600 Broadway, Suite 200
Kansas City, Missouri 64105-1659

816/474-4240
816/421-7758 FAX
www.marc.org

MARC

Mid-America Regional Council

OPERATION GREENLIGHT
TURNING STOP LIGHTS INTO GO LIGHTS

OGL STEERING COMMITTEE AGENDA
Monday, July 24, 1:30 PM
On-Line TEAMS and in-person, at MoDOT, 600 NE Colbern, Rm 236

Welcome & Introductions

1. **VOTE: Approval of April 24 Committee Minutes*** (page 2)

2. **VOTE: MO CMAQ project bid***

3. **Agency Updates**

4. **Hot Topic: Crowdsourcing for Arterial Operations, Jamie Mackey, PE, PTOE, FHWA**

5. **OGL Technology Plan Update**

6. **Grants and Awards Update**

7. **MO and KS CMAQ Construction Projects Update**

8. **Quarterly Operations Report** (page 4)

9. **Quarterly Budget Report** (page 19)

Next Regularly Scheduled Meetings: Mondays at 1:30, October 23; January 22, April 22.

Adjournment

*Action Items

OGL STEERING COMMITTEE MEETING MINUTES
Monday, April 24, 2023, 1:30 p.m.
Hybrid In-Person/Virtual Meeting: MODOT – Room 236 and online via Microsoft Teams

Members Present	MARC Staff Present	Non-Members Present
Noel Forrester, Olathe, Chair	Barry Viss	Alex Preston, TransCore
Michael Spickelmier, Lansing	Scott Cutshall	Cliff Adams, WSP
Adam Hilgedick, Blue Springs	Cedrick Owens	Christos Achillides, Iteris
Thomas Northup, KDOT	Ray Webb	Janelle Clayton, Merge Midwest
Shawn Gotfredson, Overland Park	Chris Jenkins	John Albeck, Iteris
Sol Moinuddin, KCMO	Karen Clawson	
Steve Schooley, Lenexa	Ron Achelpohl	
Brian Scovill, Leawood		
Brian Shields, Overland Park		
John Findlay, Liberty		
Kristofer Finger, KCK		
John Sullivan, Westwood		
Melissa Schmitz, MODOT		
Ryan Barrett, KDOT		
Kieth Bredehoeft, Prairie Village		
Sherri Mcintyre, Liberty		
Ericka Ross, MODOT, Vice-Chair		

Welcome
The meeting started at 1:30 p.m. Noel Forrester, Chair, welcomed all.

1. **January 23, 2023, committee minutes** – Steve Schooley made a motion to accept the minutes. The motion was supported and approved unanimously.

2. **Vice-chair election** – Ericka Ross has agreed to take the vacant Steering Committee position for MODOT which includes the vice-chair position.

3. **Agency updates** – The NFL draft activities are anticipated to cause traffic congestion around downtown KCMO.

4. **Carbon Reduction Program** – Karen Clawson with MARC shared information about a new federal funding opportunity. There are $4.6 million per year available for 5 years for projects in the Kansas City area. For more information: https://www.marc.org/transportation/funding/carbon-reduction-program.

5. **Hot topic: K-7 & Parallel R-Cut intersection** – Ryan Barrett with KDOT presented an update on the plans and construction progress for the intersection of K-7 & Parallel Pkwy. The long-term plans for this section of K-7 are to be a freeway with grade-separated crossings. As an interim solution for this intersection to improve safety and travel times, they selected an R-Cut intersection, where left turns are allowed off the main-line, but side street traffic must turn right and do a U-turn at a downstream median crossing.

6. **ATMS software project** – Background: OGL applied for and was awarded CMAQ funds for the purchase of an ATMS system. Upon reviewing several available systems and discussing with a selection sub-committee, the Steering Committee decided in 2022 that staying with TransSuite was the best option at this

time and we will be using the funds to pay for several enhancements to the existing software. Alex Preston with TransCore updated the committee. TransSuite has moved to a web-based user interface for future development, but the Windows client version is still supported. Some efforts currently underway are some user interface changes and customization, additional failure thresholds for traffic responsive, enhancements to streamline time space diagram generation, and split logger display changes. Many others are on their roadmap for the future.

7. **Grants and awards** – Ray informed the committee that OGL has been awarded the SMART grant funding, STIC project funding in both Kansas and Missouri, as well as 2025/2026 CMAQ funding that we applied for. All of these were applied for with the intent of purchasing performance measure systems. Ray will be working to plan how to have all these projects work together in concert to advance the OGL program.

8. **MO and KS CMAQ construction project updates** – Cedrick Owens updated the committee on the two projects. The Kansas project is underway: boring is taking place on 135th St. The three Siemens controllers have been received for Lansing but the 51 Econolite controllers for the other agencies will be coming in June. The Missouri project bids were rejected as too high and will be re-bid with reduced scope, hopefully in May.

9. **INRIX US signals scorecard for 2022** – Barry Viss shared some data from INRIX' Signal Scorecard, specifically for the MARC region. It shows signals in our region are operating at a better level of service than the national average. They were able to produce for us a report of the worst performing signals in our region, many of which were known to be under construction for much of the year.

10. **Quarterly operations report** – Christos Achillides and John Albeck with Iteris reported on the retiming project that included Holmes, Rockhill, Troost, and 75th St in KCMO, completed in November. The project is seen as a success. Barry Viss highlighted a few numbers from the operations report that was included in the meeting packet.

11. **Quarterly budget report –** The quarterly budget report was included in the meeting packet. Ray noted that federal funds were finished in August, after which we spent local funds only, until the new federal funds were obligated in December. We did have to tap $52,821 of our $300,000 emergency fund to bridge the gap, which funds will be replaced with new local match money. The new increased local agency match rate of $800/signal/year should help. Invoices have been sent to most agencies and many have paid. Ending balance at the end of February is $334,810. MARC will also need to collect a local match for the ATMS software project.

Other business
- We would like to offer some training for TransSuite in the next few weeks.
- The 2nd edition of the Traffic Signal Maintenance Handbook from ITE has been distributed.
- Save the date of June 14, there will be an open house "Day of Celebration" commemorating 20 years of KC Scout, 30 years of MODOT motorist assist, and 15 years of OGL.

Next meeting date: July 24, 2023.

Adjournment – Meeting was adjourned at 2:58 p.m.

