



Traffic Safety Initiative

Summary

This initiative proposal is a joint effort by Police Services and PDT, and is supported by the City Attorney's Office, and Municipal Court. It results from recent changes to Colorado law related to the expanded use of photo speed enforcement tools on sections of roadways designated by the City Council. The initiative's primary goal is to promote traffic safety through speed enforcement and supports Vision Zero, the City Council's goal of eliminating Fort Collins roadway fatalities and reducing injury crashes.

A fundamental portion of the initiative proposal is a recommended ordinance to change municipal code 1106 and 615. If approved, this will result in the Council identifying "speed corridors" based on vehicle speed and crash data provided by City staff. Once the Council identifies speed corridors, Police Services can utilize photo speed enforcement in these areas. Without a speed corridor designation, state law limits the use of photo radar to school zones, neighborhoods, construction zones, and streets that are adjacent to parks.

Based on preliminary data collected for the proposed corridors and expansion to allow current red-light cameras to begin capturing speed data, the system will increase the number of citations issued. This increase will significantly increase the workload for the City Attorney's office and the Municipal Court. To offset this impact, a BFO offer, funded entirely by this program, will be submitted to increase personnel at the CAO and Municipal Court.

Background

Traffic speed is a concerning problem facing the City. Last year, the City experienced a record-high number of fatal and injury collisions, many of which were associated with people driving beyond posted speed limits.

In 2023, the State passed legislation to allow local governments to conduct unmanned speed enforcement with AVIS (Automated Vehicle Identification System). With this change in state law, the City of Fort Collins has the opportunity to impact traffic speed compliance through the expanded use of automated speed enforcement—to reduce the number of injury accidents and traffic-related fatalities on our roadways.

As part of the City's current traffic enforcement program, six intersections are outfitted with red-light cameras (two cameras per intersection) that detect red stop-light violations. Those twelve red-light-camera approaches have the capability to also detect, validate, and generate speeding violations where vehicle speed exceeds the posted limit of more than eleven miles per hour, if those intersections are designated within a speed corridor. Additionally, this initiative adds the contracted use of two transportable units that can be placed temporarily in problematic locations to address speed compliance between intersections.

The offer could fund essential FTEs in Municipal Court, the City Attorney's Office and PDT. This offer is fully funded through traffic safety funds collected from current red-light camera and speed camera enforcement and further funded if this proposal is adopted by the City Council.

<https://www.cpr.org/2023/06/06/police-signs-bill-allowing-more-speed-cameras-across-colorado/>

<https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004607.pub4/abstract>



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It is estimated that by 2020, road traffic crashes will have moved from ninth to third in the world ranking of burden of disease, as measured in disability adjusted life years. The prevention of road traffic injuries is of global public health importance. Measures aimed at reducing traffic speed are considered essential to preventing road injuries; the use of speed cameras is one such measure.

Thirty five studies met the inclusion criteria. Compared with controls, the relative reduction in average speed ranged from 1% to 15% and the reduction in proportion of vehicles speeding ranged from 14% to 65%. In the vicinity of camera sites, the pre/post reductions ranged from 8% to 49% for all crashes and 11% to 44% for fatal and serious injury crashes. Compared with controls, the relative improvement in pre/post injury crash proportions ranged from 8% to 50%.

Ordinance update

To establish the use of unmanned speed enforcement or AVIS, an update to the existing ordinance is required. Recommended changes to City Ordinance 1106 and 615 will align with state law updates signed into law from Senate Bill 23-200 which updated CRS 42-4-110.5 permitting local and state governments to implement AVIS within their jurisdictions along designated speed corridors. Additionally, the city council is being asked to adopt designated speed corridors through a resolution based on data collected within the past five years but not to exceed five years. This working group has provided the past three years of data to support corridor designation. Data beyond three was not utilized as it was not geocoded for locations.

Corridor Designation

Police Services and PDT are asking the Council to designate through resolution speed corridors to address dangerous driving on the community roadways. Data supports identifying corridors in accordance with state law CRS 42-4-110.5, utilizing crashes, citations, and complaints. Two tiers of corridors have been identified by a working group of city stakeholders responsible for responding to and addressing roadway safety. The two tiers being presented represent the most common locations for injury/fatal crashes, citations involving speeding, careless driving, reckless driving, and racing. In addition, complaint data was used to support the empirical data but not used to weigh the decision as complaints are relative to the opinion of the complainant and vary widely. The Traffic Safety Initiative group is proposing adoption of at least tier one, however would submit tier two locations support a need for additional speed enforcement as those areas of the city are experiencing high volumes of driving behaviors which contribute to injury and fatal crashes.

