Welcome & Introductions

1. Approval of January 22 Committee Minutes* (page 2)

2. Two Minute Agency Updates

3. Network Security Assessment-Executive Summary and Presentation by RubinBrown

4. Report on Open Data Service for Real-Time Traffic Signal Data (page 7)

5. MO CMAQ 3302(423) Design/Construction Signal Enhancements Update
   - Addition of Blue Springs (9 signals) and Grandview (5 signals) plus KCMO CCTV and fiber

6. Regional Traffic Signal Map Update and Demo (page 17)

7. STP/CMAQ Call for Projects Submittal, MO and KS (page 18)


9. Quarterly Budget Report (page 38)

10. Adaptive Traffic Signal Control (ATSC) Systems and Training Course (page 40)

11. Kansas City Regional Purchasing Cooperative Overview (page 41)
   - Update on regional contracts available for agencies use (CCTV, network equipment, wireless, labor)

12. Shared Best Practice Forum for Traffic Signal Detection (page 42)

13. Other Business

Next Regularly Scheduled Meetings: Monday’s of July 23, October 22, 2018

Getting to MARC: Information on transportation options to the MARC offices, including directions, parking, transit, carpooling, and bicycling, can be found online. If driving, visitors and guests should enter the Rivergate Center parking lot from Broadway and park on the upper level of the garage. An entrance directly into the conference area is available from this level.

Parking: Free parking is available when visiting MARC. Visitors and guests should park on the upper level of the garage. To enter this level from Broadway, turn west into the Rivergate Center parking lot. Please use any of the available spaces on the upper level at the top of the ramp.

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Adjournment

*Action Items

Future meetings / conferences:

- ATSPM UDOT Developer and User Webinar (3rd Mondays monthly at 10AM)
- ITS Heartland April 23-25
- ITSA Annual Meeting, June 4-7, 2018, Detroit
- MARC Annual Meeting, June 8, 2018, InterContinental Kansas City at the Plaza
- IMSA Forum and EXPO, July 28-31, Orlando
- ITE Annual Meeting, August 20-23, Minneapolis
- MoVITE Fall Meeting, October 3-5, Lenexa, KS
Welcome & Introductions
Meeting started at 1:30. Derek Olson, the Chair of the committee, welcomed all and conducted introductions

1. October 23 Committee Minutes – The minutes were approved unanimously.

2. Two Minute Agency Updates
- Derek notified the committee of MODOT’s Buckle Up, Phone Down safety campaign. Also they recently opened the new interchange at I-49 & 155th St, a combination diverging diamond and roundabout.
- Dave Northup noted some staff changes at KDOT.
  o Brian Gower was promoted to Bureau Chief of Transportation Safety and Technology
  o Carla Anderson was promoted to State Traffic Engineer
  o Mike Floberg was promoted to Director of Innovative Technologies
  o Leroy Koehn was promoted to District One, District Engineer
- Noel Forrester informed the committee that Olathe’s work with Live Traffic Data and Miovision should be up and operational this spring.

3. MARC Conflict of Interest and Whistleblower Policies – These were included in the meeting Packet. Derek brought them to the committee’s attention. They have not changed since the last time they were brought to the committee. Committee members are asked to review and abide by these policies.

4. Central Signal Software System Engineering – OGL cannot continue with a sole source contract with TransCore for ATMS software indefinitely. Eventually we will need to go out for competitive bid for
system software. Prior to that we will need to do a system engineering process per the FHWA recommended process to specify our system requirements. MARC has solicited for firms to help with that system engineering process, received two submittals, and a selection team chose the Iteris, Vireo, and gbaSI team. The meeting packet included an item for MARC Board approval that will come before them January 23. This item requests approval to enter contract with the Iteris team, with a contract amount not to exceed $180,000. The OGL Steering Committee also needs to approve MARC entering this contract. The system engineering process will likely include Request for Information (RFI) whereby we will educate ourselves on current industry capabilities. All partner agencies are invited and encouraged to participate in the process. End product after about 9 months will be a system requirements document and the RFP document for solicitation. Steve Schooley made a motion to approve MARC entering this contract. The motion was supported and passed unanimously.

5. 2017/2018 OGL Local Agreements Status – Two agencies have yet to enter agreements with MARC: Raymore and Liberty. All others have been invoiced and paid per agreement.

6. MO CMAQ 3302(423) Design/Construction Signal Enhancements Update – This effort includes installation of several CCTV’s as well as adding Blue Springs and Grandview to the OGL system with Trekk as the design consultant. Field investigations have been complete and 60% plans are scheduled to be released soon.

7. Regional Traffic Signal Map – Scott Cutshall showed the committee the new web map in progress. This is an update to the OGL system map on the MARC website which will make it a GIS based map and will include all signals in the region, not just the OGL system. Information displayed will be corridor, crossroad, agency, and contact info. Once the data is cleaned up and agencies have approved, the map will be made accessible to the public. Scott will send a link to the map to the committee tomorrow for their review.

8. STP/CMAQ Call for Projects – The meeting packet included a table of several initiatives that the Committee has been discussing advancing in the region. The STP/CMAQ call for projects for the region was released on Friday, so there is an opportunity to apply for these funds to help pay for some of these initiatives. The CMAQ funds available are $4.5 and 5 million in MO and KS respectively. STP funds available are $14.6 and $25.6 million in MO and KS respectively. Included in the meeting packet, MARC staff brought a proposal to apply for funds for vehicle and pedestrian detection, PTZ cameras, some communications upgrades, and some controller upgrades. Estimated total cost $2,560,000. OGL Operations is already paid for off the top from the STP program so there may be an incentive to request CMAQ money for these projects to not touch STP. The estimated scope may be too big to be appropriate for CMAQ application, however, given the smaller amount available. The scope is easily scalable if less funds were awarded. The money would not be available until 2021/2022 so the projects submitted should not be urgent needs. Project submittals are due March 23rd, prior to the next Steering Committee meeting. Mike McDonald mentioned that we should be aware of the Air Quality area boundary if using CMAQ funds. The consensus of the committee was that the efforts identified are appropriate and MARC staff should work with the cities involved to refine the scope and proceed. The committee requested that city staff provide input to MARC staff on their needs as they fit into this proposal. Donna Coatsworth says Noland & Fair can be removed from the proposal.

Blake also discussed the Open Traffic Signal Data initiative a bit more. Olsson Associates has contacted several agencies across the country who make various types of data available to the public freely. Those agencies have not mentioned any liability concerns associated with releasing their data, but they are not releasing live traffic signal status.

