APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application *March 12, 2007*	Application Number	WisDOT Project ID Number
Project Title ***Replacement of Independent Master Clocks***	Location(s) Served by Project *735 Signalized Intersections in the City of Milwaukee*	
Project Description - Project Limits *19 Intersections in the City of Milwaukee*	County/Counties Served by Project *Milwaukee*	
Project Description Continued	Total Cost of Project (Including Local Match) *$3,000,000*	
Name and Address of Public Sponsor *City of Milwaukee* *Department of Public Works* *841 N. Broadway Rm. 701* *Milwaukee, WI 53202*	Name, Telephone & Fax Numbers of Public Sponsor Contact *Jeffrey S. Polenske, PE* *City Engineer* *Phone: (414) 286-2400* *Fax: (414) 286-5994*	
Other Organization(s) Involved in Project (e.g. Private Partner)	Name, Telephone & Fax Numbers of Private Partner	
Project Category/Categories ☐ Public Transportation ☐ Bicycle/Pedestrian ☐ Car and Vanpooling ☐ Park & Ride Lot X Traffic Flow Improvement (e.g. System Signalization) ☐ Alternative Fuels ☐ Other (Please Describe, e.g., Diesel Retrofit):	Sponsor's Metropolitan Planning Organization Area X Southeastern WI Regional Planning Commission (SEWRPC) ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area ☐ Non Metropolitan Planning Area	

Project Description - Be Brief But Complete

1. Where is the project located? Who does it serve? How large will it be? What will it be made of? How will it be accomplished?
Important: In addition to describing the project location below, attach a map of the project site to this application.

This project involves the replacement of the 19 independent master clocks that are used by the City of Milwaukee to synchronize the City's 735 traffic signals. The existing time base master clocks will be replace by advanced traffic controllers (ATC) that are capable of intercommunication and have far more capabilities. To enable the use of the advance features of the ATC, enhanced communication cable will be installed into each of the 19 new ATC units from the City of Milwaukee's engineering office and signal maintenance facility. To enable communication from the engineering office and maintenance facility, software communication programs will be purchased and installed in the office and maintenance facility microcomputers and each of the 19 ATC units.

Coordination of all traffic signals under the jurisdiction of the City of Milwaukee will improve the efficiency of the entire roadway and transit transportation system. Installation of the new ATC controllers and communication system will allow the implementation of unexpected special event or incident based timing plans from office locations, instead of sending a technician out to specific locations.

The use of ATC units to control the City's signal system will provide many future improvements to Southeastern Wisconsin's transportation system due to the flexibility of the communication interface of the ATC unit. Since the ATC uses the National

Transportation Communication Intermodal Protocol (NTCIP), and future transportation improvement projects will be compatible and adaptable to the ATC. In particular, the City is in the process of engineering an adaptive signal system which will be fully compatible with the ATC. In addition the City is participating in two other major interjurisdictional projects know as the Integrated Corridor Improvement (ICOP) Project and Traffic Incident Management Enhancements (TIME). Any improvements made under these project initiatives will be completely compatible with the ATC units and in fact will be complimentary.

2. Why is the project necessary? How will it contribute to improving air quality?

By eliminating the common problem of timing drift between the independent TBC clocks currently used to coordinate the City's signal system, all of the City's signals will be coordinated by a common reference point. Currently, the City of Milwaukee's signal system is composed of 19 different subsystems, and there is no guarantee of coordination between the subsystems.

Coordination of traffic signals has been shown to reduce the number of vehicular stop/start cycles, reduce idling time, and reduce fuel consumption of vehicles. All of these efforts have been shown to reduce harmful emissions from these vehicles.

3. Realistically, how much use will this facility or service get?

The project includes 467.12 miles of roadway with over 6 million vehicle miles of travel (VMT). The speeds on affected links may increase from 18 miles per hour to a range of 20 to 25 miles per hour.

4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

The City of Milwaukee plans to let the design of the project in 2008. Upon the completion of the design, the City and the contractor will undertake the installation and testing of all controller, communication, and other equipment used in the project in 2009-2010 with the project being fully implemented by 2010. The City will oversee the design process to ensure that all tasks are performed in a timely manner.

5. What obstacles or problems must be overcome to implement this project?

The City of Milwaukee must ensure that all hardware and software can be integrated into the system and that all communication devices work as programmed.

6. What will make this project a success?

The proposed project will ensure that all 19 master clocks in the City of Milwaukee will be coordinated with one another, reducing the effects of drift in the individual clocks and ensuring traffic flow between these individual subsystems is not disrupted. Coordination of traffic signals has been shown to reduce the number of vehicular stop/start cycles, reduce idling time, and reduce fuel consumption of vehicles. All of these efforts have been shown to reduce harmful emissions from these vehicles.

Project Cost Estimate & Timetable[1]			
Item	**Year 1**	**Year 2**	**Year 3**
Engineering & Design[2]	$ 750,000	$	$
State Design Review[3]	$	$	$
Real Estate & Easements	$	$	$
Utility Relocation	$	$	$
Construction	$	$	$
Bridges & Buildings	$	$	$
Landscaping	$	$	$
Railroad Signals/Crossings	$	$	$
Traffic Control Devices	$	$ 1,125,000	$1,125,000
Operation & Maintenance	$	$	$
Marketing & Promotion	$	$	$
Other: e.g. transit operating	$	$	$
Other: e.g. transit capital	$	$	$
Other:	$	$	$
Subtotal	$	$	$
Contingencies & Constr Mgt[4]	$	$	$
Total	$	$	$
Local Share[5]	$ 150,000	$ 225,000	$ 225,000
Federal Share[6]	$ 600,000	$ 900,000	$ 900,000

[1] Typically design is done in Year 1, real estate acquisition in Year 2, and construction in Year 3.
[2] Engineering/Design cost is typically 15% to 20% of the construction cost.
[3] State design review is typically 3% of construction cost, minimum $5,000. This covers plan review, bid advertisement, and printing/mailing of plan sets to potential bidders. *This cost applies only to projects that will be let and administered by WisDOT.*
[4] Contingencies and construction management are typically budgeted at 15% of the Subtotal.
[5] Local share for this program is normally 20%.
[6] Federal share for this program is normally 80%.

Please affirm your understanding of the following project conditions by initialing in the spaces provided:

_____ A. Private organizations proposing projects generally must have a public sponsor (a local government unit or transit operator).

_____ B. The project sponsor or private partner must provide matching dollar funding of at least 20% of project costs.

_____ C. This is a reimbursement program. The applicant organization must finance the project until Federal reimbursement funds are available.

_____ D. The applicant must fund project costs in excess of the amounts indicated in the above Project Cost Estimate (i.e. cost overruns) at no expense to State/Federal funding sources.

