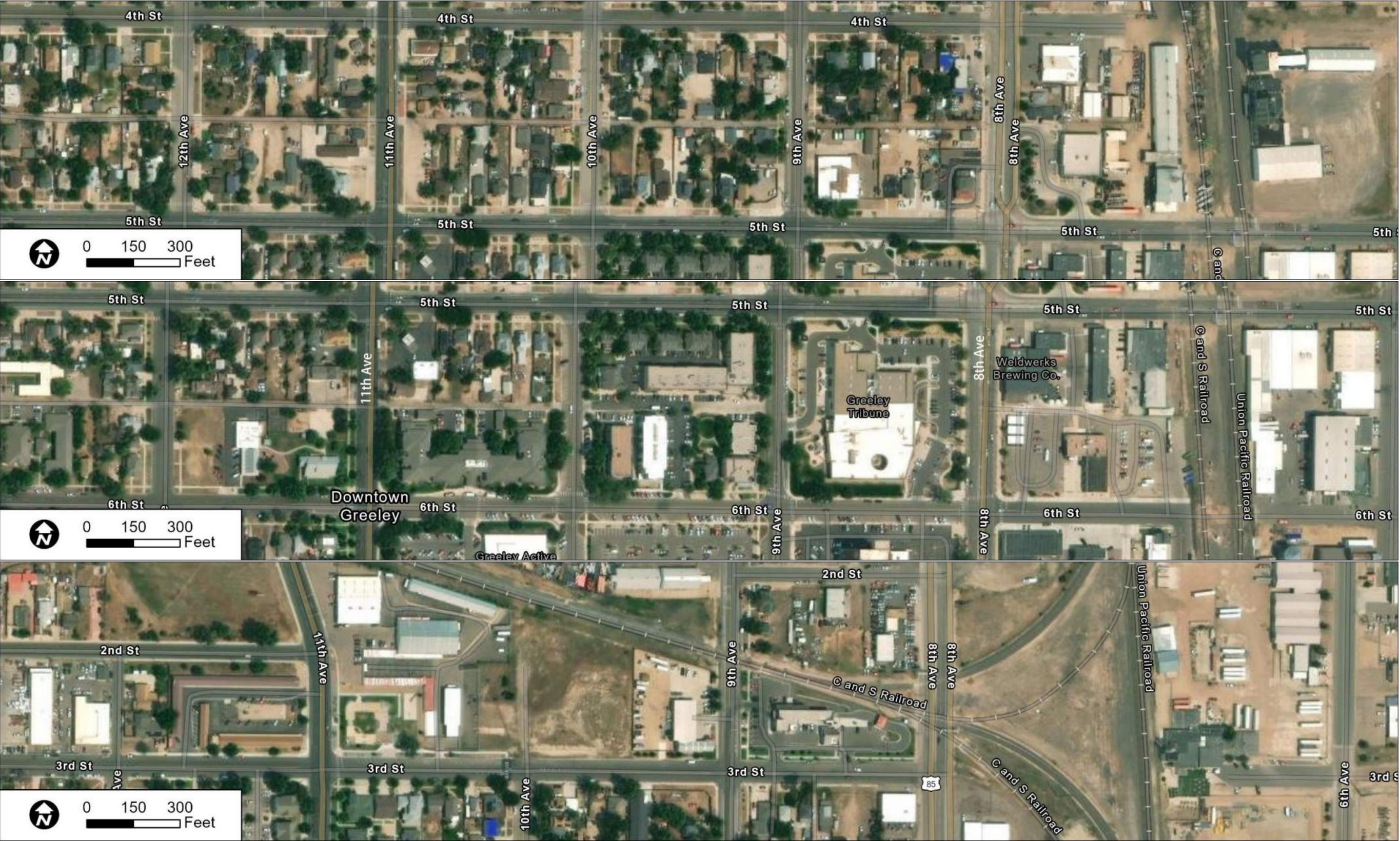
- Not included in Vision Zero Quick-Build Recommendations

Observations

- Improve stop sign visibility at 29th St and 43rd Ave
- Potential speed hump location on 30th St west of 40th Ave Ct
- Parking at 29th St and 39th Ave impedes the visibility of the stop sign - consider adjusting striping, adding bulb-outs, or adding a rear stop sign

Revised Recommendations

- Install stop sign visibility enhancements with reflective posts at 29th St and 43rd Ave
- Paint and post curb extensions at 29th St/30th St and 39th Ave, 30th St and 41st Ave, and 30th St and 43rd Ave
- Paint and post protected corners at 30th St and 29th St
- Install high-visibility crosswalk on 29th St at park crossing
- Install speed hump on 30th St west of 40th Ave Ct and west of 35th Ave
- Install westbound speed feedback sign west of 35th Ave
- Install eastbound speed feedback sign east of 39th Ave





Existing Characteristics

- Major Arterials: 8th Ave
- Minor Arterials: 11th Ave, 5th St
- Minor Collectors: 2nd St, 10th Ave
- Local Roads: all remaining
- ADT: 11th Ave=4800vpd, 8th Ave=5700vpd, A St=114vpd, 1st St=41vpd, 3rd St=890vpd, 4th St=45vpd, 5th St=5600vpd, 6th St=270vpd
- Posted speed limit: 11th Ave=35mph, 8th Ave=35mph, A St=20mph, 1st St=20mph, 3rd St=20mph, 4th St=20mph, 5th St=35mph, 6th St=20mph
- Observed speeds: 1st St - 85th Pct: 14-27mph, 95th Pct: 17-30mph
- 3rd St - 85th Pct: 21-51mph, 95th Pct: 24-53mph
- 5th St - 85th Pct: 26-34mph, 95th Pct: 31-37mph
- 6th St - 85th Pct: 16-21mph, 95th Pct: 23mph
- 11th Ave - 85th Pct: 29-39mph, 95th Pct: 34-44mph
- 10th Ave - 85th
- Ped/bike/transit facilities: On-street bike lanes: A St, 11th Ave, 9th Ave, 5th St
- 1 Bus Stop at 11th Ave and B St (Route 6)
- 2 Bus Stops at A St and 9th Ave (Route 4)
- 2 Bus Stops at 8th Ave and 6th St(Route 4)
- 1 Bus Stop at 1st St (CDOT Outrider)
- 2 Bus Stop at 9th Ave and 2nd St (Rou
- Land use: Residential, Mixed Use, Commercial, Industrial, PUD
- Pavement rehab projects: Rejuvenate (2025) - A St, 11th Ave to 8th Ave; 10th Ave, A St to 1st St; 1st St, 11th Ave to 8th Ave; 8th Ave, 1st St to C St; 3rd St W of 11th Ave; 4th St W of 11th Ave; 6th St W of 11th Ave; 6th St, 8th Ave to RR tracks
- Areas of persistent poverty: High poverty area

Crash Data

- Segments on HIN: 8th Ave, 5th St, A St from 11th Ave to 9th Ave, 11th Ave from 3rd St to 6th St

- HRN Status: Moderate to high risk along 11th Ave and 8th Ave, moderate risk along 5th St, low risk along all other roadways
- Total Crashes: 77
- Fatalities: 0
- Ser

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Bulb-outs and green paint may be beneficial at A St and 9th Ave
- Transit route takes a NB left at the A St and 9th Ave interection
- Bulb-outs, high-visibility crosswalks, and stop bars would be beneficial at 4th St and 10th Ave
- Bulb-outs, high-visibility crosswalks, and stop bars would be beneficial at 4th St and 9th Ave
- Add striping for interior parking with outer bike lanes along 4th St west of 8th Ave
- Bulb-outs would be beneficial at 5th St and 10th Ave
- Median/access control is not recommended along 10th Ave
- Recommend bulb-outs to end parking sooner and improve pedestrian/bicyclist visibility at 5th St and 9th Ave
- Proper signage is needed if a high-visibility crosswalk is installed across 5th St at 9th Ave
- Colored crosswalks need cleaning and repainting at 5th St and 8th Ave
- Missing bulb-outs at 6th St and 10th Ave
- Missing high-visibility crosswalk on the south leg of 6th St and 8th Ave intersection

Revised Recommendations

- No recommendations within Downtown Area. See Projects 1-4, 1-4A, 1-4B, 3-1, 3-2, 3-3, 3-3A, 3-3B, 3-5, 3-9, and 3-10 for improvements.

23rd St Rd and 42nd Ave (ID 3-29)



- HRN Status: Low risk along 23rd St Rd and 42nd Ave
- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Non-ADA compliant ramps
- Add a raised crosswalk for the crossing that leads to the trail
- The City mentioned that this location had previously been planned to have a mini-roundabout but has since been removed

Revised Recommendations

- Paint and post protected corners

Existing Characteristics

- Unsignalized, 2-way stop control
- 23rd St Rd: Local Road, 2-lane cross section
- 42nd Ave: Minor Collector, 2-lane cross section
- ADT: 42nd Ave= 750vpd, 23rd St=15vpd
- Posted speed limit: 42nd Ave= 25mph, 23rd St=30mph
- Observed speeds: North leg - 85th Pct: 17mph, 95th Pct: 19mph
- Ped/bike/transit facilities: On-street bike lanes on all 3 legs
- Trail tying into 42nd Ave from the east
- Land use: Residential, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is not on HIN

County Road 31 and County Road 66 (ID 3-30)



Existing Characteristics

- Unsignalized, 2-way stop control
- County Road 31: Minor Arterial, 2-lane cross section
- County Road 66: Minor Arterial, 3-lane cross section
- ADT: County Rd 31= 6900vpd, County Road 66=239vpd
- Posted speed limit: County Road 31=35mph, County Road 66 (east leg)=35mph, County Road 66 (west leg)=20mph
- Observed speeds: North leg - 85th Pct: 58mph, 95th Pct: 61mph
- South leg - 85th Pct: 59mph, 95th Pct: 62mph
- East leg - 85th Pct: 40mph, 95th Pct: 47mph
- Ped/bike/transit facilities:
- Land use: Residential, Commercial
- Pavement rehab projects: Overlay (2026) - north, south, and east legs of intersection
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Intersection is on HIN
- HRN Status: Moderate risk along north leg of County Road 31, low risk along County Road 66
- Total Crashes: 7
- Fatalities: 2 (2017 and 2019)
- Serious Injuries: 1 (2014)

Vision Zero Recommendations

- Stop sign visibility enhancements
- Clear sight obstructions on northeast corner and/or consider conversion to all way stop

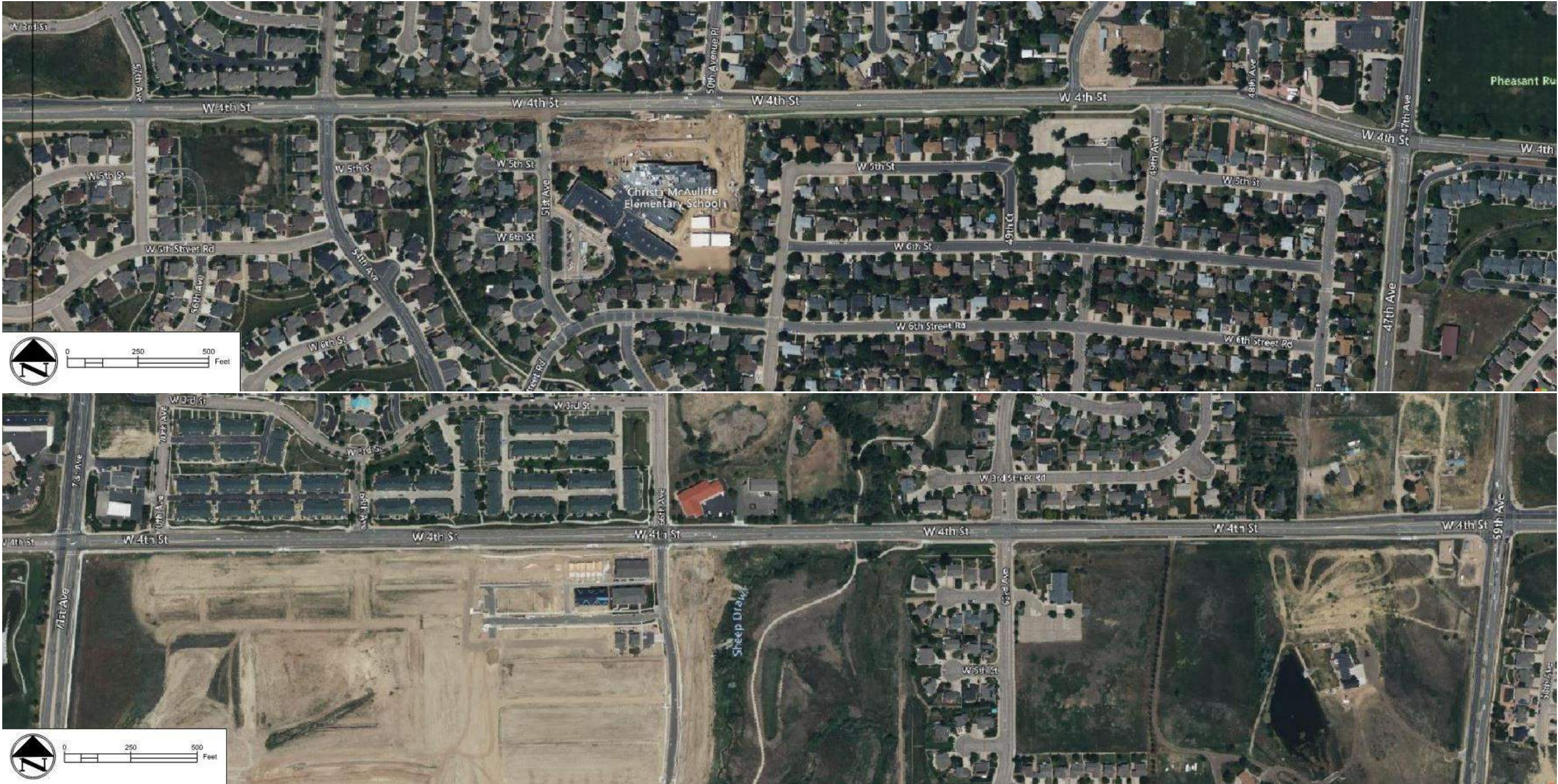
Observations

- Existing blind spot near bushes
- A four-way stop will likely not be warranted but stop signs can be enhanced with beacons or red posts

Revised Recommendations

- Install stop sign visibility enhancements with reflective posts

4th St, 47th Ave to 71st Ave (ID 4-1)



Existing Characteristics

- Minor Arterial, 4-lane cross section
- ADT: 4000-9000vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 34-50mph, 95th Pct: 40-55mph
- Ped/bike/transit facilities: Sheep Draw Trail crossing between 66th Ave and 63rd Ave
- Shared use path



- 1 bus stop at 71st Ave (Route 1)
- Land use: Residential, Commercial, Industrial, Conservation District, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: Not a high poverty area

Crash Data

- Segment on HIN: 47th Ave to 49th Ave
- HRN Status: Moderate risk
- Total Crashes: 51
- Fatalities: 1 (2018)
- Serious Injuries: 6 (2015, 2019,2021x3, 2022)

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

Revised Recommendations

- Install speed feedback signs east and west of 63rd Ave
- Install centerline hardening at 70th Ave

71st Ave and 12th St (ID 4-2)



Existing Characteristics

- Unsignalized, 2-way stop control
- 71st Ave: Minor Arterial Road, 4-lane divided cross section on north leg, 3-lane cross section on south leg
- 12th St: Local Road, 2-lane cross section
- ADT: 71st Ave=7900-8100vpd, 12th St=77vpd
- Posted speed limit: 71st Ave=40mph, 12th St=20mph
- Observed speeds: North leg - 85th Pct: 46mph, 95th Pct: 49mph
- South leg - 85th Pct: 46mph, 95th Pct: 49mph
- West leg - no data
- Ped/bike/transit facilities: Shared use path
- Enhanced shoulder bike lane
- Sheep Draw Trail crossing
- Bus Route 1 along 71st Ave
- Land use: Residential, Holding Agriculture, Conservation District
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection on HIN: north and south legs
- HRN Status: Moderate risk along 71st Ave, Low risk along 12th St
- Total Crashes: 2
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Location was identified as a high priority pedestrian crossing. Existing crosswalk and crossing signs are present.

Revised Recommendations

- Install RRFBs and pedestrian push button posts on south leg

71st Ave and Poudre River Trail Crossing (ID 4-3)



Existing Characteristics

- Unsignalized
- 71st Ave: Unclassified, 2-lane cross section
- ADT: 2026vpd
- Posted speed limit: 55mph
- Observed speeds: 85th Pct: 44mph, 95th Pct: 47mph
- Ped/bike/transit facilities: Poudre River Trail crossing
- Land use: Conservation District
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Low risk
- Total Crashes: 1
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Location was identified as a high priority pedestrian crossing. Existing crosswalk and crossing signs are present. No existing lighting at the crossing.

Revised Recommendations

- Install solar crosswalk lighting

County Road 27 and Poudre River Trail Crossing (ID 4-4)



Existing Characteristics

- Unsignalized
- County Road 27: Major Arterial, 3-lane cross section
- ADT: 1285vpd
- Posted speed limit: 40mph
- Observed speeds: 85th Pct: 57mph, 95th Pct: 61mph
- Ped/bike/transit facilities: Poudre River Trail crossing
- Land use: Residential, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection is not on HIN
- HRN Status: Moderate risk
- Total Crashes: 4
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Location was identified as a high priority pedestrian crossing. Existing crosswalk and flashers are present. No existing lighting at the crossing.

