# Chicago Metropolitan Agency for Planning 

## MEMORANDUM

To: CMAQ Project Selection Committee<br>From: Regional Transportation Operations Committee<br>Date: June 22, 2011<br>Re: (Draft) Project Packages

"GO TO 2040 recommends that the region prioritize investments toward strategic enhancements and modernization of the transportation system. If carefully targeted, these types of projects will improve access, mobility, and the overall experience for all users." GO TO 2040 P 272

The MPO Policy Committee requested that the Regional Transportation Operations Coalition identify projects of particular significance in advancing the goals, objectives and action areas of the GO TO 2040 Comprehensive Regional Plan. Most of these projects were identified from among improvements submitted during the regular call for projects for the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. In addition, a program of operational improvements for broad implementation is suggested. It is anticipated that one or more regional indicators would be improved by the projects. The recommended projects will provide a coherent, identifiable achievement over the five-year time frame, i.e. a focused program.

The Regional Transportation Operations Coalition identified 4 key groups of projects:
System Modernization and Intelligent Transportation Systems (ITS) are projects which will improve the information available to highway system managers and to travelers. These projects advance the development of the region's Intelligent Transportation System (ITS) by adopting best practices in new technologies. GO TO 2040 supports advancing ITS projects of all types.

Corridor Recommendations are multiple projects which should be implemented together in specific arterial corridors to provide more focused and discernable benefits to specific roadways.

Special Projects are unique projects the region's system operators identified as important for a variety of operational reasons.

The Operations Program consists of strategies and projects which the RTOC believes should be undertaken by the region, and supported by CMAQ or other funding, but which were not yet put forward as project applications.

## System Modernization and Intelligent Transportation Systems (ITS)

> "Improvements related to Intelligent Transportation Systems (ITS) are also considered strategic enhancements and modernization. These include the use of real-time traveler information for both highway and transit, signal improvements such as interconnects or Transit Signal Priority (TSP) systems, traffic management centers, and many others. (...) GO TO 2040 supports continuing to advance ITS projects of all types, and recommends a continued role for CMAP in coordinating these efforts regionally. "GO TO 2040 p 272

This package of projects provides congestion relief by improving the system through better information and modernized operations. Better information allows better management of incidents, reducing incident delay, and allows the dissemination of better traveler information. Except for RTA's implementation of a regional system of Transit Signal Priority corridors, the projects in this package were selected from among traffic flow improvement proposals submitted through the call for CMAQ projects. This list of projects can be expanded by implementing more of the packages included in the region's ITS Plan and in the Regional ITS Architecture.

A few technologies deserve special mention.

1. Implementation of the roadside equipment needed for development of a regional Transit Signal Priority network results in a clear reduction in traffic congestion on the system's roadways.
2. Adaptive signal control proposals will improve the real-time capability of signal systems to be resilient in various traffic conditions. Adaptive control technologies typically include improved detection of traffic conditions and improved algorithms for managing traffic in congested conditions.
3. Several improvements in this package involve variable message signs (VMS) on arterial highways. Such VMS systems, often seen on the expressway system in the past, are now being deployed to provide better en-route travel information, often at key decision points.
4. Finally, the package includes better information systems for arterial roadways. Such systems can provide information to central traffic management centers; which can then coordinate traffic and incident response with other agencies and distribute information via web services or the Gateway Traveler Information System.