_____ E. Projects must be designed and constructed in accordance with all applicable federal and state requirements, including but not limited to those on page 13 of the application.

If the public sponsor is submitting more than one application, prioritize this project here (e.g., 1 of 5):

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I hereby certify that the above statements are true and complete to the best of the applicant's knowledge and understanding.

Name of Applicant Organization	
City of Milwaukee, Department of Public Works	
Name of Signer (Printed Clearly)	Title
Jeffrey S. Polenske, P.E.	City Engineer
Signature	Date

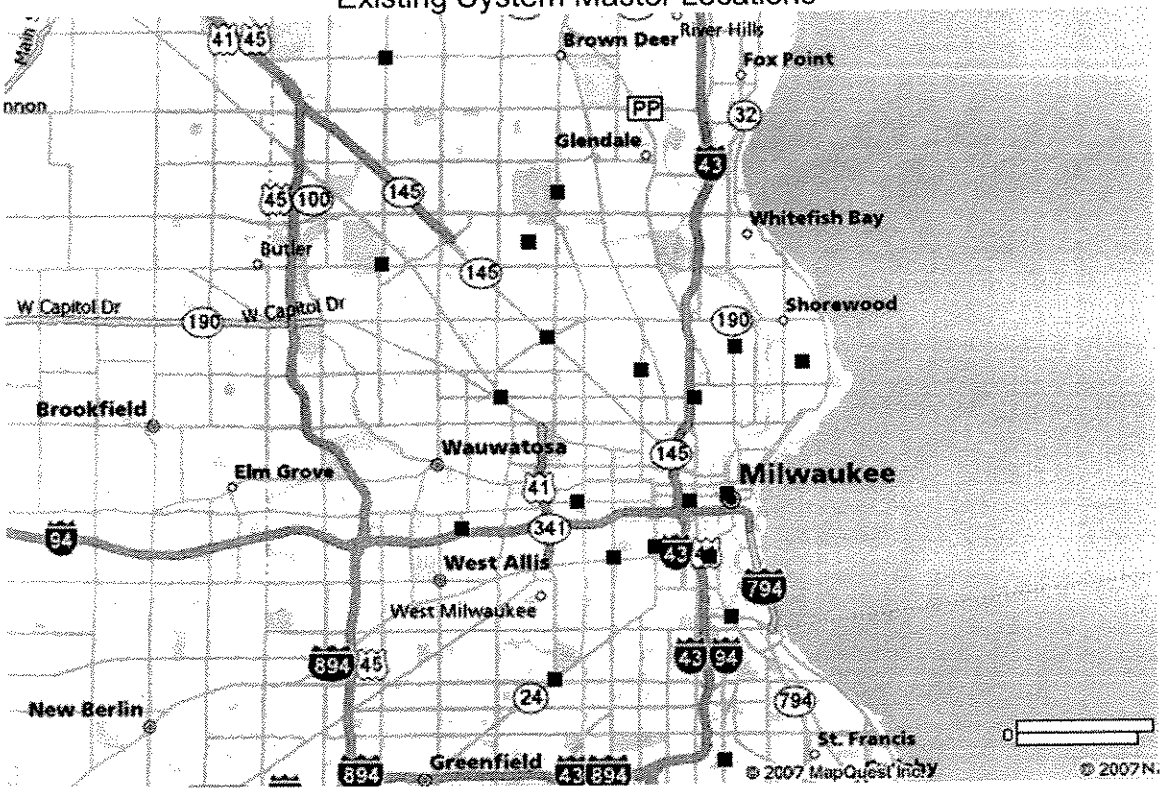
Information Below to Be Completed by the WisDOT Region Office			
Environmental Document Type	Improvement Type		Program Year
Primary ID	Related ID's		Program *CMAQ*
Responsible Projects Group		Project Supervisor	

WisDOT Region Approvals			
Team Leader Approval	Date	Group Manager Concurrence	Date
Programming Team Approval	Date	Systems Planning Manager Concurrence	Date

PLEASE ATTACH A SITE MAP, PHOTOGRAPHS, OR ANY OTHER GRAPHICS THAT WILL ASSIST THE SELECTION COMMITTEE IN UNDERSTANDING THE LOCATION AND NATURE OF THE PROPOSED PROJECT.

PROJECT LOCATION MAP

Existing System Master Locations



APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application	Application Number	WisDOT Project ID Number
February 26, 2007		

Project Title	Location(s) Served by Project
Installation of Coordinated Traffic Signals at six All-Way Stop Controlled Locations	Corridors and areas bounded by the project
Project Description - Project Limits W. Howard Av. at S. 43rd St., S. 51st St., and S. 68th St., and S. 84th St., W. Keefe Av. and N. 51st Blvd., and N. Humboldt Av. and N. Kane Pl.	**County/Counties Served by Project** Milwaukee
Project Description Continued	**Total Cost of Project (Including Local Match)** $390,000
Name and Address of Public Sponsor City of Milwaukee 841 N. Broadway Rm. 701 Milwaukee, WI 53202	**Name, Telephone & Fax Numbers of Public Sponsor Contact** Jeffrey S. Polenske, PE City Engineer Phone: (414) 286-2400 Fax: (414) 286-5994
Other Organization(s) Involved in Project (e.g. Private Partner)	**Name, Telephone & Fax Numbers of Private Partner**
Project Category/Categories ☐ Public Transportation ☐ Bicycle/Pedestrian ☐ Car and Vanpooling ☐ Park & Ride Lot X Traffic Flow Improvement (e.g. System Signalization) ☐ Alternative Fuels ☐ Other (Please Describe, e.g., Diesel Retrofit):	**Sponsor's Metropolitan Planning Organization Area** X Southeastern WI Regional Planning Commission (SEWRPC) ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area ☐ Non Metropolitan Planning Area

Project Description - Be Brief But Complete

1. Where is the project located? Who does it serve? How large will it be? What will it be made of? How will it be accomplished?
Important: In addition to describing the project location below, attach a map of the project site to this application.

The project includes the installation of six coordinated traffic signals at all-way stop controlled intersections. The City of Milwaukee plans to undertake the design, installation, operation, and maintenance of six traffic signals at the subject locations.

2. Why is the project necessary? How will it contribute to improving air quality?

The City of Milwaukee proposes to install six coordinated traffic signals at all-way stop controlled intersections that are warranted and are located within or adjacent to existing signal systems. The current all-way stop control unnecessarily increases delay and congestion, wasting fuel and increasing emissions, and reduces the number of safe pedestrian gaps at nearby uncontrolled locations.

The installation of the six coordinated traffic signals at the subject intersections will reduce vehicle delay and increase the number of safe pedestrian gaps at nearby uncontrolled locations to encourage additional pedestrian trips.

3. Realistically, how much use will this facility or service get?

The current entering volumes at the six locations vary from 14,300 to 20,300.