Mid-America Regional Council's Quarterly Report
For
Operation Green Light

2nd Quarter 2023 Report

July 24th, 2023

Prepared For:

OGL Steering Committee

Prepared By:

OGL Operations Team

Table of Contents

ii

List of Figures

iii

Introduction

Operation Green Light (OGL) is a bi-state, multi-jurisdictional regional effort to improve traffic flow and reduce vehicle emissions. Managed by the Mid-America Regional Council (MARC), Operation Green Light works with federal, state, and local agencies to operate a program that coordinates traffic signal timing and communication between intersections across jurisdictional boundaries.

This report details the work performed on the Operation Green Light communications network during the 2nd Quarter of 2023 and highlights signal timing and agency coordination. OGL currently monitors/operates 755 signals and manages over 1200 network devices. These devices include intersection controllers, wireless radios, switches, cameras, routers, serial-to-IP converters, and servers. For more information on the program, visit www.marc.org/OGL.

Operations Summary

A summary of the operational results and activities of the OGL program staff during the reporting period is presented below.

Repair tickets

- OGL staff actively responded to **7** repair tickets.

Corridor/Signal Timing Efforts

- 5/17-19 – Updated timing plans were installed on M291 in Liberty, MO
- 6/5-6 – Several updates were made corridor-wide to M-152 signal timing in Liberty, MO

Training Sessions/Panels/Events

- 4/4 – Barry Viss attended the TCC Intersection of Knowledge webinar
- 4/13 – OGL staff attended Crowdsourced Data to Advance Transportation Operations
- 4/13 – Ray Webb & Cedrick Owens attended MoDOT LPA training
- 5/1 - 5/3 – Barry Viss attended ITS Heartland in St. Charles, MO
- 5/11 – Chris Jenkins and Scott Cutshall attended the May KSITE chapter meeting
- 5/15 – Barry Viss led a TransSuite Web UI training

Additional Information

- OGL staff set up and scheduled the Miovision equipment to conduct **21** counts. Most of these were 13-hour turning movement counts.

Notes on Operations Summary

1. Repair ticket levels used by OGL staff are defined in Exhibit I Scope of Services as follows:
   - Minor – investigate and resolve communication problem within 5 business days, weather permitting
   - Major – investigate and resolve communication problem within 2 business days, weather permitting
   - Critical – investigate and resolve communication problem within 24 hours, weather permitting

System Hardware/Software Activities/Issues

The following list represents major software or hardware activities performed during the 2nd Quarter of 2023:
   - 4/13 – TransSuite was updated to 23.1.0

Interagency Coordination

During the 2nd Quarter, OGL staff participated in the following interagency activities:

- 4/6 – OGL met with MoDOT planning staff to discuss focus of future work
- 4/6, 4/19 – OGL staff met with Iteris regarding contract work
- 4/6 – OGL and agency staff met with TransCore on software enhancement work
- 4/12, 4/26 – OGL and Olsson held bi-weekly conference calls for contract work
- 4/12, 4/26 – Cedrick Owens attended KS CMAQ construction progress meeting
- 4/12 – Barry Viss met with TransCore on software enhancement work
- 4/18 – Barry Viss attended project meeting for gas main relocation on M9 in NKC
- 4/18 – Chris Jenkins attended the KC Scout Infrastructure meeting
- 4/20 – OGL and several agencies met informally to discuss various technical topics
- 4/20 – OGL staff participated in the OGL Regional TransSuite Monthly Status meeting
- 4/21 – Barry and Ray met with UrbanLogiq staff
- 4/24 – OGL team held the April OGL Steering Committee meeting
- 4/25 – Barry met with MODOT and MAS staff to reconfigure TRSP detectors on US-71
- 4/26 – OGL met with Blue Springs to discuss signal operations
- 4/27 – OGL met with MODOT and Iteris to discuss M-291 coordination updates
- 5/4 – OGL and partner agencies attended the Regional TransSuite Enhancements Demo/Guidance Meeting
- 5/4 – Ray met with Robinson Camp, Blue Springs public works director
- 5/8 – Ray met with Celia Duran to coordinate Mission's Carbon Reduction application
- 5/8 – Barry met with TransCore to discuss TRSP operation
- 5/10, 5/24 – OGL and Olsson held bi-weekly conference calls for contract work
- 5/10, 5/24 – Cedrick Owens attended KS CMAQ construction progress meeting
- 5/10 – Ray and Scott met with Overland Park regarding data collection
- 5/10 – Barry met with Olathe and HDR regarding signal operation at Old 56 & Lone Elm
- 5/11 – Chris Jenkins attended the KC Scout Infrastructure meeting
- 5/18 – OGL and several agencies met informally to discuss various technical topics
- 5/18 – OGL staff participated in the OGL Regional TransSuite Monthly Status meeting
- 5/19 – OGL and Olsson staff met to discuss updates to the OGL Technology Plan
- 5/22 – Barry Viss attended project meeting for utility project on M9 in NKC
- 5/25 – Cedrick Owens replaced controllers on K7 in Lansing
- 5/31 – OGL staff met with Iteris regarding contract work
- 6/7, 6/21 – OGL and Olsson held bi-weekly conference calls for contract work
- 6/7, 6/21 – Cedrick Owens attended KS CMAQ construction progress meeting
- 6/7 – Chris Jenkins met with KC Scout, TCC, and WTI staff to discuss product enhancements
- 6/7 – Ray met with MoDOT, KDOT and KC Scout for Collaboration event planning
- 6/8 – OGL, Leawood, and contractor met to discuss network configuration for KS CMAQ project
- 6/8 – OGL and Iteris staff met to discuss Travel time and CV applications
- 6/14 – OGL hosted Day of Celebration with MoDOT/KDOT and KC Scout staff
- 6/15 – OGL and several agencies met informally to discuss various technical topics
- 6/15 – OGL staff participated in the OGL Regional TransSuite Monthly Status meeting
- 6/16 – Barry, Olsson, Merriam, and KDOT staff met to discuss changes to 67th & I-35
- 6/20 – Chris Jenkins attended the KC Scout Infrastructure meeting
- 6/27 – OGL and Belton staff met to discuss OGL operations for upcoming work
- 6/29 – OGL and MoDOT staff met to discuss operations