Automated Vehicle Identification System (AVIS) Upgrade

Upgrading existing red-light camera locations to issue speed violations would cost \$2500 per month, per approach (12) totaling \$30,000 per month to activate all approaches.

Adding transportable solutions which could be moved periodically, likely every thirty days in areas where speed is most concerning would cost \$8,500 per month per unit (2). It is recommended two



transportable systems are added to traffic safety operations totaling \$17,000 a month with total systems additions being \$564K annually. The systems specifications include:

- Dual radar - Lane-specific tracking radar (primary radar) measures the speed and position of vehicles in beam, while the speed radar (secondary radar) provides high precision speed measurement of vehicle in beam. This enables the system to precisely track each vehicle and accurately trigger speed events, even in high-traffic locations. This also enables hardware-based edge SSV (secondary speed verification), which Verra Mobility uniquely provides.
- High-Definition Video - Capture high-definition digital video including a configurable video clip (up to 12-seconds) of the event and video of each speed-enforced location. This footage has been used to successfully assist law enforcement in solving both traffic and non-traffic related crimes.
- High-Efficiency LED Strobe - The purpose-built LED strobe allows for the ideal level of illumination to capture evidence of speed violations, while reducing the amount of light pollution typically associated with regular strobes.
- Ultra-High-Resolution Images - The camera captures ultra-high-resolution color images of 12 megapixels. While other systems rely on multiple pieces of equipment to process and store images, the Verra Mobility system integrates the camera and the main processing unit together. This eliminates the risk for missed or misinterpreted event data as it transfers from one processor to another.

Additional Recommended Personnel:

With the addition of automated speed enforcement utilizing AVIS an increase in the number of citations is anticipated. With an increase in citations staffing is required to support this traffic safety initiative to quell dangerous driving behaviors. Municipal Court and the City Attorney’s Office will be directly impacted with the increase in citations, and it is recommended that funds generated from AVIS enforcement be utilized to provide necessary staffing. The AVIS funds currently can support the additional personnel requested by municipal court and the City Attorney’s Office for 2024 and 2025, however, the addition of the recommended corridors and AVIS capabilities will ensure future funding while addressing traffic safety. Below is a table highlighting the current increase in traffic citations for current camera radar vans and red-light camera citations processed by the Municipal Court and the City Attorney’s Office from January 1st to March 31st for each year shown.



	2023 YTD	2024 YTD	% Change
Citations Issued	4522	7872	+42%
Citations Disposed	4223	7162	+42%
Dismissals	350	677	+48%
Trials Scheduled	44	88	+50%
Motions Filed	144	320	+55%
Cases Served by VM	270	292	+8%

Projected 2024 Total	Projected Increase with Corridors
30K	40K
	133% Increase

Additional Personnel Costs:

Personnel costs to support speed corridor and automated enforcement for the city consist of the following proposed positions.

2024 Personnel costs to support speed corridor and automated enforcement for the city consist of the following proposed positions.

- (2) Full-time municipal court clerks \$67,696 (Municipal Court)
- (1) City Attorney and (1) Legal Assistant \$142,774 (City Attorney’s Office)
- Estimated 1-2 FTE’s for temporary staffing (either hourly or contractual) Municipal Court \$24,904
- Estimated 1-2 FTE’s for temporary staffing (either hourly or contractual) City Attorney’s Office \$179,112
 - Total personnel cost expansion funded by automated enforcement \$414,486

2025 and ongoing personnel costs

- (2) Full-time municipal court clerks \$154,285 (Municipal Court)
- (1) City Attorney and (1) Legal Assistant \$253,142 (City Attorney’s Office)
- Estimated 1-2 FTE’s for temporary staffing (either hourly or contractual) Municipal Court \$58,864
- Estimated 1-2 FTE’s for temporary staffing (either hourly or contractual) City Attorney’s Office \$258,902
- (1) Vision Zero Coordinator (PDT) \$130,713
- (1) Network Engineer (PDT) \$117,072
 - Total personnel cost expansion funded by automated enforcement \$972,978



Anticipated RLCR Revenue

Automated enforcement of speeding violations in areas where the City designates as speed corridors will generate revenue earmarked for traffic safety. Those funds as they are dedicated for traffic safety, would support funding positions in the courts, city attorney’s office, and City PDT.

