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#### **MEMORANDUM**

To: CMAQ Project Selection Committee

From: Regional Transportation Operations Committee

**Date:** June 22, 2011

**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 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 Ashland Av to MLK Jr Dr	\$3,275,000	\$2,080,000	15 signals on Cermak; cameras	2012-2013
SI01123521	CDOT	Ashland Av from Devon Av/Clark St to Fullerton Av/Ashland Av	\$5,225,000	\$3,920,000	7 signals on Ashland. Includes cameras and VMS	2012-2014
OT01123611	CDOT	Arterial VMS 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 System 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 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
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.	2016

					Funding for	
					construction only.	
SI08123515	DuPage	DuPage Co Central	\$895,000	\$716,000	Phase 1 North	2012-2013
	County	Signal System - Phase	, , , , , , , , , , , , , , , , , , , ,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DuPage area. 55	
	DOT	I			intersections.	
					Includes video	
SI08123516	DuPage	DuPage Co Central	\$846,000	\$676,800	Phase 2 North	2013-2014
	County	Signal System - Phase			DuPage area.	
	DOT	II			Expand to 77 signals.	
					Includes video.	
SI08123517	DuPage	DuPage County	\$1,325,000	\$980,000	Phase 3 North	2014-2015
	County	Central Signal			DuPage area.	
	DOT	System - Phase III			Expand to 108	
					signals. Includes	
					video	
SI10123560	Grayslake	Lake St from	\$675,180	\$540,140	Interconnect to other	2014-2015
		Washington St to			signal systems and	
		Belvidere Rd			connect to	
					PASSAGE; VIDEO	
SI09123533	Kane	CH 37/Stearns Rd	\$2,235,750	\$1,788,600	Adaptive signal	2013-2014
	County	from Randall Rd to			control, road	
	DOT	Kane/DuPage			weather information	
		County Line			system, dms, cctv,	
					and traffic data	
SI10123526	Lake	IL 120/Belvidere Rd	#2 204 140	¢1 01E 210	collectors 3 signal modernized	2014-2015
5110123526		from IL 134/Main St	\$2,394,140	\$1,915,310	and interconnect	2014-2015
	County DOT	to US 45			willconnect to	
	DO1	10 03 43			PASSAGE; VIDEO	
SI10123525	Lake	US 12/Rand Rd from	\$2,330,200	\$1,864,160	Interconnect to other	2014-2015
3110123323	County	IL 176 Ramps to	ψ2,330,200	φ1,004,100	signal systems along	2014-2015
	DOT	Milller Rd			U.S. Rte 12 and	
					upgrade other	
					signals. Also	
					connect to	
					PASSAGE; VIDEO	
SI10123531	Lake	Sheridan Rd from	\$3,852,290	\$3,081,830	Interconnect to other	2013-2014
	County	Wadsworth Rd to			signal systems along	
	DOT	Grand Av			IL 137 and signal	
					modernization. Also	
					connect to	
					PASSAGE; VIDEO	
SI10123524	Lake	IL 83 from IL 173 to	\$2,017,480	\$1,613,990	Interconnect to other	2013-2014
	County	Millstone Dr			signal systems along	
	DOT				IL 83 and connect to	
			<b>.</b>		PASSAGE; VIDEO	
DE10123576	Lake	Aptakisic Rd	\$488,270	\$390,610	Adaptive Signal	2012-2013
	County	Adaptive Traffic			Control on Aptakisic	
	DOT	Control			Rd between	
					Brandywyn Ln. to	
DE10122500	T al.	Cilman III II III 171	#1 <b>3</b> 01 300	#1 000 110	Parkway Dr.	2012 2012
DE10123580	Lake	Gilmer/Hawley/IL176	\$1,291,380	\$1,033,110	Adaptive Signal	2012-2013
	County	Adaptive Traffic			Control on Gilmer	
	DOT	Control			Rd between Freemont Center Rd	
					and Midlothian Rd	
	I	_1	L	1	and mudounan Ka	<u>I</u>

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 Traffic Signal 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 Signal Priority Integration Plan, Five Year Implementation: Priority Corridors	\$40,000,000 \$94,556,750	\$2,000,000 \$74,315,010	Eng and construction requested FFY 2012	2012

