

# FY 2020 Signal Optimization Shared Service Executive Summary

The signal timing and optimization shared service program was established to help Districts with signal optimization projects that are funded through the Central Office and managed by the Metro District Signal Operations Unit. In FY 2020 the Central Office Consultant Services Unit was granted \$200,000 in consultant P/T contracts for the signal optimization program. In addition, TSMO provided an additional \$150,000 to the signal optimization shared services program because it was determined that signal optimization was Strategy #1 of the TSMO implementation plan. Of this budgeted amount, the Metro Signal Operations Unit led six signal optimization projects with a total cost of \$305,028.08.

FY 2020 was also notable because of the COVID-19 pandemic. As a direct result of the pandemic, five of the six signal optimization projects had to be deferred to FY 2021. Below in table 1 is a summary of the projects managed by the Metro District including the consultant who is performing the signal optimization project, the project name, the total number of signals being re-timed, and approximately how much of the project was completed in FY 2020 and how much remains in FY 2021. Also included in the table is the corresponding operational cost to the district for Metro’s time to manage the Professional/Technical contracts for the projects.

Table 1

District	Consultant	Project Name	Signals Re-timed	Cost	Project Status		Metro Operational Cost
					Completed in FY 2020	Remaining for FY 2021	
1	SRF Consulting Group, Inc.	2021 Hinckley, Two Harbors, Hibbing TH 48, 61, 169 Signal Optimization	17	\$61,585.45	0%	100%*	\$0.00
2	Kadrmass Lee & Jackson, Inc.	2020 Park Rapids and Thief River Falls TH 32 and 34 Signal Optimization	8	\$45,391.32	56.8%	43.2%	\$725.31
4	Alliant Engineering, Inc.	2020 Alexandria TH 29 Signal Optimization	15	\$56,500.64	59.9%	40.1%	\$615.00
6	Short Elliot Hendrickson, Inc.	Northfield, Faribault, Lake City Signal Optimization	15	\$44,453.32	76.7%	23.3%	\$861.46
8	SRF Consulting Group, Inc.	2020 Marshall and Hutchinson TH 19, 59, 7 and 15 Signal Optimization	18	\$52,099.80	71.3%	28.7%	\$1,261.37
<b>Totals</b>			73	\$260,030.53			\$3,463.14

\* This project was moved to FY 2021.

Table 2 shows one project was completed in FY 2020. This table shows the consultant who performed the signal optimization project, the project name, the total number of signals that were re-timed, the Measure of Effectiveness (MOE), the Benefit to Cost ratio (B/C) for the project and the corresponding operational cost to the district for Metro’s time to manage the Professional/Technical contract for the project.

Table 2

District	Consultant	Project Name	Signals Re-timed	Cost	(MOE) Measure of Effectiveness				Benefit	Benefit to Cost Ratio**	Metro Operational Cost
					Delay Reduction (Hrs)	Stops Reduction (Vehicles)	Fuel Reduction (Gal)	Emission Reduction (Kg) *			
7	Alliant Engineering	2020 Mankato TH 169 and TH 22 Signal Optimization	11	\$44,997.55	15,298	839,156	23,406	2,332	\$2,044,375	45	\$651.46
<b>Totals</b>			11	\$44,997.55	15,298	839,156	23,406	2,332	\$2,044,375		\$651.46

\* Includes CO Emissions, NOx Emissions, and VOC Emissions

\*\* Benefit to Cost Ratio did not include Metro's time for managing the project.

If you have questions about this executive summary or the signal optimization shared service please contact Mike Fairbanks at [mike.fairbanks@state.mn.us](mailto:mike.fairbanks@state.mn.us) or (651) 234-7819