

SUBJECT

Items Relating to the Design and Implementation of a Traffic Responsive Traffic Signal System at Signals Adjacent to the Railroad Tracks in the Vicinity of Lemay, Riverside and Mulberry.

- A. Resolution 2013-032 Authorizing the Mayor to Execute an Intergovernmental Agreement with the Colorado Department of Transportation to Use Federal Congestion Mitigation Air Quality (CMAQ) Funds for the Design and Implementation of a Traffic-Responsive Traffic Signal System at Signals Adjacent to the Railroad Tracks in the Vicinity of College Avenue, Lemay Avenue, Riverside Avenue and Mulberry Street.
- B. First Reading of Ordinance No. 059, 2013, Appropriating Unanticipated Grant Revenue in the Transportation Services Fund for the Design, Equipment Procurement and Implementation of a Traffic-Responsive Traffic Signal System.

EXECUTIVE SUMMARY

The City's Traffic Operations Department was awarded a \$248,370 Federal Congestion Mitigation Air Quality (CMAQ) grant to design, procure equipment and implement a traffic responsive traffic signal system at select intersections that are impacted by railroad and truck operations. The project will be implemented at intersections along North College Avenue (U.S. 287), Riverside Avenue (SH 14), Mulberry Street (SH 14) and Lemay Avenue where trains and heavy trucks impact traffic on those major streets. The project is intended to reduce traffic delays by more quickly dispersing congestion at the intersections impacted by the passing trains.

BACKGROUND / DISCUSSION

The City of Fort Collins uses traffic signal timing plans that change automatically by time of day to account for the normal, predictable variations in traffic that occur throughout a typical day. When unpredictable traffic patterns/volumes occur, the signal timing plans that run by time of day may not provide optimal service to motorists.

Two primary causes of unpredictable traffic in Fort Collins are railroad activity and truck activity. Train tracks cross major streets in Fort Collins, including College Avenue (US 287), Riverside Avenue (SH 14), Mulberry Street (SH 14) and Lemay Avenue. Duration of blockages vary – occasionally exceeding twenty minutes. The time of day when blockages occur are random, but they regularly occur during the morning, midday or evening peak hours. These blockages create congestion that the normal signal plans do not optimally accommodate.

Truck traffic passing through Fort Collins on the US 287/State Highway 14 route is fairly steady throughout the course of a normal weekday. However, weather-related closures on I-80 and/or I-25 in Wyoming or in Colorado north of Fort Collins can result in a very heavy influx of truck traffic that is not accommodated by the existing time of day signal plans.

This project provides for design and implementation of traffic responsive signal timing adjacent to critical railroad crossings and along the US 287/SH 14 truck route. Traffic responsive timing is able to react to unusual changes in traffic and automatically implement timings that would best serve the actual conditions in the field, regardless of time of day. There is potential for reductions in delay, congestion and air pollution through the use of this signal timing strategy in locations that have highly varied traffic such as those proposed.

FINANCIAL / ECONOMIC IMPACTS

The City was awarded a \$248,370 Federal Congestion Mitigation Air Quality (CMAQ) grant to design, procure equipment and implement a Traffic Responsive Traffic Signal System project. The project is estimated to cost \$300,000 with the funding coming from a Federal CMAQ grant and City Local Overmatch funds. The Overmatch funds are available in the current Traffic Operations budget.

The project fund breakdown is as follows:

Federal Funds:	\$248,370
City funds:	<u>\$ 51,630</u>
	\$300,000

ENVIRONMENTAL IMPACTS

The purpose of the project is to automate signal operational capabilities during train and heavy truck traffic periods, reducing motorist delay and congestion. Reduced delay and quicker congestion dispersion results in reduced emissions and reduced fuel consumption.

STAFF RECOMMENDATION

Staff recommends adoption of the Resolution and the Ordinance on First Reading.

RESOLUTION 2013-032
OF THE COUNCIL OF THE CITY OF FORT COLLINS
AUTHORIZING THE MAYOR TO EXECUTE AN INTERGOVERNMENTAL
AGREEMENT WITH THE COLORADO DEPARTMENT OF TRANSPORTATION
TO USE FEDERAL CONGESTION MITIGATION AIR QUALITY (CMAQ) FUNDS
FOR THE DESIGN AND IMPLEMENTATION OF A TRAFFIC-RESPONSIVE
TRAFFIC SIGNAL SYSTEM AT SIGNALS ADJACENT TO THE RAILROAD
TRACKS IN THE VICINITY OF COLLEGE AVENUE, LEMAY AVENUE,
RIVERSIDE AVENUE, AND MULBERRY STREET

WHEREAS, in regulating the flow of traffic on City streets, the City uses traffic signal timing plans which change automatically by the time of day to account for the normal, predictable variations in traffic that occur throughout a typical day; and