Ray discussed the investigation into using HERE probe data for the Signal Performance Measures and Automated Travel Time collection initiatives. Overland Park has expressed interest in having access to that
data as part of a larger purchase by MARC or the states. MODOT has purchased access to the data and KDOT is considering budgeting for a statewide data purchase, both of which results in MARC staff having access, but their purchase agreements do not necessarily grant local city staff within their state access. It is not clear what the agreement would be if MARC bought the data. Barry mentioned that he attempted using the data to evaluate signal timing changes and the natural variability of the data and the large geographic resolution relative to signal spacing makes it less useful than we hoped. It is useful for identifying abnormal conditions in the past, e.g. correlating freeway incidents with poor performance on surrounding surface streets.

We are only in the beginning stages of evaluating Traffic Responsive or Adaptive efforts. The two corridors suggested so far are US-71 (with neighboring Prospect) and M-350.

9. Quarterly Operations Update – Chris highlighted a few items from the Operations Report that was included in the meeting packet. There seem to be increasing opportunities for OGL to be involved in signal timing changes in response to incidents and roadwork activities, and this spring and summer will be a busy year for roadwork.

10. Quarterly Budget Report – Ray was not able to prepare the budget report due to MARC financial staff being busy with year-end work and unable to get Ray the information needed.

11. Network Security Assessment – Barry updated the committee. Rubin Brown has completed their assessment and supplied staff with a draft report. Recommendations include increased concentration on security training for users, prioritizing software patches for equipment, regular network security assessments and penetration testing, security policy updates, and moving the ATMS software to a cloud and/or web interface solution. TransCore is working on a web interface currently and we could implement that soon.

12. Video Recording Update – Chris has found that most agencies with cameras on the MARC Security Center system are willing to record, except for MODOT. He is working on drafting a policy that will address who will record, for what purposes, who owns the recorded video, who can view the video, retention lengths, procedures for supplying video to 3rd parties.

13. Regional Detection Issues Discussion – Ray introduced the topic. Keeping vehicle detection in good working order is a constant battle for most agencies, costing a lot of time and money. Yet accurate detection is required for many of the more modern initiatives that we all would like to see progress in the region. One suggestion was to have a separate forum to see how we can all help each other. This would include contractors, vendors, electricians and technicians, as well as engineering/management staff. Tracking maintenance activities with enough detail would help to tell the story of the magnitude of the problem to decision makers. We would like to know performance track records of different brands and technologies as well as any tips and tricks to help with each. Lideana and Derek will work on organizing such a group in late March or April.

14. Other Business – Lideana reminded the committee about the Lewis and Clark WB bridge replacement, which will start in a couple weeks. The Broadway Bridge SB lanes will be closed for a short time later this spring or summer. IMSA Central and KAUTC will be holding their joint conference in Lawrence on March MoVITE spring meeting is April 4-6 in Omaha, fall meeting is October 3-5 in Lenexa. ITS Heartland TSMO webinar January 25, 12:00-13:00.

Next Regularly Scheduled Meetings: Monday, April 23, July 23, October 22
Adjournment – The meeting ended at 3:30
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<td>Committee Members</td>
<td>Review Conflict of Interest and Whistleblower policies</td>
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<tr>
<td>Jan 23</td>
<td>Scott Cutshall</td>
<td>Email Committee members with access to the online signal map being worked on for review</td>
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<tr>
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<td>Raymore and Liberty</td>
<td>Execute agreements with MARC for 2017/2018</td>
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<td>February 9</td>
<td>All Agencies</td>
<td>All Agencies Review Field Infrastructure Packet. MARC to work with agencies to refine CMAQ/STP application content</td>
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<td>Ray Webb</td>
<td>Prepare and distribute Budget report for 4th Quarter 2017</td>
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<td>Chris Jenkins</td>
<td>Draft video recording polices and procedures for recording on the MARC-owned Security Center system</td>
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<tr>
<td>Late March or April, 2018</td>
<td>Lideana Laboy and Derek Olson</td>
<td>Organize a meeting for regional discussion of signal detection problems and solutions.</td>
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1 Introduction

The development and integration of connected vehicle technologies provide the very realistic potential for significantly safer and more efficient transportation system. These technologies will certainly benefit both the users and the providers of our highways. One of the basic premise of connected vehicles is that the receive real-time information regarding traffic operations. For connected vehicle operations on the arterial network, traffic signal data is a critical need.

This data can be used to let vehicles know when a stop condition will develop and automatically slow them in advance. Conversely, it can also let approaching vehicles know that a green condition is about to occur, eliminating unnecessary braking and queuing of traffic. If an intersection is over capacity and delays are excessive, a vehicle receiving the delay information can turn off the engine, eliminating unnecessary idling.

Due to an increasing number of requests for data from third parties, Operation Green Light (OGL) is considering establishing an open data service to provide real-time traffic signal information (SPaT data – Signal Phase and Timing data) to those parties, public and private, who have needs for the information. By definition, an open data service is a program which aggregates and stores specific data sets and allow others to access the data by using a defined applications programming interface (API).

As local officials evaluated the benefits of providing open access to the information, a few concerns and questions were identified. These items are:

- Security of local jurisdictions’ data systems
- Liability exposure by providing the traffic signal data
- Safety (e.g. will the traffic signal information be used in a manner which compromises safety of arterial traffic operations)
- Cost of providing the data
- Potential for generating additional revenues
- Best practices in providing access to the data
2 Approach

To understand the impacts of the concerns with providing traffic signal data through an open data service, the practices of several agencies and private companies were reviewed. Interviews were conducted with two MPOs, five cities, and three private companies who consume traffic data. Most of the parties interviewed were recommended by Operation Green Light staff due to contacts made at a Regional Peer Exchange conducted by the National Operations Center of Excellence (NOCoE) and other parties with experiences in sharing traffic signal and other operations data. Additionally, the experiences of sharing traffic data by a Department of Transportation were also included.

The agencies consulted were:
1. East-West Gateway Council of Governments, St. Louis Metro Area
2. North Central Texas Council of Governments (NCTCOG), Dallas Metro Area
3. Seattle, WA
4. Olathe, KS
5. San Jose, CA
6. Norwalk, CT
7. Gainesville, FL
8. Iowa Department of Transportation
9. Inrix
10. HERE
11. Traffic Technology Services, Inc.

