MARICOPA ASSOCIATION of GOVERNMENTS

302 North 1st Avenue, Suite 300 ▲ Phoenix, Arizona 85003
Phone (602) 254-6300 ▲ FAX (602) 254-6490
E-mail: mag@mag.maricopa.gov ▲ Web site: www.mag.maricopa.gov

October 30, 2009

TO: Members of the MAG Transportation Review Committee
Members of the MAG Intelligent Transportation Systems Committee
Members of the MAG Bicycle and Pedestrian Committee

FROM: Doug Kukino, Glendale, Chair of the MAG Air Quality Technical Advisory Committee

SUBJECT: MAG AIR QUALITY TECHNICAL ADVISORY COMMITTEE RECOMMENDATIONS ON THE EVALUATION OF PROPOSED FY 2014 CMAQ PROJECTS FOR THE FY 2011-2015 MAG TRANSPORTATION IMPROVEMENT PROGRAM

On October 29, 2009, the MAG Air Quality Technical Advisory Committee made a recommendation to forward the Air Quality Projects in Table 1 ranked in order of cost-effectiveness to the Transportation Review Committee. In addition, the AQTAC made a recommendation to forward the evaluation of proposed CMAQ projects in Table 2 through Table 4 sorted by cost-effectiveness to the MAG Transportation Review Committee and modal committees based on technical merit only.

In addition, the MAG Air Quality Technical Advisory Committee made a recommendation to send a letter to the MAG Regional Council requesting that the Regional Council consider revising the CMAQ allocations established in the Regional Transportation Plan to increase the funding available for Air Quality Projects that reduce PM-10.

Within the Maricopa County nonattainment area, the federal air quality standard has not yet been attained for PM-10 particulate pollution. Therefore, projects that reduce particulate matter are important to the region. The Air Quality Projects in Table 1 reduce particulate matter including the purchase of PM-10 Certified Street Sweepers and Paving Unpaved Roads Program.

Also in Table 1, it is important to note that the Regional Rideshare Program, Telework/Ozone Education Program, Trip Reduction Program, and Travel Reduction Program for the current and subsequent years (2010-2014) are under review by the MAG Regional Council Executive Committee. The Executive Committee is evaluating the programs for efficiencies and consolidation. Project amounts are being held in abeyance. Any ranking of these projects is subject to change depending on the decisions made by the Regional Council Executive Committee.

If you have any questions, please contact Dean Giles, MAG, at (602) 254-6300.

Attachments

cc: Intergovernmental Representatives

October 30, 2009

Table 1 - Evaluation of Proposed AIR QUALITY Projects for the Federal Fiscal Year 2014 Sorted by Cost Effectiveness
Approximately $7.5 million available for FY 2014 (RTP)

Agency	Location	Work Type	FY	Length (miles)	Emission Reduction Weighted TOG(kg/day)	Emission Reduction Weighted NOx(kg/day)	Emission Reduction Weighted PM10(kg/day)	Emission Reduction Weighted Total(kg/day)	Cost Effectiveness ($/met.ton)	CMAQ Funds Requested
MAG	Regionwide	Purchase PM-10 Certified Street Sweepers[1]	2014		0.00	0.00	290.07	290.07	$1,211	$900,000
MAG	Regionwide	Pave Unpaved Roads Program[2]	2014	10.0	0.00	0.00	603.43	603.43	$1,423	$4,664,000
MAG	Regionwide	Telework/Ozone Education Program[3,13]	2014		69.45	62.95	197.55	329.95	$2,566	$300,000
MAG	Regionwide	Regional Rideshare Program[4,11]	2014		92.12	83.49	262.01	437.62	$3,830	$594,000
MAG	Regionwide	Trip Reduction Program[5,12]	2014		138.88	125.87	395.03	659.78	$3,892	$910,000
MAG	Regionwide	Travel Reduction Program[4,10]	2014		0.92	0.83	2.61	4.36	$87,411	$135,000

Table 2 - Evaluation of Proposed BICYCLE Projects for the Federal Fiscal Year 2014 Sorted by Cost Effectiveness (Includes Weighted Emission Reductions)