Quarterly Repair Ticket Statistics by Month

In the 2nd Quarter of 2023, OGL staff created and responded to **7** repair tickets in the Kansas City area.
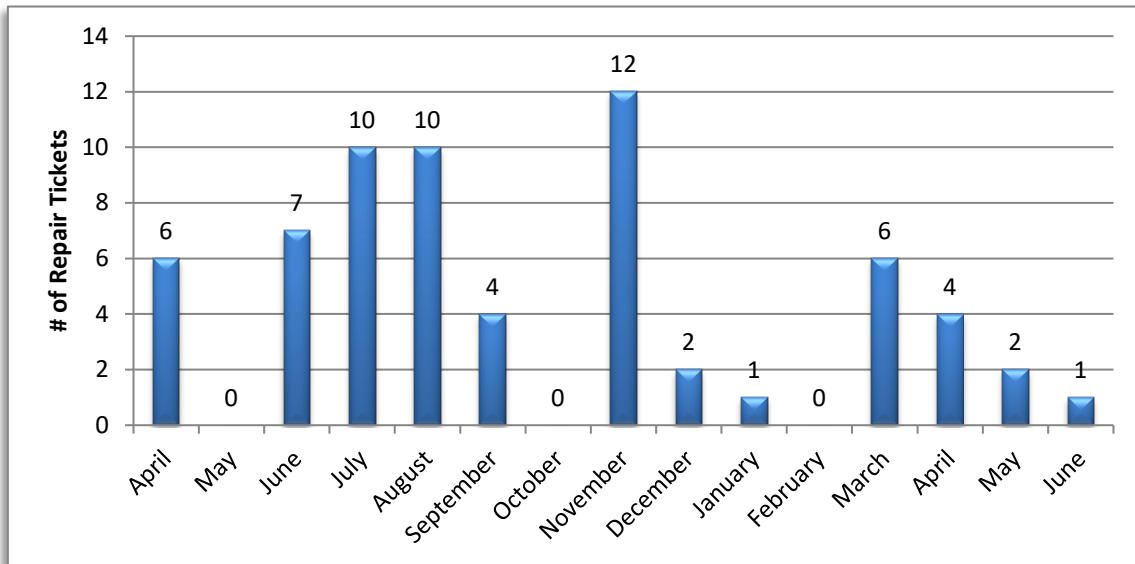
Figure 1 – Quarterly Repair Ticket Statistics by Month
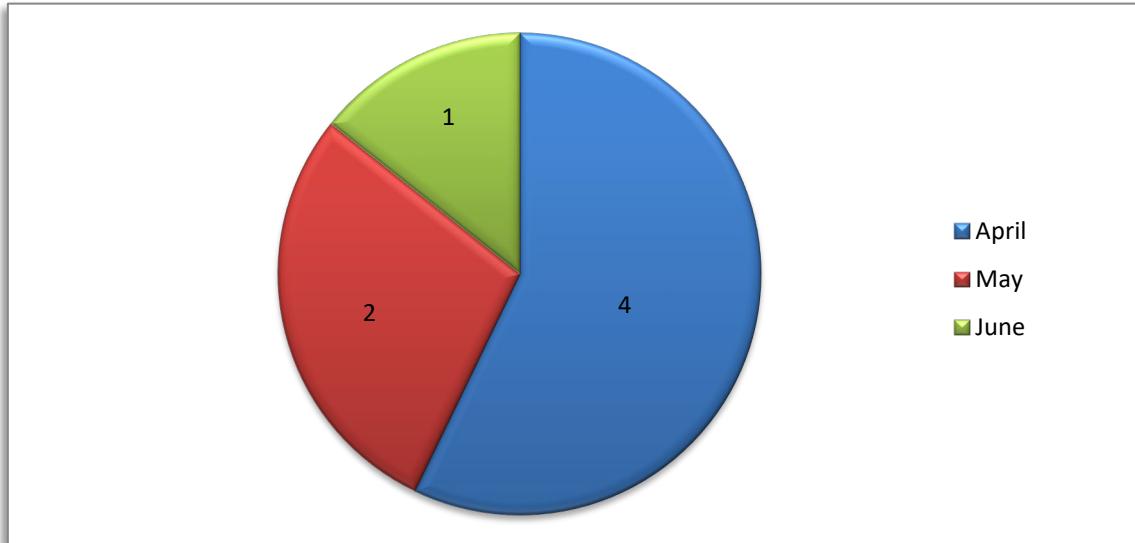
Additional Repair Ticket Details:

Figure 2 – Monthly Repair Ticket Statistics / Prior 15 months

Figure 2 shows the number of repair tickets that OGL staff responded to for the last 15 months. It is intended to show long-term trends in incidents that are occurring on the OGL network.

Additional Communications Statistics

OGL Network Pod Diagram

Figure 3 shows the overall design of the OGL Network and Pod Locations. It is noted that the different color of lines between the Pods represent the different type of network connections. A black line represents an FCC licensed link, an orange line represents a fiber optic connection, and a light blue line represents an unlicensed radio link. The OGL network now has 2 wireless rings as seen in the diagram.

Figure 3 – OGL Network Pod Diagram
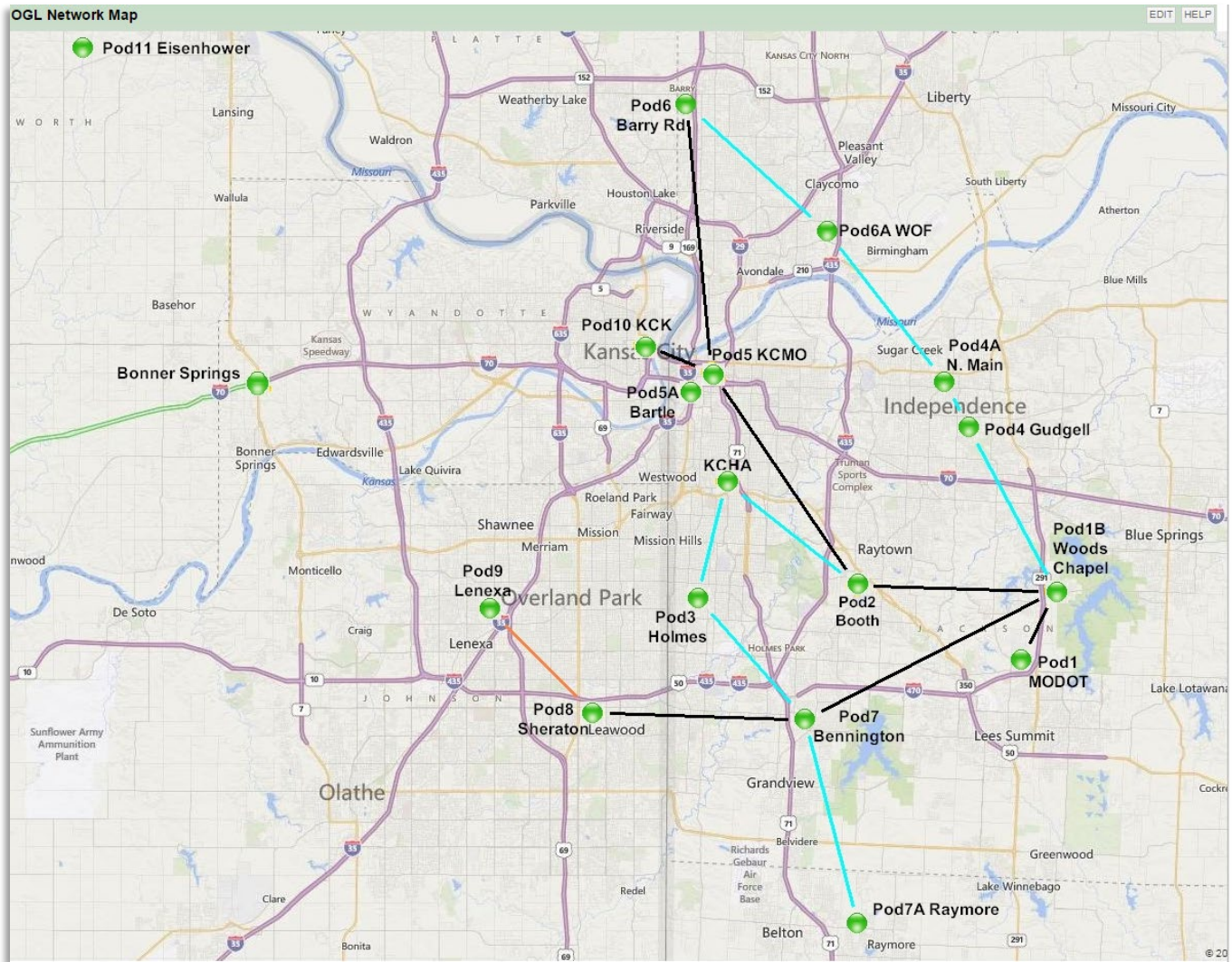
Repair Tickets by Network Pod