4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

The City of Milwaukee plans to undertake design in 2008, with construction in 2009.

5. What obstacles or problems must be overcome to implement this project?

None

6. What will make this project a success?

The proposed installation of six coordinated traffic signals will reduce congestion at the six subject intersections by providing coordinated operation within or adjacent to existing traffic signal systems, replacing the existing all-way stop control. In addition, the coordinated traffic signals will provide additional gaps in traffic at nearby uncontrolled locations to encourage additional pedestrian trips.

Project Cost Estimate & Timetable[1]

Item	Year 1	Year 2	Year 3
Engineering & Design[2]	$ 40,000	$	$
State Design Review[3]	$	$	$
Real Estate & Easements	$	$	$
Utility Relocation	$	$	$
Construction	$	$	$
Bridges & Buildings	$	$	$
Landscaping	$	$	$
Railroad Signals/Crossings	$	$	$
Traffic Control Devices	$	$ 350,000	$
Operation & Maintenance	$	$	$
Marketing & Promotion	$	$	$
Other: e.g. transit operating	$	$	$
Other: e.g. transit capital	$	$	$
Other:	$	$	$
Subtotal	$	$	$
Contingencies & Constr Mgt[4]	$	$	$
Total	$	$	$
Local Share[5]	$ 8,000	$ 70,000	$
Federal Share[6]	$ 32,000	$ 280,000	$

[1] Typically design is done in Year 1, real estate acquisition in Year 2, and construction in Year 3.
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If the public sponsor is submitting more than one application, prioritize this project here (e.g., 1 of 5):

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Name of Applicant Organization	
City of Milwaukee	
Name of Signer (Printed Clearly)	Title
Jeffrey S. Polenske, P.E.	*City Engineer*
Signature	Date

Information Below to Be Completed by the WisDOT Region Office

Environmental Document Type	Improvement Type	Program Year

Primary ID	Related ID's		Program
			CMAQ

Responsible Projects Group	Project Supervisor

WisDOT Region Approvals

Team Leader Approval	Date	Group Manager Concurrence	Date
Programming Team Approval	Date	Systems Planning Manager Concurrence	Date

PLEASE ATTACH A SITE MAP, PHOTOGRAPHS, OR ANY OTHER GRAPHICS THAT WILL ASSIST THE SELECTION COMMITTEE IN UNDERSTANDING THE LOCATION AND NATURE OF THE PROPOSED PROJECT.

PROJECT LOCATION MAP

■ Proposed Signal Location

APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application	Application Number	WisDOT Project ID Number
February 26, 2007		

Project Title	Location(s) Served by Project
Computer Optimization of 34 Traffic Signals in Bay View - City of Milwaukee	*Bay View neighborhood of the City of Milwaukee*
Project Description - Project Limits *Area bounded by Superior St., Bolivar Av., 6th St., and Bay St.*	**County/Counties Served by Project** *Milwaukee*
Project Description Continued	**Total Cost of Project (Including Local Match)** *$51,000*
Name and Address of Public Sponsor *City of Milwaukee* *841 N. Broadway Rm. 701* *Milwaukee, WI 53202*	**Name, Telephone & Fax Numbers of Public Sponsor Contact** *Jeffrey S. Polenske, PE* *City Engineer* *Phone: (414) 286-2400* *Fax: (414) 286-5994*
Other Organization(s) Involved in Project (e.g. Private Partner)	**Name, Telephone & Fax Numbers of Private Partner**

Project Category/Categories	Sponsor's Metropolitan Planning Organization Area
☐ Public Transportation ☐ Bicycle/Pedestrian ☐ Car and Vanpooling ☐ Park & Ride Lot X Traffic Flow Improvement (e.g. System Signalization) ☐ Alternative Fuels ☐ Other (Please Describe, e.g., Diesel Retrofit):	X Southeastern WI Regional Planning Commission (SEWRPC) ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area ☐ Non Metropolitan Planning Area

Project Description - Be Brief But Complete

1. Where is the project located? Who does it serve? How large will it be? What will it be made of? How will it be accomplished?
Important: In addition to describing the project location below, attach a map of the project site to this application.

The project includes the computerized signal optimization of the 34 traffic signals in the Bay View neighborhood of the City of Milwaukee. The City of Milwaukee plans to undertake data collection, modeling creation, model calibration and optimization, and implementation of timing and phasing changes.

2. Why is the project necessary? How will it contribute to improving air quality?

The proposed improvements will ensure the most efficient operation of 34 traffic signals in the Bay View neighborhood. The traffic volumes and traffic patterns have experienced dramatic changes since the opening of the Lake Parkway (STH 794) in 1999 through the neighborhood.

By computer optimizing traffic signal timing and phasing, the City of Milwaukee will provide the most efficient operation of the traffic signals to minimize vehicle emissions and reduce fuel consumption by minimizing vehicle stops and idling time.

3. Realistically, how much use will this facility or service get?

The major roadways in the project have AADT varying from 25,900 to 4,100 on E. Oklahoma Av., from 25,600 to 13,900 on E. Howard Av., from 24,100 to 16,900 on S. Chase Av./S. Howell Av. (STH 38), and from 14,300 to 9,300 on S. Kinnickinnic Av. (STH 32). Within the project limits, the weekday VMT are: E. Oklahoma Av. - 28,000, E. Howard Av. - 26,000, S. Chase Av./S. Howell Av. (STH 38) - 32,000, and S. Kinnickinnic Av. - 15,000.

4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

The City of Milwaukee plans to undertake data collection and in 2007-08, with model creation, calibration, optimization, and implementation in 2008-09.

5. What obstacles or problems must be overcome to implement this project?

None

6. What will make this project a success?

The proposed computer optimization of the 34 traffic signals will reduce vehicle emissions, reduce fuel consumption, and ensure more efficient flow of traffic throughout the neighborhood following the opening of the Lake Parkway (STH 794).