#### **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.

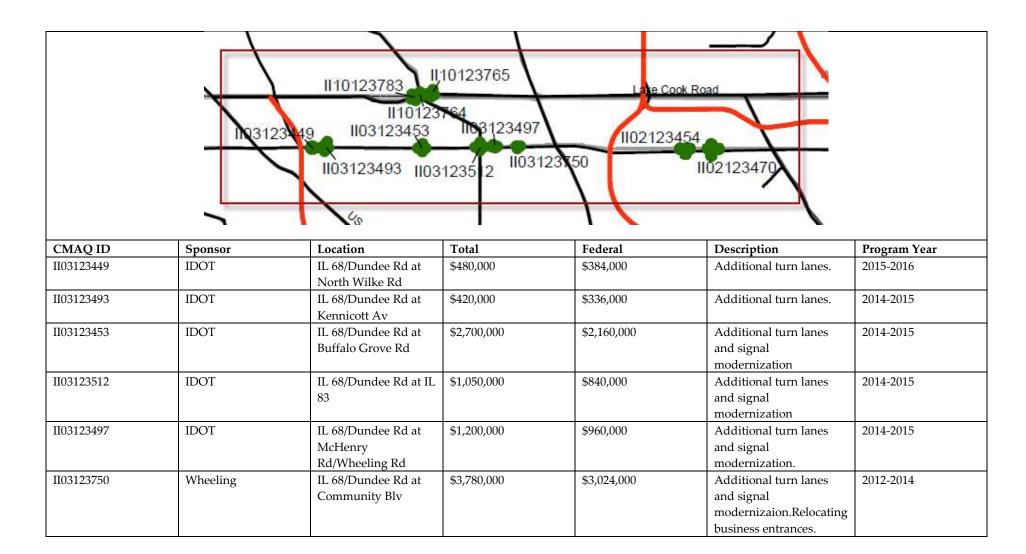
The RTOC further recommends that if these corridor improvements are recommended by the CMAQ project selection committee (PSC), the PSC will consider a policy of requesting that implementers specifically consider accommodations for intersection far-side bus stops to improve both transit and intersection 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

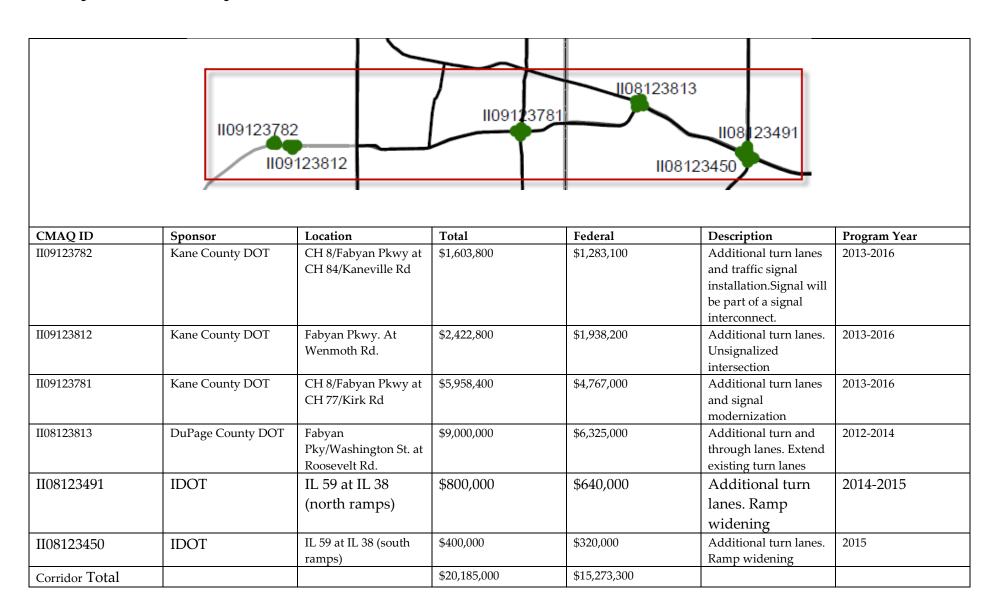
#### Lake-Cook/ Dundee Corridor



## **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
П10123783	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
Ш10123765	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