Revised Recommendations

- Install solar crosswalk lighting

59th Ave and 16th St (ID 4-5)



Existing Characteristics

- Unsignalized, 2-way stop control
- 59th Ave: Minor Arterial Road, 5-lane cross section on north leg
- 16th St: Local Road, 2-lane cross section
- ADT: 59th Ave=9500-9700vpd, 16th St=947vpd
- Posted speed limit: 59th Ave=40mph, 16th St=20mph
- Observed speeds: North leg - 85th Pct: 46mph, 95th Pct: 50mph
- South leg - 85th Pct: 47mph, 95th Pct: 50mph

- East leg - 85th Pct: 26mph, 95th Pct: 30mph
- Ped/bike/transit facilities: Shared use path along 59th Ave
- On-street bike lanes along 16th St
- Subdivision trail west of intersection
- Land use: Residential, PUD
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Intersection on HIN: north and south legs
- HRN Status: Moderate risk along 59th Ave, Low risk along 16th St
- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

- Location was identified as a medium priority pedestrian crossing.

Revised Recommendations

- Install high-visibility crosswalk and crossing signs on south leg (requires new ADA ramps)



29th St, W of 31st Ave (ID 4-6)



Existing Characteristics

- Minor Collector, 3-lane cross section
- ADT: 3800-3900vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 38mph, 95th Pct: 41mph
- Ped/bike/transit facilities: On-street bike lanes
- Bus Route 3
- Land use: Industrial, Holding Agriculture
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment on HIN

- HRN Status: Moderate risk
- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

- Not included in Vision Zero Quick-Build Recommendations

Observations

Revised Recommendations

- Install chicanes

20th St, W of Birch Ave (ID 4-7)



Existing Characteristics

- Minor Collector, 2-lane cross section
- ADT: 380vpd
- Posted speed limit: 35mph
- Observed speeds: 85th Pct: 38mph, 95th Pct: 42mph
- Ped/bike/transit facilities: None
- Land use: Residential
- Pavement rehab projects: None
- Areas of persistent poverty: High poverty area

Crash Data

- Segment is not on HIN

- HRN Status: Low risk
- Total Crashes: 0
- Fatalities: 0
- Serious Injuries: 0

Vision Zero Recommendations

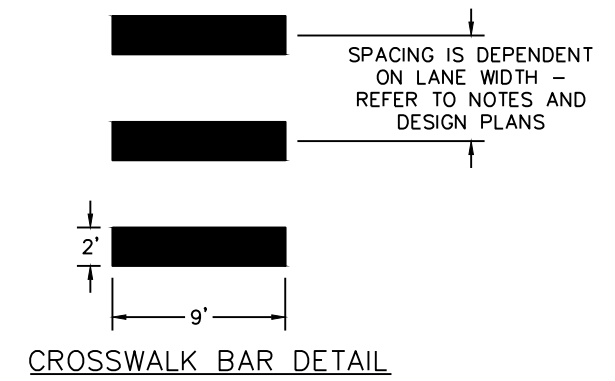
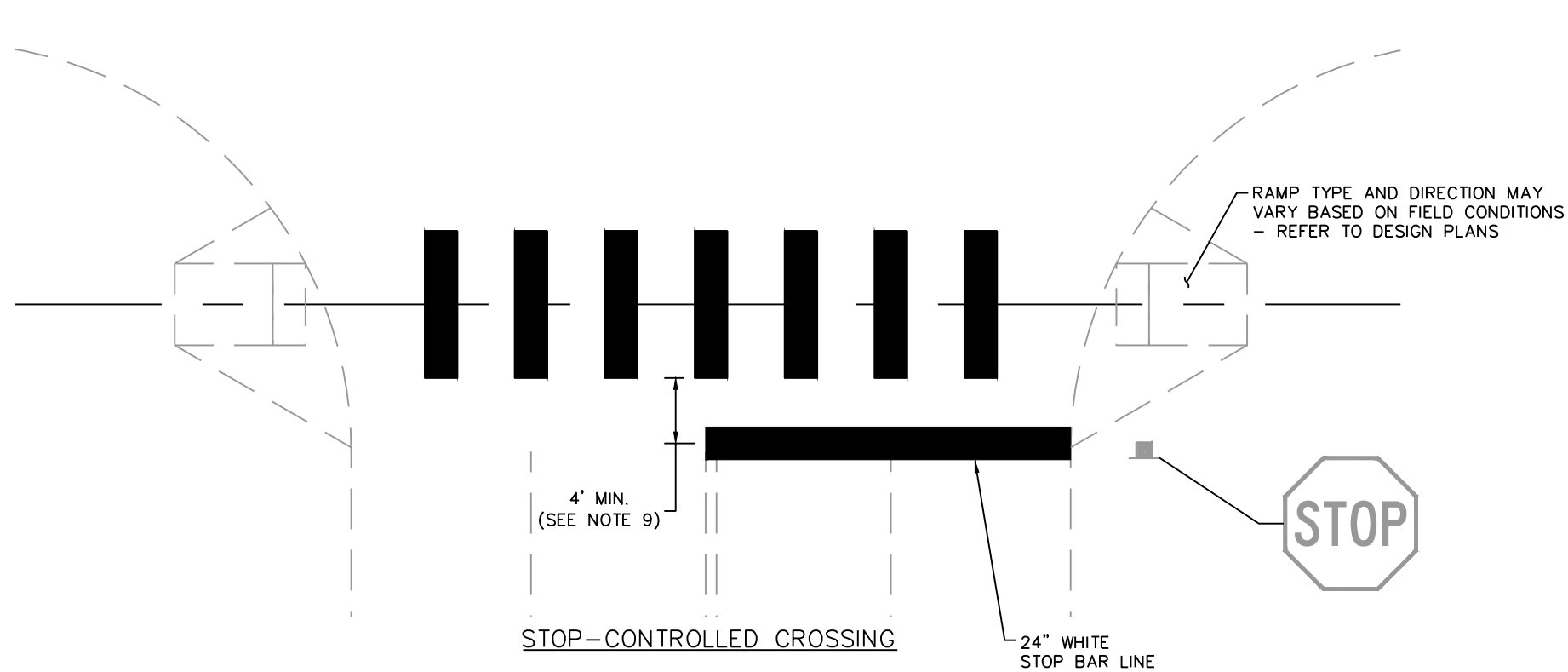
- Not included in Vision Zero Quick-Build Recommendations

Observations

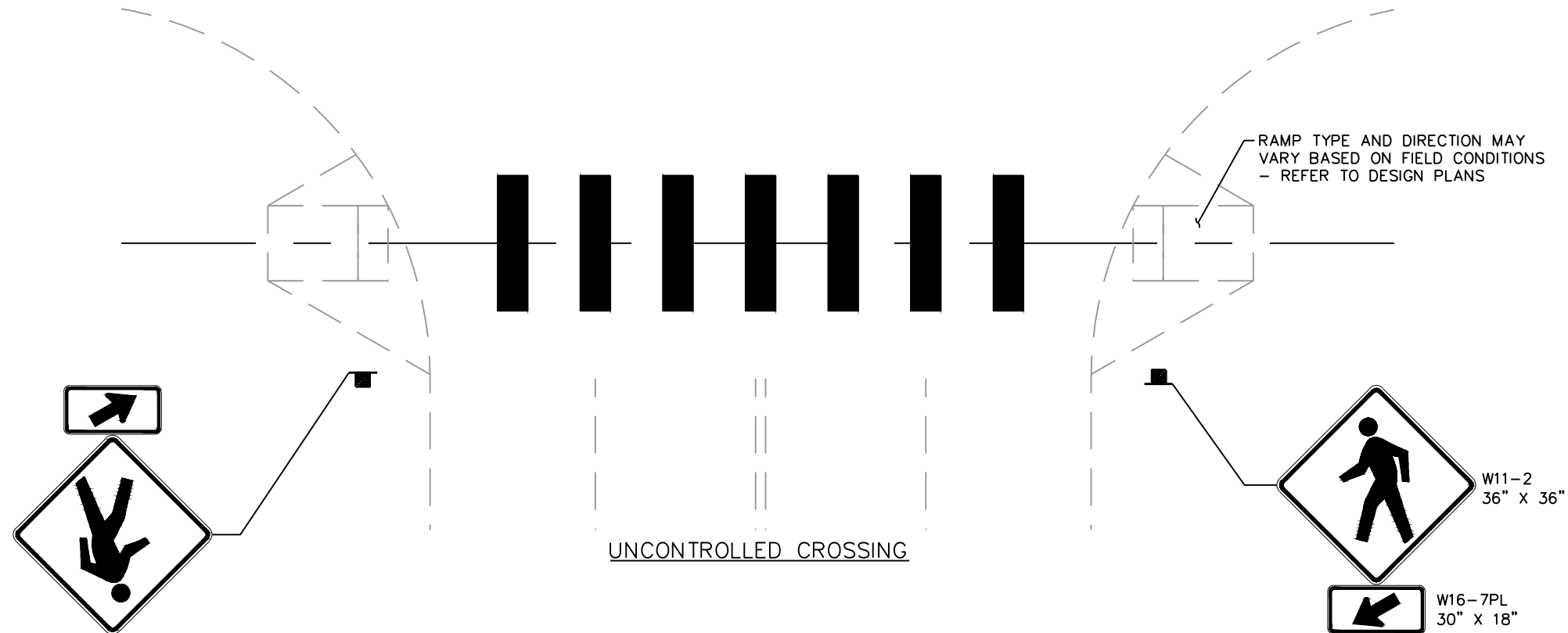
Revised Recommendations

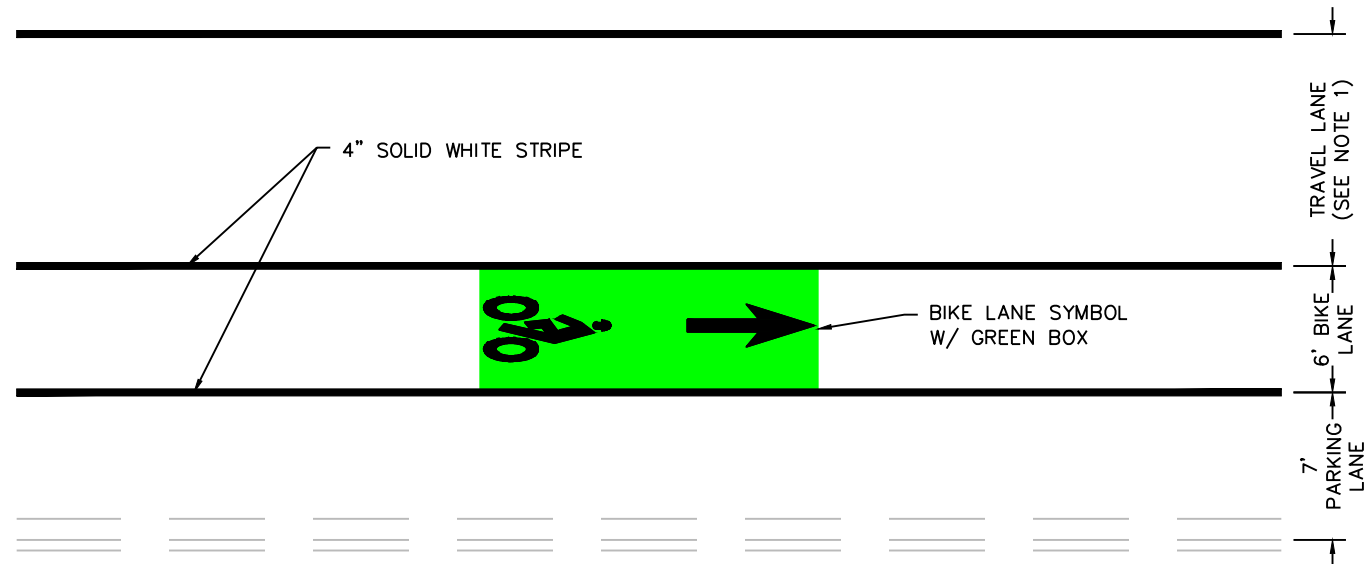
- Install chicanes

Appendix C Quick-Build Countermeasure Toolkit

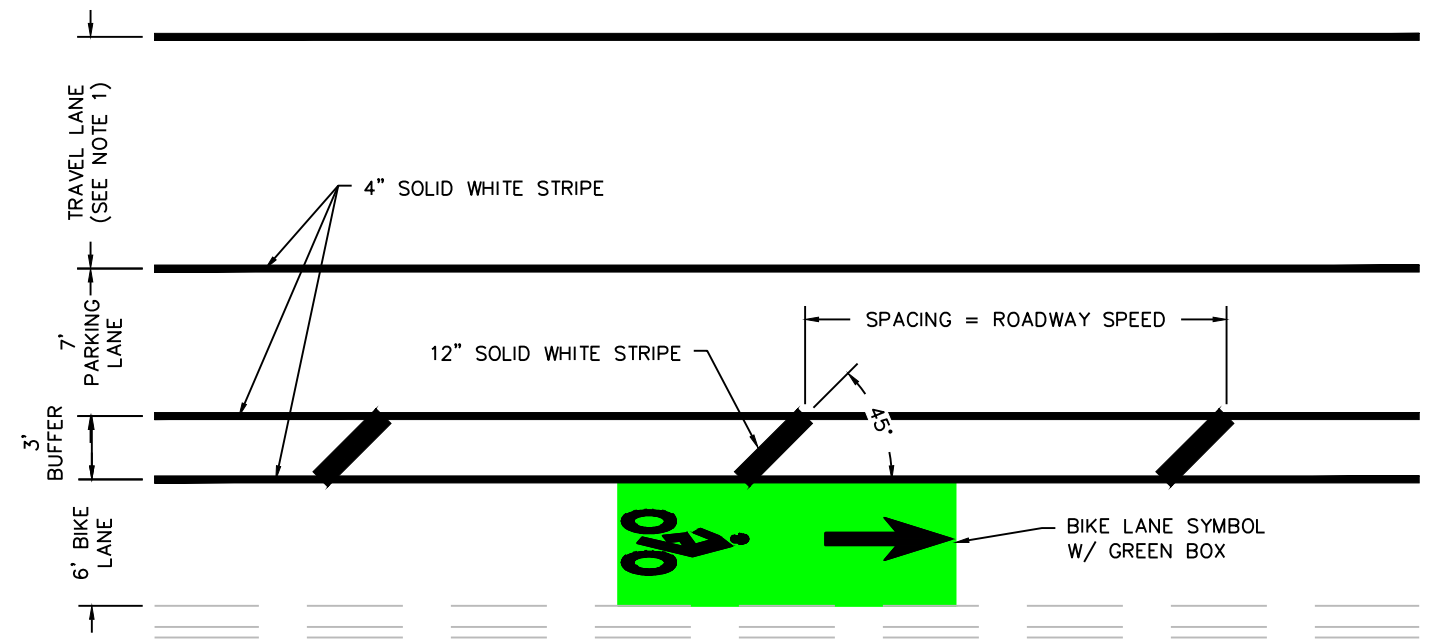


- NOTES:
1. CENTER CROSSWALKS ON CURB RAMPS. IF SUCH RAMPS ARE NOT PROVIDED, CENTER ON SIGNAL POLES WHEREVER PRACTICAL.
 2. CENTER CROSSWALKS ON EDGE LINES, LANE LINES AND CHANNELIZING LINES.
 3. CENTER CROSSWALKS BETWEEN ADJACENT LINES.
 4. MARKINGS SHALL NOT BE WITHIN WHEEL PATH OF VEHICLES.
 5. CENTER ON EXTENDED FLOW LINE.
 6. LINES AND SPACES TO APPROXIMATE ADJACENT PATTERN.
 7. W11-2 SHALL BE SUBSTITUTED WITH S1-1 WHEN CROSSING IS WITHIN A SCHOOL ZONE.
 8. REMOVE ANY SIGNS OR PAVEMENT MARKINGS IN CONFLICT WITH DESIGN.
 9. WHERE MORE THAN ONE APPROACH LANE EXISTS, STOP BAR OFFSET SHALL BE INCREASED TO 6 FEET. VERIFIED DEPARTURE SIGHT TRIANGLES FOLLOWING THE GUIDANCE OF SECTION 9.5.2.2 OF THE 2018 AASHTO PGDHS SHALL BE PROVIDED TO THE CITY ENGINEER FOR APPROVAL.