The following package totals approximately $\$ 74,315,010$ in federal funds.

| CMAQ ID | Sponsor | Facility | Total | Federal | Description | Program <br> Year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SI09123545 | Aurora | Eola Rd from E New York St to Wolf's Crossing Rd | \$1,834,500 | \$1,467,600 | Signal interconnect and modernization of 9 signals | 2013-2014 |
| SI01123520 | CDOT | Ashland Av from Roosevelt Rd to Cermak Rd/Blue Island Av | \$2,300,000 | \$1,880,000 | 7 signals on Ashland; cameras, 1 VMS | 2013-2015 |
| SI01123522 | CDOT | IL 19/Irving Park Rd from Western Av to US 41/Lake Shore Dr | \$1,160,000 | \$948,000 | Upgrade signal interconnect to Adaptive Signal Control 13 intersections | 2012-2014 |
| SI01123523 | CDOT | US 41/Lakeshore Dr and Columbus Dr from Monroe Dr to US 41/Waldron Dr ( 1600 S) | \$1,180,000 | \$944,000 | Upgrade signal interconnect to Adaptive Signal Control 11 intersections | 2012 |
| SI01123519 | CDOT | Cermak Rd from <br> Ashland Av to MLK <br> Jr Dr | \$3,275,000 | \$2,080,000 | 15 signals on Cermak; cameras | 2012-2013 |
| SI01123521 | CDOT | Ashland Av from <br> Devon Av/Clark St to <br> Fullerton <br> Av/Ashland Av | \$5,225,000 | \$3,920,000 | 7 signals on Ashland. Includes cameras and VMS | 2012-2014 |
| OT01123611 | CDOT | Arterial VMS <br> Traveler Information System, Phase I | \$1,641,000 | \$1,313,200 | Up to 15 permanent and 15 portable variable message signs. | 2012-2014 |
| OT01123612 | CDOT | Arterial Detection <br> System <br> Improvements | \$1,219,000 | \$975,200 | Installation of various technologies to collect real-time travel performance data at 130 Chicago arterial street locations. The data will be integrated with the Gateway and provided to the public. | 2012-2016 |
| II10123765 | Cook <br> County <br> Highway <br> Department | Lake Cook Rd at Weiland Rd | \$5,231,000 | \$4,185,000 | Additional turn lanes and widening. Traffic signal modernization and integration into Lake County Passage. Funding for construction only. | 2015 |
| II10123783 | Cook <br> County <br> Highway <br> Department | Lake Cook Rd at Buffalo Grove Rd | \$7,030,000 | \$5,113,000 | Additional turn lanes and widening. Traffic signal modernization and integration into Lake County Passage. | 2016 |


|  |  |  |  | Funding for <br> construction only. |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| SI08123515 | DuPage <br> County <br> DOT | DuPage Co Central <br> Signal System - Phase <br> I | $\$ 895,000$ | $\$ 716,000$ | Phase 1 North <br> DuPage area. 55 <br> intersections. <br> Includes video | $2012-2013$ |
| SI08123516 | DuPage <br> County <br> DOT | DuPage Co Central <br> Signal System - Phase <br> II | $\$ 846,000$ | $\$ 676,800$ | Phase 2 North <br> DuPage area. <br> Expand to 77 signals. <br> Includes video. | 2013 |


| SI10123527 | Lake County DOT | Cedar Lake Rd from Rollins Rd to S Rosedale Ct | \$930,070 | \$744,060 | Interconnect to other signal systems along Cedar Lake Rd and connected to PASSAGE. 1 signal modernized. VIDEO | 2012-2013 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SI10123528 | Lake County DOT | Waukegan Rd from Casimir Pulaski Dr to Norman Dr South | \$2,096,120 | \$1,676,900 | Inconnect to other signal systems along IL 43 and be connected to PASSAGE. 3 signals modernized. VIDEO | 2013-2014 |
| SI10123818 | Lake County DOT | Sunset Av, Glen Flora Av, Jackson St, 10th St and 14th St | \$2,953,970 | \$2,363,180 | Signal interconnect for 5 roads and signal modernization at two intersections. Also connect to PASSAGE; VIDEO | 2014-2015 |
| SI04123542 | Oak Park | Village of Oak Par <br> Traffic Signal <br> Management System | \$130,400 | \$104,320 | replacement of system software and network server for Traffic management system; includes E-2, so C in 2012 is unlikely | 2012 |
| TI13123796 | RTA | Regional Transit <br> Signal Priority <br> Integration Plan, Five <br> Year Implementation: <br> Priority Corridors | \$40,000,000 | 32,000,000 | Eng and construction requested FFY 2012 | 2012 |
| Total |  |  | \$94,556,750 | \$74,315,010 |  |  |