WHEREAS, the traffic signal timing plans of the City can be disrupted by unpredictable traffic patterns which are caused primarily by railroad activity and truck activity; and

WHEREAS, the impact of truck activity is most notably found along North College Avenue (US Highway 287) and Riverside Avenue (State Highway 14), while the disruption caused by train activity occurs not only in those locations but also along Lemay Avenue and Mulberry Street (State Highway 14); and

WHEREAS, City staff has recommended to the City Council that a project be undertaken for the design and implementation of traffic responsive signal timing adjacent to critical railroad crossings and along the US Highway 287/State Highway 14 truck route, and at railroad intersections at those locations, as well as Lemay Avenue and Mulberry Street; and

WHEREAS, City staff believes that the project would be beneficial to the City because such a system has the potential for reductions in traffic delay, congestion, and air pollution in locations that have highly variable traffic patterns; and

WHEREAS, the City has been awarded a Federal Congestion Mitigation Air Quality (CMAQ) grant in the amount of \$248,370 to design, procure equipment, and implement a traffic responsive traffic signal system; and

WHEREAS, the City has sufficient local matching funds in the amount of \$51,630 to complete the project, which is estimated to cost \$300,000; and

WHEREAS, the City Council has determined that the design, purchase and implementation of a traffic responsive traffic signal system at the foregoing locations is in the best interests of the City.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF FORT COLLINS that the Mayor is hereby authorized to execute an intergovernmental agreement between the City and the Colorado Department of Transportation to use Federal Congestion Mitigation Air

Quality (CMAQ) funds in the amount of \$248,370, in combination with local matching funds in the amount of \$51,630, to design and implement a traffic responsive traffic signal system at signals adjacent to the railroad tracks and along the truck route in the vicinity of College Avenue, Lemay Avenue, Riverside Avenue, and Mulberry Street.

Passed and adopted at a regular meeting of the Council of the City of Fort Collins this 16th day of April A.D. 2013.

Mayor

ATTEST:

City Clerk

ORDINANCE NO. 059, 2013
OF THE COUNCIL OF THE CITY OF FORT COLLINS
APPROPRIATING UNANTICIPATED GRANT REVENUE IN THE TRANSPORTATION
SERVICES FUND FOR THE DESIGN, EQUIPMENT PROCUREMENT AND
IMPLEMENTATION OF A TRAFFIC-RESPONSIVE TRAFFIC SIGNAL SYSTEM

WHEREAS, the City Council has adopted Resolution 2013-032 authorizing the City to enter into a contract with the Colorado Department of Transportation to obtain and use CMAQ funds to design and implement a traffic responsive signal system at signals adjacent to the railroad tracks in the vicinity of Lemay, Riverside, and Mulberry; and

WHEREAS, a traffic responsive traffic signal system is able to react to unusual changes in traffic and automatically implement timings that best serve the actual conditions in the field at that time; and

WHEREAS, the City's Traffic Operations Department has been awarded a \$248,370 Federal Congestion Mitigation Air Quality (CMAQ) grant to design, procure equipment, and implement a traffic responsive traffic signal system at select intersections that are impacted by railroad and truck operations in the City (the "Project"); and

WHEREAS, the Project will be implemented at intersections along North College Avenue, Riverside Avenue, Mulberry Street, and Lemay Avenue where trains and heavy trucks impact traffic on those major streets; and

WHEREAS, the CMAQ grant also requires that the City provide matching funds for the Project in the amount of \$51,630, which funds are available in the current Traffic Operations budget; and

WHEREAS, the Project is estimated to cost \$300,000 with the funding coming from the Federal CMAQ grant and City local overmatch funds; and

WHEREAS, Article V, Section 9, of the City Charter permits the City Council to make supplemental appropriations by ordinance at any time during the fiscal year, provided that the total amount of such supplemental appropriations, in combination with all previous appropriations for that fiscal year, does not exceed the current estimate of actual and anticipated revenues to be received during the fiscal year; and

WHEREAS, City staff has determined that the appropriation of the Grant revenue as described herein will not cause the total amount appropriated in the Transportation Services Fund to exceed the current estimate of actual and anticipated revenues during fiscal year 2013.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS that there is hereby appropriated for expenditure from unanticipated revenue in the Transportation Services Fund the sum of TWO HUNDRED FORTY-EIGHT THOUSAND THREE

HUNDRED SEVENTY DOLLARS (\$248,370) for the design, equipment procurement, and implementation of a Traffic Responsive Traffic Signal System.

Introduced, considered favorably on first reading, and ordered published this 16th day of April, A.D. 2013, and to be presented for final passage on the 7th day of May, A.D. 2013.

Mayor

ATTEST:

City Clerk

Passed and adopted on final reading on the 7th day of May, A.D. 2013.

Mayor

ATTEST:

City Clerk