Project Cost Estimate & Timetable[1]

Item	Year 1	Year 2	Year 3
Engineering & Design[2]	$ 17,000	$ 17,000	$ 8,000
State Design Review[3]	$	$	$
Real Estate & Easements	$	$	$
Utility Relocation	$	$	$
Construction	$	$	$
Bridges & Buildings	$	$	$
Landscaping	$	$	$
Railroad Signals/Crossings	$	$	$
Traffic Control Devices	$	$	$ 9,000
Operation & Maintenance	$	$	$
Marketing & Promotion	$	$	$
Other: e.g. transit operating	$	$	$
Other: e.g. transit capital	$	$	$
Other:	$	$	$
Subtotal	$	$	$
Contingencies & Constr Mgt[4]	$	$	$
Total	$	$	$
Local Share[5]	$ 3,400	$ 3,400	$ 3,400
Federal Share[6]	$ 13,600	$ 13,600	$ 13,600

[1] Typically design is done in Year 1, real estate acquisition in Year 2, and construction in Year 3.
[2] Engineering/Design cost is typically 15% to 20% of the construction cost.
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Name of Applicant Organization *City of Milwaukee*	
Name of Signer (Printed Clearly) *Jeffrey S. Polenske, P.E.*	Title *City Engineer*
Signature	Date

Information Below to Be Completed by the WisDOT Region Office

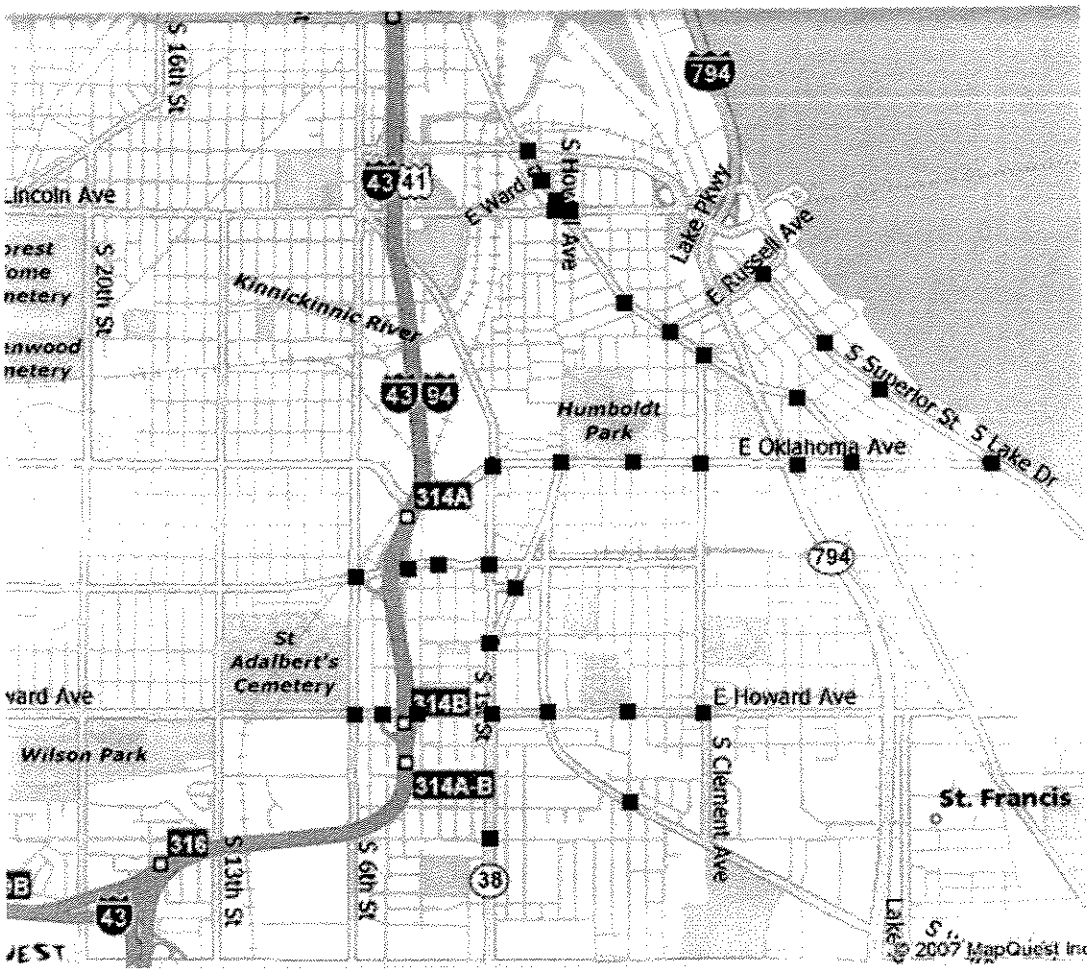
Environmental Document Type	Improvement Type		Program Year
Primary ID	Related ID's		Program *CMAQ*
Responsible Projects Group		Project Supervisor	

WisDOT Region Approvals

Team Leader Approval	Date	Group Manager Concurrence	Date
Programming Team Approval	Date	Systems Planning Manager Concurrence	Date

PLEASE ATTACH A SITE MAP, PHOTOGRAPHS, OR ANY OTHER GRAPHICS THAT WILL ASSIST THE SELECTION COMMITTEE IN UNDERSTANDING THE LOCATION AND NATURE OF THE PROPOSED PROJECT.

Project Location Map



■ Signal Location

APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application	Application Number	WisDOT Project ID Number
February 26, 2007		

Project Title	Location(s) Served by Project
Computer Optimization of 74 Traffic Signals on E./W. Capitol Dr. (STH 190) and W. Fond du Lac Av. (STH 145)	*Corridors and areas bounded by the project*
Project Description - Project Limits *E./W. Capitol Dr. (STH 190) and W. Fond du Lac Av. (STH 145) corridors in the City of Milwaukee*	**County/Counties Served by Project** *Milwaukee*
Project Description Continued	**Total Cost of Project (Including Local Match)** *$111,000*
Name and Address of Public Sponsor *City of Milwaukee* *841 N. Broadway Rm. 701* *Milwaukee, WI 53202*	**Name, Telephone & Fax Numbers of Public Sponsor Contact** *Jeffrey S. Polenske, PE* *City Engineer* *Phone: (414) 286-2400* *Fax: (414) 286-5994*
Other Organization(s) Involved in Project (e.g. Private Partner)	**Name, Telephone & Fax Numbers of Private Partner**

Project Category/Categories

- ☐ Public Transportation
- ☐ Bicycle/Pedestrian
- ☐ Car and Vanpooling
- ☐ Park & Ride Lot
- X Traffic Flow Improvement (e.g. System Signalization)
- ☐ Alternative Fuels
- ☐ Other (Please Describe, e.g., Diesel Retrofit):

Sponsor's Metropolitan Planning Organization Area

- X Southeastern WI Regional Planning Commission (SEWRPC)
- ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area
- ☐ Non Metropolitan Planning Area

Project Description - Be Brief But Complete

1. Where is the project located? Who does it serve? How large will it be? What will it be made of? How will it be accomplished?
   Important: In addition to describing the project location below, attach a map of the project site to this application.

The project includes the computerized signal optimization of the 74 traffic signals along the W. Capitol Dr. (STH 190) and W. Fond du Lac Av. (STH 145) corridors in the City of Milwaukee. The City of Milwaukee plans to undertake data collection, modeling creation, model calibration and optimization, and implementation of timing and phasing changes.

2. Why is the project necessary? How will it contribute to improving air quality?

The proposed improvements will ensure the most efficient operation of 74 traffic signals along the W. Capitol Dr. (STH 190) and W. Fond du Lac Av. (STH 145) corridors in the City of Milwaukee.