A summary of each party’s activities and positions on data sharing follows:

2.1 MPOs:
- Both the East-West Gateway COG and the NCTCOG make a variety of data available to the public, but not through an open data service.
- Neither of the MPOs currently offer any type of open sharing service for traffic signal information.
- Traffic signal data is frequently shared with adjacent jurisdictions for purposes of coordinating traffic signal operations.
- If requested by the public or private companies, traffic signal data is shared on an as-requested basis.
- The traffic signal data is generally considered public data and there is little concern about liability.
- Neither MPO has a standard agreement format for sharing data.
2.2 Cities:

Olathe, KS –
- The City of Olathe shares real-time SPaT data with a number of parties (e.g.: Live Traffic Data, Traffic Technology Services).
- The data is not available through an open data service but is provided by individual data feeds to each company. The format of these data feeds is defined within the software program where the data is stored, and access must be provided by the owner of the data.

Seattle, WA –
- The City of Seattle has established an open data service (Open Data Portal) and shares a variety of information regarding community services, city finances, GIS mapping, permit applications, public safety and transit.
- SPaT data is not presently available through the Portal.
- SPaT information is provided upon request.

San Jose, CA –
- The City of San Jose maintains an open data policy. Exceptions are made to this policy if there are concerns regarding public safety or liability.
- The City shares real-time SPaT data with a few private companies. Due to the City’s concerns regarding the impacts to public safety, they consider the present sharing arrangements to be a “trial”. At some point in the future, they will determine how they will ultimately share SPaT data.
- The SPaT information is provided through a data feed.
- The City has some concerns regarding public safety with Connected Signals use of SPaT information on their mobile application. They have been working with Connected Signals to make modifications to the app to alleviate the public safety concerns.

Norwalk, CT –
- The City of Norwalk considers sharing SPaT information a trial program. They do not have either a policy or agreements for sharing SPaT information.
- Presently, the City considers what benefits (not financial compensation) they get in return for sharing SPaT information.
- Live Traffic Data (LTD) provides the City performance measurement software and free communications to isolated intersections.
- Connected Signal provides a mobile application using the City’s SPaT data for local use.
- Traffic Technology Services (TTS) does not provide any direct benefits for the City’s use and are not presently receiving SPaT data from the City.
- The City considers any liability involved with sharing the SPaT data lies with the 3rd-parties who obtain the data and uses or sell the product derived from the data.
Gainesville, FL –

- The City of Gainesville does not share SPaT information publicly.
- The City is presently sharing SPaT information with two companies (Traffic Technology Services and Connected Signals), both connected vehicle-related data to the automotive industry.

2.3 **Department of Transportation:**

Iowa Department of Transportation (DOT):

- The Iowa Department of Transportation presently shares real-time ATMS and traveler information data with a considerable number of consumers (greater than 100). This data is shared with individual XML feeds which are pushed to the requesters.
- The DOT also shares access to traffic camera video and, if requested within three business days, provides recorded video.
- The Iowa DOT has worked with Iowa State University’s Center for Transportation Research and Education (CTRE) to establish an open data service for both the ATMS and traveler information.
- In addition, Iowa DOT is planning to establish a program where authorized parties can download recorded traffic video without DOT assistance.

2.4 **Private Entities:**

Inrix and HERE:

- In addition to probe data sources, both Inrix and HERE incorporate ATMS and traveler information data from state and local jurisdictions.
- Neither company is presently using SPaT data in production.

Traffic Technology Services, Inc. (TTS):

- TTS is a technology company and information provider to the automotive industry and other transportation services providers for connected vehicle applications.
- TTS ingests and processes SPaT data and intersection MAP data to produce a product which aides connected vehicles to travel more efficiently and safely.
- TTS receives data from numerous DOTs and cities around the country.
- In general, the only fees paid by TTS are only the costs required to make the data available.
- TTS prefers a direct data feed from each entity over access to an open data service. Open data services often do not include all the data they need (eg.: intersection MAP data, signal timing plans, etc.).
- TTS establishes an agreement with each entity describing the relationship, the data to be provided, cost (zero), indemnification requirements, liability limitations, contract termination and severance arrangements.
• TTS has worked with TransCore to develop a data feed from the TransSuite Traffic Control System (TCS) module. This data feed can be activated by checking a box from within TCS.
Summary

Based on the feedback from and the practices of the MPOs, cities, Iowa DOT and TTS, the responses to the concerns of OGL are summarized below:

3.1 Security of local jurisdictions’ data systems

Security of the data systems was very important to all the parties and was addressed in several ways.

For those providing data by a direct feed, the data feeds were a push-type feed and did not provide access to the owner’s system.

Open data services are typically designed where the data is provided from a variety of sources to a stand-alone data service. Doing so isolates the owner’s systems from access of unauthorized parties. The open data service also includes security measures, such as encryption, to protect the service.

3.2 Liability exposure by providing the traffic signal data

It was the consensus of all the parties contacted that they perceived there was minimal potential for liability associated with providing access to the data.

This opinion, coupled with the point of view that it was public data, made the concept of sharing SPaT data acceptable. While many of the agencies interviewed were not presently sharing SPaT data openly, most were willing to do so on request.

The parties which are sharing data more openly, whether by open data service or by direct data feeds, address the liability concerns with liability limitation and indemnification language, either in formal data sharing agreements or on web sites.

3.3 Safety – Will the traffic signal information be used in a manner which compromises safety of arterial traffic operations.

Most of the commercial uses for SPaT data focus on providing information for connected vehicles. To do so, the SPaT information must be processed (by third parties) for the information to be useful.

It is inherent to the success of the connected vehicle industry that the operations improve both the safety and efficiency of traffic operations.

The safety concerns regarding the integration of SPaT data and vehicle coordination with traffic signals will be subject to the oversight of the National Highway Traffic Safety Association (NHTSA) with the responsibility for safe connected vehicle operations maintained by the third-party data providers and the connected vehicle manufacturers.
3.4 Cost of providing the data

For those parties without the capability to provide data in an automated fashion, the cost of providing data is tied to the manual effort of staff in pulling the information together and making the data available.

Some of the agencies without open data services have the ability of providing real-time data by a direct data feed. The costs associated with this approach is significantly less manually aggregating the data. The cost of this approach is tied to the effort of staff in establishing agreements for use of the data and providing instructions for accessing the data feed(s).

While developing an open data service would have initial costs, it would certainly reduce the effort and cost of providing access to data on an ongoing basis.

3.5 Potential for generating additional revenues

None of the parties interviewed as part of this review required ongoing fees to obtain their data. One city did consider services provided by private parties as part of their evaluation to provide data.

In discussion with TTS, they have encountered only one party indicating there would be associated fees (outside of the cost of setting up the data feed). They are still in negotiations with that party.

3.6 Best practices in providing access to the data

Based on the input of the various agencies and companies, the following summarizes the thoughts and practices regarding providing SPaT data to others.