## Corridor Recommendations

"GO TO 2040 recommends that the region prioritize investments toward strategic enhancements and modernization of the transportation system. If carefully targeted, these types of projects will improve access, mobility, and the overall experience for all users." GO TO 2040 p. 272

GO TO 2040 specifically recommends implementing roadway improvements, including projects that add lanes to arterials or other streets, addition of turn lanes, access management programs, intersection improvements, new or improved interchanges, and new or improved bridges. The following package of projects consists of targeted arterial improvements where a number of investments in a specific corridor are under consideration, often by different jurisdictions. When taken together, a group of projects can substantially improve the operation of an entire corridor, as Strategic Regional Arterial (SRA) improvements were initially intended. Several such packages were identified.
The RTOC further recommends that if these corridor improvements are recommended by the CMAQ project selection committee (PSC), the PSC will consider a policy of requesting that implementers specifically consider accommodations for intersection far-side bus stops to improve both transit and intersection operations.
The following package totals approximately $\$ 68,802,520$ in federal funds.

## Recommended Arterial Corridors

| Identified Corridors | Project Cost | Federal Request | \# of Projects |
| :--- | ---: | ---: | ---: |
| Lake-Cook/Dundee Corridor | $\$ 27,883,000$ | $\$ 21,352,000$ | 11 |
| Fabyan Parkway/IL 38 Corridor | $\$ 20,185,000$ | $\$ 15,273,300$ | 6 |
| US 14/Barrington Road Corridor | $\$ 20,031,200$ | $\$ 11,865,000$ | 5 |
| IL 47 Corridor | $\$ 6,600,000$ | $\$ 5,280,000$ | 3 |
| US 6 Corridor | $\$ 4,400,000$ | $\$ 3,520,000$ | 2 |
| IL 59/US 20 Corridor | $\$ 4,280,000$ | $\$ 3,424,000$ | 5 |
| 55th Street Corridor | $\$ 3,885,000$ | $\$ 3,108,000$ | 3 |
| Butterfield/Roosevelt Corridor | $\$ 4,368,900$ | $\$ 2,452,220$ | 3 |
| Harlem Avenue Corridor | $\$ 1,700,000$ | $\$ 1,360,000$ | 2 |
| Pulaski Road Corridor | $\$ 1,460,000$ | $\$ 1,168,000$ | 2 |
| Total Corridor Recommendations | $\$ 94,793,100$ | $\$ 68,802,520$ | 42 |

## Lake-Cook/ Dundee Corridor


## Lake-Cook/ Dundee Corridor (Continued)

| CMAQ ID | Sponsor | Location | Total | Federal | Description | Program Year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| II02123454 | IDOT | IL 68/Dundee Rd at Landwehr Rd | \$720,000 | \$576,000 | Additional turn lanes. | 2015-2016 |
| II02123470 | IDOT | IL68/Dundee Rd at Pfingsten Rd | \$1,000,000 | \$800,000 | Additional turn lanes. | 2015-2016 |
| II10123783 | Cook County Highway Department | Lake Cook Rd at Buffalo Grove Rd | \$7,030,000 | \$5,113,000 | Additional turn lanes and widening.Traffic signal modernization and integration into Lake County Passage.Funding for construction only. | 2016 |
| II10123765 | Cook County Highway Department | Lake Cook Rd at Weiland Rd | \$5,231,000 | \$4,185,000 | Additional turn lanes and widening.Traffic signal modernization and integration into Lake County Passage.Funding for construction only. | 2015 |
| II10123764 | Cook County Highway Department | Lake Cook Rd at IL 83/McHenry Rd | \$4,272,000 | \$2,974,000 | Additional turn lanes and widening.Traffic signal modernization and integration into Lake County Passage.Funding for construction only. | 2016 |
| Corridor Total |  |  | \$27,883,000 | \$21,352,000 |  |  |