OGL staff is continually working on improving the reliability of the OGL network. Therefore, staff monitors and tracks which network pods continually have incidents. Figure 4 shows the number of repair tickets for each Pod and Figure 5 shows the number of repair tickets year–to–date for each Pod.

Figure 4 – Repair Tickets by Network Pod

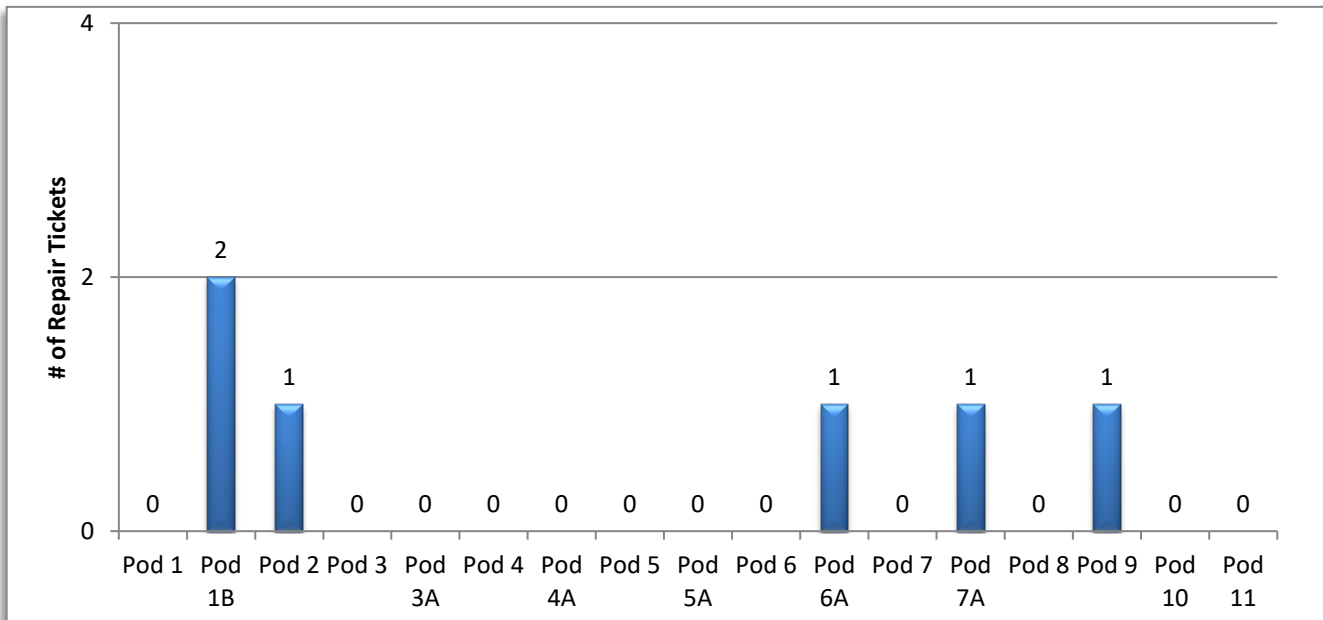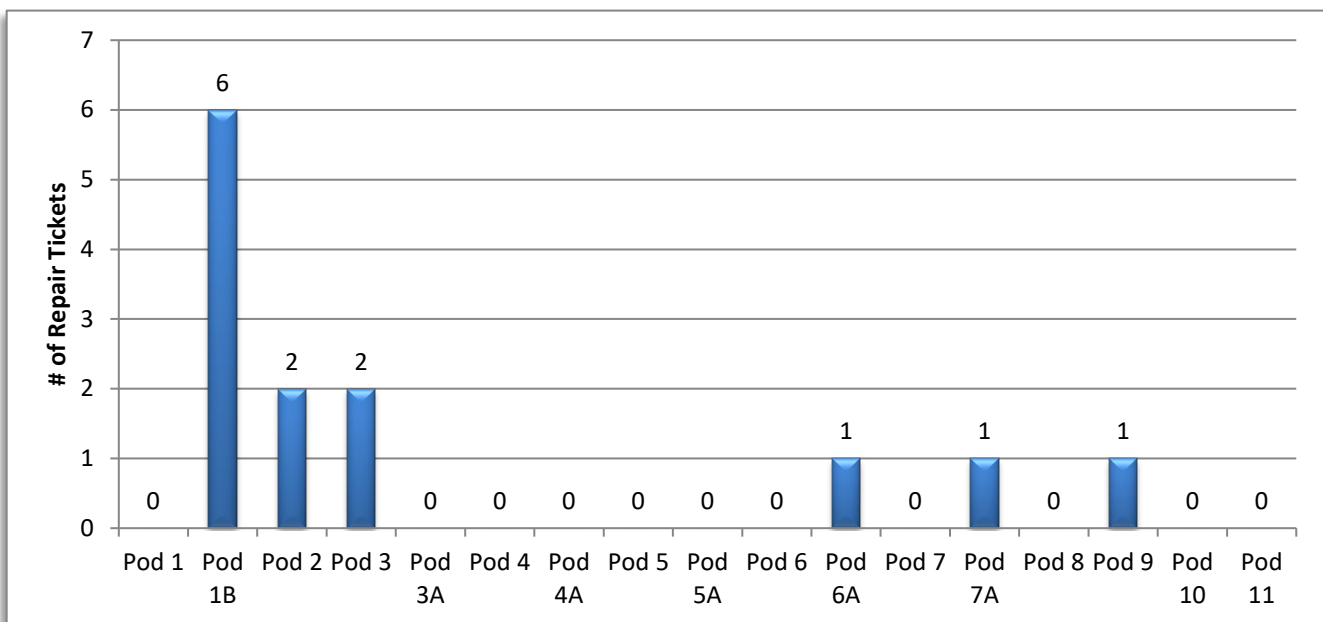### Figure 5 – Repair Tickets by Network Pod / Year – to – date