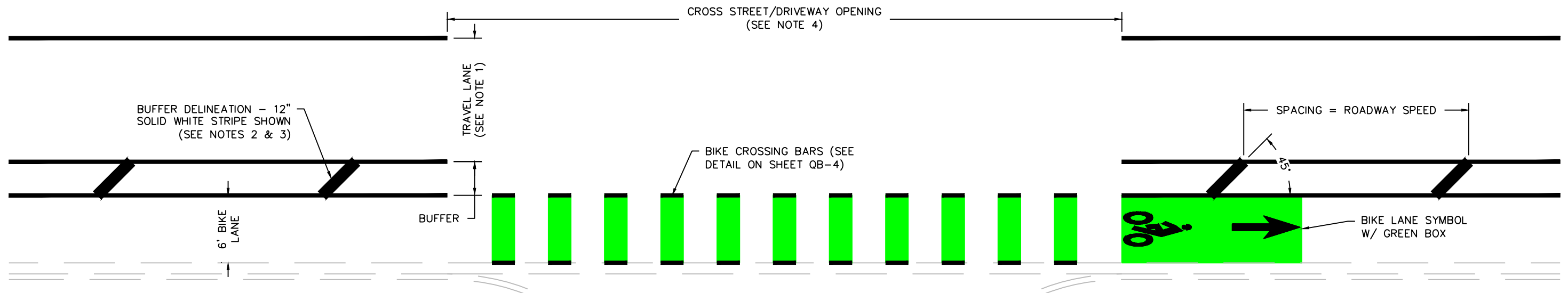




INSIDE BIKE LANE/OUTSIDE PARKING CONFIGURATION



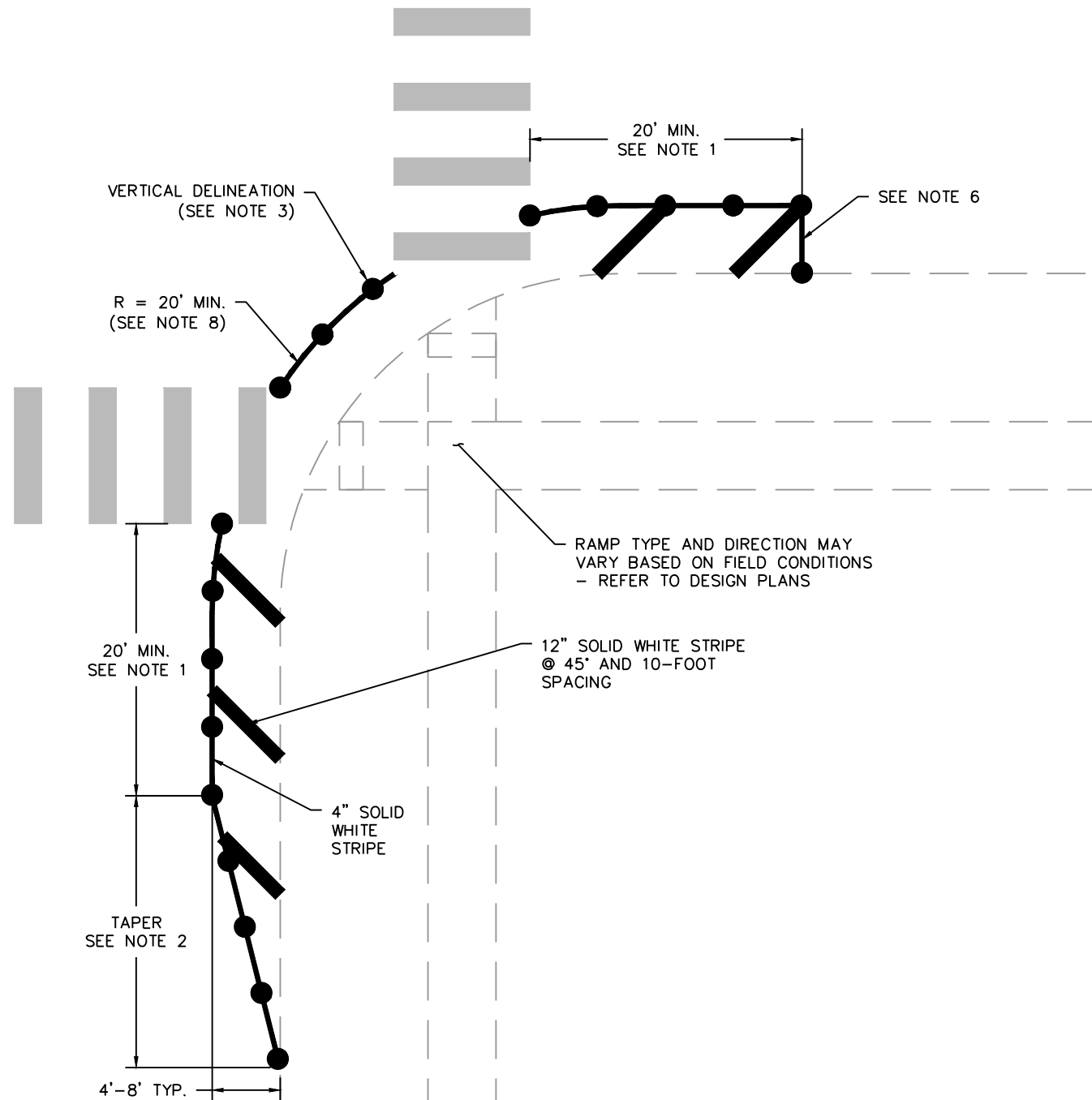
PARKING-PROTECTED BIKE LANE CONFIGURATION



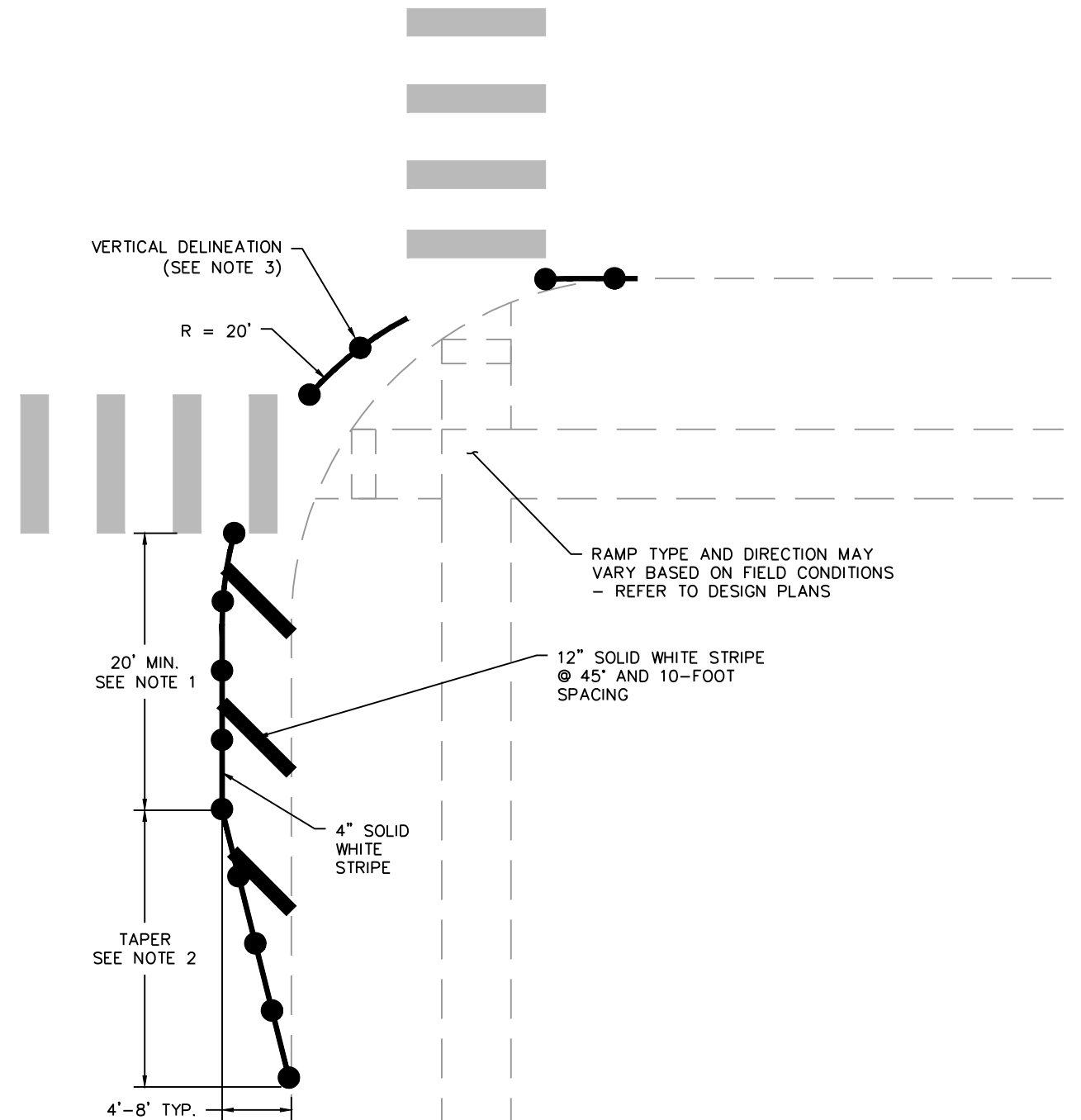
PROTECTED BIKE LANE CONFIGURATION

NOTES:

1. TRAVEL LANE WIDTH VARY DEPENDING ON ROADWAY CLASSIFICATION PER CITY OF GREELEY STANDARD SPECIFICATIONS SECTION 201.
2. HATCHING SHALL NOT BE USED FOR BUFFERS 2 FEET WIDE OR LESS.
3. REFER TO SHEET QB-11 FOR VERTICAL DELINEATION OPTIONS.
4. BIKE LANES AND BIKE LANE BUFFERS SHALL BE BROKEN AT CROSS STREETS AND HIGHER VOLUME DRIVEWAYS. BIKE LANE GAPS SHALL HAVE BIKE CROSSING BARS PLACED TO DESIGNATE THE BIKE PATH. BIKE LANES AND BUFFERS SHALL NOT BE BROKEN AT RESIDENTIAL OR LOW VOLUME DRIVEWAYS.
5. REMOVE ANY SIGNS OR PAVEMENT MARKING IN CONFLICT WITH DESIGN.



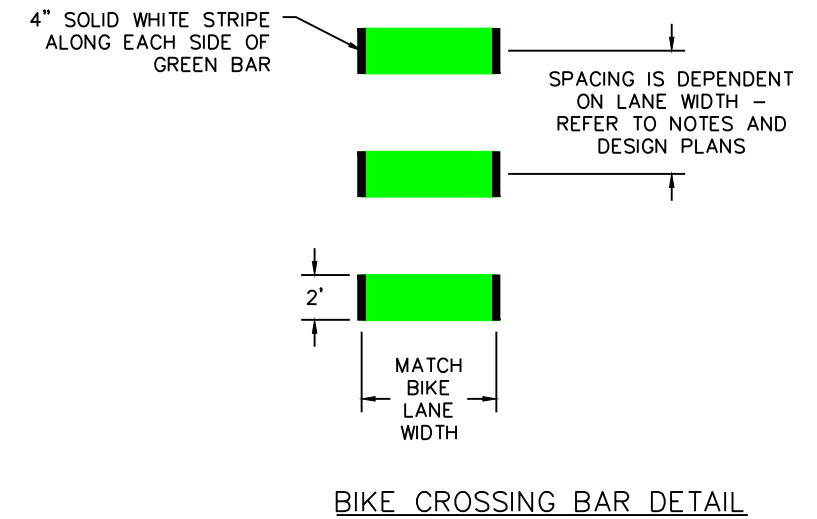
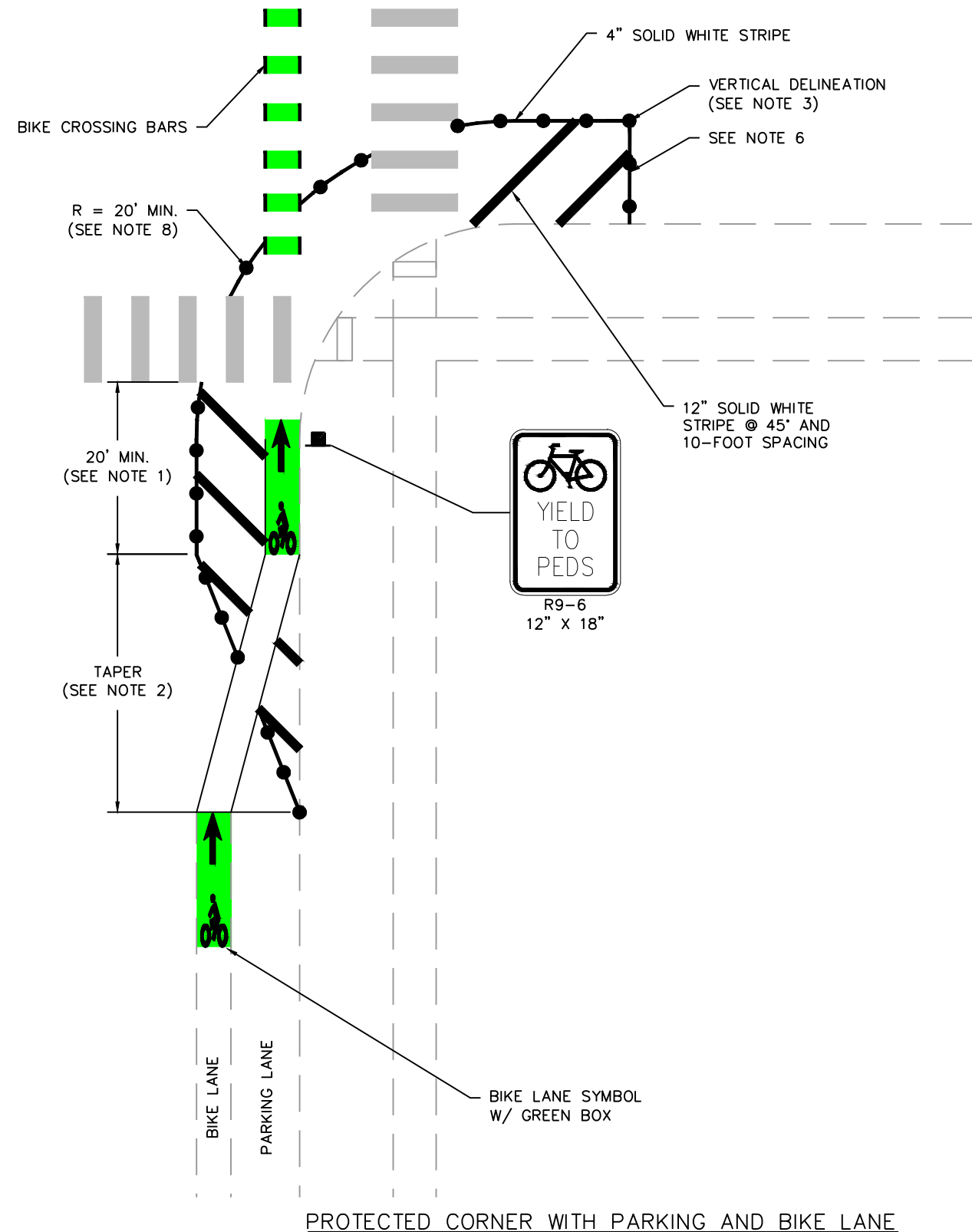
FULL CURB EXTENSION



PARTIAL CURB EXTENSION

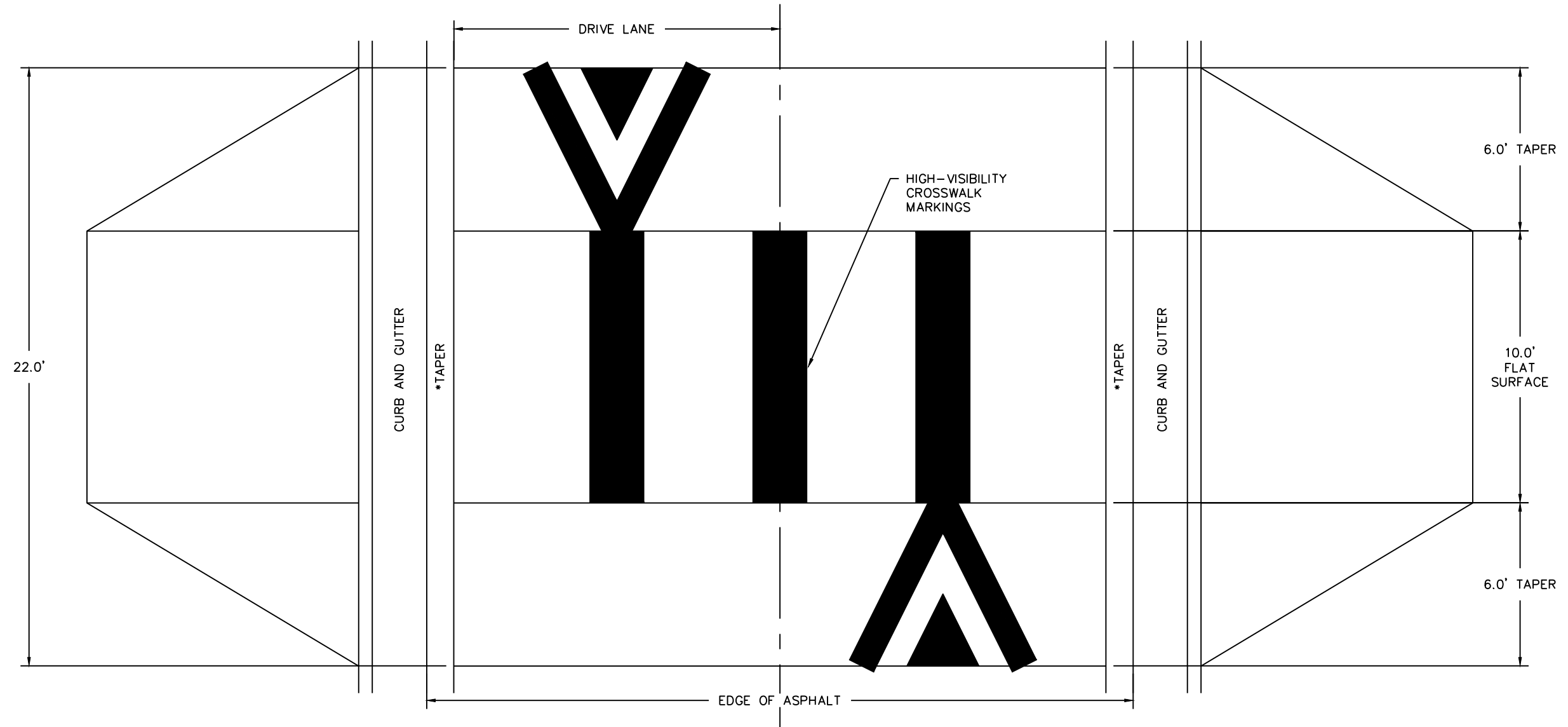
NOTES:

1. THE LENGTH OF THE CURB EXTENSION IS MEASURED AS 20' FROM THE CLOSEST EDGE OF THE CROSSWALK, WHICH IS TYPICALLY DEFINED AS THE CLOSEST POINT OF THE CURB RAMP THROAT OR THE MARKED CROSSWALK WHEN PRESENT. ANY REDUCTION IN LENGTH SHALL BE APPROVED BY THE CITY ENGINEER.
2. TAPER SHALL HAVE A MINIMUM RATE OF 1:4 UNLESS SPECIFIED OTHERWISE.
3. ARRANGE DELINEATION AND STRIPING AS TO NOT BLOCK PEDESTRIAN PATH OR DRIVEWAYS. REFER TO SHEET QB-11 FOR DELINEATION ALTERNATIVES AND APPLICATIONS.
4. DESIGN MAY VARY DEPENDING ON FIELD CONDITIONS. REFER TO PRELIMINARY DESIGN PLANS.
5. REMOVE ANY SIGNS OR PAVEMENT MARKING IN CONFLICT WITH DESIGN.
6. SNUBBED END SHALL BE USED WHEN ON DEPARTURE SIDES WHEN SIGHT CONSTRAINTS ARE PRESENT.
7. PARTIAL CURB EXTENSION SHALL BE PROVIDED WHERE SPACE IS NOT SUFFICIENT TO ADD PROTECTION ON BOTH SIDES OF THE CORNER.
8. RADIUS SHALL BE DESIGNED TO ACCOMMODATE A DESIGN VEHICLE APPROPRIATE FOR THE PROJECT LOCATION.