Agency	Location	Work Type	FY	Length (miles)	Emission Reduction Weighted TOG(kg/day)	Emission Reduction Weighted NOx(kg/day)	Emission Reduction Weighted PM10(kg/day)	Emission Reduction Weighted Total(kg/day)	Cost Effectiveness ($/met.ton)	CMAQ Funds Requested
Maricopa County	New River Road from Desert Hills Road to Venado Road	This project will widen the shoulders of New River Road to allow for a 5' bicycle lane without curb or gutter.[6,9]	2014	4.3	0.10	0.05	24.20	24.34	$6,919	$914,725
Fort McDowell Yavapai Nation	Fort McDowell Rd: SR-87 to Mohave Rd & Yavapai Rd	Widen the existing rural roadway section by 6 feet on each side and stripe the additional roadway as an on-road bicycle lane.[6,9]	2014	3.0	0.09	0.04	9.07	9.20	$13,882	$693,700
Youngtown	Outside limits are Grand Avenue and 111th Avenue to Olive Avenue and Agua Fria Parkway	Project will include creating new bike and pedestrian trails along undeveloped ROW; additionally existing roadways will be widened and/or bike lanes marked for bicycle safety.[6,7,9]	2014	5.0	0.07	0.03	0.59	0.70	$77,340	$292,800
Phoenix	Thomas Road: 22nd Street to Grand Canal	A 10' wide multi-use path will be installed along the south side of Thomas Road between the traffic signal at the Thomas Road and 22nd Street intersection to the existing asphalt path along the Grand Canal bank and providing an accessible connection.[6,7]	2014	0.1	0.37	0.16	0.21	0.75	$84,230	$341,950
Gilbert	Guadalupe Road & SRP Powerline Easement (between Val Vista Drive & Greenfield Road)	The project will improve five shared-use path crossings of arterial streets with appropriate bicycle facilities, such as bicycle signals.[6]	2014	0.5	0.42	0.20	0.26	0.88	$103,671	$497,000
Glendale	Grand Canal Outfall Channel and New River	Multi-use pathway ramps will connect to three separate multi-use pathways at a below grade location in the Grand Canal Outfall Channel.[6,7]	2014	0.09	0.33	0.15	0.19	0.66	$106,798	$663,320
Phoenix	Indian School Road: Grand Canal to 16th Street and 16th Street: Grand Canal to Indian School Rd	A 10' multi-use path will be installed along the north side of Indian School Road between the east side of the Grand Canal and the traffic signal at the intersection of 16th Street and Indian School Road.[6,7]	2014	0.2	0.45	0.20	0.26	0.91	$162,688	$1,396,500

Table 2 - Evaluation of Proposed BICYCLE Projects for the Federal Fiscal Year 2014 Sorted by Cost Effectiveness (Includes Weighted Emission Reductions)

Agency	Location	Work Type	FY	Length (miles)	Emission Reduction Weighted TOG(kg/day)	Emission Reduction Weighted NOx(kg/day)	Emission Reduction Weighted PM10(kg/day)	Emission Reduction Weighted Total(kg/day)	Cost Effectiveness ($/met.ton)	CMAQ Funds Requested
Glendale	Maryland Avenue and 75th Avenue to a point 257 feet east of 75th Avenue on the Maryland Avenue alignment	Existing drainage structure will be removed, surface area widened by excavation, retaining wall built, fence replaced, and pathway built.[6,7]	2014	0.05	0.19	0.08	0.11	0.38	$173,213	$358,529
Scottsdale	Arizona Canal from 64th Street to Goldwater Blvd and intersections at 64th St/Thomas, 64th/Osborn, 64th/Indian School, 68th/Indian School and 68th St and AZ Canal.	Improvements to the crosswalks and curb ramps at critical intersections.[6,7]	2014	0.9	0.53	0.23	0.30	1.06	$232,595	$2,323,780
Glendale	East bank of New River from Northern Avenue to the Bethany Home Road alignment	The addition of underpass lighting, landscaping, irrigation, ramada, tables, benches, and bike racks.[6,7]	2014	2.25	0.33	0.15	0.19	0.66	$278,309	$999,500
Chandler	Galveston Street & Loop 101 at milepost 59.6	Construct a 10' wide bicycle/pedestrian bridge, ramps, landing areas & path connections over the Loop 101 freeway at Galveston Street.[6,7]	2014	0.15	0.52	0.23	0.30	1.06	$323,998	$2,056,758
Avondale	Central Avenue in Avondale, Arizona - Van Buren Street south to Western Avenue	Bike lanes, mill & overlay, installation of planters, reduction of roadway width.[6]	2014	1.0	0.26	0.13	0.16	0.55	$361,137	$1,077,405
Litchfield Park	West side of Old Litchfield Road from W Fairway Drive north to E Bird Lane	Install a 10 foot wide integrally colored cement concrete pathway.[6,7]	2014	0.52	0.03	0.01	0.02	0.07	$426,216	$153,948
Tempe	El Paso Gas Easement Multi-Use Path: Rural Road to Kiwanis Park	Construct multi-use path, provide landscaping and lighting, and install furniture and art work.[6,7]	2014	0.5	0.26	0.12	0.15	0.53	$461,014	$1,323,000
Scottsdale	Along the north bank of the Arizona Canal, north of Camelback Road extending north	Construct 0.1 miles of 10-foot wide shared-use path along the north bank of the Arizona Canal from Camelback Road extending north, featuring landscaping, site furnishings, and art.[6,7]	2014	0.1	0.30	0.13	0.17	0.60	$797,171	$2,585,545
El Mirage	Thunderbird Road to Port Royale Lane	This project will include a concrete sidewalk, irrigation, landscaping and site furnishings.[6,7]	2014	0.85	0.07	0.03	0.04	0.13	$1,103,139	$792,835