Fabyan Parkway / IL 38 Corridor


## US 14 / Barrington Road Corridor



## IL 47 Corridor



## US 6 Corridor



## IL 59 / US 20 Corridor



## 55 ${ }^{\text {th }}$ Street Corridor



## Butterfield / Roosevelt Corridor

|  |  | d. / 22nd Street |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMAQ ID | Sponsor | Location | Total | Federal | Description | Program Year |
| II08123475 | IDOT | IL 38/Roosevelt Rd at Ardmore Ave | \$700,000 | \$560,000 | Additional turn lanes. | 2015-2016 |
| II08123808 | Elmhurst | IL 56/Butterfield Rd at Commonwealth Ln | \$1,649,100 | \$377,180 | Additional turn lanes and signal modernization. CMAQ for constr. | 2012 |
| II08123642 | Elmhurst | IL 56/Butterfield Rd. at York St. | \$2,019,800 | \$1,515,040 | Additional turn lanes | 2012-2016 |
| Corridor Total |  |  | \$4,368,900 | \$2,452,220 |  |  |

## Harlem Avenue Corridor



## Pulaski Road Corridor

|  | $1106123657$ $110612345$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CMAQ ID | Sponsor | Location | Total | Federal | Description | Program Year |
| H06123657 | Evergreen Park | Pulaski Rd. at 99th St. | \$410,000 | \$328,000 | Protected left turn and signal modernization | 2012 |
| I06123451 | IDOT | Pulaski Rd at 115th St | \$1,050,000 | \$840,000 | Additional turn lanes and signal modernization | 2015-2016 |
| Corridor Total |  |  | \$1,460,000 | \$1,168,000 |  |  |

## Special Projects

| CMAQ ID | Sponsor | Location | Total | Federal | Description | Program Year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| II07123506 | IDOT | IL 394 at Sauk Trail | \$810,000 | \$648,000 | Additional turn lanes. | 2012-2013 |
| II12123794 | Will County Department of Highways | CH 16/Bell Rd at CH 37/143rd St | \$12,980,000 | \$10,384,000 | Additional through and turn lanes. <br> Construction only | 2015 |
| II12123489 | IDOT | US 30/Lincoln Hwy at I-55 Ramps | \$1,000,000 | \$800,000 | Additional turn lanes on ramps. <br> Construction only | 2014 |
| II11123459 | IDOT | IL 173 at Wilmot Rd | \$3,200,000 | \$2,560,000 | Roundabout | 2013-2014 |
| BP09123715 | City of Elgin | Fox River Trail over Fox River | \$2,377,000 | \$1,902,000 | Construction of a bike path and bicycle/pedestrian bridge. May include a biosolids transfer line. | 2012-2015 |
| BP03123695 | Village of Elk Grove Village | Overpass at IL 72 Higgins Road in Busse Woods (Elk Grove Village). | \$4,925,000 | \$3,495,000 | Bicycle overpass at IL $72$ | 2011-2015 |
| II05123754 | Cicero | Cermak Rd at 49th Av and 50th Av | \$1,217,900 | \$947,280 | Additional turn lanes and signal modernization | 2012 |
| Total |  |  | \$26,509,900 | \$20,736,280 |  |  |