NOTES:

1. THE LENGTH OF THE PROTECTED CORNER IS MEASURED AS 20' FROM THE CLOSEST EDGE OF THE CROSSWALK, WHICH IS TYPICALLY DEFINED AS THE CLOSEST POINT OF THE CURB RAMP THROAT OR THE MARKED CROSSWALK WHEN PRESENT. ANY REDUCTION IN LENGTH SHALL BE APPROVED BY THE CITY ENGINEER.
2. TAPER SHALL HAVE A MINIMUM RATE OF 1:4 UNLESS SPECIFIED OTHERWISE.
3. ARRANGE DELINEATION AND STRIPING AS TO NOT BLOCK PEDESTRIAN PATH OR DRIVEWAYS. REFER TO SHEET QB-11 FOR DELINEATION ALTERNATIVES AND APPLICATIONS.
4. DESIGN MAY VARY DEPENDING ON FIELD CONDITIONS. REFER TO PRELIMINARY DESIGN PLANS.
5. REMOVE ANY SIGNS OR PAVEMENT MARKING IN CONFLICT WITH DESIGN.
6. SNUBBED END SHALL BE USED WHEN ON DEPARTURE SIDES WHEN SIGHT CONSTRAINTS ARE PRESENT.
7. PARTIAL CORNER PROTECTION SHALL BE PROVIDED WHERE SPACE IS NOT SUFFICIENT TO ADD PROTECTION ON BOTH SIDES OF THE CORNER.
8. RADIUS SHALL BE DESIGNED TO ACCOMMODATE A DESIGN VEHICLE APPROPRIATE FOR THE PROJECT LOCATION.

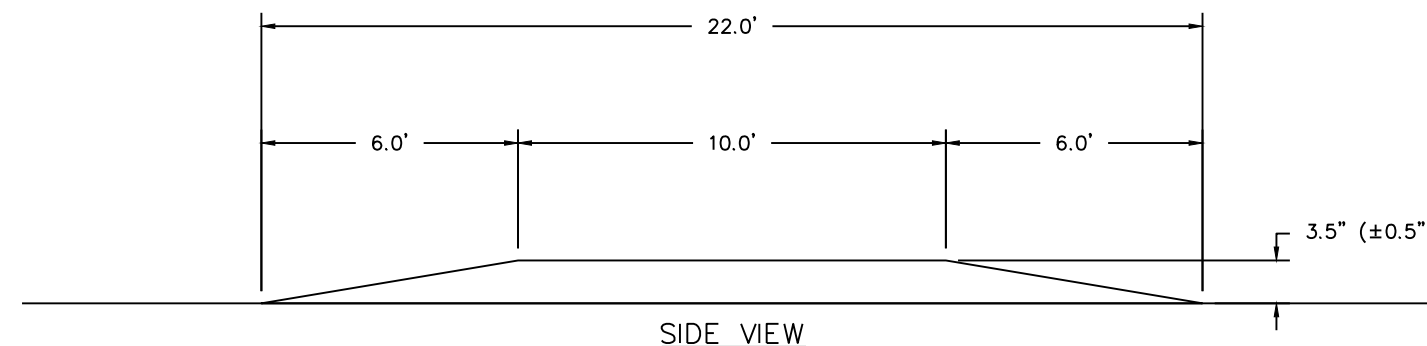


TOP VIEW

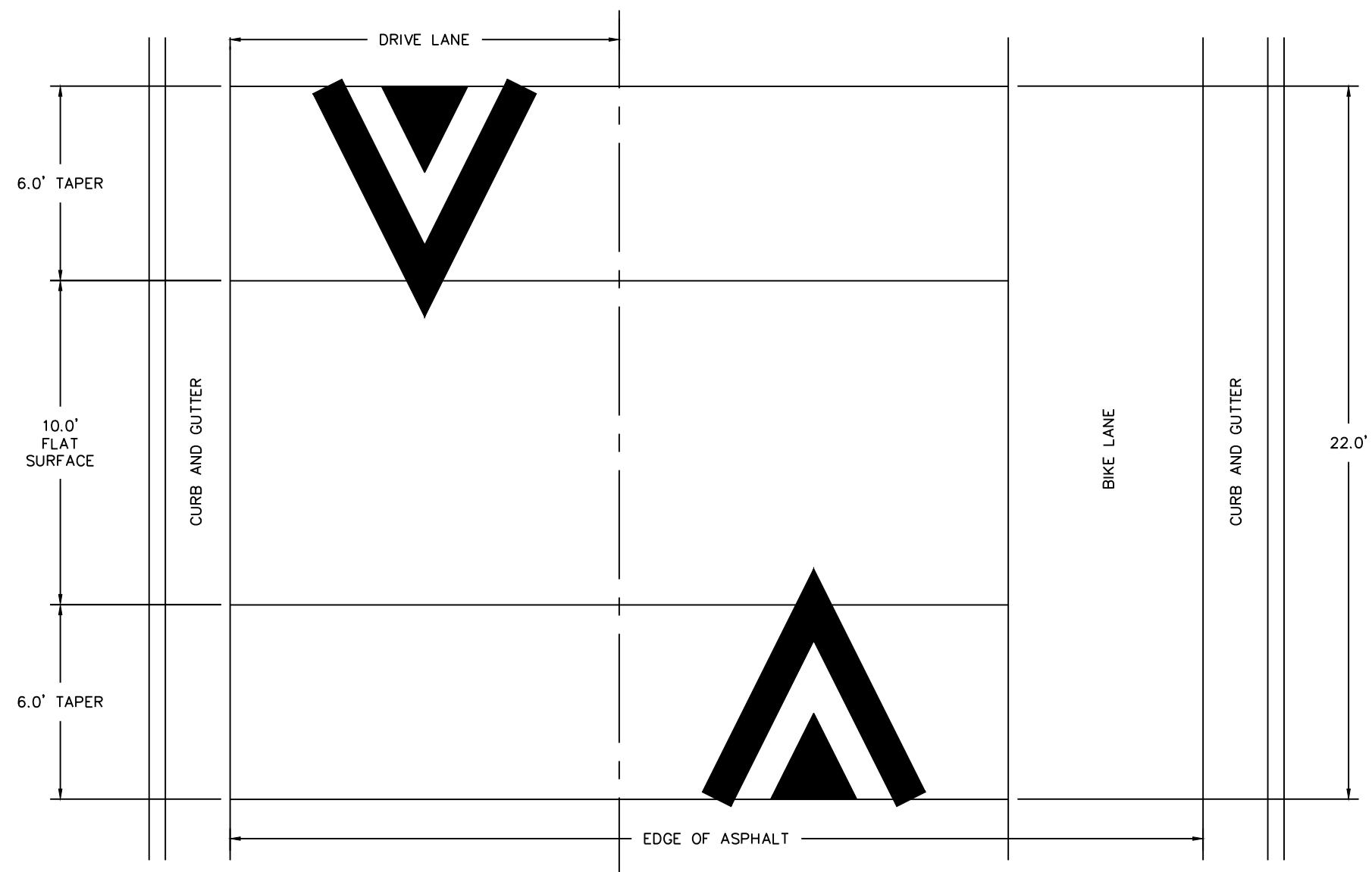
* REFER TO ADA GUIDELINES FOR CURBSIDE TAPER

NOTES:

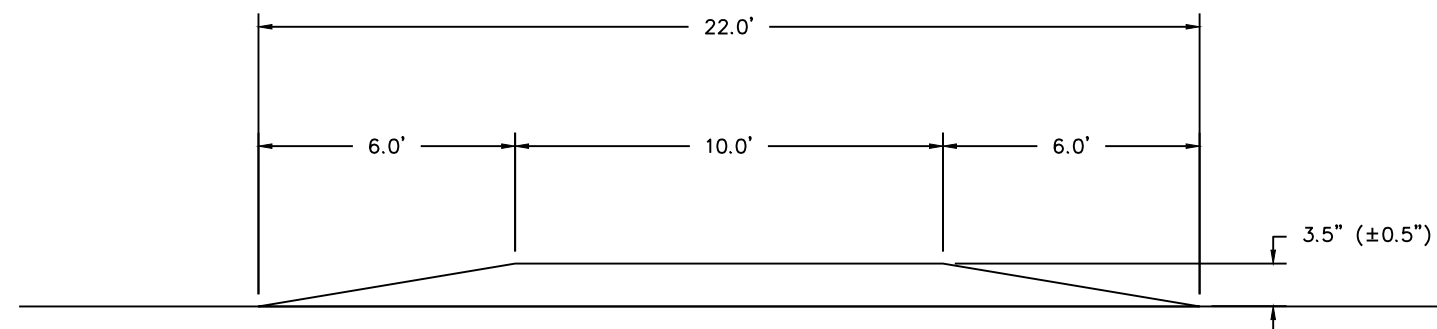
1. RAISED CROSSWALKS SHALL NOT BE PLACED ON STREETS WIDER THAN 50 FEET UNLESS APPROVED BY THE CITY ENGINEER.
2. RAISED CROSSWALKS SHALL NOT BE INSTALLED ON ROADWAYS WITH A GRADE GREATER THAN 8%.
3. UNCONTROLLED RAISED CROSSINGS SHALL BE ACCOMPANIED BY A WARNING SIGN AND ARROW PLAQUE (W11-2 OR S1-1 AND W16-7PR). SIGNS SHALL BE PLACED IN LINE WITH THE CROSSING.
4. RAISED CROSSWALKS SHALL BE MECHANICALLY ANCHORED TO PAVEMENT SURFACE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS. GLUE DOWN METHODS FOR ATTACHMENT ARE NOT ACCEPTABLE. CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE FOR INSTALLATION IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
5. STRIPING ON RAISED CROSSWALK SHALL BE INCLUDED IN RAISED CROSSWALK MATERIALS.
6. REMOVE ANY SIGNS OR STRIPING IN CONFLICT WITH DESIGN.
7. RAISED CROSSING MAY EXTEND INTO BIKE LANES BUT SHALL NOT RESTRICT ROADWAY DRAINAGE.
8. THE VERTICAL LIP SHALL NOT EXCEED A QUARTER-INCH.



SIDE VIEW



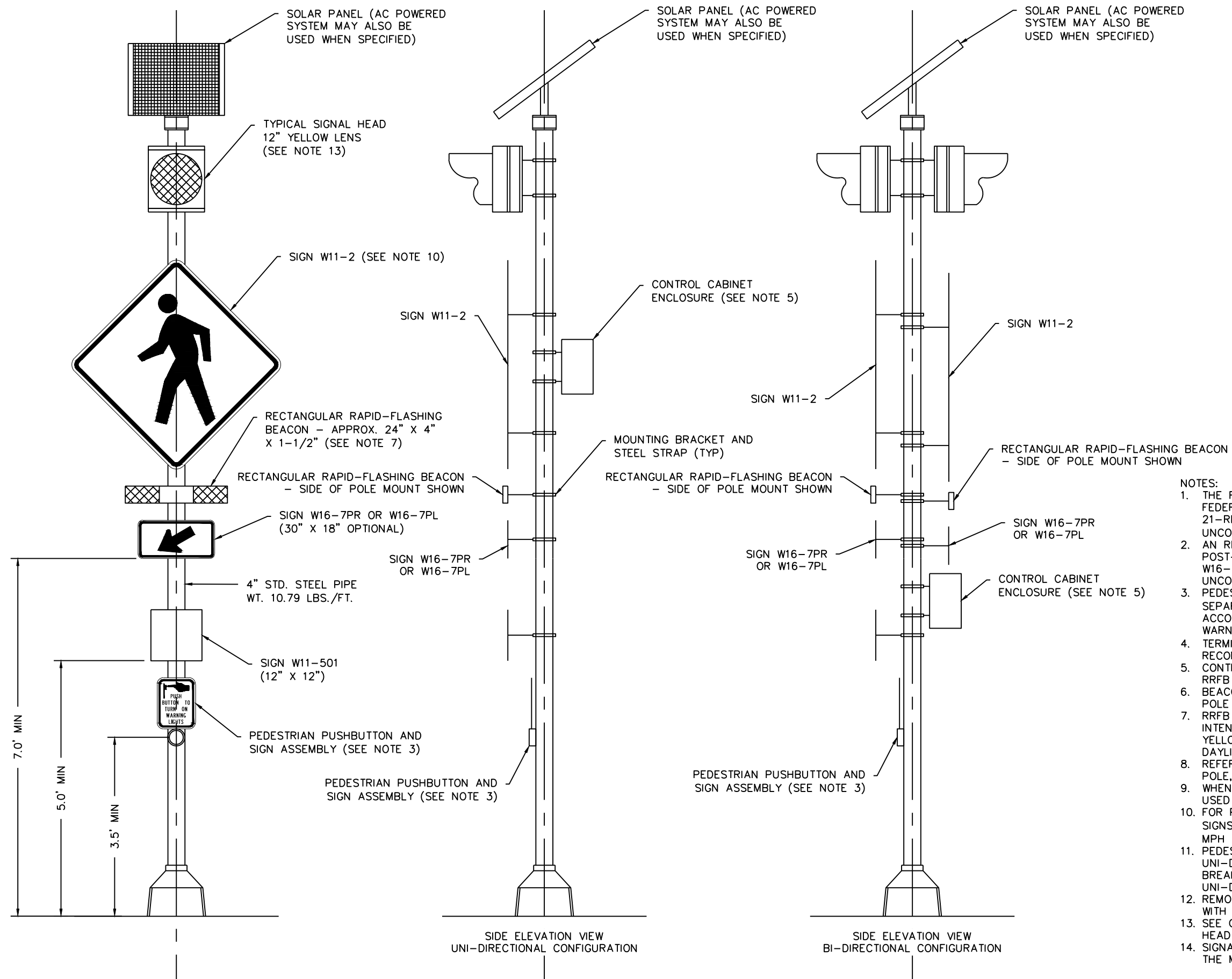
TOP VIEW



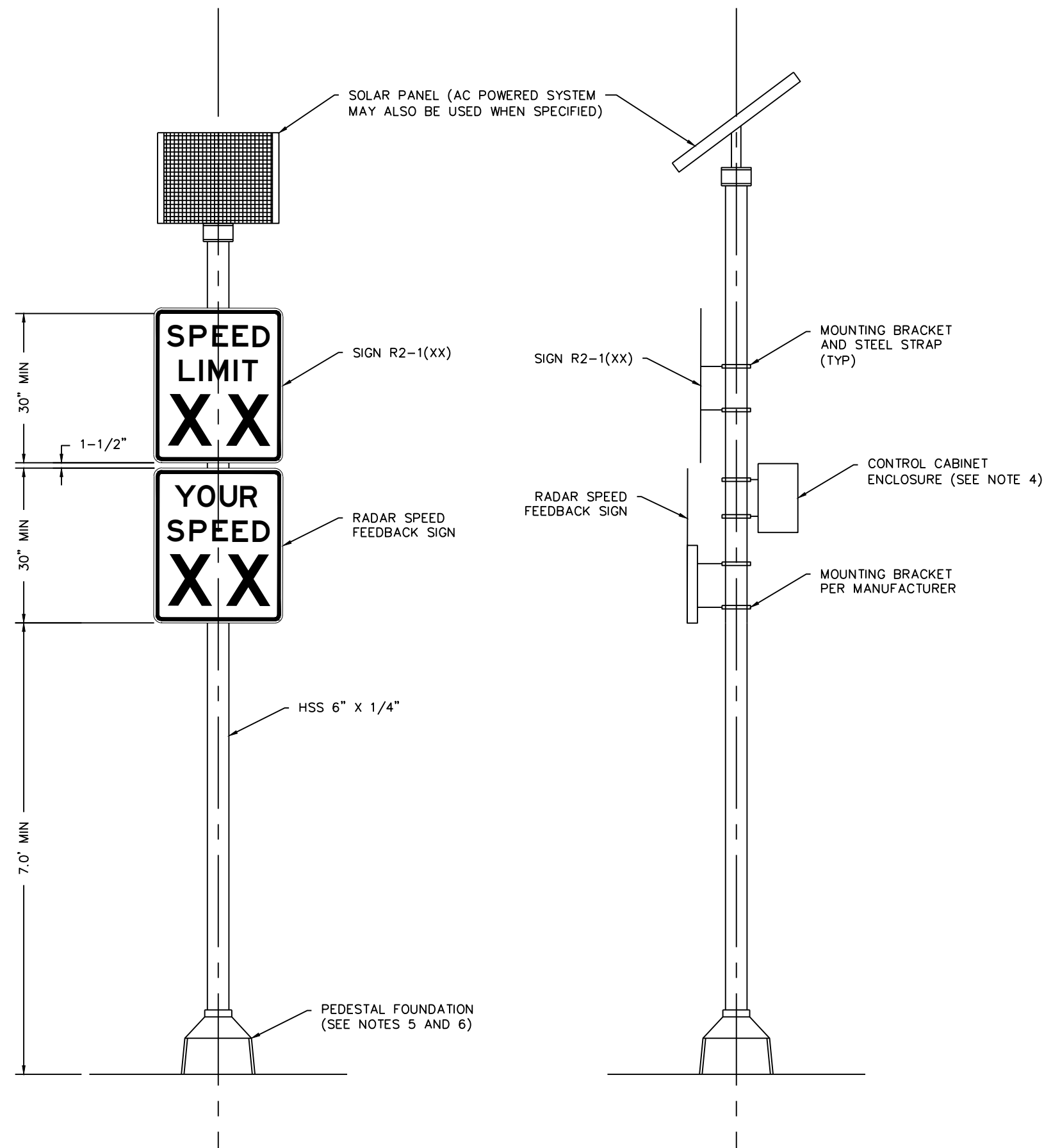
SIDE VIEW

NOTES:

1. SPEED TABLES SHALL NOT BE PLACED ON STREETS WIDER THAN 50 FEET UNLESS APPROVED BY THE CITY ENGINEER. ON TWO-WAY STREETS, SPEED TABLES MAY BE APPLIED IN BOTH DIRECTIONS.
2. SPEED TABLES SHALL NOT BE INSTALLED ON ROADWAYS WITH A GRADE GREATER THAN 8%.
3. SPEED TABLES SHALL NOT BE PLACED WITHIN 75 FEET OF AN INTERSECTION OR 100 FEET OF A STOP SIGN. WITHIN RESIDENTIAL AREAS, SPEED TABLES SHALL BE PLACED AT LOT LINES AND AVOID DRIVEWAYS.
4. SPEED TABLES SHALL BE ACCOMPANIED BY A WARNING SIGN AND SPEED PLAQUE (W17-1 AND W13-1P). SIGNS SHALL BE PLACED IN ACCORDANCE WITH MUTCD TABLE 2C-3.
5. SHALL BE MECHANICALLY ANCHORED TO PAVEMENT SURFACE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS. GLUE DOWN METHODS FOR ATTACHMENT ARE NOT ACCEPTABLE. CONTRACTOR SHALL PREPARE THE PAVEMENT SURFACE FOR INSTALLATION IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
6. STRIPING ON SPEED TABLE SHALL BE INCLUDED IN SPEED TABLE MATERIALS.
7. REMOVE ANY SIGNS OR STRIPING IN CONFLICT WITH DESIGN.
8. SPEED TABLES SHALL NOT EXTEND INTO BIKE LANES OR INTERFERE WITH SURFACE DRAINAGE.
9. THE VERTICAL LIP SHALL NOT EXCEED A QUARTER-INCH.