Table 3 - Evaluation of Proposed PEDESTRIAN Projects for the Federal Fiscal Year 2014 Sorted by Cost Effectiveness (Includes Weighted Emission Reductions)

Agency	Location	Work Type	FY	Length (miles)	Emission Reduction Weighted TOG(kg/day)	Emission Reduction Weighted NOx(kg/day)	Emission Reduction Weighted PM10(kg/day)	Emission Reduction Weighted Total(kg/day)	Cost Effectiveness ($/met.ton)	CMAQ Funds Requested
Avondale	Western Avenue from Central Avenue to City Limits	Pavement preservation, landscaping, sidewalk modifications, pedestrian ramps.[7]	2014	0.42	0.03	0.01	0.01	0.05	$1,846,408	$465,658
Gilbert	A pathway located between Gilbert Road and Ash Street, from the Water Tower Plaza	The project will design and develop a quarter-mile pedestrian pathway connecting the Water Tower Plaza and Western Powerline Trail Park.[7]	2014	0.25	0.01	0.00	0.00	0.01	$2,963,238	$222,600
El Mirage	Varney Road from Dysart Road to El Mirage Road	This project will include new 8' sidewalk on the south and north sides of Varney Road from Dysart Road to El Mirage Road.[7]	2014	1.25	0.003	0.001	0.001	0.004	$11,357,278	$261,584

Table 4 - Evaluation of Proposed ITS Projects for the Federal Fiscal Year 2014 Sorted by Cost Effectiveness (Includes Weighted Emission Reductions)

Agency	Location	Work Type	FY	Length (miles)	Emission Reduction Weighted TOG(kg/day)	Emission Reduction Weighted NOx(kg/day)	Emission Reduction Weighted PM10(kg/day)	Emission Reduction Weighted Total(kg/day)	Cost Effectiveness ($/met.ton)	CMAQ Funds Requested
Phoenix	Within Phoenix	Develop the City of Phoenix ITS Strategic Plan.[8,14]	2014	770.0	205.94	92.63	0.00	298.57	$365	$182,000
Maricopa County	Associated with AZTech Center-to-Center traffic management system located primarily at ADOT and MCDOT	Upgrade the Regional Archive Data Center Equipment and Systems to enhance archiving capacity and the utility of real time traffic data.[8]	2014	700.0	100.30	45.11	0.00	145.41	$562	$136,500
Phoenix	Within Phoenix	To extend Phase B Fiber Optic Backbone.[8]	2014	770.0	205.94	92.63	0.00	298.57	$1,639	$818,000
Scottsdale	Loop 101 at three intersections, Hayden Road, the 101 Freeway interchange at Pima Rd and 90th Street	1. To identify traffic adaptive signal systems that have been deployed and returned successful outcomes in reducing traffic delay on stated corridors across the country. 2. Deploy the selected system on FLW and complete before and after delay studies. 3. Evaluate if the Adaptive System can minimize delay as well, or better than real-time control of the area signals through the Traffic Management Center and human intervention.[8]	2014	1.0	1.27	1.21	0.00	2.47	$9,518	$39,375
Peoria	Four Corridors: Peoria Ave, Northern Ave, Olive Ave and 75th Ave, located in the southern most area of City of Peoria	To upgrade the existing cabinets, traffic controllers and also upgrade the existing loop detection to video detection on selected corridors to improve the overall communication within the City's Network and also upgrade the hardware and software with the changing technologies in ITS.[9]	2014	15.0	9.99	8.56	0.00	18.55	$22,571	$700,000
El Mirage	Within City Limits	Various arterial traffic signal enhancements to improve existing signalized intersections for computerized signal control, closed circuit video, improved pedestrian control, improved signage and signal preemption.[8]	2014	16.0	2.83	2.36	0.00	5.18	$47,959	$415,660
Tempe	Corridors of Elliot/Guadalupe/Warner	This project proposes to use an existing conduit along Elliot for fiber optic communication to the signals. Wireless radios will be used to provide communication to signals along Guadalupe & Warner. CCTVs will be placed at the major intersections for traffic monitoring.[8]	2014	13.0	2.52	1.16	0.00	3.68	$67,465	$415,485
Chandler	Ray, Elliot, Dobson, connecting at Arizona back to TMC	Provide fiber communications to Traffic Signals in the project back to the TMC.[8]	2014	9.0	1.85	1.61	0.00	3.46	$138,621	$801,500
Gilbert	Seven intersections near Baseline Road & Val Vista Drive	The project enables the traffic control center to respond to traffic congestion at 7 intersections remotely and make real-time improvements.[8]	2014	3.0	0.54	0.21	0.00	0.75	$252,728	$317,122
Glendale	67th Avenue between Glendale Ave and Cholla Street, near the intersection of 83rd Ave/Maryland	Expand the city's remote traffic monitoring and management capabilities along with providing redundancies to the communications system.[8]	2014	3.5	0.90	0.41	0.00	1.31	$451,181	$987,000
Maricopa County	Various locations along MC85 from Agua Fria Bridge West Terminal to 75th Ave	To extend traffic management capabilities along MC 85, thus improving traffic flow and overall roadway capacity, and reducing reliance on private sector leased lines for required communication links.[8]	2014	5.5	0.71	0.28	0.00	0.98	$515,879	$847,000
Fountain Hills	Shea Blvd. and Downtown Area	Provide an Initial Deployment ITS system for the traffic signals on Shea Blvd. and in the Downtown Area; with monitoring/control sites at Town Hall and the Street Yard.[8]	2014	7.0	0.51	0.20	0.00	0.71	$847,724	$1,000,000