Repair Tickets by Equipment Type

Figure 6 – Repair Tickets by Equipment Type

Figure 6 shows the number and percentage of incidents that occur for each equipment type for the quarter.
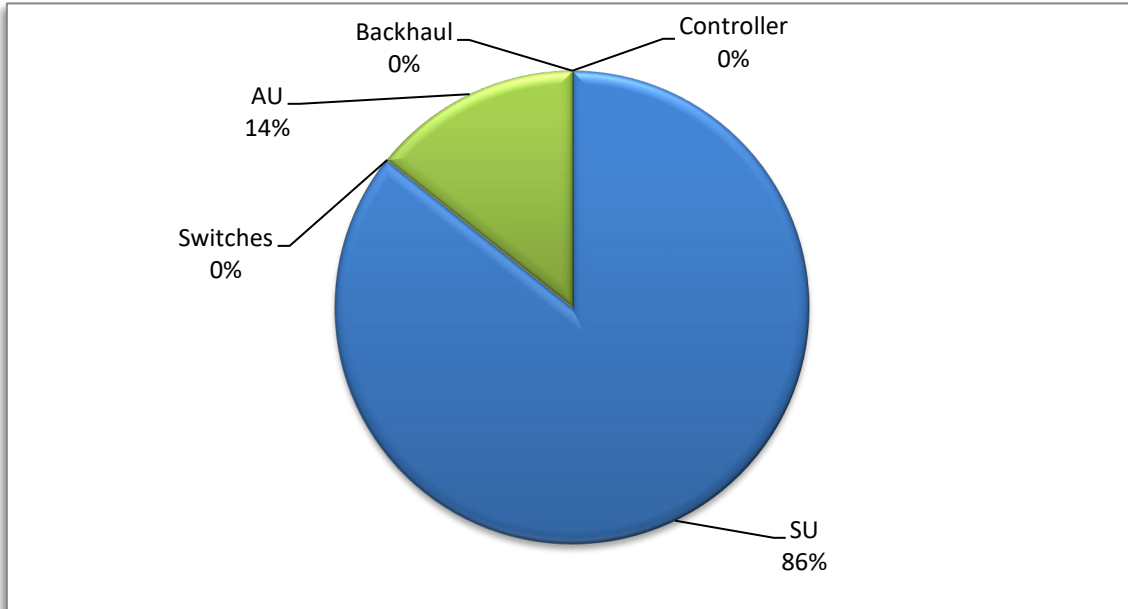
Figure 7 – Repair Tickets by Equipment Type / Year – to – Date

Figure 7 shows the percentage of repair tickets year – to – date for each equipment type.
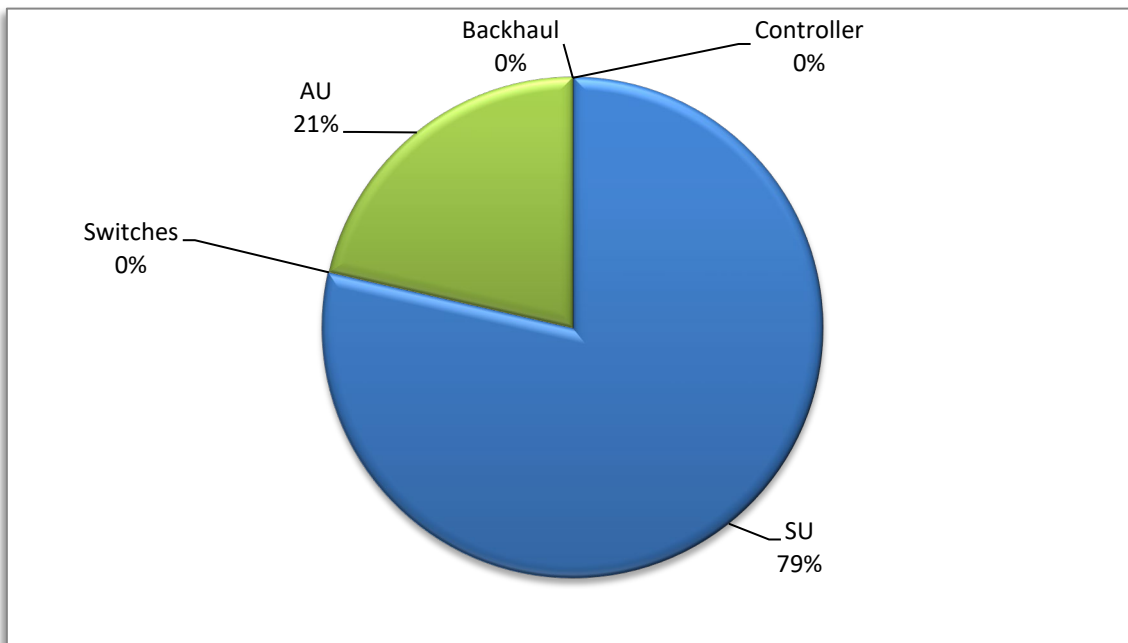
Repair Ticket Statistics by Severity Level