2024 – \$1M Current red-light fund balance

The current red-light fund balance is \$1.6M and is used to support municipal court and PDT. Activating red-light locations into speed camera locations would generate an estimated annual increase of \$2.6M additional funds from fines creating a traffic safety fund balance for 2024 of \$2.1M if activated by mid-year 2024, fund balance for 2025 of \$3.4M and for 2026 a balance of \$4.8M.

The AVIS program will be reevaluated mid-year and on an ongoing basis to determine if scalability is needed. Scalable options include possible reduction of AVIS devices being used to include vans, red-light locations for speed detection and part-time staffing if needed.

	2021	2022	2023	2024	2025	2026
Current AVIS Rev	\$ 1,211,000.00	\$ 1,164,000.00	\$ 1,150,000.00	\$ 1,604,000.00	\$ 1,888,000.00	\$ 1,944,000.00
Current AVIS Exp	\$ 882,000.00	\$ 960,000.00	\$ 1,435,000.00	\$ 1,899,000.00	\$ 1,965,000.00	\$ 2,034,000.00
Income/(Loss)	\$ 329,000.00	\$ 204,000.00	\$ (285,000.00)	\$ (295,000.00)	\$ (77,000.00)	\$ (90,000.00)
Additional Corridor Revenue				\$ 2,166,000.00	\$ 3,293,000.00	\$ 3,408,000.00
Appropriation for Immediate Need				\$ 179,122.00	\$ 324,777.00	\$ 336,144.20
Additional FTE Need to Support Speed Corridor				\$ 414,486.00	\$ 972,978.00	\$ 1,007,032.23
Additional Corridor Expenses				\$ 235,000.00	\$ 564,000.00	\$ 571,000.00
				\$ 649,486.00	\$ 1,536,978.00	\$ 1,578,032.23
Total Additional Expenses				\$ 828,608.00	\$ 1,861,755.00	\$ 1,914,176.43
Fund Balance	\$ 1,163,000.00	\$ 1,367,000.00	\$ 1,082,000.00	\$ 2,124,392.00	\$ 3,478,637.00	\$ 4,882,460.58

Recommendation:

This working group recommends the following regarding the traffic safety initiative.

- Adopt all current red-light camera intersection locations as corridors (Appendix A), and either Tier 1 (Appendix B) or Tier 2 (Appendix C) corridors based on data which identifies areas of concern regarding dangerous moving violations, serious crashes and complaints.
- Extend the contract with Verra Mobility to include speed detection AVIS at all six intersections where red-light cameras are currently deployed.
- Add two transportable AVIS for speed enforcement to address the areas adopted as speed corridors as well as school zones, adjacent to parks and construction zones.
- Use funds to fund additional personnel for traffic safety support in municipal court and the city attorney’s office.
- Use funds to support additional traffic safety initiatives, projects, equipment and services throughout all city departments to support Vision Zero. (Ordinance No. 043, 202th3)