Table 4 - Evaluation of Proposed ITS Projects for the Federal Fiscal Year 2014 Sorted by Cost Effectiveness (Includes Weighted Emission Reductions)

Agency	Location	Work Type	FY	Length (miles)	Emission Reduction Weighted TOG(kg/day)	Emission Reduction Weighted NOx(kg/day)	Emission Reduction Weighted PM10(kg/day)	Emission Reduction Weighted Total(kg/day)	Cost Effectiveness ($/met.ton)	CMAQ Funds Requested
Goodyear	Van Buren Street - Estrella Parkway to Cotton Lane	This project will provide traffic signal connectivity to three existing and one future traffic signal. In addition, CCTV cameras will be provided at key intersections.[8]	2014	2.0	0.34	0.05	0.00	0.39	$1,236,143	$812,000

Notes:

[1]Supports the Measure in the MAG 2007 Five Percent Plan for PM-10: "Sweep Streets with PM-10 Certified Street Sweepers"

[2]Supports the Measure in the MAG 2007 Five Percent Plan for PM-10: "Pave or Stabilize Existing Public Dirt Roads and Alleys"

[3]Supports the Transportation Control Measures (TCM) in the Serious Area PM-10 Plan and CO Maintenance Plan:" Encouragement of Telecommuting, Teleworking and Teleconferencing" and "Areawide Public Awareness Programs"

[4]Supports the TCMs in the Serious Area PM-10 Plan and CO Maintenance Plan: "Areawide Public Awareness Program" and "Employer Rideshare Program Incentives"

[5]Supports the TCM in the Serious Area PM-10 Plan and CO Maintenance Plan: "Trip Reduction Program"

[6]Supports the TCM in the Serious Area PM-10 Plan and CO Maintenance Plan: "Development of Bicycle Travel Facilities"

[7]Supports the TCM in the Serious Area PM-10 Plan and CO Maintenance Plan: "Encouragement of Pedestrian Travel"

[8]Supports the TCMs in the Serious Area PM-10 Plan and CO Maintenance Plan: " Coordinate Traffic Signal Systems" and "Develop Intelligent Transportation Systems"

[9]These projects also include shoulder paving which supports the measure in the MAG 2007 Five Percent Plan for PM-10: "Pave or Stabilize Unpaved Shoulders"

[10]The funding amount for the Arizona Department of Administration Travel Reduction Program project is being held to the current level of $135,000.
This project will be considered and evaluated for regional funding amounts and effectiveness by the MAG Regional Council Executive Committee.
The Executive Committee is currently considering efficiencies and consolidation of the rideshare and alternate mode related activities.

[11]The funding amount for the Regional Public Transportation Authority Regional Rideshare Program project is being held to the current level of $594,000.
This project will be considered and evaluated for regional funding amounts and effectiveness by the MAG Regional Council Executive Committee.
The Executive Committee is currently considering efficiencies and consolidation of the rideshare and alternate mode related activities.

[12]The funding amount for the Maricopa County Trip Reduction Program project is being held to the current level of $910,000.
This project will be considered and evaluated for regional funding amounts and effectiveness by the MAG Regional Council Executive Committee.
The Executive Committee is currently considering efficiencies and consolidation of the rideshare and alternate mode related activities.

[13]The funding amount for the Regional Public Transportation Authority Telework/Ozone Education Program project is being held to the current level of $300,000.
This project will be considered and evaluated for regional funding amounts and effectiveness by the MAG Regional Council Executive Committee.
The Executive Committee is currently considering efficiencies and consolidation of the rideshare and alternate mode related activities.

[14]Emission reductions are based on future ITS project implementation that results from the Strategic Plan.