Figure 8 – Repair Ticket Statistics by Severity Level

Figure 8 shows the number and percentage of incidents by severity level for the quarter.
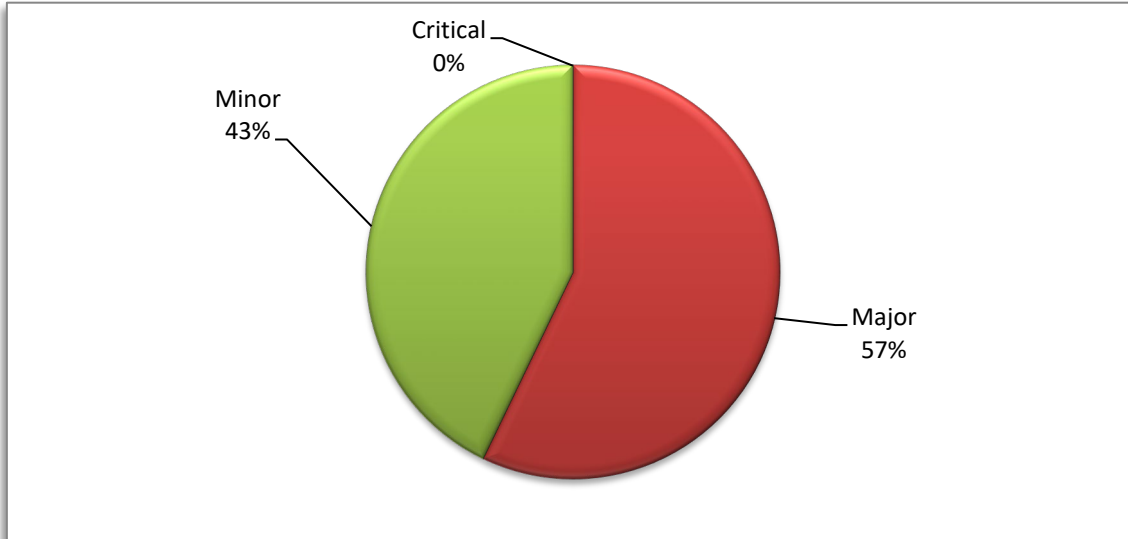

Figure 9 – Repair Ticket Statistics by Severity Type / Prior 15 months

Figure 9 shows the number of incidents by severity type that OGL staff has managed in the last 15 months.
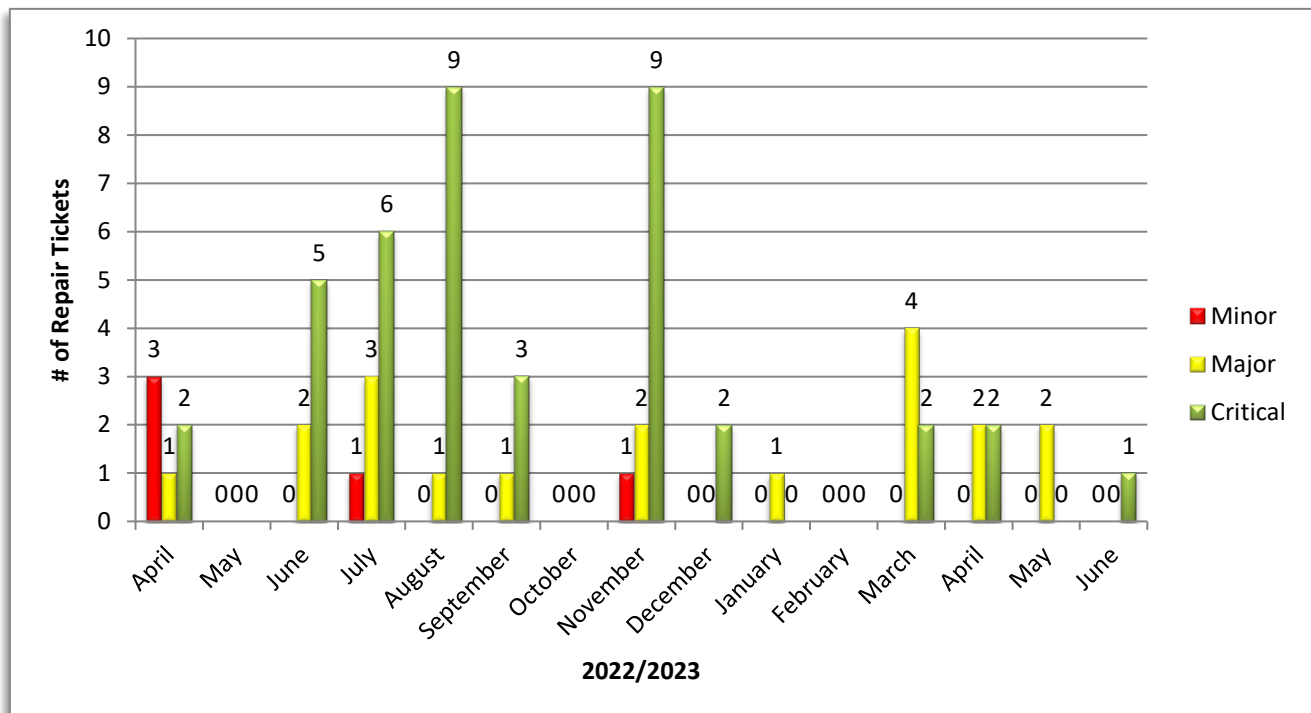
Summary of Critical Events

The OGL staff responded to **0** critical events during the 2nd Quarter of 2023.

Preventative Maintenance

Each year at the Pod locations for the OGL network, preventative maintenance is performed according to Exhibit I Scope of Services.

Preventative Maintenance is scheduled for the 3rd quarter.

Incident Management

FHWA's Congestion Report estimates the following causes of congestion on US roadways:
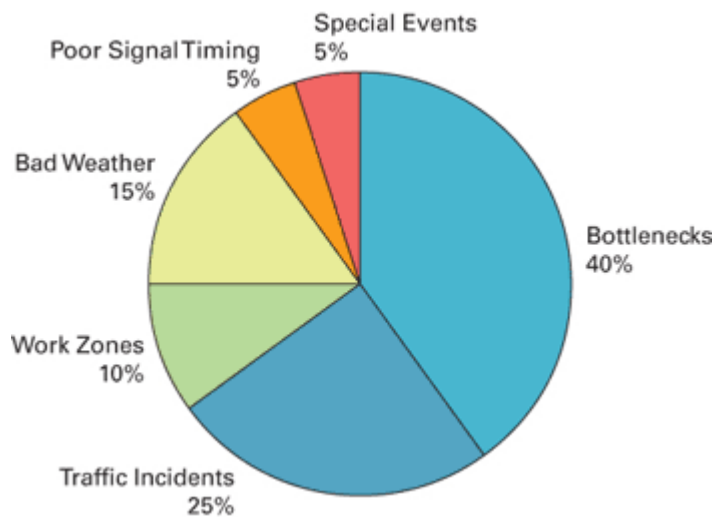
Noticing that Traffic Incidents, Work Zones, Bad Weather, and Special Events account for approximately 55% of congestion, OGL responds to these types of events. When traffic patterns are abnormal, signal timing can often be adjusted to reduce the impact.