- The SPaT data is public information and providing it to others is appropriate.
- Many of the parties interviewed recognized the long-term benefits for safety and efficient travel will ultimately be realized due to the connected vehicle industry. In that light, providing SPaT data now will aid the advancement of these capabilities.
- Surveyed agencies perceive minimal liability, if any, associated with making this data available.
- Providing access to the SPaT data via an open data service makes access as easy as possible, both for the agencies providing the data and the parties receiving the data.
- Presently, more agencies are providing SPaT data by direct data feeds (rather than an open data service). This may be related to the relatively few number requests for this specific type of data. As a matter of interest, TransSuite’s TCS module has the capability to provide this data feed.
- Before providing the data, establish the expectations and responsibilities of each party. This can be accomplished by formal agreement. The City of Olathe has
developed a “generic” agreement and shared it with OGL for their use and reference. Some of the items the agreement includes are:

- Services provided
- Limitations
- Responsibilities of parties
- Restrictions
- Liability Limitations
- Term of the agreement
- Indemnifications
- Agreement termination
- Security breach responsibilities

Data sharing agreements used by other agencies typically contain similar items.
Regional Traffic Signal System Map

The OGL staff along with the GIS team at MARC have been working on a new online signal map. This map is an attempt to represent all the traffic signals in the KC metro area, both OGL and non OGL. The goal for this tool is for the public to utilize as a quick reference of the traffic signals and who has ownership of those signals. It also shows a clear division between OGL signals, and non-OGL signals. We have built this with data that we have collected from each of the agencies over the past months.

- The OGL team is confident that with just a few final edits remaining we can very shortly go live on the MARC website with this tool
- This is a much easier map to manage than what we had before, any edits required after it is released to the public can be easily made
## Summary of Operation Green Light Traffic Signal Advancements KS

### MARC

#### Contact Information

<table>
<thead>
<tr>
<th>Organization</th>
<th>MARC</th>
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<tbody>
<tr>
<td>Contact person</td>
<td>Raymond Webb</td>
</tr>
<tr>
<td>Title</td>
<td>Traffic Operation Manager</td>
</tr>
<tr>
<td>Phone</td>
<td>8164744240</td>
</tr>
<tr>
<td>E-mail</td>
<td><a href="mailto:rwebb@marc.org">rwebb@marc.org</a></td>
</tr>
<tr>
<td>Organization address</td>
<td>600 Broadway, Suite 200, Kansas City</td>
</tr>
<tr>
<td></td>
<td>Kansas City, MO  64105</td>
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#### General Information

- **G8.1 Project title:** Operation Green Light Traffic Signal Advancements KS
- **G8.2 Project description:** Enhances the OGL communications system with fiber optics in Leawood that will provide more robust communications and reliability and additional redundancy. Upgraded controllers in KCK and Leavenworth that are not up to date and capable of providing a high level of reliability. Also adds CCTV's in KCK, Merriam and Leawood on high volumes routes in areas that currently do not have coverage to allow better observing of traffic patterns as well as enhanced ability to diagnose traffic signal malfunctions. Also is the advancement of HERE data acquisition for the Johnson County that will provide arterial performance measures.
- **G8.3 Project contact:** Raymond Webb, Traffic Operation Manager, MARC 600 Broadway, Suite 200 Kansas City, MO 64105 816.474.4240
- **G1. Project Type:** Road & Bridge - ITS Capital Improvements
- **G2. Funding Stream:** CMAQ STP
- **G3. TIP Number:**
- **G4. State:** Kansas
- **G5. Project county:** 1. Wyandotte 2. Johnson 3. Leavenworth
- **G6. Project municipality:** 1. Multi-City
- **G7. Multiple agencies / jurisdictions?** Yes
- **G8.4 Purpose and need:** The Regional Operation Green Light program is enhanced with fiber communications, vehicle detection, advanced traffic signal controllers and CCTV. HERE data included for Johnson County that will provide arterial performance data. This work will modernize the intersections to allow for more efficient operation for all users including pedestrians and transit.
Enhances the OGL communications system with fiber optics in Leawood that will provide more robust communications and reliability and additional redundancy. Upgrades 62 controllers in KCK and 1 in Leavenworth that are out of date and unable of providing a high level of reliability. Adds 12 CCTV's in KCK, 1 in Merriam and Leawood on high volumes routes in areas that currently do not have coverage to allow better observing of traffic patterns as well as enhanced ability to diagnose traffic signal malfunctions. Vehicle detection to be added in KCK for 6 key approaches currently lacking detection. Also is the advancement of HERE data acquisition for the Johnson county region.

**G9. Origin and ending**

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**G10. Functional Classification:**

Principal Arterial

**G11. In Transportation Outlook 2040?**

Yes Decade: 2010

**G12. Multi-Agency Plan?**

Yes

This project implements recommendations of the Operation Green Light Final project report

**G13. Included in a CIP?**

No

**G14. Planning stage:**

Conceptual Plan

**G15. Reviewed by state DOT?**

No

**G16. Right-of-Way acquisition:**

All acquired or none needed

**G17. ROW by local public agency process manual?**

Yes

**G18. Other unique local goals and objectives?**

Yes

In addition to regional goals and benefits to the traveling public identified in the Transportation Outlook 2040, OGL operations will support local goals to enhance the efficiency of the state and local public agency traffic signal operations.

**G19. Transportation Disadvantaged Population:**

| Population: |  |

**G20. Relevant Public Engagement:**

|  |

**G21. Planned Public Engagement:**

|  |

**G22. Sustainable Places Criteria:**

| Complete Street Design---Connected Street Network---------------- |
| ------------------- Transit-Ready Corridors----- |

**G22.1. Describe CSP relationship:**

Traffic signals provide multi modal access for pedestrians, bike and transit.

**G23. Implements Sustainable Places Initiatives?**

No

**G24. Serves Regional Activity Center?**

No

--Select--

**G25. Environmental justice tracts?**

Yes

Project improves access to and from multiple EJ tracts by coordinate traffic signal timing on routes serving these areas.