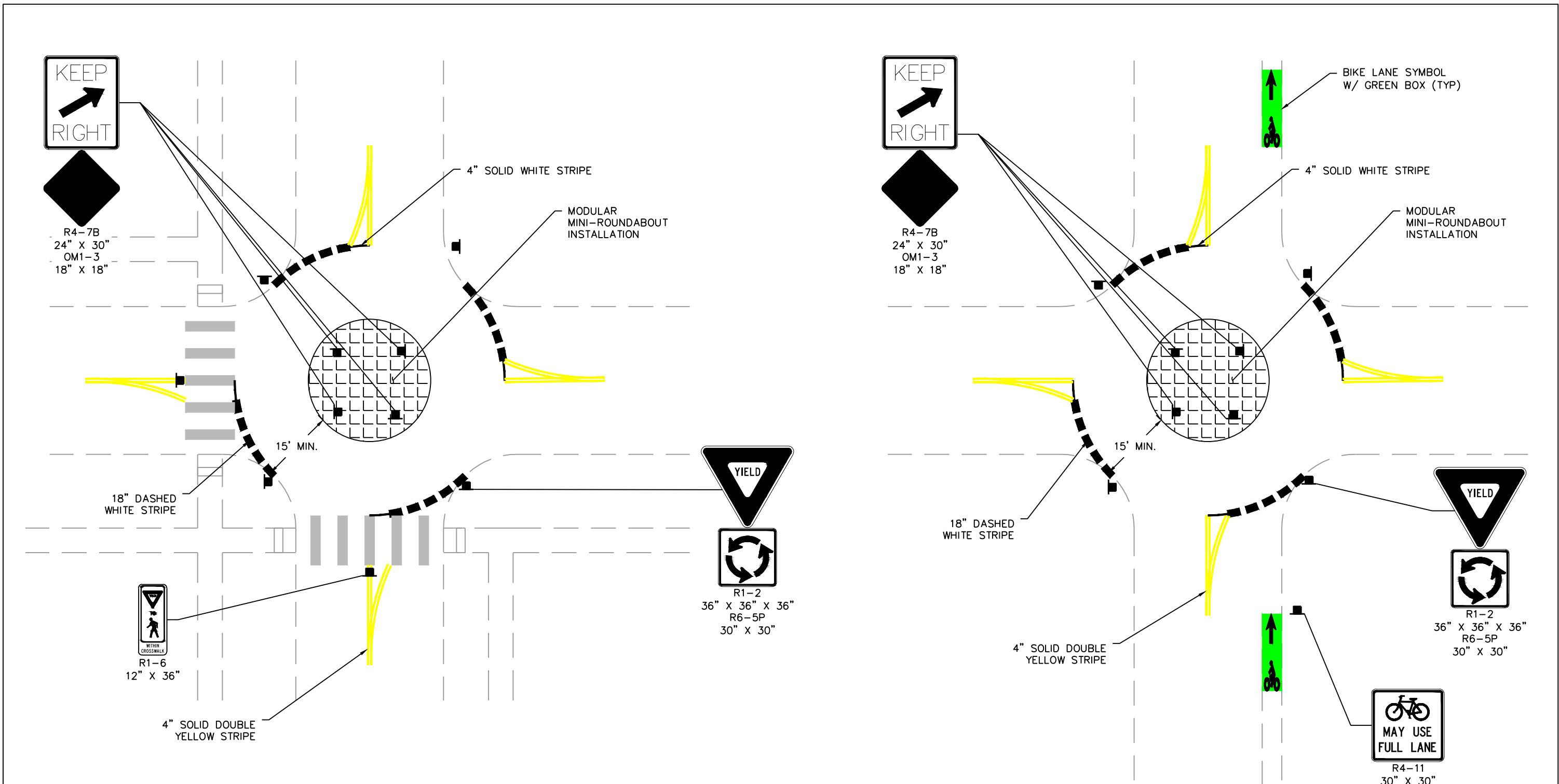


- NOTES:
1. THE RRFB SYSTEM SHALL ADHERE TO ALL ASPECTS OF THE FEDERAL HIGHWAY ADMINISTRATION, INTERIM APPROVAL 21-RECTANGULAR RAPID-FLASHING BEACONS AT UNCONTROLLED MARKED CROSSWALKS (FHWA IA-21).
 2. AN RRFB SHALL ONLY BE USED TO SUPPLEMENT A POST-MOUNTED W11-2, S1-1, OR W11-15 SIGN WITH W16-7P PLAQUE, LOCATED IMMEDIATELY ADJACENT TO AN UNCONTROLLED MARKED CROSSWALK.
 3. PEDESTRIAN PUSHBUTTON AND SIGN ASSEMBLY MAY BE SEPARATE PARTS. USE R10-25 (9" X 25") SIGN IN ACCORDANCE WITH MUTCD. SIGN MAY INCLUDED INTEGRATED WARNING LIGHTS.
 4. TERMINATE RRFB CONNECTIONS PER MANUFACTURER'S RECOMMENDATION.
 5. CONTROL CABINET ENCLOSURE SHALL BE SIZED BY THE RRFB MANUFACTURER.
 6. BEACON ASSEMBLY MAY BE MOUNTED ON THE SIDE OF THE POLE AS SHOWN OR ON TOP OF THE POLE IF SPECIFIED.
 7. RRFB DISPLAYS SHALL BE LED TYPE MEETING THE INTENSITY REQUIREMENTS OF SAE J595 FOR CLASS I YELLOW, BUT SHALL NOT EXCEED 1000 CANDELAS DURING DAYLIGHT AND 500 CANDELAS AFTER DARK.
 8. REFER TO CDOT STD DETAIL S-614-14 FOR STANDARD POLE, BASE, AND FOUNDATION DETAILS.
 9. WHEN SPECIFIED IN THE PLANS, AC POWER SYSTEM MAY BE USED IN PLACE OF SOLAR POWERED SYSTEM.
 10. FOR POSTED SPEEDS OF 35 MPH OR LOWER, THE W11-2 SIGNS SHALL BE 36" X 36". FOR POSED SPEEDS OF 40 MPH OR HIGHER, THE W11-2 SIGNS SHALL BE 48" X 48".
 11. PEDESTAL FOUNDATION MAY BE USED FOR BOTH UNI-DIRECTIONAL AND BI-DIRECTIONAL CONFIGURATIONS. BREAKAWAY BASE INSTALLATION SHALL BE USED FOR UNI-DIRECTIONAL CONFIGURATION ONLY.
 12. REMOVE ANY SIGNS OR PAVEMENT MARKING IN CONFLICT WITH DESIGN.
 13. SEE CDOT STD DETAIL S-614-14 FOR TYPICAL SIGNAL HEAD DETAIL.
 14. SIGNAL HEAD MOUNTING HARDWARE SHALL BE PROVIDED BY THE MANUFACTURER.

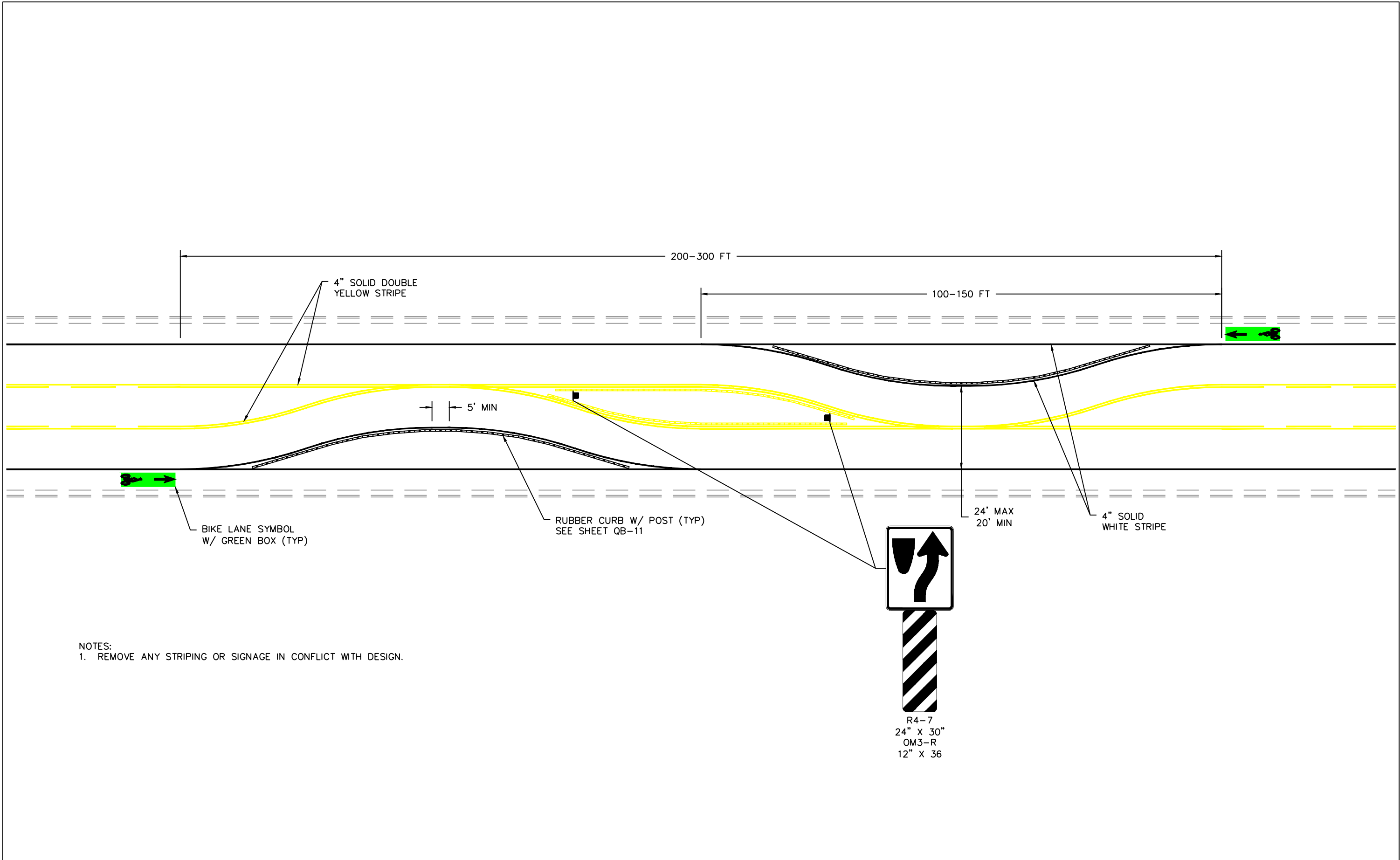


NOTES:

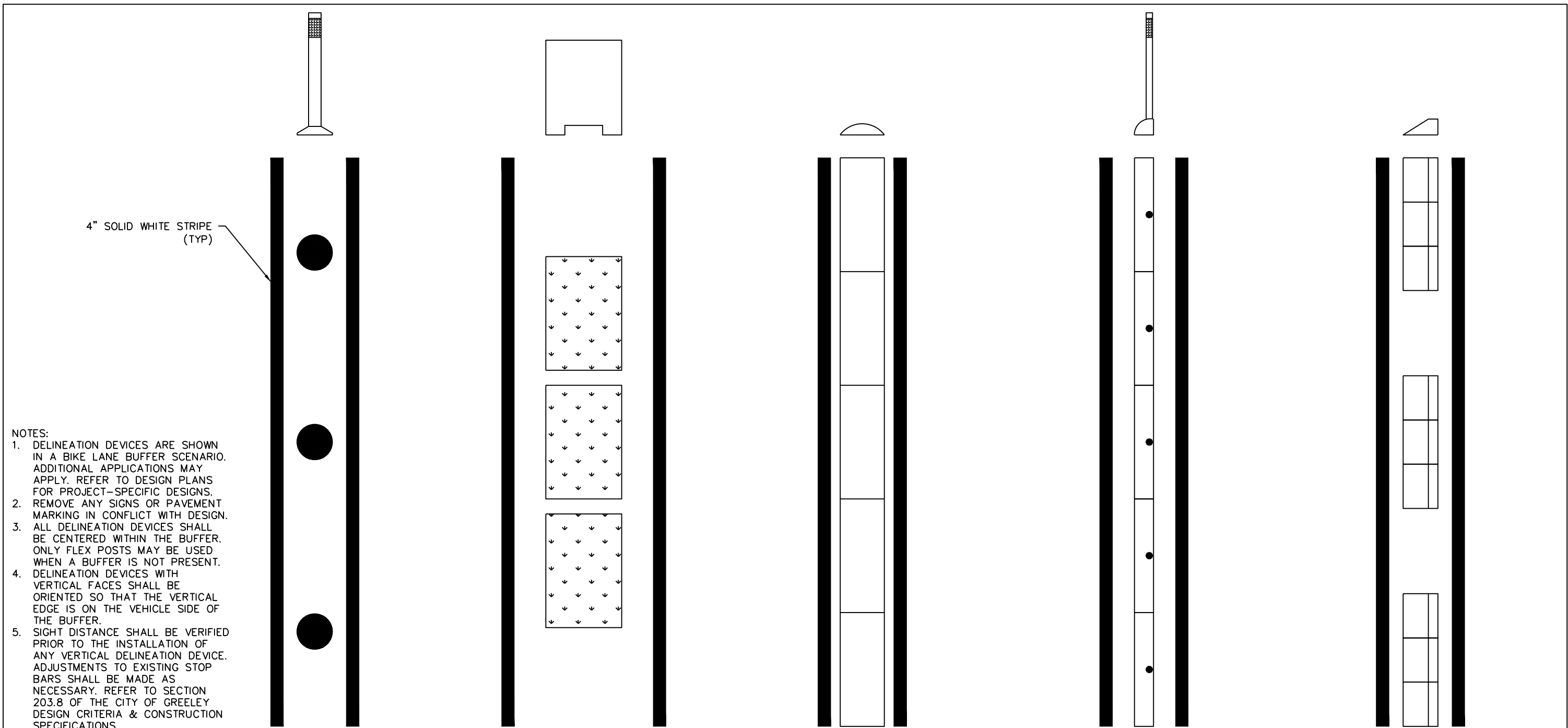
1. A RADAR SPEED FEEDBACK SIGN (RSFS) CAN BE MOUNTED BELOW A SPEED LIMIT SIGN OR WITHIN 100 FEET DOWNSTREAM OF A SPEED LIMIT SIGN.
2. INSTALLATION DESIGN CONFORMS WITH THE LATEST AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" AND SHALL BE FABRICATED IN ACCORDANCE WITH:
 - 2.1. HIGH STRENGTH BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM-A325 AND SHALL BE GALVANIZED OR CADMIUM PLATED.
 - 2.2. HOLES SHALL BE DRILLED AND CUTS SHALL BE PREFERABLY BE SAW CUTS; HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL SHALL NOT PROJECT BEYOND THE PLANE OF THE PLATE FACE ON BREAKAWAY PLATES.
 - 2.3. ALL WELDING IS TO BE CONTINUOUS AND IN ACCORDANCE WITH CURRENT AWS SPECIFICATIONS.
 - 2.4. PIPE LENGTH VARIES WITH VERTICAL PLACEMENT, MINIMUM GROUND CLEARANCE (7') AND THE SIGN PANEL REQUIRED. IT WILL BE AS SHOWN ON THE PLANS, OR AS DETERMINED BY CROSS-SECTION, OR AS DIRECTED BY THE ENGINEER FOR EACH LOCATION (MAXIMUM LENGTH IS APPROXIMATELY 20' AND MINIMUM LENGTH IS APPROXIMATELY 13'-2" IF LENGTH IS NOT SPECIFIED SUPPLY MAXIMUM - MAY REQUIRE FIELD CUT TO CONFORM TO TYPICAL SIGN PLACEMENT DETAILS).
3. ALL ELECTRICAL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NEC, NEMA, UL OR EIA WHEREVER APPLICABLE; THE COLORADO PUC AND ANY LOCAL CODES OR ORDINANCES WHICH MAY APPLY.
4. CONTROL CABINET ENCLOSURE SHALL BE SIZED BY THE RSFS MANUFACTURER.
5. TERMINATE RSFS CONNECTIONS PER MANUFACTURER'S RECOMMENDATION.
6. PEDESTAL POLES SHALL HAVE A FRANGIBLE BASE: AKRON FOUNDRY TB2-17 OR APPROVED EQUAL.
7. WHEN SPECIFIED IN THE PLANS, AC POWER SYSTEM MAY BE USED IN PLACE OF SOLAR POWERED SYSTEM.
8. R2-1 SIZE SHALL BE PER MUTCD REQUIREMENT. THE RSFS SIZE SHOULD MATCH THE SIZE OF THE R2-1 IT IS SUPPLEMENTING.
9. THE RSFS SHALL INCLUDE "YOUR SPEED" LEGEND AND SHOULD BE A BLACK LEGEND ON A YELLOW BACKGROUND. FOR SCHOOL ZONES THE RSFS SHALL INCLUDE THE "YOUR SPEED" LEGEND AND SHOULD BE A BLACK LEGEND ON A FLUORESCENT YELLOW-GREEN BACKGROUND.
10. REMOVE ANY SIGNS OR PAVEMENT MARKINGS IN CONFLICT WITH DESIGN.