OGL staff interacted with these types of events on **133** occasions in the 2nd quarter of 2023. These consisted of weather events, crashes, roadwork events or other abnormal events that impacted traffic flow. Of these events, OGL staff made operational changes to traffic signals for **99** of them. The remainder resulted in communication with KC Scout, or the agency involved or monitoring of the situation only.

Some examples include:

- 4/11 – a crash closed 3 lanes of EB I-435 at State Line Rd. OGL staff adjusted signal timing at many area intersections to accommodate detouring traffic.
- Roadwork at US-40 & Blue Ridge Blvd closed lanes off and on for several months. Signal timing was adjusted to accommodate changes when needed.
- 4/24 – A WaterOne project started on Shawnee Mission Pkwy that closed lanes EB. Signal timing was adjusted to accommodate changes as they occurred.
- 4/24 – A Spire project started on M-9 that closed lanes NB daily. Signal timing was adjusted when necessary to accommodate changes as they occurred.
- 5/4 – The interchange of I-29 & NE 72nd closed for roadwork. OGL staff adjusted signal timing at many area intersections to accommodate detouring traffic.
- 5/8 – Roadwork closed ramps I-70 EB & US-40. OGL staff adjusted signal timing at area intersections to accommodate detouring traffic.
- May – Several graduation events were held at the Cable Dahmer Arena. OGL staff adjusted signal timing at area intersections to attempt to accommodate traffic flows in and out.
- 6/3 – I-70 closed in Independence for Blue Ridge Blvd bridge removal. OGL staff adjusted signal timing at many area intersections to accommodate detouring traffic.
- 6/5 – I-70 EB was closed before Sterling due to a vehicle fire. OGL staff adjusted signal timing at many area intersections to accommodate detouring traffic.

Figure 10 – Number of Incidents Responded to

Figure 10 shows the trends in the number of incidents OGL responded to during the last 6 quarters.
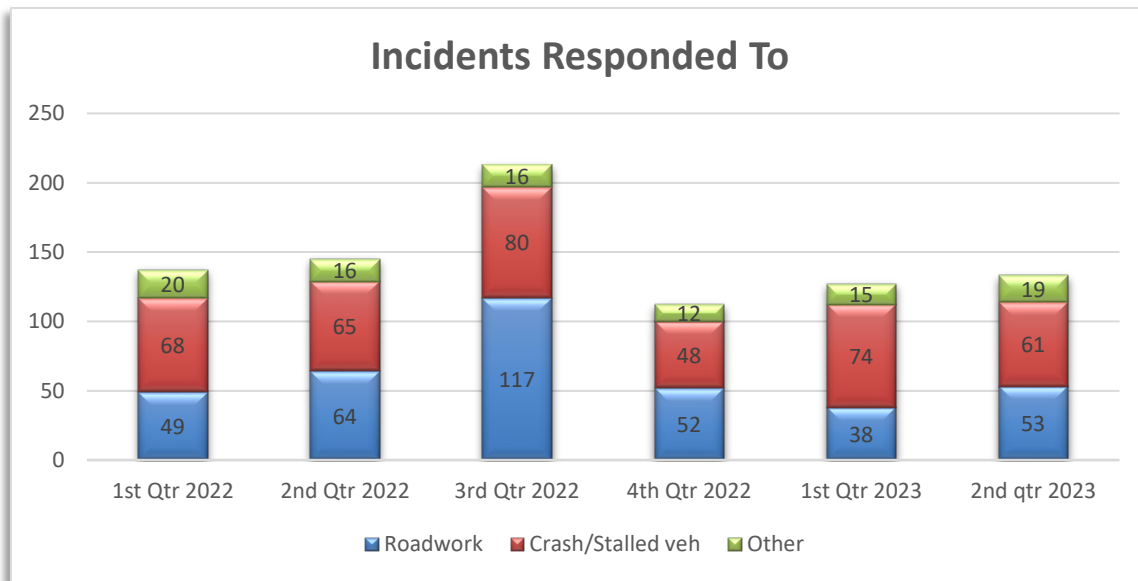
Traffic Signal Event Tracking

Issue	Jurisdiction	Count	Issue	Jurisdiction	Count
All Directions Dark	MODOT	1	Other	MODOT	1
	Shawnee	1		Lees Summit	2
				KCMO	1
All Directions Flashing	Blue Springs	1			
	Bonner Springs	2	Ped Recalling	Blue Springs	1
	Gladstone	2		Raymore	2
	Independence	1		MODOT	3
	Leawood	1			
	Lees Summit	3	Phase Backing Up	MODOT	2
	Lenexa	2			
	Merriam	1	Poor Progression	Belton	1
	Mission	1		Liberty	1
	MODOT	23		Merriam	1
	UGOVT	3			
			Phase Skipped	Liberty	1
Conflict With Opposing Phase	Liberty	1		Lees Summit	2
	Merriam	1			
			Preempt Not Working Properly	MODOT	1
Cycling Improperly	MODOT	2			
			Program Replacement Controller	Merriam	1
Detection Not Working Correctly	Gladstone	2		UGOVT	1
	MODOT	13			
	Grandview	1	TransSuite Database Comparison Diff	Blue Springs	1
	Independence	4		Leavenworth	1
	Lees Summit	3		Lansing	1
	Leawood	2		Independence	1
	Merriam	4		Lenexa	8
	Liberty	1		Lees Summit	3
	Lenexa	6		MODOT	22
				Shawnee	12
Green Time to short	MODOT	1		UGOVT	8
	Blue Springs	1			
Intersection not running Correct plan	Lees Summit	1			
	KCMO	1	**Total**		**164**

Figure 11 – Number of Traffic Signal Issues

Figure 11 shows the trends in the number of traffic signal events OGL responded to during the last 6 quarters.