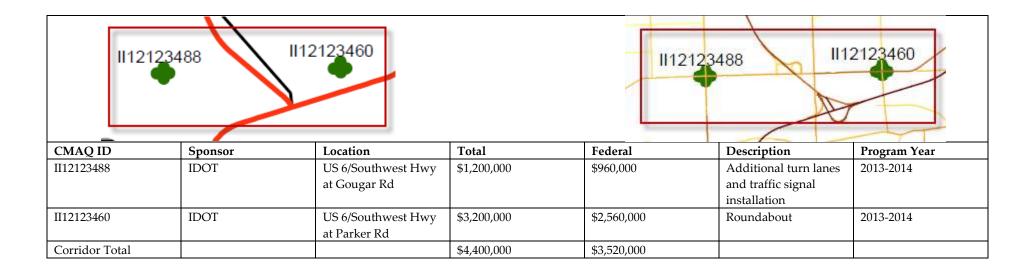
# **US 14 / Barrington Road Corridor**

9hwa.	CMAQ ID	Sponsor	Location	Total	Federal	Description	Program Year
			Hart Rd. at US			Additional turn	
II19123814		Lake County	14/W Northwest			lanes and signal	
	II10123814	DOT	Hwy	\$9,531,200	\$3,465,000	modernization	2012-2015
			IL 68/E Dundee				
<del>                                     </del>			Rd at S Barrington			Additional turn	
	II03123505	IDOT	Rd	\$720,000	\$576,000	lanes.	2014-2015
			IL 62/Algonquin				
			Rd at Barrington			Additional turn	
	II03123469	IDOT	Rd	\$600,000	\$480,000	lanes.	2015-2016
1103123505						Widening of	
						Barrington Rd	
7						from a 3-lane cross	
1100450400						section to 5-lane	
103123469						cross section along	
						3300 ft between IL	
						Rte 62 and	
BE03 <mark>12</mark> 3473						Mudhank	
T						Rd.Barringon Rd is	
						generally a 5-lane	
			Barrington Rd			cross section in	
, ,			from IL			this area with the	
IL 72 (h			62/Algonquin Rd			exception of this	
	BE03123473	IDOT	to Mudhank Rd	\$8,700,000	\$6,960,000	segment.	2015 - 2016
1			Barrington Rd at			Additional turn	
1103123503	II03123503	IDOT	Bode Rd	\$480,000	\$384,000	lanes.	2014-2015
1103123303							
	Corridor Total			\$20,031,200	\$11,865,000		

