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A RESOLUTION AUTHORIZING EXECUTION OF INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE CITY OF COMMERCE CITY AND THE COLORADO DEPARTMENT OF TRANSPORTATION REGARDING FUNDING TO UPGRADE THE DETECTION SYSTEMS AND PROVIDE DILEMMA ZONE AND RED PROTECTION AT 12 SIGNALIZED INTERSECTIONS

Summary & Background

The City applied for, and was awarded, a Highway Safety Improvement Project (HSIP) grant through CDOT to upgrade the detection systems and provide dilemma zone protection and red indication protection at 12 traffic signals in the City. These measures are implemented through installation of traffic signal detection system technologies that incorporate radar-based detection.

Dilemma Zone Protection - Allows the signal controller to extend the green interval until an approaching vehicle proceeds to the intersection before the signal phase transition. The dilemma zone is the area in which it may be difficult for a driver to decide whether to stop or proceed through an intersection at the onset of the yellow signal indication.

Red Protect - Allows the delayed start of an opposing green signal when the detection indicates that a vehicle is traveling at a speed on the approach that is not likely to stop and will not clear the intersection before the end of the red clearance. The red protection is implemented through speed-sensitive radar detection to monitor every vehicle approaching an intersection in the detection zone.

The signalized intersections included in the project are:

- Highway 2 / Rosemary Street / Quebec Parkway
- Highway 2 / E. 112th Avenue
- E. 104th Avenue / Revere Street
- E. 104th Avenue / Potomac Street
- E. 104th Avenue / King Soopers (west of Chambers Road)
- E. 104th Avenue / Chambers Road
- E. 104th Avenue / Landmark Drive
- E. 104th Avenue / Reunion Parkway
- Quebec Parkway / E. 72nd Avenue

- Quebec Parkway / E. 64th Avenue / Prairie Parkway
- Quebec Parkway / E. 60th Avenue
- Quebec Parkway / E. 58th Avenue

This technology improves safety by preventing broadside and rear end crashes at several highly traveled intersections (listed above) and reduces the amount of red light running during peak hours.

This project is planned to be delivered by the City and includes design, environmental, and construction. Design is anticipated to start in early 2024 with construction beginning in early 2025. Project substantial completion is anticipated by Q4 2025.

Staff Responsible (Department Head): Shawn Poe, PE, CFM, Interim Director of Public Works and City Engineer

Staff Presenting: Shawn Poe, PE, CFM, Interim Director of Public Works and City Engineer

Financial Impact: The estimated total commitment from the City for this IGA is \$50,400, which is 10% of the HSIP Award of \$504,000.

Funding Sources: \$ 453,600 - Highway Safety Improvement Program (HSIP) grant
\$ 50,400 - CIP budget
\$ 504,000 - Total

Staff Recommendation: Approve A Resolution Authorizing the Execution of Intergovernmental Agreement by and Between the City of Commerce City and the Colorado Department of Transportation Regarding Funding to Upgrade the Detection Systems and Provide Dilemma Zone and Red Protection at 12 Signalized Intersections.

Suggested Motion: Motion to approve A Resolution Authorizing Execution of Intergovernmental Agreement by and Between the City of Commerce City and the Colorado Department of Transportation Regarding Funding to Upgrade the Detection Systems and Provide Dilemma Zone and Red Protection at 12 Signalized Intersections.