By computer optimizing traffic signal timing and phasing, the City of Milwaukee will provide the most efficient operation of the traffic signals to minimize vehicle emissions and reduce fuel consumption by minimizing vehicle stops and idling time.

3. Realistically, how much use will this facility or service get?

E./W. Capitol Dr. (STH 190) has AADT which varies from 47,900 to 26,500 and W. Fond du Lac Av. (STH 145) has AADT which varies from 34,900 to 16,800. Within the project limits, the weekday VMT on W. Capitol Dr. is 234,000 and the weekday VMT on W. Fond du Lac Av. is 148,000.

4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

The City of Milwaukee plans to undertake data collection and in 2007-08, with model creation, calibration, optimization, and implementation in 2008-09.

5. What obstacles or problems must be overcome to implement this project?

None

6. What will make this project a success?

The proposed computer optimization of the 74 traffic signals will reduce vehicle emissions, reduce fuel consumption, and ensure more efficient flow of traffic along the E./W. Capitol Dr. (STH 190) and W. Fond du Lac Av. (STH 145) corridors in the City of Milwaukee.

Project Cost Estimate & Timetable[1]

Item	Year 1	Year 2	Year 3
Engineering & Design[2]	$ 37,000	$ 37,000	$ 18,000
State Design Review[3]	$	$	$
Real Estate & Easements	$	$	$
Utility Relocation	$	$	$
Construction	$	$	$
Bridges & Buildings	$	$	$
Landscaping	$	$	$
Railroad Signals/Crossings	$	$	$
Traffic Control Devices	$	$	$ 19,000
Operation & Maintenance	$	$	$
Marketing & Promotion	$	$	$
Other: e.g. transit operating	$	$	$
Other: e.g. transit capital	$	$	$
Other:	$	$	$
Subtotal	$	$	$
Contingencies & Constr Mgt[4]	$	$	$
Total	$	$	$
Local Share[5]	$ 7,400	$ 7,400	$ 7,400
Federal Share[6]	$ 29,600	$ 29,600	$ 29,600

[1] Typically design is done in Year 1, real estate acquisition in Year 2, and construction in Year 3.
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Name of Signer (Printed Clearly) *Jeffrey S. Polenske, P.E.*	Title *City Engineer*
Signature	Date

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Environmental Document Type	Improvement Type	Program Year	
Primary ID	Related ID's		Program *CMAQ*
Responsible Projects Group	Project Supervisor		

WisDOT Region Approvals

Team Leader Approval	Date	Group Manager Concurrence	Date
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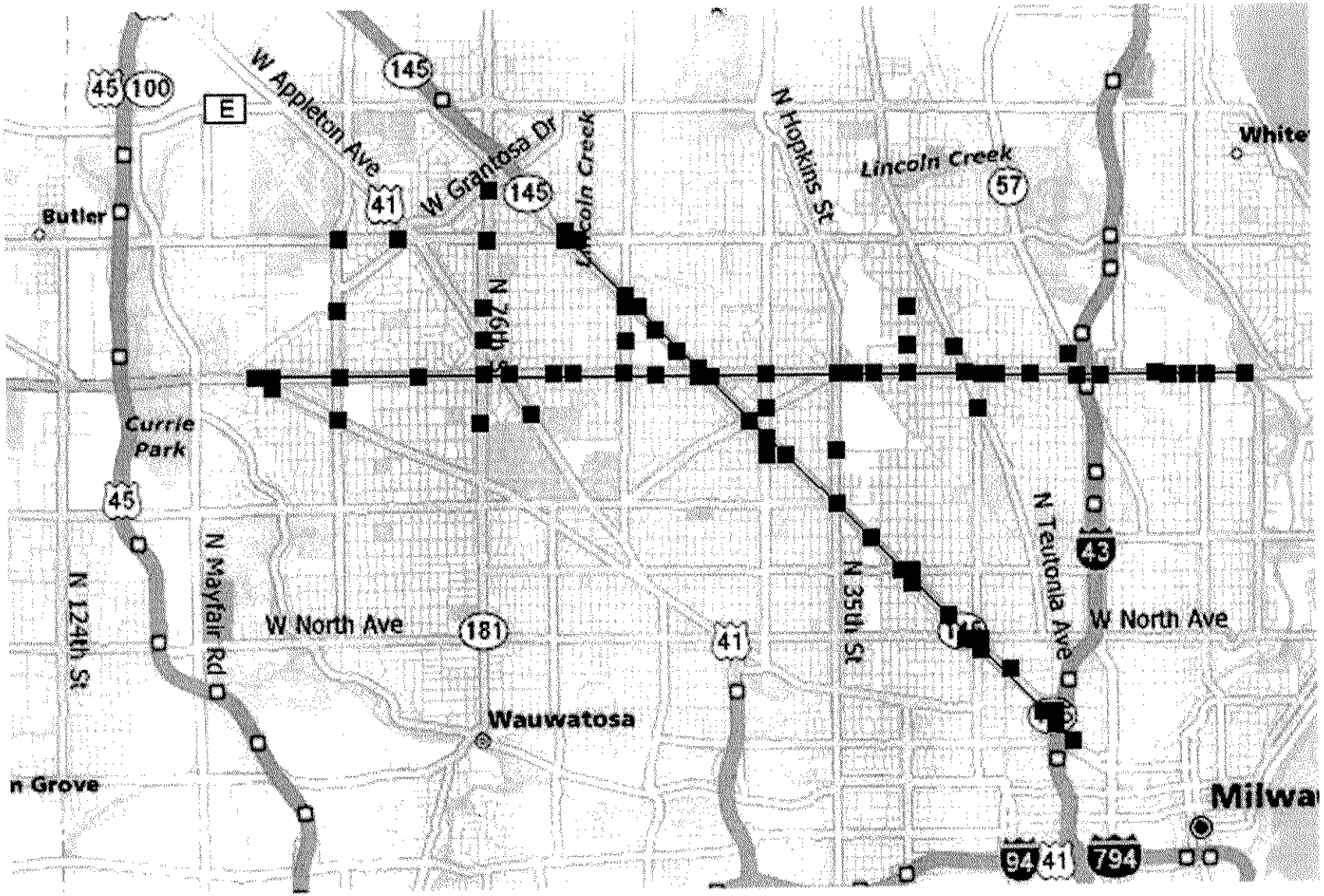
Project Location Map



APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application	Application Number	WisDOT Project ID Number
February 26, 2007		