**G26. Reduces greenhouse gas emissions?**

Yes

Due to the reduction of vehicle stops, delay and idling traffic, greenhouse gases are reduced. National studies show benefits of traffic signal timing and operations and local examples of OGL reducing emissions can be found at http://marc.org/Transportation/Commuting/Operation-Green-Light/OGL-System-Coordination

**G27. Natural Resource information:**

|  |

**G28. Community Links at Watershed Scale:**

|  |
G29. Explain local land use or comprehensive plans:

G30.1 Complies with MARC's CSP? Yes
G30.2 Exception to the MARC CSP? No

Traveler Type (All Ages & Abilities)

Pedestrians:
Mobility Aids:
Bicyclists:
Transit Riders:
Cars:
Trucks:
Motorcycles:
Buses:
Green Streets:

Project Financial Information

CMAQ Federal amount 570 (Thousands of $)
CMAQ Match amount: 142 (Thousands of $)
CMAQ Year requested: 2021
STP Federal amount: 570 (Thousands of $)
STP Match amount: 142 (Thousands of $)
STP Year requested: 2021
Source of Local Match: match from participating agencies local funds

Explain: Preliminary Engineering is included in the project

Scope Change: This project can use either STP or CMAQ and is scalable. More or fewer intersections will be aided depending on the funding available. The elements are independent of one another.

Cost Breakdown:

Highway: 100 %
Transit: %
Bike: %
Pedestrian: %
Other: %

Additional Information for Road and Bridge Projects

C8.1 Part of Operation Green Light? Yes
C8.2 Subclassification: Intersection Improvement
C8.3 Other subclassification: --Select--
C8.8 Intersection improvement information: involves 63 intersections for controllers
C8.9 Segment information source: agency procurements and OGL past projects
C8.14 Project life: 12.5 Years
# Summary of Operation Green Light Traffic Signal Advancements MO

**MARC**

<table>
<thead>
<tr>
<th>Contact Information</th>
</tr>
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<tbody>
<tr>
<td><strong>Organization:</strong> MARC</td>
</tr>
<tr>
<td><strong>Contact person:</strong> Raymond Webb</td>
</tr>
<tr>
<td><strong>Title:</strong> Traffic Operation Manager</td>
</tr>
<tr>
<td><strong>Phone:</strong> 8164744240</td>
</tr>
<tr>
<td><strong>E-mail:</strong> <a href="mailto:rwebb@marc.org">rwebb@marc.org</a></td>
</tr>
<tr>
<td><strong>Organization address:</strong> 600 Broadway, Suite 200, Kansas City</td>
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<tr>
<td><strong>Kansas City, MO</strong> 64105</td>
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## General Information

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<thead>
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<th>Operation Green Light Traffic Signal Advancements MO</th>
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<td>The Regional Operation Green Light Regional program is enhanced with a Traffic Responsive system and advanced detection on US 71, vehicle detection where none exists in KCMO, advanced traffic signal controllers and CCTV in key locations in the region. This work will modernize the intersections to allow for more efficient operation for all users including pedestrians and transit.</td>
</tr>
<tr>
<td>G8.3 Project contact:</td>
<td>Raymond Webb, Traffic Operation Manager, MARC 600 Broadway, Suite 200 Kansas City, MO 64105 816.474.4240</td>
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<tr>
<td>G1. Project Type:</td>
<td>Road &amp; Bridge - ITS Capital Improvements</td>
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<td>G7. Multiple agencies / jurisdictions?</td>
<td>Yes Missouri Department of Transportation, the Cities of Belton, Gladstone, Independence, Kansas City, Lee's Summit, North Kansas City and Raymore</td>
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<tr>
<td>G8.4 Purpose and need:</td>
<td>Project includes advanced vehicle detection on US71 at Gregory, 59th and 55th for a Traffic Responsive Module to the ATMS software to improve time of day operations. Advances in signal operations allow for high resolution data for advanced performance. Addition of CCTVs allow for improved operations for observations of traffic and response to incidents. Controllers are in MoDOT,</td>
</tr>
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</table>
Gladstone, Lees Summit. Side street vehicle Detection will be added in KCMO where there currently is none to increase traffic signal efficiency. CCTV will be added in MoDOT, Belton, Raymore Independence and KCMO where there is no coverage to allow for the ability to respond to traffic signal malfunctions and to monitor traffic flow. Totals include 30 vehicle detection approaches, 32 CCTV and 117 traffic signals controllers. This project includes PE (preliminary engineering) for a construction project that would install vehicle detection and CCTV

G9. Origin and ending

Route: 
From: 
To: 
Length (Miles):

G10. Functional Classification: Principal Arterial
G12. Muli-Agency Plan? Yes
This project implements recommendations of the Operation Green Light Final project report

G13. Included in a CIP? No
G14. Planning stage: Conceptual Plan
G15. Reviewed by state DOT? No
G16. Right-of-Way acquisition: All acquired or none needed
G17. ROW by local public agency process manual? Yes

G18. Other unique local goals and objectives? In addition to regional goals and benefits to the traveling public identified in the Transportation Outlook 2040, OGL operations will support local goals to enhance the efficiency of the state and local public agency traffic signal operations.

G19. Transportation Disadvantaged Population:
G20. Relevant Public Engagement:
G21. Planned Public Engagement:
G22. Sustainable Places Criteria: Complete Street Design---Connected Street Network---Transit-Ready Corridors-----

G22.1. Describe CSP relationship: Traffic signals provide multi modal access for pedestrians, bike and transit.
G23. Implements Sustainable Places Initiatives? No
G24. Serves Regional Activity Center? No

G25. Environmental justice tracts? Yes
Project improves access to and from multiple EJ tracts by coordinate traffic signal timing on routes serving these areas.
G26. Reduces greenhouse gas emissions? Yes
Due to the reduction of vehicle stops, delay and idling traffic, greenhouse gases are reduced. National studies show benefits of traffic signal timing and operations and local examples of OGL reducing emissions can be found at http://marc.org/Transportation/Commuting/Operation-Green-Light/OGL-System-Coordination

G27. Natural Resource information:
G28. Community Links at Watershaed Scale:
G29. Explain local land use or comprehensive plans:
G30.1 Complies with MARC's CSP? Yes
G30.2 Exception to the MARC CSP? No

**Traveler Type (All Ages & Abilities)**
- Pedestrians:
- Mobility Aids:
- Bicyclists:
- Transit Riders:
- Cars:
- Trucks:
- Motorcycles:
- Buses:
- Green Streets:

---

**Project Financial Information**

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<td>Source of Local Match</td>
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Explain: Preliminary Engineering is included in the project

Scope Change: This project can use either STP or CMAQ and is scalable. More or fewer intersections will be aided depending on the funding available. The elements are independent of one another.

