Zumbehl Road & Ipswich Lane Intersection Improvements

Sponsor: St Charles  Project No. 20-000026

Project Type: Traffic Flow

TOTAL FUNDING

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Project Description

The City of Saint Charles and the St. Charles City School District are working together to improve traffic flow operations at the intersection of Zumbehl Road and Ipswich Lane/Jefferson Intermediate School Entrance. Currently, the all-way stop sign controlled intersection at Ipswich Lane and Zumbehl Road is failing during peak hours. Using the 2017 intersection volume, the intersection delay is 214.7 sec/veh with a LOS F. This project will provide a new traffic signal, new dedicated left and right turn bays to improve intersection operations and reduce traffic congestion. Constructing the intersection improvements mentioned will reduce the intersection delay by 196.7 sec/veh and operate at a LOS B. The dedicated left and right turn bays allow multiple vehicles through the intersection instead of one vehicle at a time with a stop sign.

Additionally, the school district is changing the way traffic exits at the school's property. The school district is adding a westbound approach during the next school year, starting in August 2020. With the addition of another approach, intersection improvements are needed to bring this intersection out of a failing level of service and decrease intersection delay. These intersection improvements were also recommended with the Zumbehl Corridor Study completed in 2019.

During the AM and PM rush hours, multiple school children cross Zumbehl Rd on the north side of the intersection at Ipswich Lane. From the recent Zumbehl Corridor Study, it was found that intersection of Zumbehl and Ipswich has a failing level of service (LOS F) during AM and PM peak hours. The proposed intersection improvements include signalizing the intersection, adding a northbound right turn bay on Zumbehl Road, a southbound left turn bay on Zumbehl Road, an eastbound left turn bay on Ipswich Lane, and pedestrian crossing on east approach leg. Most of the improvements will be constructed within existing right of way. Limited amount of easements will be needed for the traffic signal posts.

Several warrants were evaluated for justification of the intersection improvements. Warrant 3, Peak Hour and Warrant 5, School Crossing were evaluated and meet the criteria for improvements. Enclosed are the warrant calculations showing the need for a new traffic signal and dedicated left and right turn bays. The City has applied for Federal CMAQ funding for 50% of the project costs. The City is requesting County funds for 25% of the project costs. The City and School District will contribute to the remaining project costs. In conclusion, intersection improvements are warranted and this project will improve the intersection level of service and reduce traffic congestion.
Road Board Application

PROJECT INFORMATION

Permit #: RB20-000026
Project Type: Traffic Flow

Name: Zumbehl Road & Ipswich Lane Intersection Improvements
Limits: Intersection of Zumbehl Road and Ipswich Lane / Entrance to Jefferson Intermediate School
Lane Miles: .1

Federal Functional Classification: 2 - Minor Arterial

Anticipated useful life of the proposed improvements (years): 20

Estimated date of completion: 10/31/2023

Traffic Flow Information

Traffic Volume ADT:
Existing 11000
Future 12500

Travel Time or Delay:
Existing 214.7
Projected 18

PROJECT DESCRIPTION

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CONTACT INFORMATION

Sponsoring Agency: City of Saint Charles
Contact Person Name: City of Saint Charles Engineering Department
Title: Telephone Number: (636) 949-3237
E-mail Address: engineering.department@stcharlescitymo.gov

SIGNATURE
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DISCLAIMER: This map is based on information maintained by the City of St. Charles, Missouri. The City does not warrant or guarantee the accuracy or completeness of the information shown. It is the responsibility of the user of this information to verify independently its accuracy and completeness. By using this information, the user waives any and all claims against the City of St. Charles, Missouri, arising from such use.
## Estimate of Project Costs

### Specific Roadway Items

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<th>Quantity</th>
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### Construction Cost Subtotal: $358,750.00

### Contingency: $24,725.00

### Inflation: $21,525.00

### Preliminary Engineering: $50,000.00

### Right-of-Way: $30,000.00

### Construction Testing: $15,000.00

### Project Total: $500,000.00
Typical Sections of Zumbehl Rd and Ipswich Ln

Section B-B
- looking south on Zumbehl Rd

Before
- NB Thru
- CL
- SB Thru

After
- NB Thru
- CL
- SB Left
- SB Thru/Right

Section A-A
- looking north on Zumbehl Rd

Before
- SB Thru
- CL
- NB Thru

After
- SB Thru
- CL
- NB Left/Thru
- NB Right

Section C-C
- looking east on Ipswich Ln

Before
- WB Thru
- CL
- EB Left
- EB Thru/Right

After
- WB Thru
- CL
- EB Thru
- EB Thru/Right