Project Title	Location(s) Served by Project
Installation of Pedestrian Countdown Timers at 325 Signalized Locations	Corridors and areas bounded by the project
Project Description - Project Limits 325 Intersections in the City of Milwaukee	**County/Counties Served by Project** Milwaukee
Project Description Continued	**Total Cost of Project (Including Local Match)** $2,250,000
Name and Address of Public Sponsor City of Milwaukee 841 N. Broadway Rm. 701 Milwaukee, WI 53202	**Name, Telephone & Fax Numbers of Public Sponsor Contact** Jeffrey S. Polenske, PE City Engineer Phone: (414) 286-2400 Fax: (414) 286-5994
Other Organization(s) Involved in Project (e.g. Private Partner)	**Name, Telephone & Fax Numbers of Private Partner**

Project Category/Categories

- ☐ Public Transportation
- X Bicycle/Pedestrian
- ☐ Car and Vanpooling
- ☐ Park & Ride Lot
- ☐ Traffic Flow Improvement (e.g. System Signalization)
- ☐ Alternative Fuels
- ☐ Other (Please Describe, e.g., Diesel Retrofit):

Sponsor's Metropolitan Planning Organization Area

- X Southeastern WI Regional Planning Commission (SEWRPC)
- ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area
- ☐ Non Metropolitan Planning Area

Project Description - Be Brief But Complete

1. Where is the project located? Who does it serve? How large will it be? What will it be made of? How will it be accomplished?
Important: In addition to describing the project location below, attach a map of the project site to this application.

The project includes the installation of pedestrian countdown timers with 12" combination LED "Walk/Don't Walk" housings at 325 signalized intersections in the City of Milwaukee that have been identified at crossing of 75' or wider and in commercial districts, along major bus routes, near schools, or near other major pedestrian generators. The work will be performed by City staff. The project will provide pedestrians with the length remaining on the flashing "Don't Walk" pedestrian phase and provide larger and brighter 12" LED "Walk/Don't Walk" symbol housings to replace existing 9" and 12" incandescent text and symbol "Walk/Don't Walk" housings.

2. Why is the project necessary? How will it contribute to improving air quality?

The proposed installation of pedestrian countdown timers with 12" LED "Walk/Don't Walk" housings will provide pedestrians with the time remaining on the flashing "Don' Walk" phase. This will encourage additional pedestrian trips Citywide at locations where the pedestrian crossings can be long (75' or longer) and intimidating to pedestrians, particularly children and the elderly. In addition, the larger and brighter 12" "Walk/Don't Walk" symbol housings will be more visible to pedestrians. These installations will increase pedestrian safety,

comfort, and security at longer and higher vehicle volume pedestrian crossings Citywide.

3. Realistically, how much use will this facility or service get?

The 325 signalized intersections selected in the City of Milwaukee were identified at crossings of 75' or wider and in commercial districts, along major bus routes, near schools, or near other major pedestrian generators. These locations have the highest number of pedestrians crossing.

The installation of pedestrian countdown timers with 12" combination "Walk/Don't Walk" housings will reduce the number of vehicle trips Citywide, reducing emissions and reducing fuel consumption, by encouraging more pedestrian trips at locations where pedestrians may be discouraged from crossing because of the width of the roadway.

4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

The City of Milwaukee plans to undertake design in 2008, with construction in 2009.

5. What obstacles or problems must be overcome to implement this project?

None

6. What will make this project a success?

The proposed installation will increase the number and frequency of pedestrian trips in commercial districts, along major bus routes, near schools, or near other major pedestrian generators by providing the length remaining on the flashing "Don't Walk" and by using brighter LED 12" "Walk/Don't Walk" symbols.

Project Cost Estimate & Timetable[1]

Item	Year 1	Year 2	Year 3
Engineering & Design[2]	$ 250,000	$	$
State Design Review[3]	$	$	$
Real Estate & Easements	$	$	$
Utility Relocation	$	$	$
Construction	$	$	$
Bridges & Buildings	$	$	$
Landscaping	$	$	$
Railroad Signals/Crossings	$	$	$
Traffic Control Devices	$	$ 2,000,000	$
Operation & Maintenance	$	$	$
Marketing & Promotion	$	$	$
Other: e.g. transit operating	$	$	$
Other: e.g. transit capital	$	$	$
Other:	$	$	$
Subtotal	$	$	$
Contingencies & Constr Mgt[4]	$	$	$
Total	$	$	$
Local Share[5]	$ 50,000	$ 400,000	$
Federal Share[6]	$ 200,000	$ 1,600,000	$

[1] Typically design is done in Year 1, real estate acquisition in Year 2, and construction in Year 3.
[2] Engineering/Design cost is typically 15% to 20% of the construction cost.
[3] State design review is typically 3% of construction cost, minimum $5,000. This covers plan review, bid advertisement, and printing/mailing of plan sets to potential bidders. *This cost applies only to projects that will be let and administered by WisDOT.*
[4] Contingencies and construction management are typically budgeted at 15% of the Subtotal.
[5] Local share for this program is normally 20%.
[6] Federal share for this program is normally 80%.

Please affirm your understanding of the following project conditions by initialing in the spaces provided:

_____ A. Private organizations proposing projects generally must have a public sponsor (a local government unit or transit operator).

_____ B. The project sponsor or private partner must provide matching dollar funding of at least 20% of project costs.

_____ C. This is a reimbursement program. The applicant organization must finance the project until Federal reimbursement funds are available.

_____ D. The applicant must fund project costs in excess of the amounts indicated in the above Project Cost Estimate (i.e. cost overruns) at no expense to State/Federal funding sources.

_____ E. Projects must be designed and constructed in accordance with all applicable federal and state requirements, including but not limited to those on page 13 of the application.

If the public sponsor is submitting more than one application, prioritize this project here (e.g., 1 of 5):

-------- of --------

I hereby certify that the above statements are true and complete to the best of the applicant's knowledge and understanding.

Name of Applicant Organization	
City of Milwaukee	
Name of Signer (Printed Clearly)	Title
Jeffrey S. Polenske, P.E.	*City Engineer*
Signature	Date

Information Below to Be Completed by the WisDOT Region Office

Environmental Document Type	Improvement Type	Program Year

Primary ID	Related ID's		Program
			CMAQ

Responsible Projects Group	Project Supervisor

WisDOT Region Approvals

Team Leader Approval	Date	Group Manager Concurrence	Date
Programming Team Approval	Date	Systems Planning Manager Concurrence	Date

PLEASE ATTACH A SITE MAP, PHOTOGRAPHS, OR ANY OTHER GRAPHICS THAT WILL ASSIST THE SELECTION COMMITTEE IN UNDERSTANDING THE LOCATION AND NATURE OF THE PROPOSED PROJECT.

APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application	Application Number	WisDOT Project ID Number
April 15, 2007		

Project Title	Location(s) Served by Project
Open Metal Grate Bridge Bike Lanes	Various Arterial Roadways Citywide
Project Description - Project Limits Install anti-slip bridge decking in bike lane of lift bridges at Water St., Pleasant St., Wisconsin Ave., and Juneau.	County/Counties Served by Project Milwaukee
Project Description Continued ***Create bicycle lanes on various open metal grate lift bridges in Milwaukee.***	Total Cost of Project (Including Local Match) $700,000
Name and Address of Public Sponsor City of Milwaukee 841 North Broadway, Room 701 Milwaukee Wisconsin, 53202	Name, Telephone & Fax Numbers of Public Sponsor Contact Mr. Jeffrey S. Polenske City Engineer (414)286-2400 telephone (414)286-5994 Fax
Other Organization(s) Involved in Project (e.g. Private Partner)	Name, Telephone & Fax Numbers of Private Partner
Project Category/Categories ☐ Public Transportation **X** Bicycle/Pedestrian ☐ Car and Vanpooling ☐ Park & Ride Lot ☐ Traffic Flow Improvement (e.g. System Signalization) ☐ Alternative Fuels ☐ Other (Please Describe, e.g., Diesel Retrofit):	Sponsor's Metropolitan Planning Organization Area **X** Southeastern WI Regional Planning Commission (SEWRPC) ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area ☐ Non Metropolitan Planning Area

Project Description - Be Brief But Complete

1. Where is the project located? Who does it serve? How large will it be? What will it be made of? How will it be accomplished?
Important: In addition to describing the project location below, attach a map of the project site to this application.

This project retrofit our existing lift bridges with 4ft. anti-slip treatments on the outside edge to improve the deck for bicyclists. The existing bridge decks are open metal grate and very slippery when wet. We will add either the SlipNot plating. We will leave the outside 1 foot area (not usable by cyclists) open to allow for drainage and snow removal. We have already used these treatments on two bridges in Milwaukee with great success and hope to add them to these remaining key bridges. We will use either the SlipNot brand bridge plate.

This project will serve primarily the mixed use development Downtown, in the Third Ward and Brewers Hill areas. These areas have high density and already experience one of the higher level of trips by bicycle. However the metal bridges scare many cyclists and keep them from biking downtown.

2. Why is the project necessary? How will it contribute to improving air quality?

One of the stated goals in the Wisconsin Bicycle Transportation Plan 2020 is to increase levels of bicycling throughout Wisconsin. And the

2035 plan advises that: "All arterial streets and highways (including their bridge and underpass facilities) except freeways should provide accommodation for bicyclists."

This goal is to be accomplished by providing new and improved transportation facilities to accommodate and encourage use by bicyclists, i.e. providing bike lanes on bridges. Our metal bridges prove to be intimidating to even very experienced cyclists. This anti-slip plating has been used on a couple brides in Milwaukee and has been extremely well received by cyclists. Adding this plating to our other bridges will remove one of the final barriers to cycling in our central business district. This project will encourage the use of bicycles for utilitarian trips that are now being made by automobile.

3. Realistically, how much use will this facility or service get?

Bicycle lanes provide many benefits that will encourage the use of bicycles for utilitarian trips that are now being made by automobiles. Among the benefits of bicycle lanes are:

1. Defining a space for bicyclists to ride.
2. Helping less experienced bicyclists feel more confident and will to ride on busier streets.
3. Reducing motor vehicle lane changing when passing bicyclists.
4. Increasing bikeway visibility in the transportation system.

The level of bicycling in the City of Milwaukee increased after we installed the last anti-slip bridge deck bike lanes, and this project will further increase bicycle use in Milwaukee for utilitarian trips. According to the State Bicycle Plan, the transportation benefits of bicycling include reduced congestion, decreased need for parking, and the implementation of safety improvements that benefit all roadway users.

4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

If awarded this grant and given permission to expend funds, the City of Milwaukee structural engineering department will begin preliminary engineering. Due to our previous experience with the product, we expect to be able to advertise the project the following year. The entire project (all bridges) should be finished within 3 years of the grant award..

5. What obstacles or problems must be overcome to implement this project?

Balancing the lift bridges with additional counterweights could be a problem, but initial inspections lead us to estimate there is sufficient room for additional counterweights.

6. What will make this project a success?

The mission statement in the Wisconsin Bicycle Transportation Plan is:

"To establish bicycling s a viable, convenient and safe transportation choice throughout Wisconsin"

Providing additional bicycle lanes on arterial roadways within the City of Milwaukee will help to move forward with that goal. Providing additional bicycle lanes on these metal bridges will add to an already impressive bikeway system in the City of Milwaukee.

Project Cost Estimate & Timetable[1]

Item	Year 1	Year 2	Year 3
Engineering & Design[2]	$ 100,000	$	$
State Design Review[3]	$	$	$
Real Estate & Easements	$	$	$
Utility Relocation	$	$	$
Construction	$	$	$

Bridges & Buildings	$	$ 550,000	$
Landscaping	$	$	$
Railroad Signals/Crossings	$	$	$
Traffic Control Devices	$	$	$
Operation & Maintenance	$	$	$
Marketing & Promotion	$	$	$
Other: e.g. transit operating	$	$	$
Other: e.g. transit capital	$	$	$
Other:	$	$	$
Subtotal	$	$ 550,000	$
Contingencies & Constr Mgt[4]	$	$ 50,000	$
Total	$ 100,000	$ 600,000	$
Local Share[5]	$ 20,000	$ 120,000	$
Federal Share[6]	$ 100,000	$ 480,000	$

APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application	Application Number	WisDOT Project ID Number
April 15, 2007		

Project Title	Location(s) Served by Project
Bicycle Lane Installations	Various Arterial Roadways Citywide
Project Description - Project Limits Install pavement marking on various arterial roadways	County/Counties Served by Project Milwaukee
Project Description Continued **Create exclusive bicycle lanes on various roadways throughout the City of Milwaukee.**	Total Cost of Project (Including Local Match) $600,000
Name and Address of Public Sponsor City of Milwaukee 841 North Broadway, Room 701 Milwaukee Wisconsin, 53202	Name, Telephone & Fax Numbers of Public Sponsor Contact Mr. Jeffrey S. Polenske City Engineer (414)286-2400 telephone (414)286-5994 Fax
Other Organization(s) Involved in Project (e.g. Private Partner)	Name, Telephone & Fax Numbers of Private Partner

Project Category/Categories	Sponsor's Metropolitan Planning Organization Area
☐ Public Transportation **X** Bicycle/Pedestrian ☐ Car and Vanpooling ☐ Park & Ride Lot ☐ Traffic Flow Improvement (e.g. System Signalization) ☐ Alternative Fuels ☐ Other (Please Describe, e.g., Diesel Retrofit):	**X** Southeastern WI Regional Planning Commission (SEWRPC) ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area ☐ Non Metropolitan Planning Area

Project Description - Be Brief But Complete

1. Where is the project located? Who does it serve? How large will it be? What will it be made of? How will it be accomplished?
   Important: In addition to describing the project location below, attach a map of the project site to this application.