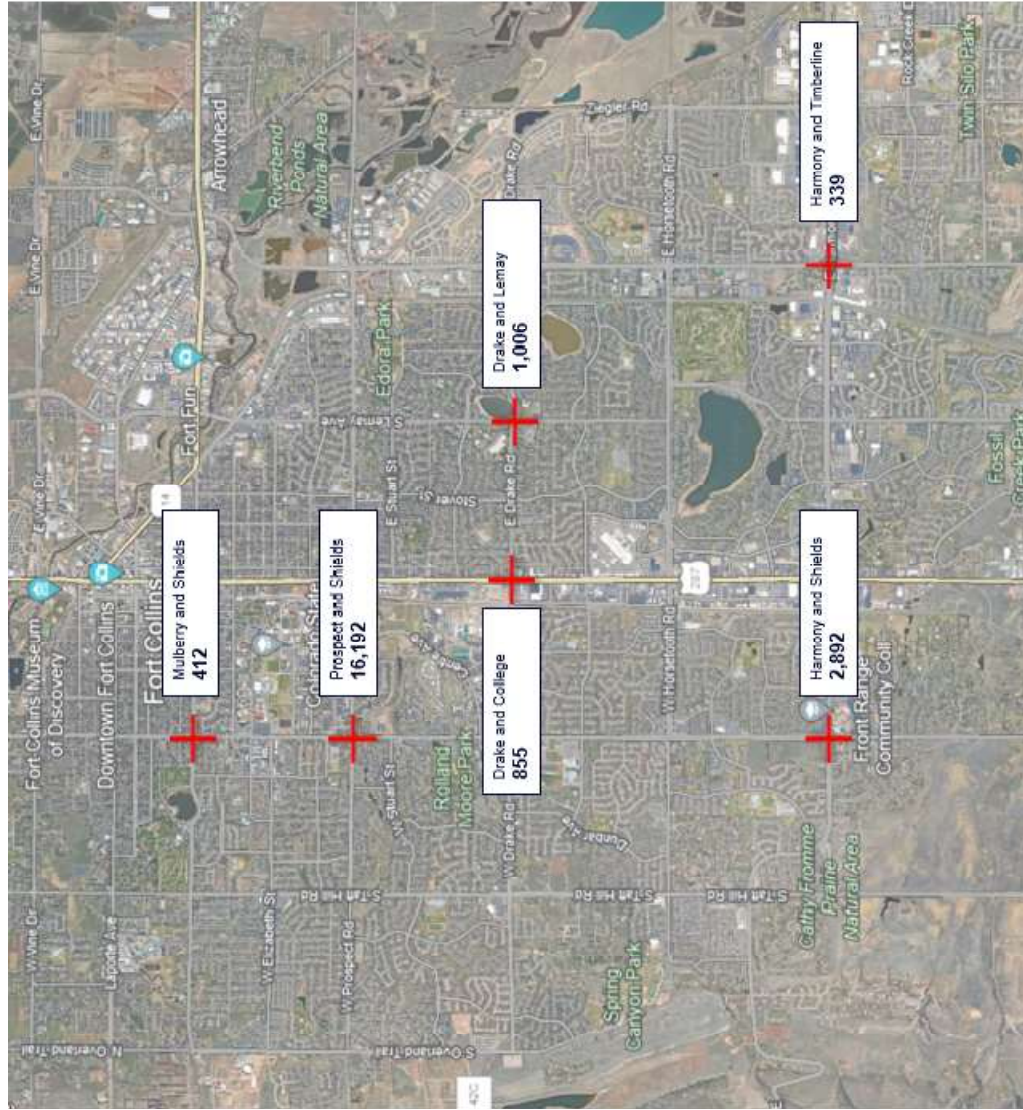


- Provide bi-annual updates to council in-line with the budgeting process on the performance of the adopted speed corridors and adjust based on data and direction from council. Data will be provided in accordance with the requirements from state statute.
- Create a citywide multidisciplinary steering committee to process funding requests for traffic safety projects, equipment or personnel.