Justification (can we complete this table on Monday)

| CMAQ ID | Sponsor | Location |  |
| :--- | :--- | :--- | :--- |
| II07123506 | IDOT | IL 394 at Sauk Trail | This location is at the end of the limited access system and is a dangerous location. |
| II12123794 | Will County <br> Department of <br> Highways | CH 16/Bell Rd at CH <br> $37 / 143$ rd St |  |
| II12123489 | IDOT | US 30/Lincoln Hwy at <br> I-55 Ramps |  |
| II11123459 | IDOT | IL 173 at Wilmot Rd |  |
| BP09123715 | City of Elgin | New trail bridge over <br> Fox River | This project has is expected to include a biosolids pipeline that will reduce the need for truck trips <br> between two separate facilities of the Fox River Water Reclamation District |
| BP03123695 | Village of Elk Grove | Bikeway overpass at <br> IL 72 Higgins Road in <br> Busse Woods (Elk <br> Grove Village). | Substantial conflicts exist between pedestrians and bicyclists and motorists at this location. <br> Delay from this conflict backs up onto I-290 mainline. Therefore a grade separation here would <br> reduce danger for all users. |
| II05123754 | Cicero | Cermak Rd at 49th Av <br> and 50th Av | (From cta) |

## Operations Program

The region's CMAQ program did not receive project submittals addressing freeway congestion. The following four priority areas should be used as a basis for operations program development over the next several years.

Top Priority: FY 2012 CMAQ Program Development:
Data Integration: Public Safety Answering Point (PSAP)/ Traffic Management Center (TMC)
"The PSAP often serves as the point of origin for Traffic Incident Management (TIM)-related information exchange and communication since it receives and processes 911 calls and other requests for assistance, and serves as the main dispatch center for law enforcement, fire, and emergency medical services. Computer Aided Dispatch (CAD) is the PSAP's primary information system and most common means used to manage and dispatch multiple response vehicles from the PSAP. When a PSAP operator/dispatcher receives a call for service, the information is entered into the CAD system.

A growing number of jurisdictions are integrating PSAP CAD systems into Traffic Management Center operations to facilitate the real-time exchange of incident data."
http://ops.fhwa.dot.gov/eto_tim_pse/publications/timhandbook/chap4.htm

Our region's response to incidents and the resulting congestion and safety hazards they cause will be improved with better flow of information to traffic management centers about incidents as they occur. This is a complicated undertaking which will require significant investments in building relationships with the PSAP operators and system operators, detailed study of how the desired information flow can be accomplished, and actual implementation of the information system.

## Second Priority:

## Incident Management Programs, including arterial incident management

- "Incidents are estimated to cause more than 50 percent of total delay experienced by motorists in all urban areas. Of this, 25 percent is caused by traffic incidents such as crashes, stalled vehicles, roadway debris, and spilled cargo.
- Secondary crashes are estimated to cause 18 percent of all fatalities on freeways.
- In 2002, approximately 50 percent of all police, Emergency Medical Services (EMS) personnel, and firefighter fatalities occurred as a result of transportation incidents (either accidental or "struck-by" incidents or crashes in pursuit or other line-of-duty activities).
- Between 1997 and 2006, 17 percent of the accidental law enforcement deaths were the result of "struck-by" motor vehicle incidents occurring during activities such as traffic stops, roadblocks, directing traffic and assisting motorists."
http://ops.fhwa.dot.gov/eto_tim_pse/publications/timhandbook/chap1.htm\#sec1-4

This project includes further integrating incident data, and coordination among responding agencies. Best practices have been developed and may be a resource for highway operations and incident response personnel. Many of these practices are focused on preventing secondary incidents in the course of daily highway operations.

Among the areas of most concern are those related to handling highway fatalities. These tragedies require a response by a medical examiner or coroner (depending on the jurisdiction), in support of a death investigation. These may take hours and result in further incidents, including additional fatalities. RTOC wishes to pursue resolution of the interests of all stakeholders in these situations. This may require closer coordination or even new legislation regarding facility closures.

Third Priority:
Traveler Information (VMS, Web sites, HAR, etc.)
Traffic Management (Detection/Sensors)

## Fourth Priority:

Speed Harmonization
(These will need additional write-up consistent with the presentation on May 19).