- NOTES:
1. ROUNDABOUT DIAMETER IS DEPENDENT ON THE EXISTING ROADWAY WIDTHS. ROUNDABOUT EDGE SHALL BE A MINIMUM OF 15 FEET FROM THE EDGE OF CURB.
 2. YIELD SIGNS SHALL BE PLACED ON EACH APPROACH.
 3. POSTS SHALL NOT BLOCK R1-6 SIGNS.
 4. REMOVE ANY SIGNS OR PAVEMENT MARKING IN CONFLICT WITH DESIGN.
 5. DESIGN MAY VARY DEPENDING ON FIELD CONDITIONS. REFER TO PRELIMINARY DESIGN PLANS.
 6. ROUNDABOUT DESIGN SHALL ENSURE THAT THE VEHICLE WHEEL PATH DOES NOT CROSS PEDESTRIAN CROSSING PATHS.
 7. CURB EXTENSIONS OR PROTECTED CORNERS MAY BE COMBINED WITH ROUNDABOUT DESIGN FOR WIDER ROADWAY WIDTHS TO PROVIDE GREATER DEFLECTION FOR APPROACHES. REFER TO SHEETS QB-3 AND QB-4 CURB EXTENSION AND PROTECTED CORNER DETAILS.
 8. WHEN PRESENT, EXISTING STREET NAME SIGNS SHALL REMAIN PROTECTED IN PLACE.



NOTES:
1. REMOVE ANY STRIPING OR SIGNAGE IN CONFLICT WITH DESIGN.



- NOTES:
1. DELINEATION DEVICES ARE SHOWN IN A BIKE LANE BUFFER SCENARIO. ADDITIONAL APPLICATIONS MAY APPLY. REFER TO DESIGN PLANS FOR PROJECT-SPECIFIC DESIGNS.
 2. REMOVE ANY SIGNS OR PAVEMENT MARKING IN CONFLICT WITH DESIGN.
 3. ALL DELINEATION DEVICES SHALL BE CENTERED WITHIN THE BUFFER. ONLY FLEX POSTS MAY BE USED WHEN A BUFFER IS NOT PRESENT.
 4. DELINEATION DEVICES WITH VERTICAL FACES SHALL BE ORIENTED SO THAT THE VERTICAL EDGE IS ON THE VEHICLE SIDE OF THE BUFFER.
 5. SIGHT DISTANCE SHALL BE VERIFIED PRIOR TO THE INSTALLATION OF ANY VERTICAL DELINEATION DEVICE. ADJUSTMENTS TO EXISTING STOP BARS SHALL BE MADE AS NECESSARY. REFER TO SECTION 203.8 OF THE CITY OF GREELEY DESIGN CRITERIA & CONSTRUCTION SPECIFICATIONS.

CRITERIA	FLEX POST	PLANTER	ROLL CURB	CURB W/ POST	ZIPPER
REQUIRED BUFFER WIDTH	NO MINIMUM	4' MINIMUM	2' MINIMUM	NO MINIMUM	2' MINIMUM
SPACING	5'-10'	0'-30'	CONTINUOUS	0'-4'	0'-4' BETWEEN SETS
APPLICATION	BUFFERED BIKE LANE, PROTECTED BIKE LANE, PROTECTED CORNER, CURB EXTENSION, LANE HARDENING	PROTECTED CORNER	BUFFERED BIKE LANE, PROTECTED BIKE LANE, PROTECTED CORNER, CURB EXTENSION, LANE HARDENING	BUFFERED BIKE LANE, PROTECTED BIKE LANE, PROTECTED CORNER, CURB EXTENSION, LANE HARDENING	BUFFERED BIKE LANE, PROTECTED BIKE LANE
APPROX. DIMENSIONS	HEIGHT: 24"-48"	HEIGHT: SEE NOTE 5	40" L X 12" W X 3.5" H	POST HEIGHT: 24"-48" CURB: 36" L X 6" W X 5" H	11" L X 11" W X 4.9" H
MISCELLANEOUS	WIDER SPACING SHALL BE USED ALONG LONGER ROADWAY SEGMENTS. NARROWER SPACING SHALL BE USED FOR CURB EXTENSIONS AND PROTECTED CORNERS.	PLANTERS TO BE USED WHEN AESTHETICS IS A CONSIDERATION		WHEN USED FOR CENTERLINE HARDENING, CURB SHALL BE ROUNDED ON BOTH SIDES	

Appendix D Countermeasure Cost Tables

Table D-1: Summary of High-Visibility Crosswalk Locations

Project ID	Project Location	Quantity (LF)	Cost
1-4A	5th St and 9th Ave	102	\$8,210
1-4B	5th St and 8th Ave	327	\$16,740
1-9	13th St, 23rd Ave to 14th Ave		
	13th St and 21st Ave	48	\$2,520
1-17	22nd St, 35th Ave to 28th Ave		
	22nd St btwn Mountair Ln and 28th Ave Ct	37	\$7,760
1-23	Residential (Alpine Ave/22nd St/Aspen Ave/24th St)		
	22nd St and Apple Ave	47	\$3,970
	24th St and 1st Ave	56	\$5,970
2-1A	13th Ave and 5th St	157	\$12,640
2-2	12th Ave, 2nd St to 20th St		
	12th Ave and 16th St	53	\$5,690
2-3	8th St, 16th Ave to 10th Ave		
	8th St and 16th Ave	51	\$3,170
	8th St and 12th Ave	90	\$5,520
2-5	11th St, 19th Ave to 11th Ave		
	11th St and 12th Ave	154	\$11,550
2-5A	11th St and 13th Ave	152	\$11,650
2-7	11th St, 9th Ave to 6th Ave		
	11th St and 7th Ave	62	\$6,250
2-8	12th St, 11th Ave to 7th Ave		
	12th St and 11th Ave	53	\$5,690
	12th St and 7th Ave	100	\$8,470
2-9	12th St, 14th Ave to 11th Ave		
	12th St and 14th Ave	50	\$5,690
2-10	13th St, 14th Ave to 8th Ave		
	13th St and 12th Ave	52	\$3,410
2-13	8th Ave and 14th St	60	\$3,070
2-14	16th St, 11th Ave to 1st Ave		
	16th St and 8th Ave	218	\$11,160
	16th St and 4th Ave	57	\$3,510
	16th St and 1st Ave	255	\$16,020
2-14A	16th St and 7th Ave	100	\$9,010
2-14B	16th St and 6th Ave	100	\$9,600
2-17	17th St, 9th Ave to 6th Ave		
	17th St and 6th Ave	100	\$5,680
2-19	20th St, 11th Ave to 4th Ave		
	20th St and 7th Ave	100	\$8,210
	20th St and 6th Ave	200	\$13,230
2-20	19th St, 14th Ave to 10th Ave		

Table D-1: Summary of High-Visibility Crosswalk Locations

Project ID	Project Location	Quantity (LF)	Cost
	19th St and 14th Ave	54	\$5,690
2-22	14th Ave, 16th St to 20th St		
	14th Ave and 18th St	108	\$8,480
	14th Ave and 17th St	108	\$8,480
2-26	9th Ave and 25th St	220	\$15,800
2-29	22nd St, 9th Ave to US 85		
	22nd St and 4th Ave	148	\$10,440
3-1	N 11th Ave, D St to 16th St		
	N 11th Ave btwn 10th St and 11th St	52	\$5,690
3-3A	4th St and 10th Ave	160	\$12,920
3-3B	4th St and 9th Ave	160	\$12,920
3-5	8th Ave and 6th St	73	\$6,810
3-6	8th Ave and 7th St	199	\$10,330
3-7	8th Ave and 9th St	149	\$7,820
3-8	8th Ave and 10th St	220	\$11,160
3-16	4th St btwn 50th Ave Pl and 49th Ave	62	\$3,350
3-22	13th St, 63rd Ave Ct to 60th Ave		
	13th St and 60th Ave	44	\$5,140
3-24/3-25	18th St and 59th Ave	72	\$3,910
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)		
	W 29th St, Park Crossing E of 39th Ave	50	\$5,690
4-5	59th Ave and 16th St	71	\$6,530
Subtotal			\$345,550
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$172,780
Total			\$518,330

Table D-2: Summary of Speed Feedback Sign Locations

Project ID	Project Location	Quantity (EA)	Cost
1-11	35th Ave, 4th St to 10th St		
	35th Ave, N of W 6th St	1	\$12,000
	35th Ave, S of W 6th St	1	\$12,000
1-13	4th St and 25th Ave	2	\$24,000
1-14	28th Ave, 10th St to 20th St		
	28th Ave, N of W 12th St	1	\$12,000
	28th Ave, N of W 13th St	1	\$12,000
1-15	16th St, 35th Ave to 23rd Ave		
	16th St, W of 33rd Ave	1	\$12,000
	16th St, E of 29th Ave	1	\$12,000

Table D-2: Summary of Speed Feedback Sign Locations

Project ID	Project Location	Quantity (EA)	Cost
1-18	Reservoir Rd, 27th St to 28th Ave		
	Reservoir Rd, E of 28th Ave	2	\$24,000
2-21	Reservoir Rd/20th St, 17th Ave to 11th Ave		
	Reservoir Rd/20th St, E of 17th Ave	1	\$12,000
	Reservoir Rd/20th St, E of 13th Ave	1	\$12,000
3-15	54th Ave, 9th St to 6th St Rd		
	54th Ave, S of W 7th St	1	\$12,000
	54th Ave, N of W 7th St	1	\$12,000
3-16	4th St btwn 50th Ave Pl and 49th Ave	2	\$24,000
3-20A	16th St, E of 40th Ave	1	\$12,000
3-20B	16th St, W of 40th Ave	1	\$12,000
3-21	20th St, 47th Ave to 35th Ave		
	20th St, E of Homestead Rd	1	\$12,000
	20th St, W of 44th Ave Ct	1	\$12,000
3-22	13th St, 63rd Ave Ct to 60th Ave	2	\$24,000
3-24/3-25	18th St and 59th Ave	2	\$24,000
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)		
	29th St, E of 39th Ave	1	\$12,000
	29th St, W of 47th Ave	1	\$12,000
4-1	4th St, 47th Ave to 71st Ave		
	4th St, E of 63rd Ave	1	\$12,000
	4th St, W of 63rd Ave	1	\$12,000
Subtotal			\$336,000
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$168,000
Total			\$504,000

Table D-3: Summary of RRFB Locations

Project ID	Project Location	Quantity (EA)	Cost
1-7	15th St, 16th Ave Ct to 8th Ave		
	15th St and 15th Ave	2	\$27,450
1-9	13th St, 23rd Ave to 14th Ave		
	13th St and 21st Ave	2	\$33,450
1-10	13th St, 35th Ave to 23rd Ave		
	13th St and 30th Ave	2	\$27,450
1-16	28th Ave, 20th St to Reservoir Rd		
	28th Ave and 22nd St Dr	2	\$30,450
1-16A	28th Ave and Reservoir Rd	2	\$30,450
1-25	26th St and Ash Ave	2	\$27,450
2-13	8th Ave and 14th St	3	\$44,180

Table D-3: Summary of RRFB Locations

Project ID	Project Location	Quantity (EA)	Cost
2-17	17th St, 9th Ave to 6th Ave		
	17th St and 6th Ave	2	\$33,450
2-19	20th St, 11th Ave to 4th Ave		
	20th St and 9th Ave	2	\$33,450
2-22	14th Ave, 16th St to 20th St		
	14th Ave and Cranford Pl	2	\$30,450
2-25	10th Ave, 16th St to 25th St		
	10th Ave and 21st St	2	\$33,450
3-9	9th Ave and A St	2	\$27,450
3-11A	11th Ave and D St	2	\$30,450
3-17	4th St and 46th Ave	2	\$30,450
3-20	16th St, 47th Ave to 35th Ave		
	16th St and 43rd Ave	2	\$30,450
	16th St and 40th Ave	2	\$27,450
3-24/3-25	18th St and 59th Ave	2	\$27,450
4-2	71st Ave and 12th St	2	\$33,450
Subtotal			\$558,830
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$279,420
Total			\$838,250

Table D-4: Summary of Curb Extension/Protected Corner Locations

Project ID	Project Location	Quantity (LS)	Cost
1-4	5th St, 14th Ave to 8th Ave		
	5th St and 10th Ave	1	\$31,680
1-4A	5th St and 9th Ave	1	\$51,150
1-5A	14th Ave and 9th St	1	\$1,840
1-6A	14th Ave and 10th St	1	\$21,910
1-7	15th St, 16th Ave Ct to 8th Ave		
	15th St and 15th Ave	1	\$17,550
1-8	13th St, 8th Ave to US 85	1	\$109,790
	13th St and 7th Ave		
	13th St and 4th Ave		
1-9	13th St, 23rd Ave to 14th Ave	1	\$61,750
	13th St and 21st Ave		
	13th St and 22nd Ave		
1-9B	13th St and 23rd Ave	1	\$9,160
1-10	13th St, 35th Ave to 23rd Ave		
	13th St and 30th Ave	1	\$10,780
1-10A	13th St and 28th Ave	1	\$9,390

Table D-4: Summary of Curb Extension/Protected Corner Locations

Project ID	Project Location	Quantity (LS)	Cost
1-13	4th St and 25th Ave	1	\$14,600
1-12	4th Street and Greeley #3 Canal Trail (west of 26th Ave)	1	\$18,070
1-16	28th Ave, 20th St to Reservoir Rd		
	28th Ave and 22nd St Ln	1	\$15,630
1-20	17th Ave and 30th St Rd	1	\$24,040
	17th Ave and 30th St Rd		
	17th Ave and 30th St		
1-22	20th St, Alpine Ave to Balsam Ave		
	20th St and Alpine Ave	1	\$18,030
1-24	24th St and Balsam Ave	1	\$21,850
2-3	8th St, 16th Ave to 10th Ave		
	8th St and 16th Ave	1	\$29,830
2-3A	8th St and 11th Ave	1	\$36,220
2-5	11th St, 19th Ave to 11th Ave		
	11th St and 12th Ave	1	\$54,630
2-5A	11th St and 13th Ave	1	\$44,950
2-6	11th St and 9th Ave	1	\$21,090
2-7A	11th St and 8th Ave	1	\$11,400
2-8	12th St, 11th Ave to 7th Ave		
	12th St and 7th Ave	1	\$34,340
2-8A	12th St and 8th Ave	1	\$8,960
2-9	12th St, 14th Ave to 11th Ave	1	\$65,710
	12th St and 14th Ave		
	12th St and 13th Ave		
2-10	13th St, 14th Ave to 8th Ave		
	13th St and 12th Ave	1	\$35,170
2-10A	13th St and 13th Ave	1	\$47,960
2-10B	13th St and 9th Ave	1	\$52,330
2-10C	13th St and 10th Ave	1	\$40,190
2-11	12th St and 9th Ave	1	\$33,570
2-12	12th St and 10th Ave	1	\$33,290
2-14A	16th St and 7th Ave	1	\$46,440
2-15	16th St and 13th Ave	1	\$26,480
2-17	17th St, 9th Ave to 6th Ave	1	\$53,590
	17th St and 9th Ave		
	17th St and 7th Ave		
	17th St and 6th Ave		
2-18	18th St and 7th Ave	1	\$44,150
2-20	19th St, 14th Ave to 10th Ave	1	\$52,340
	19th St and 13th Ave		

Table D-4: Summary of Curb Extension/Protected Corner Locations

Project ID	Project Location	Quantity (LS)	Cost
	19th St and 11th Ave		
2-22	14th Ave, 16th St to 20th St	1	\$64,320
	14th Ave and Cranford Pl		
	14th Ave and 17th St		
2-25	10th Ave, 16th St to 25th St	1	\$24,720
	10th Ave and 17th St		
	10th Ave and 18th St		
	10th Ave and Cranford Pl		
2-25A	10th Ave and 25th St	1	\$51,280
2-26	9th Ave and 25th St	1	\$43,600
2-27	9th Ave and 24th St	1	\$52,710
2-29	22nd St, 9th Ave to US 85	1	\$81,430
	22nd St and 4th Ave		
	22nd St and 6th Ave		
3-1	N 11th Ave, D St to 16th St	1	\$64,320
	N 11th Ave and 13th St		
3-2	10th Ave, 5th St to 12th St	1	\$19,520
	10th Ave and 6th St		
	10th Ave and 8th St		
	10th Ave and 10th St		
3-3A	4th St and 10th Ave	1	\$16,460
3-3B	4th St and 9th Ave	1	\$46,440
3-9	9th Ave and A St	1	\$40,590
3-18	43rd Ave, 4th St to 16th St		
	43rd Ave and 7th St	1	\$3,710
3-26	59th Ave, 20th St to 21st St		
	59th Ave and 20th St	1	\$1,820
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)	1	\$32,540
	29th St and 30th St		
	30th St and 43rd Ave		
	30th St and 41st Ave		
	29th St/30th St and 39th Ave		
3-29	23rd St Rd and 42nd Ave	1	\$24,300
Subtotal			\$1,777,620
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$888,810
Total			\$2,666,430