**Cost Breakdown:**

<table>
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<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Highway</td>
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<tr>
<td>Transit</td>
<td>%</td>
</tr>
<tr>
<td>Bike</td>
<td>%</td>
</tr>
<tr>
<td>Pedestrian</td>
<td>%</td>
</tr>
<tr>
<td>Other</td>
<td>%</td>
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</tbody>
</table>

**Additional Information for Road and Bridge Projects**

C8.1 Part of Operation Green Light? Yes
C8.2 Subclassification: Intersection Improvement
C8.3 Other subclassification: --Select--
C8.8 Intersection improvement information: MO intersections involve 171 locations
Mid-America Regional Council’s Quarterly Report For Operation Green Light

1st Quarter 2018 Report
April 23rd, 2018

Prepared For:
OGL Steering Committee

Prepared By:
OGL Operations Team
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Introduction
Operation Green Light (OGL) is a bi-state 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 system 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 1st Quarter of 2018 and highlights of signal timing and agency coordination. OGL currently monitors/operates 705 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 http://www.marc.org/Transportation/Commuting.

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 5 repair tickets. OGL uses the repair tracking database to manage work orders and billing for the contractor, but currently don’t differentiate between normal repair work and radio upgrades.

Corridor/Signal Timing Efforts
- Silverstein Eye Center Event timings update for concerts
- Douglas St timings for bridge construction
- Updated ring structure and sequence at Bannister & US-71
- Updated coordination plans for 75th St in OP and Prairie Village
- Established and updated timing for temporary signals installed with Lewis and Clark bridge work

Training Sessions/Panels/Events
- 1/17 – Scott Cutshall attended the Big 5 Transportation Kick-off event
- 1/31 – OGL staff participated in the TSMO Program Plan Development Roundtable webinar
- 2/22 – Ray Webb attended ITS Heartland webinar on CV and AV impacts on TSMO
- 3/15 – Ray Webb met with Rogers, AR staff and NW Arkansas Regional Planning Commission
- 3/19 – OGL staff participated in the ATSPM UDOT developer/user webinar
- 3/20 – OGL staff participated in an Econolite Centracs SPM webinar
- 3/22 – Barry Viss and Chris Jenkins attended KCITE APS & FYA training
- 3/29 – Barry Viss attended the MARC Regional Travel Model Valuation

Additional Information
- OGL staff set up and scheduled the Miovision equipment to conduct 17 counts. Most of these were 13-hour turning movement counts and the remaining were 24-hour ADT counts. Before travel time runs were done on Douglas St before bridge construction began.
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 1st Quarter of 2018:
   - All Pod routers, switches, and core network equipment was upgraded to the newest version of firmware
   - 3/13 – TransSuite was updated to 17.6.5
Interagency Coordination

During the 1st Quarter, OGL staff participated in the following interagency activities:

- 1/2, 1/8, 1/16, 1/22, 1/29 – Barry Viss worked from the KCMO operations center
- 1/3 – OGL and Lee’s Summit staff met to discuss controller operations and upgrade costs
- 1/10, 1/24, 2/7, 2/21, 3/7, 3/21 – OGL and Olsson held bi-weekly calls for signal timing work status
- 1/10 – Ray attend the Regional ITS Architecture meeting
- 1/11 – OGL, MoDOT and TREKK staff met to discuss the OGL CMAQ project
- 1/11 – Ray Webb attended the I-70 Lewis and Clark traffic control meeting
- 1/12, 3/14 – Barry Viss and Ray Webb attended monthly core team meeting for M152 bridge project in Liberty, MO
- 1/12 – OGL and Liberty, MO staff met discuss OGL operations and upcoming construction projects
- 1/12 – Chris and Ray attended meeting for the Bonner Tower communications with 911 staff and KDOT
- 1/18 – Ray attended the KCITE followed by a tour of the Olathe TOC along with KC Scout staff
- 1/18, 2/15, 3/15 – OGL staff participated in the OGL Regional TransSuite Monthly Status meeting
- 1/22 – OGL staff attended the OGL Steering Committee Meeting
- 1/23 – OGL, Iteris, MoDOT, & KC Scout staff met to discuss ITS Architecture Update and Review
- 1/26, 2/23, 3/1, 3/9, 3/21 – OGL, MoDOT, and KC Scout staff met to discuss upcoming 2018 signal project and network communications configuration
- 1/26 – OGL and Olsson staff met to discuss incident management timing plans
- 2/5, 2/12, 2/20, 2/26 - Barry Viss worked from the KCMO operations center
- 2/2, 2/27 – OGL, Olsson, OP, and Olathe met to discuss OGL performance management
- 2/5 – OGL, MARC 911, and KDOT staff had a conference call to discuss possible radio installation/upgrade at the KDOT Bonner Springs communications tower
- 2/6 – OGL and KC Scout staff met to review operations after major incident closed I-35
- 2/13 – Ray attended KDOT’s District 1 Annual Construction meeting, presented on OGL
- 2/14 – OGL, MoDOT, KC Scout, consultants, and contractors met to discuss upcoming I435 Design-Build project
- 2/15 – Ray participated in MARC Automated Vehicle meeting
- 2/15 – Ray participated in the Swope Prospect Connectivity Study Project Management Meeting
- 2/15 – Barry and MODOT staff met to discuss proposed signing striping and signals for the new M-152 bridge project
- 2/22 – Chris Jenkins attended KCMO City Manager’s Camera Coordination meeting
- 2/23 – OGL staff attended pre-con meeting for the Douglas St bridge project
2/26 – Ray attended the KC Regional ITS Architecture committee meeting
2/27 – OGL and Leawood staff discussed possible CMAQ application project
2/27 – OGL and KCK staff discussed possible CMAQ application project
2/28 – OGL and MoDOT staff met to discuss sign and signal layout for M152 bridge project
3/5, 3/12, 3/19, 3/26 – Barry Viss worked from the KCMO operations center
3/5-9 – Ray attended the FAU training on Adaptive Traffic Control Systems
3/13 – OGL staff met with KCK EOC staff to tour roof of KCK City Hall about installation of wireless radio for improved Fairfax district communications
3/14 – OGL staff met with Jason Sims with Kapsch and 2 individuals from Spain touring TMCs in the US and discussed signal operations, software, etc.
3/15 – Ray presented on regional traffic signal coordination at the NW Arkansas Regional Planning Commission meeting in Rogers Arkansas
3/20 – OGL, OP, and KCMO staff participated in a Centracs SPM Demo and conference call
3/26 – Des Moines, IA and Iteris staff met and toured the OGL offices
3/29 – OGL, KCMO, & TREKK Staff met to discuss design of CMAQ project
3/29 – Chris Jenkins attended KCMO City Manager’s Camera Coordination meeting
Quarterly Repair Ticket Statistics by Month

In the 1st Quarter of 2018, OGL staff created and responded to 5 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 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 are representing the different type of network connections. A black line represents a 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.

![Pie chart showing severity levels](image)

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.

![Bar chart showing repair tickets by severity](image)
Summary of Critical Events
The OGL staff responded to 0 critical events during the 1st Quarter of 2018.