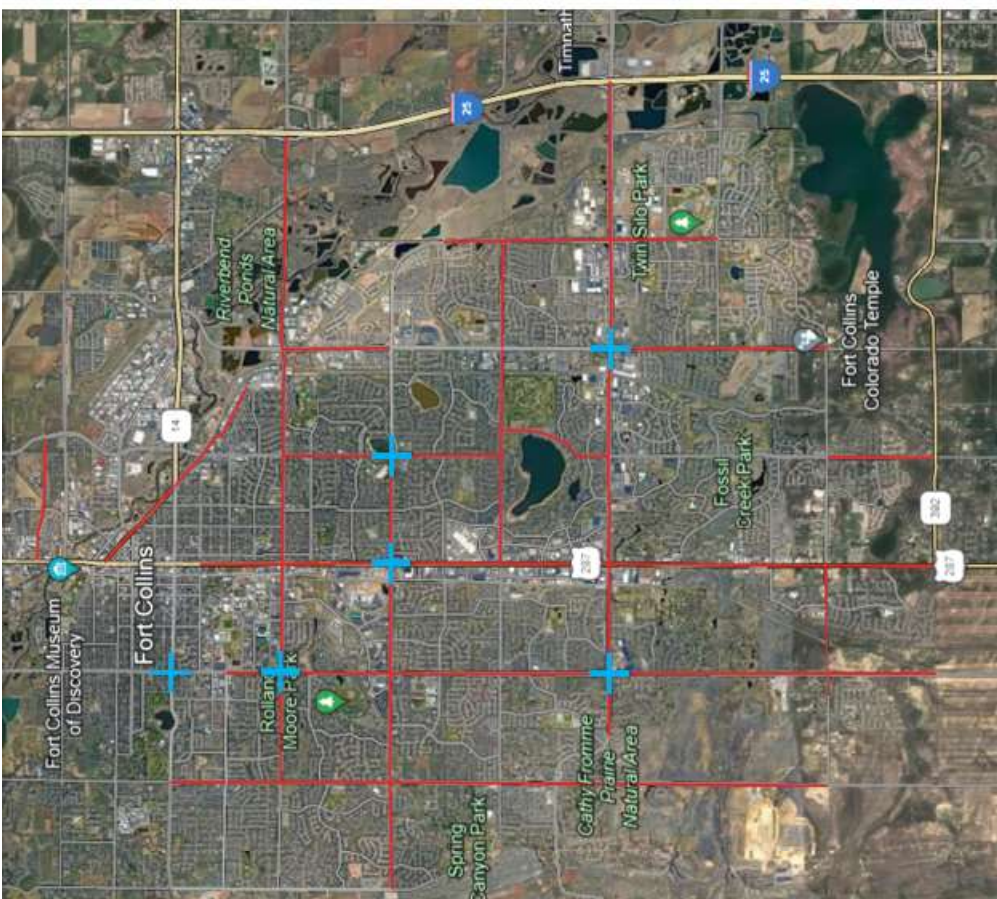
Data reflects monthly average of red-light camera speed detections from 2019 to 2023

Drake/Lemay and Harmony/Shields are newer and only reflect monthly average from 2024.

Speeding 11+ MPH



Appendix B



Road	From	To
Suniga Road	College Ave	Lemay Ave
Riverside Drive	College Ave	Pitkin St
Prospect Road	Taft Hill Road	125
Drake Road	Overland Tr	Lemay Ave
Horsetooth Road	College Ave	Ziegler Rd
Harmony Road	Chokecherry Tr	125
Trilby Road	Wainwright Dr	College Ave/287
Taft Hill Road	Mulberry St	Trilby St
Shields	Elizabeth St	Carpenter Rd
College Ave/HWY 287	Laurel St	Carpenter Rd
Lemay Avenue	Prospect Rd	Trilby Rd
Timberline Road	Prospect Rd	Drake Rd
Timberline Road	Harmony Rd	Trilby Rd
Ziegler Road	William Neal Pkwy	Kechter Rd

Intersection	Directions
Mulberry and Shields	North and South
Prospect and Shields	North and South
Harmony and Shields	North and South
Drake and College	North and South
Drake and Lemay	North and East
Harmony and Timberline	East and West

Appendix C

Road	From	To
Suniga Road	College Ave	Lemay Ave
Riverside Drive	College Ave	Pitkin St
Prospect Road	Taft Hill Road	I25
Drake Road	Overland Tr	Lemay Ave
Horsetooth Road	College Ave	Ziegler Rd
Harmony Road	Chokecherry Tr	I25
Tribly Road	Wainwright Dr	College Ave/287
Taft Hill Road	Mulberry St	Tribly St
Shields	Elizabeth St	Carpenter Rd
College Ave/HWY 287	Laurel St	Carpenter Rd
Lemay Avenue	Prospect Rd	Tribly Rd
Timberline Road	Prospect Rd	Drake Rd
Timberline Road	Harmony Rd	Tribly Rd
Ziegler Road	William Neal Pkwy	Kechter Rd
Conifer Street	College Ave	Lemay Ave
Mulberry Street	Taft Hill Rd	12th St
Stuart Street	College Avenue	Lemay Avenue
Elizabeth Street	Overland Tr	Shields Rd
Drake Road	Lemay Ave	Miles House Ave
Overland Trail	Mulberry St	Drake Rd
Timberline Road	Drake Rd	Harmony Rd

Intersection	Directions
Mulberry and Shields	North and South
Prospect and Shields	North and South
Harmony and Shields	North and South
Drake and College	North and South
Drake and Lemay	North and East
Harmony and Timberline	East and West