Table D-5: Summary of Lane Reconfiguration Locations

Project ID	Project Location	Quantity (LS)	Cost
1-1	14th Ave, A St to 5th St	1	\$15,950
1-2	2nd St, 23rd Ave to 14th Ave	1	\$62,420
1-3	5th St, 23rd Ave to 14th Ave	1	\$40,630
1-5	14th Ave, 5th St to 9th St	1	\$45,960
1-10	13th St, 35th Ave to 23rd Ave	1	\$54,870
1-11	35th Ave, 4th St to 10th St	1	\$29,010
1-14	28th Ave, 10th St to 20th St	1	\$96,090
1-15	16th St, 35th Ave to 23rd Ave	1	\$54,900
1-16	28th Ave, 20th St to Reservoir Rd	1	\$46,570
1-17	22nd St, 35th Ave to 28th Ave	1	\$30,490
1-21	1st Ave, 18th St to 31st St	1	\$59,960
2-5	11th St, 19th Ave to 11th Ave	1	\$13,180
2-16	8th Ave, 15th St to 22nd St	1	\$54,390
2-21	Reservoir Rd/20th St, 17th Ave to 11th Ave	1	\$36,420
2-23	17th Ave, Alles Dr to Reservoir Rd	1	\$6,550
2-24	25th St, 17th Ave to 11th Ave	1	\$40,820
2-28	26th St, 11th Ave to 9th Ave	1	\$23,330
3-1	N 11th Ave, D St to 20th St	1	\$130,700
3-3	4th St, 14th Ave to 8th Ave	1	\$22,940
3-12	H St, O St to 11th Ave	1	\$129,980
3-18	43rd Ave, 4th St to 16th St	1	\$74,460
3-20	16th St, 47th Ave to 35th Ave	1	\$47,570
3-21	20th St, 47th Ave to 35th Ave	1	\$4,400
3-22	13th St, 63rd Ave Ct to 60th Ave	1	\$15,690
3-26	59th Ave, 20th St to 21st St	1	\$12,470
3-27	29th St, EOP to 47th Ave	1	\$15,390
Subtotal			\$1,165,140
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$582,570
Total			\$1,747,710

Table D-6: Summary of Raised Crosswalk/Speed Table Locations

Project ID	Project Location	Quantity (LF)	Cost
1-1	14th Ave, A St to 5th St		
	14th Ave and 4th St	52	\$19,950
1-20	17th Ave and 30th St Rd		
	17th Ave, south of 30th St	56	\$19,700
1-22	20th St, Alpine Ave to Balsam Ave	86	\$31,600
	20th St west of Alpine Ave		
	20th St btwn Alpine Ave and Balsam Ave		

Table D-6: Summary of Raised Crosswalk/Speed Table Locations

Project ID	Project Location	Quantity (LF)	Cost
1-23	Residential (Alpine Ave/22nd St/Aspen Ave/24th St)		
	22nd St and Apricot Ave	47	\$17,000
1-25	26th St and Ash Ave	45	\$16,400
2-2	12th Ave, 2nd St to 20th St	154	\$63,600
	12th Ave and 8th St		
	12th Ave and 18th St		
	12th Ave and Cranford Pl		
2-3	8th St, 16th Ave to 10th Ave		
	8th St and 13th Ave	52	\$21,400
2-5	11th St, 19th Ave to 11th Ave		
	11th St and Greeley Ditch No. 3	30	\$11,900
2-20	19th St, 14th Ave to 10th Ave		
	19th St, east of 13th Ave	51	\$18,200
2-28	26th St, 11th Ave to 9th Ave		
	26th St and 10th Ave	56	\$22,600
3-10	A St, 14th Ave to 11th Ave		
	A St and N 12th Ave	52	\$21,400
3-14	Residential (63rd Ave/6th St/61st Ave/8th St)	148	\$61,800
	W 8th St, btwn 62nd Ave Ct and 61st Ave Ct		
	W 8th St and 61st Ave Ct		
	W 6th St Rd and 62nd Ave		
	W 6th St Rd, btwn 61st Ave and 61st Ave Ct		
3-19	Residential (42nd Ave/4th St/41st Ave/7th St)	76	\$31,500
	W 7th St and 41st Ave		
	W 7th St and 42nd Ave		
3-27	29th St, EOP to 47th Ave	94	\$36,900
	29th St and 58th Ave		
	29th St, E of 58th Ave		
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)	84	\$31,000
	W 30th St, btwn 41st Ave and 40th Ave		
	W 29th St, W of 35th Ave		
		Subtotal	\$424,950
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$212,480
		Total	\$637,430

Table D-7: Summary of Lighting Locations

Project ID	Project Location	Quantity (EA)	Cost
2-25	10th Ave, 16th St to 25th St		
	10th Ave and 25th St	2	\$7,000
4-3	71st Ave and Poudre River Trail Crossing	1	\$3,500
4-4	County Road 27 and Poudre River Trail Crossing	1	\$3,500
Subtotal			\$14,000
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$7,000
Total			\$21,000

Table D-8: Summary of Mini-Roundabout Locations

Project ID	Project Location	Quantity (EA)	Cost
1-9A	13th St and 18th Ave	1	\$39,890
1-10B	13th St and 31st Ave	1	\$17,500
2-2	12th Ave, 2nd St to 20th St	2	\$58,060
	12th Ave and 12th St		
	12th Ave and 19th St		
2-25	10th Ave, 16th St to 25th St		
	10th Ave and 23rd St	1	\$35,070
3-14	Residential (63rd Ave/6th St/61st Ave/8th St)	2	\$43,410
	W 7th St and 62nd Ave Ct		
	W 7th St and 62nd Ave		
3-27	W 29th St, EOP to 47th Ave	2	\$75,930
	W 29th St, W of 47th Ave		
	W 29th St and W 31st St		
Subtotal			\$269,860
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$134,930
Total			\$404,790

Table D-9: Summary of Chicane Locations

Project ID	Project Location	Quantity (LS)	Cost
1-16	28th Ave, 20th St to Reservoir Rd		
	28th Ave, btwn 22nd St Rd and 24th St	1	\$49,240
3-18	43rd Ave, 4th St to 16th St		
	43rd Ave, S of 42nd Ave/Ward Dr	1	\$24,110
3-27	29th St, EOP to 47th Ave		
	29th St, W of 53rd Ave	1	\$26,440
4-6	29th St, W of 31st Ave	1	\$26,650
4-7	20th St, W of Birch Ave	1	\$16,700

Table D-9: Summary of Chicane Locations

Project ID	Project Location	Quantity (LS)	Cost
Subtotal			\$143,140
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$71,570
Total			\$214,710

Table D-10: Summary of Miscellaneous Countermeasure Locations

Project ID	Project Location	Countermeasure	Cost
1-5	14th Ave, 5th St to 9th St	Signal Head Realignment	\$2,400
1-10C	13th St and 35th Ave	Centerline Hardening	\$1,800
1-13	4th St and 25th Ave	Warning Sign	\$2,600
1-15	16th St, 35th Ave to 23rd Ave	Extend School Zone	\$1,000
1-16	28th Ave, 20th St to Reservoir Rd	Extend School Zone	\$1,000
1-23	Residential (Alpine Ave/22nd St/Aspen Ave/24th St)	Sign Visibility	\$230
	22nd St and Apple Ave		
	23rd St Rd and Aspen Ave		
	Aspen Ave and E 23rd St		
2-3	8th St, 16th Ave to 10th Ave		
	8th St and 13th Ave	Stop Bars	\$810
2-5	11th St, 19th Ave to 11th Ave		
	11th St near Greeley Ditch No. 3	Centerline Hardening	\$6,300
2-6	11th St, 11th Ave to 9th Ave		
	11th St and 10th Ave	Crossing Signs	\$2,900
2-10A	13th St and 13th Ave	Crossing Signs	\$1,450
2-16B	8th Ave and 18th St	Rubber Refuge	\$260
2-22A	14th Ave and 16th St	LPIs	\$0
3-1A	11th Ave and 10th St	LPIs	\$0
3-1B	11th Ave and 9th St	LPIs	\$0
3-21A	20th St and 47th Ave	Centerline Hardening	\$58,800
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)	Stop Sign Enhancements	\$230
3-30	County Road 31 and County Road 66	Stop Sign Enhancements	\$120
4-1	4th St, 47th Ave to 71st Ave	Centerline Hardening	\$5,500
Subtotal			\$85,400
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)			\$42,700
Total			\$128,100

Table D-11: Summary of Removals

Project ID	Project Location	Quantity (LS)	Cost
1-1	14th Ave, A St to 5th St	1	\$2,480

Table D-11: Summary of Removals

Project ID	Project Location	Quantity (LS)	Cost
1-2	2nd St, 23rd Ave to 14th Ave	1	\$150
1-3	5th St, 23rd Ave to 14th Ave	1	\$890
1-4	5th St, 14th Ave to 8th Ave	1	\$210
1-4A	5th St and 9th Ave	1	\$420
1-4B	5th St and 8th Ave	1	\$0
1-5	14th Ave, 5th St to 9th St	1	\$2,500
1-5A	14th Ave and 9th St	1	\$30
1-6A	14th Ave and 10th St	1	\$110
1-7	15th St, 16th Ave Ct to 8th Ave	1	\$400
1-8	13th St, 8th Ave to US 85	1	\$930
1-9	13th St, 23rd Ave to 14th Ave	1	\$1,100
1-9A	13th St and 18th Ave	1	\$530
1-9B	13th St and 23rd Ave	1	\$90
1-10	13th St, 35th Ave to 23rd Ave	1	\$6,430
1-10A	13th St and 28th Ave	1	\$60
1-10B	13th St and 31st Ave	1	\$0
1-10C	13th St and 35th Ave	1	\$0
1-11	35th Ave, 4th St to 10th St	1	\$2,410
1-12	4th Street and Greeley #3 Canal Trail (west of 26th Ave)	1	\$290
1-13	4th St and 25th Ave	1	\$120
1-14	28th Ave, 10th St to 20th St	1	\$2,210
1-15	16th St, 35th Ave to 23rd Ave	1	\$0
1-16	28th Ave, 20th St to Reservoir Rd	1	\$2,560
1-16A	28th Ave and Reservoir Rd	1	\$300
1-17	22nd St, 35th Ave to 28th Ave	1	\$1,930
1-18	Reservoir Rd, 27th St to 28th Ave	1	\$0
1-20	17th Ave and 30th St Rd	1	\$170
1-21	1st Ave, 18th St to 31st St	1	\$17,360
1-22	20th St, Alpine Ave to Balsam Ave	1	\$90
1-23	Residential (Alpine Ave/22nd St/Aspen Ave/24th St)	1	\$0
1-24	24th St and Balsam Ave	1	\$40
1-25	26th St and Ash Ave	1	\$300
2-1A	13th Ave and 5th St	1	\$0
2-2	12th Ave, 2nd St to 20th St	1	\$1,300
2-3	8th St, 16th Ave to 10th Ave	1	\$210
2-3A	8th St and 11th Ave	1	\$250
2-5	11th St, 19th Ave to 11th Ave	1	\$920
2-5A	11th St and 13th Ave	1	\$320
2-6	11th St, 11th Ave to 9th Ave	1	\$180
2-7	11th St, 9th Ave to 6th Ave	1	\$0

Table D-11: Summary of Removals

Project ID	Project Location	Quantity (LS)	Cost
2-7A	11th St and 8th Ave	1	\$0
2-8	12th St, 11th Ave to 7th Ave	1	\$200
2-8A	12th St and 8th Ave	1	\$0
2-9	12th St, 14th Ave to 11th Ave	1	\$350
2-10	13th St, 14th Ave to 8th Ave	1	\$170
2-10A	13th St and 13th Ave	1	\$530
2-10B	13th St and 9th Ave	1	\$380
2-10C	13th St and 10th Ave	1	\$270
2-11	9th Ave, 12th St to 16th St	1	\$160
2-12	10th Ave, 12th St to 16th St	1	\$230
2-13	8th Ave and 14th St	1	\$0
2-14	16th St, 8th Ave to 1st Ave	1	\$0
2-14A	16th St and 7th Ave	1	\$310
2-14B	16th St and 6th Ave	1	\$0
2-15	16th St and 13th Ave	1	\$190
2-16	8th Ave, 15th St to 22nd St	1	\$2,840
2-16B	8th Ave and 18th St	1	\$0
2-17	17th St, 9th Ave to 6th Ave	1	\$200
2-18	18th St and 7th Ave	1	\$360
2-19	20th St, 11th Ave to 4th Ave	1	\$0
2-20	19th St, 14th Ave to 10th Ave	1	\$160
2-21	Reservoir Rd/20th St, 17th Ave to 11th Ave	1	\$2,950
2-22	14th Ave, 16th St to 20th St	1	\$760
2-22A	14th Ave and 16th St	1	\$0
2-23	17th Ave, Alles Dr to Reservoir Rd	1	\$190
2-24	25th St, 17th Ave to 11th Ave	1	\$3,270
2-25	10th Ave, 16th St to 25th St	1	\$1,670
2-25A	10th Ave and 25th St	1	\$330
2-26	9th Ave and 25th St	1	\$250
2-27	9th Ave and 24th St	1	\$420
2-28	26th St, 11th Ave to 9th Ave	1	\$1,500
2-29	22nd St, 9th Ave to US 85	1	\$470
3-1	N 11th Ave, D St to 20th St	1	\$15,970
3-1A	11th Ave and 10th St	1	\$0
3-1B	11th Ave and 9th St	1	\$0
3-2	10th Ave, 5th St to 12th St	1	\$70
3-3	4th St, 14th Ave to 8th Ave	1	\$60
3-3A	4th St and 10th Ave	1	\$0
3-3B	4th St and 9th Ave	1	\$200
3-5	8th Ave and 6th St	1	\$0

Table D-11: Summary of Removals

Project ID	Project Location	Quantity (LS)	Cost
3-6	8th Ave and 7th St	1	\$0
3-7	8th Ave and 9th St	1	\$0
3-8	8th Ave and 10th St	1	\$0
3-9	9th Ave and A St	1	\$320
3-10	A St, 14th Ave to 11th Ave	1	\$0
3-11A	11th Ave and D St	1	\$150
3-12	H St, O St to 11th Ave	1	\$2,840
3-14	Residential (63rd Ave/6th St/61st Ave/8th St)	1	\$400
3-15	54th Ave, 9th St to 6th St Rd	1	\$0
3-16	4th St btwn 50th Ave Pl and 49th Ave	1	\$0
3-17	4th St and 46th Ave	1	\$300
3-18	43rd Ave, 4th St to 16th St	1	\$6,230
3-19	Residential (42nd Ave/4th St/41st Ave/7th St)	1	\$0
3-20	16th St, 47th Ave to 35th Ave	1	\$10,650
3-20A	16th St, E of 40th Ave	1	\$150
3-20B	16th St, W of 40th Ave	1	\$0
3-21	20th St, 47th Ave to 35th Ave	1	\$3,280
3-21A	20th St and 47th Ave	1	\$0
3-22	13th St, 63rd Ave Ct to 60th Ave	1	\$1,870
3-24/3-25	18th St and 59th Ave	1	\$0
3-26	59th Ave, 20th St to 21st St	1	\$810
3-27	29th St, EOP to 47th Ave	1	\$4,040
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)	1	\$190
3-29	23rd St Rd and 42nd Ave	1	\$60
3-30	County Road 31 and County Road 66	1	\$0
4-1	4th St, 47th Ave to 71st Ave	1	\$0
4-2	71st Ave and 12th St	1	\$300
4-3	71st Ave and Poudre River Trail Crossing	1	\$0
4-4	County Road 27 and Poudre River Trail Crossing	1	\$0
4-5	59th Ave and 16th St	1	\$0
4-6	29th St, W of 31st Ave	1	\$360
4-7	20th St, W of Birch Ave	1	\$70
		Subtotal	\$113,770
		Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)	\$56,885
		Total	\$170,655

Appendix E Individual and Grouped Project Locations

Table E-1: Individual Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
1-3	5th St, 23rd Ave to 14th Ave	Modify lane configuration to improve lane delineation from 23rd Ave to 21st Ave	2	\$41,600
1-6A	14th Ave and 10th St	Paint and post protected corners	2	\$22,100
1-8	13th St, 8th Ave to US 85	Paint and post protected corners at 4th Ave and 7th Ave	1	\$110,800
1-12	4th Street and Greeley #3 Canal Trail (west of 26th Ave)	Paint and post protected corners	2	\$18,400
1-21	1st Ave, 18th St to 31st St	Modify lane configuration from a 5-lane to a 3-lane cross section	1	\$77,400
1-24	24th St and Balsam Ave	Paint and post curb extensions	3	\$21,900
2-15	16th St and 13th Ave	Paint and post protected corners	2	\$26,700
2-18	18th St and 7th Ave	Paint and post protected corners	1	\$44,600
2-27	9th Ave and 24th St	Paint and post protected corners	3	\$53,200
3-5	8th Ave and 6th St	Install high-visibility crosswalk on south leg	2	\$6,900
3-6	8th Ave and 7th St	Install high-visibility crosswalks on all legs	2	\$10,400
3-7	8th Ave and 9th St	Install high-visibility crosswalks on all legs	1	\$7,900
3-8	8th Ave and 10th St	Install high-visibility crosswalks on all legs	2	\$11,200
3-10	A St, 14th Ave to 11th Ave	Install raised crosswalk at N 12th Ave on east leg (requires new ADA ramps)	1	\$21,400
3-11A	11th Ave and D St	Install RRFBs and pedestrian push button post on north leg		\$30,600
3-12	H St, O St to 11th Ave	Modify lane configuration from a 5-lane to a 3-lane cross section	2	\$132,900
3-17	4th St and 46th Ave	Install RRFBs and pedestrian push button post on west leg	2	\$30,800
3-29	23rd St Rd and 42nd Ave	Paint and post protected corners	3	\$24,400
3-30	County Road 31 and County Road 66	Install stop sign visibility enhancements with reflective posts	1	\$200
4-2	71st Ave and 12th St	Install RRFBs and pedestrian push button posts on south leg	2	\$33,800
4-3	71st Ave and Poudre River Trail Crossing	Install solar crosswalk lighting	3	\$3,500
4-4	County Road 27 and Poudre River Trail Crossing	Install solar crosswalk lighting	2	\$3,500
4-5	59th Ave and 16th St	Install high-visibility crosswalk and crossing signs on south leg (requires new ADA ramps)	2	\$6,600
4-6	29th St, W of 31st Ave	Install chicanes	2	\$27,100
4-7	20th St, W of Birch Ave	Install chicanes	3	\$16,800
			Subtotal	\$784,700
			Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)	\$392,400
			Total	\$1,177,100