There was one critical event that wasn’t entered into the system, but not associated with OGL equipment, but was critical to OGL communications. The fiber optics cable that OGL communications traverses through Overland Park, KS was hit and damaged by a contractor. Once identified, OP, Lenexa, and OGL staff began working to get communications working again using an alternate path between the Sheraton and Lenexa. This new path was identified, tested, configured, and connected after a short time. This new path will also stay in place so once the damaged cable is repaired, there should be a redundant connection to Lenexa.

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 for 2018 hasn’t begun yet.

CCTV Operations
As part of the MO American Recovery and Reinvestment Act project in 2010 and the 2015 OGL CCTV and Network Enhancement project, 118 CCTV cameras were constructed at critical locations throughout the region. Since final installation, these cameras have routinely proven valuable to manage traffic and signal timing. During times of timing plan implementation, construction and detours, OGL staff, operations staff and signal electricians have routinely used these cameras to observe traffic and signal operations. Through the use of CCTV combined with TransSuite, malfunctions can be investigated remotely for a variety of issues including detection problems and timing concerns saving time investigating the issue in the field.

A bridge rehab project was started by MoDOT on Douglas St in Lees Summit in an area that has existing CCTV coverage. These cameras have been used to respond to incidents or timing changes in the construction zone. At different times during construction, I-470 was closed for bridge demolition. This and surrounding cameras proved extremely useful to monitor traffic conditions and signal operations.
### Traffic Signal Event Tracking

#### SharePoint 2018, 1st Quarter

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<th>Count</th>
<th>Issue</th>
<th>Jurisdiction</th>
<th>Count</th>
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**Total**: 305
MARC’s OGL program operates from STP Federal revenues on a reimbursement basis from MoDOT and KDOT who administer the funds. The local match for 2017-2018 is collected annually by agreement every two years which is the general time frame of the two year MoDOT and KDOT two year agreements.

Local funds are combined with federal STP funds to comprise the total operations budget. The current federal funds to local funding split is 50/50. Reimbursement of federal funds from MoDOT and KDOT are an 80% federal, 20% local rate. In Kansas, all agreements are in the form of a single combined agreement for the 15 agencies. The agreements had been by agency till the 2017-2018 agreement that is now combined into a single agreement due to Kansas statues that were to require an inter-local agreement but was later changed due to an updated statute however the single agreement remains.

Notes on the budget summary:

- All but one Missouri side agreement has been executed.
- All but one cities funds have been collected for 2017. 2018 funds have been collected from KCMO only
- The budget is for two years starting April 2017
- The % variance column can be used to compare variance to the current data of 50% (12 of 24 months) progress.
- Funds collected for the current period minus the applied 20% match results in $1,234,232.27 remaining local funds
- Local funds remaining to be billed for 2018 is $405,200
- Remain STP funds are $136,889 (KDOT $50,492, MoDOT $86,397)
- At an average monthly expenses of $130,802, federal funds will be depleted by the end of April or early May

Scenario 1*:
Invoice remaining 2018 local funds of $405,200
Assuming 2019 STP funds are not started until January 2019, at that time the local fund balance is projected to be $323,000. With the 2018 invoice $405,200, the local balance would be approximately $728,200.

Scenario 2*:
Do not invoice remaining 2018 local funds of $405,200
Assuming 2019 STP funds are not started until January 2019, at that time the local fund balance is projected to be $323,000.

*These estimate are based on historical averages and projections of expenses and will vary and should be used for approximation only.

Considerations:
The current work to review the regional ATMS software requirements will be getting underway and within 1-2 years the region could face expenses related to ATMS software. Currently that expense is not budgeted and could be anywhere from $0 to $500,000 or more. The original ATMS software initial cost was $1.2M.

Recommendation: Scenario 1
Due to several agencies having concerns of not being billed which could pose budget issues, scenario 1 is recommended. It continues the ongoing annual invoice and does not leave a gap and addresses all cities equally. Overall this option should still reduce the local balance as compared to the current balance.
### Mid-America Regional Council (MARC)
**MO & KS OGL Operations 65210**
**2-Year Budget Period Beginning April 1, 2017**
**Report ending March 31, 2018**

#### Expenses

<table>
<thead>
<tr>
<th>Item</th>
<th>Two-Year Program Budget</th>
<th>Cumulative To Date</th>
<th>Balance (yet to be spent)</th>
<th>% Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries, Fringe Benefits, Indirect Costs</td>
<td>$1,099,716</td>
<td>$532,344.41</td>
<td>$567,371.59</td>
<td>48.4%</td>
</tr>
<tr>
<td>Consultants/Contracted Services</td>
<td>$865,636</td>
<td>$578,087.71</td>
<td>$287,547.29</td>
<td>66.8%</td>
</tr>
<tr>
<td>Legal Fees</td>
<td>$10,000</td>
<td>$5,264.92</td>
<td>$4,735.08</td>
<td>52.6%</td>
</tr>
<tr>
<td>Meeting/Travel (In/Out of Region &amp; Registration)</td>
<td>$16,200</td>
<td>$5,135.97</td>
<td>$11,064.03</td>
<td>31.7%</td>
</tr>
<tr>
<td>Rent</td>
<td>$15,248</td>
<td>$7,420.76</td>
<td>$7,827.24</td>
<td>48.7%</td>
</tr>
<tr>
<td>Telephone/Maint. (Internet, mobile, ConferSave, USB modem)</td>
<td>$48,000</td>
<td>$18,200.13</td>
<td>$29,799.87</td>
<td>37.9%</td>
</tr>
<tr>
<td>Insurance</td>
<td>$8,000</td>
<td>$3,603.00</td>
<td>$4,397.00</td>
<td>45.0%</td>
</tr>
<tr>
<td>Postage</td>
<td>$200</td>
<td>$31.72</td>
<td>$168.28</td>
<td>15.9%</td>
</tr>
<tr>
<td>Equipment/Computer/Supplies</td>
<td>$249,000</td>
<td>$194,125.99</td>
<td>$54,874.01</td>
<td>78.0%</td>
</tr>
<tr>
<td>Service Agreements</td>
<td>$2,000</td>
<td>$565.46</td>
<td>$1,434.54</td>
<td>28.3%</td>
</tr>
<tr>
<td>Automobile Gas/Maintenance</td>
<td>$16,000</td>
<td>$4,024.68</td>
<td>$11,975.32</td>
<td>25.2%</td>
</tr>
<tr>
<td>Professional Memberships</td>
<td>$1,000</td>
<td>-</td>
<td>$1,000.00</td>
<td>0.0%</td>
</tr>
<tr>
<td>Training</td>
<td>$3,000</td>
<td>-</td>
<td>$3,000.00</td>
<td>0.0%</td>
</tr>
<tr>
<td>Utilities</td>
<td>$10,000</td>
<td>$5,082.97</td>
<td>$4,917.03</td>
<td>50.8%</td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$2,344,000.00</strong></td>
<td><strong>$1,353,888.72</strong></td>
<td><strong>$990,111.28</strong></td>
<td><strong>57.8%</strong></td>
</tr>
</tbody>
</table>