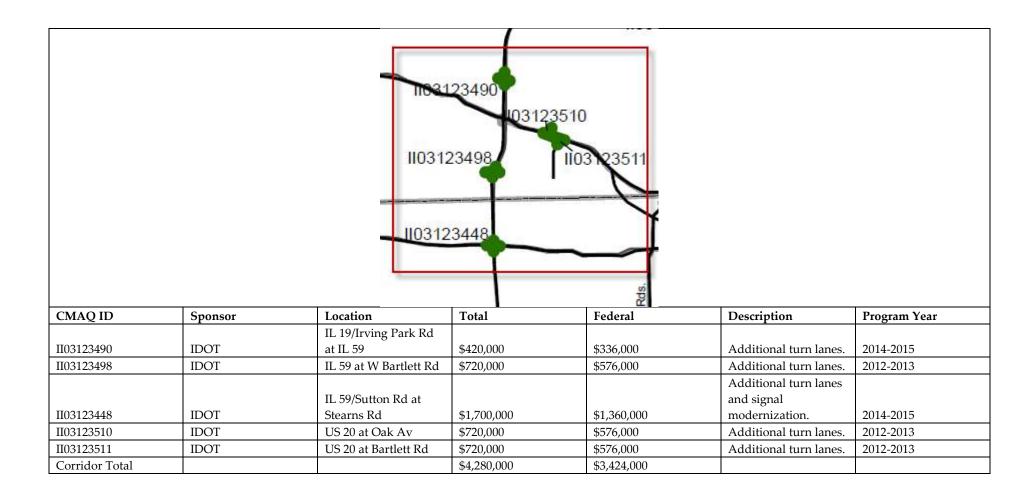
## **IL 47 Corridor**

	CMAQ ID	Sponsor	Location	Total	Federal	Description	Program Year
109123468	II09123468	IDOT	IL47/72/Higgins Rd at US 20	\$1,950,000	\$1,560,000	Additional turn lanes and signal modernization.	2012-2013
1109/23478	II09123478	IDOT	IL 47/72 at US 20	\$1,450,000	\$1,160,000	Additional turn lanes and signal modernization.	2012-2013
	II09123461	IDOT	IL 47 at Plato Rd	\$3,200,000	\$2,560,000	Roundabout	2013-2014
	Corridor Total			\$6,600,000	\$5,280,000		
II09123461							