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
1-1	14th Ave, A St to 5th St	Install raised crosswalk on north leg at 4th St intersection Remove crosswalk on south leg at 4th St intersection Modify lane configuration from a 4-lane to a 3-lane cross section south of 2nd St to 5th St	2	\$38,400
1-2	2nd St, 23rd Ave to 14th Ave	Modify lane configuration to reduce roadway width, remove on-street parking, and improve lane delineation Install delineators adjacent to sidewalk on north side of 2nd St	2	\$62,600
1-4	5th St, 14th Ave to 8th Ave	Paint and post protected corners at 10th Ave	1	\$121,200
1-4A	5th St and 9th Ave	Paint and post protected corners Install high-visibility crosswalks on east and west legs		
1-4B	5th St and 8th Ave	Install high-visibility crosswalks on all legs		
2-1A	13th Ave and 5th St	Install high-visibility crosswalks on north, south, and west legs Install crossing signs on west leg		
1-5	14th Ave, 5th St to 9th St	Modify lane configuration from a 4-lane to a 3-lane cross section Modify signal head alignment with lane reconfiguration	2	\$52,800
1-5A	14th Ave and 9th St	Paint and post curb extensions		
1-7	15th St, 16th Ave Ct to 8th Ave	Install RRFBs at 15th Ave on east leg Paint and post protected corners at 15th Ave	2	\$45,400
1-9	13th St, 23rd Ave to 14th Ave	Paint and post protected corners at 22nd Ave, 21st Ave, and 14th Ave Install high-visibility crosswalk at 21st Ave on west leg Install RRFBs and pedestrian push button post at 21st Ave on west leg	2	\$148,700
1-9A	13th St and 18th Ave	Install mini-roundabout		
1-9B	13th St and 23rd Ave	Paint and post protected corners		
1-10	13th St, 35th Ave to 23rd Ave	Paint and post protected corners at 30th Ave Modify lane configuration to improve lane delineation between 28th Ave and 35th Ave Install RRFBs at 30th Ave school west leg crossing	1	\$128,400
1-10A	13th St and 28th Ave	Paint and post protected corners		
1-10B	13th St and 31st Ave	Install mini-roundabout		
1-10C	13th St and 35th Ave	Install centerline hardening to southbound left turn		

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
1-11	35th Ave, 4th St to 10th St	Install southbound speed feedback sign north of W 6th St Install northbound speed feedback sign south of W 6th St Modify lane configuration to improve lane delineation	1	\$55,500
1-13	4th St and 25th Ave	Install westbound speed feedback sign east of intersection Install eastbound speed feedback sign west of intersection Paint and post protected corners Install W2-2 warning sign for Boys and Girls Club driveway	2	\$41,400
1-14	28th Ave, 10th St to 20th St	Install northbound and southbound speed feedback signs approaching curves near 12th St Rd Modify lane configuration to remove on-street parking and improve lane delineation between 10th St and 13th St	2	\$122,300
1-15	16th St, 35th Ave to 23rd Ave	Modify lane configuration to improve lane delineation Extend school zone Install signage and markings to transition bicyclists from bike lane to path near 25th Ave Install eastbound speed feedback sign east of 42nd Ave Ct Install westbound speed feedback sign west of 36th Ave Ct	2	\$79,900
1-16	28th Ave, 20th St to Reservoir Rd	Modify lane configuration to improve lane delineation where on-street parking can be removed Paint and post protected corners at 22nd St Ln Extend school zone to the south Install RRFs and pedestrian push button post at 22nd St Dr school crossing on south leg Install chicanes between 22nd St Road and 24th St	2	\$200,300
1-16A	28th Ave and Reservoir Rd	Install RRFs and pedestrian push button post at Reservoir Rd crossing on northeast leg		
1-18	Reservoir Rd, 27th St to 28th Ave	Install eastbound and westbound speed feedback signs on Reservoir Rd east of 28th Ave		
1-17	22nd St, 35th Ave to 28th Ave	Install high-visibility crosswalk and crossing signs between Mountair Ln and 28th Ave Ct (requires new ADA ramps) Modify lane configuration to improve lane delineation	3	\$40,200

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
1-20	17th Ave and 30th St Rd	Paint and post protected corners Install speed table between 30th St and 30th St Rd	3	\$44,000
1-22	20th St, Alpine Ave to Balsam Ave	Paint and post curb extensions at Alpine Ave intersection Install speed hump near Alpine Ave Install raised crosswalk between Alpine Ave and Balsam Ave	3	\$49,800
1-23	Residential (Alpine Ave/22nd St/Aspen Ave/24th St)	Install speed table on 22nd St between Ash Ave and Apricot Ave Enhance sign visibility with reflective posts at 22nd St and Apple Ave, 23rd St Rd and Aspen Ave, and Aspen Ave and E 23rd St Install high-visibility crosswalk at 22nd St and Apple Ave on east leg Install high-visibility crosswalk and crossing signs at 24th St and 1st Ave on north leg (requires new ADA ramps)	3	\$27,200
1-25	26th St and Ash Ave	Install raised crosswalk on east leg Install RRFBs on east leg	3	\$44,200
2-2	12th Ave, 2nd St to 20th St	Install mini-roundabout at 12th St and 19th St Install raised crosswalks at 8th St (east leg), 18th St (west leg), and Cranford PI (west leg) Install high-visibility crosswalk and crossing signs at 16th St on east leg	2	\$128,700
2-3	8th St, 16th Ave to 10th Ave	Install high-visibility crosswalks and stop bars at 16th Ave (east and west legs) and 12th Ave (north and south legs) Paint and post protected corners at 16th Ave Install raised crosswalks at 13th Ave on east leg Install stop bars at 13th Ave on north and south legs	2	\$97,500
2-3A	8th St and 11th Ave	Paint and post protected corners		
2-5	11th St, 19th Ave to 11th Ave	Install high-visibility crosswalks at 12th Ave on north, south, and east legs Paint and post protected corners at 12th Ave Modify lane configuration to improve lane delineation between 14th Ave and 13th Ave Install centerline hardening at reverse curve near Greeley Ditch No 3. Install centerline striping between 19th Ave and 18th Ave Install speed table near Greeley Ditch No. 3	2	\$155,500

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
2-5A	11th St and 13th Ave	Install high-visibility crosswalks on north, south, and east legs Install stop bars on north and south legs Paint and post protected corners		
2-6	11th St, 11th Ave to 9th Ave	Install crossing signs at 10th Ave on north and south legs Paint and post protected corners at 9th Ave	3	\$24,200
2-7	11th St, 9th Ave to 6th Ave	Install high-visibility crosswalk and crossing signs at 7th Ave on north leg	3	\$17,700
2-7A	11th St and 8th Ave	Paint and post curb extensions		
2-8	12th St, 11th Ave to 7th Ave	Install high-visibility crosswalks and warning signs at 11th Ave (south leg) and 7th Ave (north leg) Install high-visibility crosswalk and stop bar at 7th Ave on east leg Paint and post protected corners at 7th Ave	1	\$125,100
2-8A	12th St and 8th Ave	Paint and post curb extensions		
2-11	9th Ave, 12th St to 16th St	Paint and post protected corners at 12th St		
2-12	10th Ave, 12th St to 16th St	Paint and post protected corners at 12th St		
2-9	12th St, 14th Ave to 11th Ave	Install high-visibility crosswalk and warning signs at 14th Ave on north leg Paint and post protected corners at 14th Ave and 13th Ave	2	\$71,800
2-10	13th St, 14th Ave to 8th Ave	Paint and post protected corners at 12th Ave Install high-visibility crosswalks at 12th Ave on north leg	2	\$182,100
2-10A	13th St and 13th Ave	Paint and post protected corners Install crossing sign on east leg for eastbound direction		
2-10B	13th St and 9th Ave	Paint and post protected corners		
2-10C	13th St and 10th Ave	Paint and post protected corners		
2-13	8th Ave and 14th St	Install RRFBs and pedestrian push button post on south leg and south median refuge Install high-visibility crosswalks on south leg	2	\$47,300
2-14	16th St, 8th Ave to 1st Ave	Install high-visibility crosswalks and crossing signs on uncontrolled approaches Install stop bars where missing	2	\$96,100
2-14A	16th St and 7th Ave	Install high-visibility crosswalks and crossing signs on east and west legs Modify protected corner striping to include bike lanes		
2-14B	16th St and 6th Ave	Install high-visibility crosswalks on east and west legs Install stop bars on north and south legs		
2-16	8th Ave, 15th St to 22nd St	Modify lane configuration from a 5-lane to a 3-lane cross section north of 17th St	1	\$57,600
2-16B	8th Ave and 18th St	Install rubber median refuge on south crosswalk		

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
2-17	17th St, 9th Ave to 6th Ave	Paint and post protected corners at 7th Ave and 6th Ave Paint and post curb extensions at 9th Ave Install RRFBs, pedestrian push button posts, and high-visibility crosswalk on south leg at 6th Ave Install high-visibility crosswalk and stop bar on west leg at 6th Ave	2	\$93,000
2-19	20th St, 11th Ave to 4th Ave	Install RRFBs and pedestrian push button posts at 9th Ave on east leg Install stop bar at 7th Ave on west leg Install high-visibility crosswalk and warning signs at 7th Ave on north leg Install high-visibility crosswalks at 6th Ave on all legs Install crossing signs at 6th Ave for north and south legs	2	\$54,900
2-20	19th St, 14th Ave to 10th Ave	Paint and post protected corners at 13th Ave Paint and post curb extensions at 11th Ave Install speed table east of 13th Ave Install high-visibility crosswalk and crossing signs at 14th Ave on north leg	3	\$76,400
2-21	Reservoir Rd/20th St, 17th Ave to 11th Ave	Install eastbound speed feedback sign east of 17th Ave Install westbound speed feedback sign east of 13th Ave Modify lane configuration to move parking to south side of street and improve lane delineation	2	\$63,400
2-22	14th Ave, 16th St to 20th St	Paint and post protected corners at 17th St and Cranford Pl Install high-visibility crosswalks at 18th St and 17th St on north and south legs Install RRFBs and pedestrian push button post at Cranford Pl on south leg	2	\$112,500
2-22A	14th Ave and 16th St	Implement LPIs		
2-23	17th Ave, Alles Dr to Reservoir Rd	Install delineators along south shoulder on Reservoir Road at 17th Ave Modify lane configuration to improve lane delineation	2	\$6,800
2-24	25th St, 17th Ave to 11th Ave	Modify lane configuration from a 4-lane to a 3-lane cross section Modify lane configuration to eliminate parking at 17th Ave to maintain westbound right-turn lane	2	\$44,100

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
2-25	10th Ave, 16th St to 25th St	Paint and post protected corners at Cranford PI Paint and post curb extensions at 17th St and 18th St Install RRFBs and pedestrian push button posts at 21st St on south leg Install mini-roundabout at 23rd St	2	\$153,700
2-25A	10th Ave and 25th St	Paint and post protected corners Install solar crosswalk lighting		
2-26	9th Ave and 25th St	Paint and post protected corners Install high-visibility crosswalk on all legs Install crossing signs on east and west legs Install stop bars on north and south legs	3	\$59,700
2-28	26th St, 11th Ave to 9th Ave	Install raised crosswalk at 10th Ave on west leg Modify lane configuration from a 4-lane to a 3-lane cross section between 10th Ave Ct and 8th Ave	3	\$47,500
2-29	22nd St, 9th Ave to US 85	Paint and post protected corners at 4th Ave and 6th Ave Install high-visibility crosswalk at 4th Ave on north leg, south leg, and crossing 22nd St	2	\$92,400
3-1	N 11th Ave, D St to 20th St	Modify lane configuration from a 4-lane to a 3-lane cross section Paint and post protected corners at 13th St Install high-visibility crosswalk and crossing signs between 10th St and 11th St (requires new ADA ramps)	2	\$216,700
3-1A	11th Ave and 10th St	Implement LPIs		
3-1B	11th Ave and 9th St	Implement LPIs		
3-2	10th Ave, 5th St to 12th St	Paint and post protected corners at 8th St Paint and post curb extensions at 6th St and 10th St	2	\$19,600
3-3	4th St, 14th Ave to 8th Ave	Modify lane configuration to improve lane delineation	2	\$112,000
3-3A	4th St and 10th Ave	Paint and post protected corners Install high-visibility crosswalks and stop bars on east and west legs Install high-visibility crosswalk on north leg		
3-3B	4th St and 9th Ave	Paint and post protected corners Install high-visibility crosswalks and stop bars on east and west legs Install high-visibility crosswalk on north leg		
3-9	9th Ave and A St	Paint and post protected corners Install RRFBs on west leg	3	\$68,400

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
3-14	Residential (63rd Ave/6th St/61st Ave/8th St)	Install speed table on 6th St Rd between 61st Ave Ct and 61st Ave and on 8th St between 62nd Ave Ct and 61st Ave Ct Install raised crosswalk at 6th St Rd and 62nd Ave (west leg) and 8th St and 61st Ave Ct (west leg) Install mini-roundabouts on W 7th St at 62nd Ave and 62nd Ave Ct	3	\$105,700
3-15	54th Ave, 9th St to 6th St Rd	Install northbound speed feedback sign south of W 7th St Install southbound speed feedback sign north of W 7th St	3	\$24,000
3-16	4th St btwn 50th Ave Pl and 49th Ave	Install eastbound speed feedback sign west of existing HAWK Install westbound speed feedback sign east of existing HAWK Install high-visibility crosswalk at exiting HAWK	2	\$27,400
3-18	43rd Ave, 4th St to 16th St	Paint and post protected corners at 7th St Modify lane configuration to adjust parking north of 10th St and remove parking south of 10th St Install chicanes south of 42nd Ave/Ward Dr	2	\$108,600
3-19	Residential (42nd Ave/4th St/41st Ave/7th St)	Install raised crosswalk at W 7th St and 42nd Ave (west leg) and W 7th St and 41st Ave (east leg)	3	\$31,500
3-20	16th St, 47th Ave to 35th Ave	Modify lane configuration from a 4-lane to a 3-lane cross section Install RRFBs and pedestrian push button post at 43rd Ave on east leg Install RRFBs at 40th Ave on east leg	2	\$140,400
3-20A	16th St, E of 40th Ave	Install westbound speed feedback sign approaching curve		
3-20B	16th St, W of 40th Ave	Install eastbound speed feedback sign approaching curve		
3-21	20th St, 47th Ave to 35th Ave	Modify lane configuration to narrow lane widths Install eastbound speed feedback sign west of 44th Ave Ct Install westbound speed feedback sign east of Homestead Rd	2	\$90,500
3-21A	20th St and 47th Ave	Install centerline hardening		
3-22	13th St, 63rd Ave Ct to 60th Ave	Install eastbound and westbound speed feedback signs Paint and post a two-way multi-use path on north side of road Install high-visibility crosswalk and crossing signs at 60th Ave on west leg	3	\$46,700

Table E-2: Grouped Project Locations

Project ID	Project Location	Recommendation(s)	Priority	Cost
3-24/3-25	18th St and 59th Ave	Install RRFBs and high-visibility crosswalk on south leg Install northbound and southbound speed feedback signs on 59th Ave Install advance warning signs for 59th Ave crossing	2	\$55,400
3-26	59th Ave, 20th St to 21st St	Paint and post protected corner on southwest corner at 20th St Modify lane configuration to remove the southbound acceleration lane and begin southbound bike lane on southwest corner of 20th St Modify lane configuration to remove outside northbound thru lane and continue northbound bike lane to 20th St	2	\$15,100
3-27	29th St, EOP to 47th Ave	Install mini-roundabout at 31st St and west of 47th Ave Install raised crosswalk at 58th Ave on east leg Install speed table east of 58th Ave Modify lane configuration to narrow roadway width at 47th Ave intersection Install chicanes west of 53rd Ave	2	\$158,700
3-28	Gateway Lakes Community (47th Ave/28th St Rd/35th Ave/30th St Rd)	Install stop sign visibility enhancements with reflective posts at 29th St and 43rd Ave Paint and post curb extensions at 29th St/30th St and 39th Ave, 30th St and 41st Ave, and 30th St and 43rd Ave Paint and post protected corners at 30th St and 29th St Install high-visibility crosswalk on 29th St at park crossing Install speed hump on 30th St west of 40th Ave Ct and west of 35th Ave Install westbound speed feedback sign west of 35th Ave Install eastbound speed feedback sign east of 39th Ave	3	\$93,700
4-1	4th St, 47th Ave to 71st Ave	Install speed feedback signs east and west of 63rd Ave Install centerline hardening at 70th Ave	1	\$29,500
Subtotal				\$4,454,200
Construction Engineering, Mobilization, Traffic Control, Construction Surveying, Contingency (50%)				\$2,227,100
Total				\$6,681,300



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