Signal Issues Responded To

	1st Qtr 2022	2nd Qtr 2022	3rd Qtr 2022	4th Qtr 2022	1st Qtr 2023	2nd Qtr 2023
Other	22	33	34	27	38	25
Differences	38	60	54	40	47	57
Ped Det	11	15	4	4	13	6
Veh Det	34	37	37	33	44	36
Flash	72	50	45	45	33	40

Legend: Flash, Veh Det, Ped Det, Differences, Other
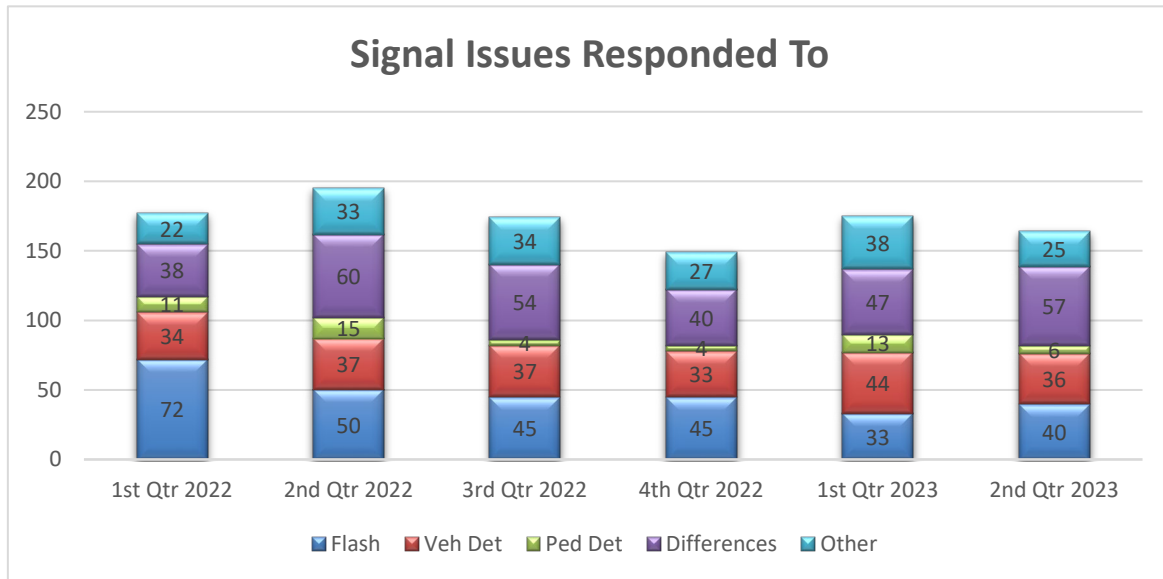
Steering Committee Budget Report
May 31, 2023, Ending

MARC's OGL program operates from Surface Transportation Block Grant (STBG) Federal revenues on a reimbursement basis from MoDOT and KDOT who administer the STBG funds. The local match for 2023-2024 is collected annually via a multi-year agreement which coincides generally with the period of the two-year MoDOT and KDOT STBG Federal funding agreements. However, for this funding cycle, most agencies have executed a four-year agreement with one doing a one-year and one doing a two-year agreement.

STBG funds are allocated prior to the regional STBG/CMAQ call for projects process that occurs every two years. It is the responsibility of the OGL Steering Committee to approve the budget for the program. The budget is authorized by MARC's Total Transportation Policy Committee (TTPC) and MARC Board.

Local funds from twenty-seven agencies are combined with federal STBG funds to comprise the total operations budget. The annual revenue of 755 signals at $800/signal is $604,000 and the total federal STBG funds are $700,000. This results in a 54% federal to 46% local funding split.

Budget Summary:

- Reserve / Emergency (local funds) balance $300,000

    a. This represents a restoration back to the original $300,000 which were utilized last fall when local revenues were depleted.

- Missouri STBG funds were obligated November 10, 2022. OGL began using some STBG funds for labor and then fully in December for all expense.

- Local OGL #65377 (deferred balance) of $28,439 is a separate local fund for expenses not covered by STBG funds.

- Total Expenses average 22% compared to month 6 of 24-month budget percentage of 25%.

- Of the $604,000 2023 local funds to collect, $188,400 are yet to be collected. Gladstone will be invoiced as soon as the agreement is completed by the end of July. KCMO is in the process of paying the 2023 invoice.

- The ending balance of local funds is $432,696.26.

Mid-America Regional Council (MARC)
MO & KS OGL Operations #65240
2-Year Budget Period Beginning December 1, 2022
Report Ending 05/31/2023

Expenses	Two-Year Program Budget	Cumulative To Date	Balance (yet to be spent)	% Variance Cumulative/Budget 6 / 24 months = 25%
Salaries, Fringe Benefits, Indirect Costs	$1,534,492.00	$371,399.86	$1,163,092.14	24.2%
Consultants/Contracted Services	787,270.00	181,909.98	605,360.02	23.1%
Legal Fees	10,000.00	2,584.40	7,415.60	25.8%
Meeting/Travel (In/Out of Region & Registration)	12,400.00	1,451.50	10,948.50	11.7%
Rent	19,738.00	3,912.20	15,825.80	19.8%
Telephone/Maint.(Internet, mobile, ConferSave, USB mode	13,200.00	2,570.71	10,629.29	19.5%
Miscellaneous (classified ads, postage)	500.00	3.96	496.04	0.8%
Insurance	8,000.00	1,632.00	6,368.00	20.4%
Equipment/Computer/Supplies	196,000.00	2,186.31	193,813.69	1.1%
Service Agreements	1,400.00	-	1,400.00	0.0%
Automobile Gas/Maintenance	10,800.00	1,423.41	9,376.59	13.2%
Professional Memberships	1,000.00	-	1,000.00	0.0%
Training	2,000.00	-	2,000.00	0.0%
Utilities	11,200.00	3,534.28	7,665.72	31.6%
Total Expenses	**$2,608,000.00**	**$572,608.61**	**$2,035,391.39**	22.0%

Revenues (Reimbursement from DOT's at 80/20	Two-Year Program Budget	Cumulative To Date	Balance	% Variance Cumulative/Budget
STP Funding, KDOT	$420,000.00	$137,426.09	$282,573.91	32.7%
STP-Funding, MoDOT	980,000.00	320,660.82	659,339.18	32.7%
Local Gov't Funding-Required 20% match	350,000.00	114,521.70	235,478.30	32.7%
Total Revenues for Federal Grant	**$1,750,000.00**	**$572,608.61**	**$1,177,391.39**	
Local Gov't Revenue above 20% match	858,000.00	$0.00	858,000.00	
Combined Revenues	**$2,608,000.00**	**$572,608.61**	**$2,035,391.39**	

Local Government Revenues				
Funds available		330,778.96		
Funds billed but not yet received.		188,000.00		
Local Operation Green Light Program #65377 (deferred balance)		28,439.00		
Total available		547,217.96		
Less: Amount applied to OGL grant 65240 - Cumulative to Date		(114,521.70)		
Less: Amount above required match		0.00		
Less: Amount transferred to other grants		0.00		
Ending Balance 5/31/2023		**$432,696.26**		
Reserve/Emergency (local funds)		**$300,000.00**		