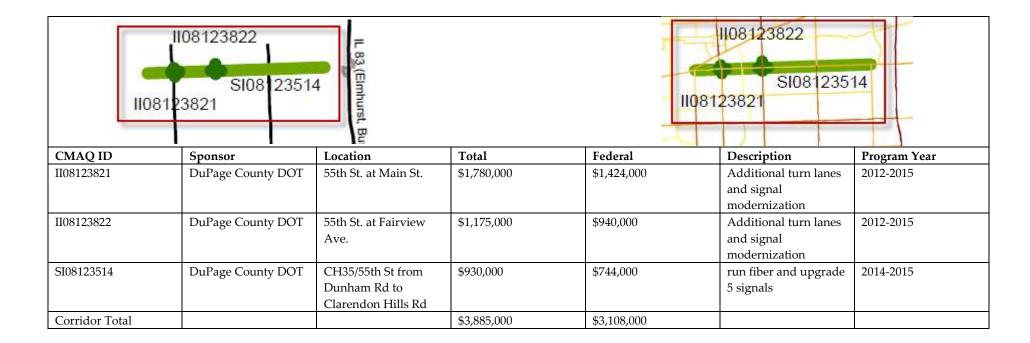
## **US 6 Corridor**



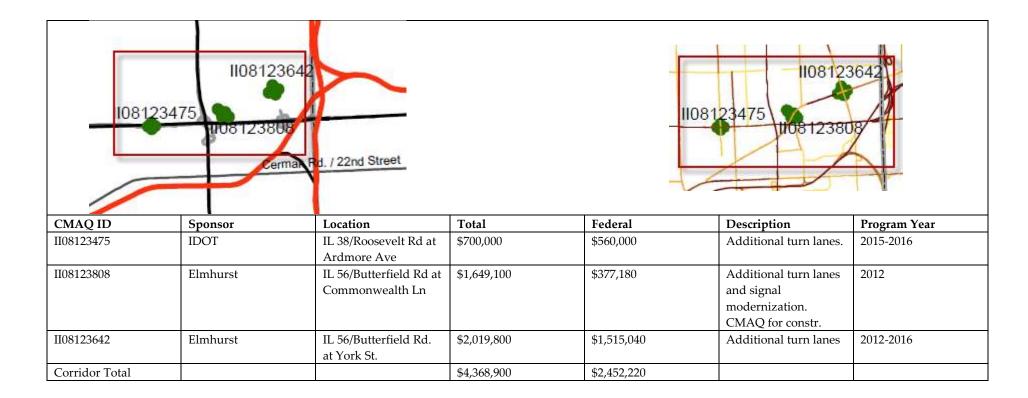
## IL 59 / US 20 Corridor



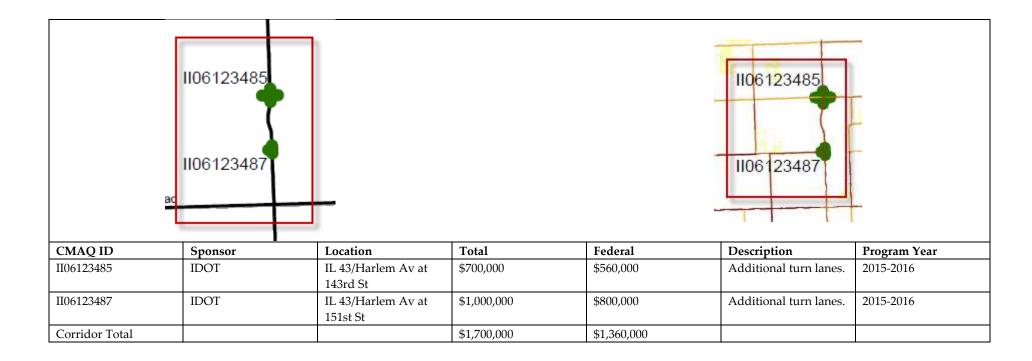
#### 55<sup>th</sup> Street Corridor



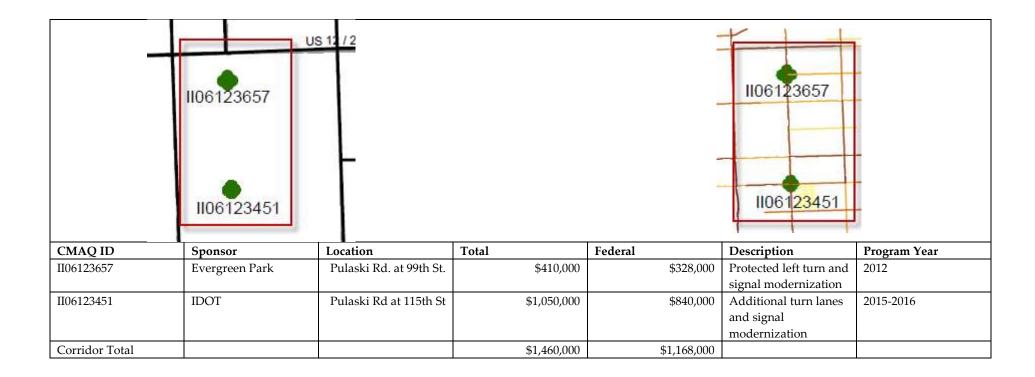
#### **Butterfield / Roosevelt Corridor**



## **Harlem Avenue Corridor**



#### Pulaski Road Corridor



# **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	CH 16/Bell Rd at CH	\$12,980,000	\$10,384,000	Additional through	2015
	Department of	37/143rd St			and turn lanes.	
	Highways				Construction only	
II12123489	IDOT	US 30/Lincoln Hwy at	\$1,000,000	\$800,000	Additional turn lanes	2014
		I-55 Ramps			on ramps.	
					Construction only	
II11123459	IDOT	IL 173 at Wilmot Rd	\$3,200,000	\$2,560,000	Roundabout	2013-2014
					Construction of a bike	
					path and	
					bicycle/pedestrian	
		Fox River Trail over			bridge. May include a	
BP09123715	City of Elgin	Fox River	\$2,377,000	\$1,902,000	biosolids transfer line.	2012 - 2015
		Overpass at IL 72				
		Higgins Road in				
	Village of Elk Grove	Busse Woods (Elk			Bicycle overpass at IL	
BP03123695	Village	Grove Village).	\$4,925,000	\$3,495,000	72	2011 - 2015
II05123754	Cicero	Cermak Rd at 49th Av	\$1,217,900	\$947,280	Additional turn lanes	2012
		and 50th Av			and signal	
					modernization	
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	CH 16/Bell Rd at CH	
	Department of	37/143rd St	
	Highways		
II12123489	IDOT	US 30/Lincoln Hwy at	
		I-55 Ramps	
II11123459	IDOT	IL 173 at Wilmot Rd	
		New trail bridge over	This project has is expected to include a biosolids pipeline that will reduce the need for truck trips
BP09123715	City of Elgin	Fox River	between two separate facilities of the Fox River Water Reclamation District
		Bikeway overpass at	
		IL 72 Higgins Road in	Substantial conflicts exist between pedestrians and bicyclists and motorists at this location.
	Village of Elk Grove	Busse Woods (Elk	Delay from this conflict backs up onto I-290 mainline. Therefore a grade separation here would
BP03123695	Village	Grove Village).	reduce danger for all users.
II05123754	Cicero	Cermak Rd at 49th Av	(From cta)
		and 50th Av	

#### **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).