#### Revenues (Reimbursement from DOTs at 80/20)

<table>
<thead>
<tr>
<th>Item</th>
<th>Two-Year Program Budget</th>
<th>Cumulative To Date</th>
<th>Balance (yet to be collected)</th>
<th>% Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>STP Funding, KDOT</td>
<td>$450,000.00</td>
<td>$399,508.21</td>
<td>$50,491.79</td>
<td>88.8%</td>
</tr>
<tr>
<td>STP-Funding, MoDOT</td>
<td>$770,000.00</td>
<td>$683,602.79</td>
<td>$86,397.21</td>
<td>88.8%</td>
</tr>
<tr>
<td>Local Govt Rev-Required 20% match of $1,525,000</td>
<td>$305,000.00</td>
<td>$270,777.72</td>
<td>$34,222.28</td>
<td>88.8%</td>
</tr>
<tr>
<td><strong>Total Revenues for Federal Grant</strong></td>
<td><strong>$1,525,000.00</strong></td>
<td><strong>$1,353,888.72</strong></td>
<td><strong>$171,111.28</strong></td>
<td><strong>88.8%</strong></td>
</tr>
</tbody>
</table>

#### Local Government Balances:

<table>
<thead>
<tr>
<th>Item</th>
<th>Two-Year Program Budget</th>
<th>Cumulative To Date</th>
<th>Balance (yet to be collected)</th>
<th>% Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds available from previous budgets</td>
<td></td>
<td>$786,209.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funds collected for current budget period</td>
<td></td>
<td>$718,800.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total available</strong></td>
<td></td>
<td>$1,505,009.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount applied for current budget period (see above)</td>
<td></td>
<td>(270,777.72)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Ending Balance March 31, 2018**  
$1,234,232.27

**Reserve/Emergency (local funds)**  
$300,000.00
ISSUE
Report on Adaptive Traffic Signal Control (ATSC) Systems as related to the ATSC course with FAU.

BACKGROUND
The week of March 5th, Ray attended the Florida Atlantic University course on ATSC Systems. The course covered definition, overview of technologies, evaluation and performs measures, infrastructure, criteria for selection and a high level review of several systems and in-depth review of 8 systems. The eight systems were demonstrated in a hand on lab environment. Materials provided included a large three ring binder and an excel spreadsheet that can assist in selecting systems requirement. Ray will briefly review the course. Below is a map showing the ATSC systems deployed and links to FAU info.
http://latom.eng.fau.edu/research-reports/

ATCS COVERED IN TRAINING

- ACDSS (KLD Engineering & TransCore)
- ACS Lite (Siemens)
- Balance/Epiccs (PTV AG)
- Centracs Adaptive (Econolite)
- InSync (Rhythm Engineering)
- ITACA (Schneider Electric)
- Kadence (Kimley-Horn Associates)
- LADOT ATCS (Not commercially available)
- Marlin (Peek)
- MAC (Delcan)
- MaxAdapt (Intellilight)
- MOTION (Siemens)
- NWS Voyage (Northwest Signal/Peek)
- OPAC (Schneider Electric)
- QuicTrac (McCain)
- RHODES (Not commercially available)
- SCATS (TransCore)
- SCOOT (Siemens)
- SURTRAC (Rapid Flow Technologies)
- SynchroGreen (Trafficware)
- Transparity (McCain)
- UTOPIA (Swarco)
- Xelligent (Xelligent)
ISSUE
Kansas City Regional Purchasing Cooperative Program info will be provided and noted how local agencies can utilize these contracts

BACKGROUND
Operation Green Light (OGL) program works with MARC’s KCRPC program

The Kansas City Regional Purchasing Cooperative (KCRPC) is a local government purchasing cooperative. It is a partnership of the Mid-America Regional Council, the Mid-America Council of Public Purchasing (MACPP) and local governments. The KCRPC is a purchasing resource for local governments. MARC operates the KCRPC, and Program Coordinator Rita Parker is responsible for its day-to-day activities.

The KCRPC is managed under the guidance of a steering committee, composed of city and county managers and purchasing officials who provide policy guidance, and an advisory committee of public purchasing officials who advise on specific programs and make specific recommendations on bids and contracts. The KCRPC is a work in progress intended to help local governments obtain better prices and reduce administrative costs.

OGL program partners can use these contracts if their local procurement regulations allow.

Examples of contracts

Network communications:
- This contract is led by the OGL program. It has been bid and allows for region use. It is a labor contract that is used to maintain the OGL communications network. Electronic Technologies has this contract.

Surveillance Cameras:
- There are two contracts for a variety of equipment from wireless radios, switch and a number of other items. ETI and C&C are two contracts that provide a list of what equipment can be purchase and the % discount from list price.

Vehicles:
- A regional contract for purchase of cars and trucks allows for purchase from a variety of car dealers depending on the make and model.

Others:
There is a large number of available products and services that can be purchased using the existing KCRPC databases. Call Rita Parker or search the database for a list of available contracts.
TOPIC
Planning for Shared Best Practice Forum for Traffic Signal Detection

BACKGROUND
The OGL Steering Committee has discussed traffic signal detection issues on several occasions. Since the issue of detection failures and the maintenance of detection issues is of regional interest, it was suggested in the January meeting to organize a regional forum to discuss detection issues, operations and maintenance.

PURPOSE:
Generally a 2-3 hour forum would:
Discuss what detection agencies use and why
Discuss issues agencies have operating signal detection and how they maintain
What issues do agencies find related to signal detection problems
What advancement in signal detection are agencies using
How are agencies maintaining, preventive maintenance and what unique fixes have worked.

OPTIONS FOR A FORUM:
Westview room – (seats around 20 people plus a few around the sides)
  May 1, AM open
  May 7, AM open
  May 10, AM open (ks stp priorities committee 9AM)
  May 14 open except for 12-1
  May 17, open

Board room (normal ogl steering meeting room)
  May 1 open
  May 4 AM open till 12
  May 7, open after 10
  May 14 AM open
  May 16 open

RECOMMENDATION
OGL Steering committee to suggest dates for this forum and suggest agenda items.