In 2003, the City of Milwaukee retained the Bicycle Federation of Wisconsin (BFW) to evaluate the City's bicycle route network and to make recommendations for improvements to existing and proposed routes (Project I.D. 2984-11-02). The City's bicycle route network currently consists of signed bike routes and about 47 miles of bike lanes. The focus of the BFW project consisted of identifying City streets that are appropriate for bike lanes. This analysis identified 257 miles of streets with cross sections and traffic volumes appropriate for bike lanes. Those streets were then prioritized according to three main criteria:

1. Connectivity to other bike lanes or paths
2. Need based on amount of bike lanes in the area
3. Requests from surveys

This resulted in 145 miles ranked as "high priority" segments. The BFW also prepared Milwaukee's "Bike Lane Design Guide" which indicates the streets that are appropriate for bike lanes and shows the appropriate lane widths, with and without parking. We currently have a CMAQ grant

to stripe an additional 30 miles this summer. This project will allow the City of Milwaukee to continue to install bike lanes on many of the roadways previously identified as being appropriate for bike lanes. It is the City's desire to install approximately 20 to 30 miles of new bicycle lanes per year.

2. Why is the project necessary? How will it contribute to improving air quality?

One of the stated goals in the Wisconsin Bicycle Transportation Plan 2020 is to increase levels of bicycling throughout Wisconsin. And the 2035 plan advises that: "All arterial streets and highways (including their bridge and underpass facilities) except freeways should provide accommodation for bicyclists."

This goal is to be accomplished by providing new and improved transportation facilities to accommodate and encourage use by bicyclists, i.e. providing bike lane, and by expanding the statewide network of safe and convenient routes for bicycle transportation. The State Bicycle Plan and the Facilities Development Manual also recommends that bicycle provisions be provided on urban arterial roadways unless the costs or adverse impacts of such accommodations are excessively disproportionate to expected usage. The State Bicycle Plan also states that the WISDOT will cooperate with local jurisdictions to help develop "stand alone" bikeway projects. This project is consistent with the State Bicycle Plan in that the bicycle route network will be expanded and improved accommodations will be provided for bicyclists. This will encourage the use of bicycles for utilitarian trips that are now being made by automobile.

3. Realistically, how much use will this facility or service get?

Bicycle lanes provide many benefits that will encourage the use of bicycles for utilitarian trips that are now being made by automobiles. Among the benefits of bicycle lanes are:

1. Defining a space for bicyclists to ride.
2. Helping less experienced bicyclists feel more confident and will to ride on busier streets.
3. Reducing motor vehicle lane changing when passing bicyclists.
4. Guiding bicyclists through intersections.
5. Increasing bikeway visibility in the transportation system.

The level of bicycling in the City of Milwaukee increased after we installed the last bike lanes, and this project will further increase bicycle use in Milwaukee for utilitarian trips. According to the State Bicycle Plan, the transportation benefits of bicycling include reduced congestion, decreased need for parking, and the implementation of safety improvements that benefit all roadway users.

4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

It is the City's intent to install approximately 20 to 30 miles of new bicycle lanes per year. Since the Bicycle Federation of Wisconsin has identified 145 miles of roadway as "high priority" for bicycle lanes, there is no doubt that the goal of 20 to 30 miles per year can be met, assuming funding is in place. It is our intention to let a pavement marking installation project in each of the three program years. The Milwaukee Bike Lane Design Guide identifies the candidate roadways and provides guidance in the proper location of the pavement markings for various roadway widths, with and without parking. The City will be able to put together the necessary documents for a local let pavement

marking installation project immediately following authorization to expend the funds.

5. What obstacles or problems must be overcome to implement this project?

Once the funding is in place, the only obstacle is to dedicate appropriate staff time to implement the projects.

6. What will make this project a success?

The mission statement in the Wisconsin Bicycle Transportation Plan is:

"To establish bicycling s a viable, convenient and safe transportation choice throughout Wisconsin"

Providing additional bicycle lanes on arterial roadways within the City of Milwaukee will help to move forward with that goal. Providing additional bicycle lanes will add to an already impressive bikeway system in the City of Milwaukee. It will compliment the County's Oak Leaf Trail system and the State's Hank Aaron State Trail. This project is just one more element in making the City of Milwaukee a first class bicycling city.

Project Cost Estimate & Timetable[1]

Item	Year 1	Year 2	Year 3
Engineering & Design[2]	$ 10,000	$ 10,000	$
State Design Review[3]	$	$	$
Real Estate & Easements	$	$	$
Utility Relocation	$	$	$
Construction	$ 250,000	$ 250,000	$
Bridges & Buildings	$	$	$
Landscaping	$	$	$
Railroad Signals/Crossings	$	$	$
Traffic Control Devices	$	$	$
Operation & Maintenance	$	$	$
Marketing & Promotion	$	$	$
Other: e.g. transit operating	$	$	$
Other: e.g. transit capital	$	$	$
Other:	$	$	$
Subtotal	$ 260,000	$ 260,000	$
Contingencies & Constr Mgt[4]	$ 40,000	$ 40,000	$
Total	$ 300,000	$ 300,000	$
Local Share[5]	$ 60,000	$ 60,000	$
Federal Share[6]	$ 240,000	$ 240,000	$

APPLICATION FOR FUNDING
CMAQ PROGRAM FYs 2008-2010

Wisconsin Department of Transportation

Date of Application	Application Number	WisDOT Project ID Number
April 15, 2007		

Project Title	Location(s) Served by Project
Bicycle Lane Installations	Various Arterial Roadways Citywide
Project Description - Project Limits Install pavement marking on various arterial roadways	County/Counties Served by Project Milwaukee
Project Description Continued **Create exclusive bicycle lanes on various roadways throughout the City of Milwaukee.**	Total Cost of Project (Including Local Match) $600,000
Name and Address of Public Sponsor City of Milwaukee 841 North Broadway, Room 701 Milwaukee Wisconsin, 53202	Name, Telephone & Fax Numbers of Public Sponsor Contact Mr. Jeffrey S. Polenske City Engineer (414)286-2400 telephone (414)286-5994 Fax
Other Organization(s) Involved in Project (e.g. Private Partner)	Name, Telephone & Fax Numbers of Private Partner
Project Category/Categories ☐ Public Transportation ☒ Bicycle/Pedestrian ☐ Car and Vanpooling ☐ Park & Ride Lot ☐ Traffic Flow Improvement (e.g. System Signalization) ☐ Alternative Fuels ☐ Other (Please Describe, e.g., Diesel Retrofit):	Sponsor's Metropolitan Planning Organization Area ☒ Southeastern WI Regional Planning Commission (SEWRPC) ☐ Bay-Lake Regional Planning Commission (BLRPC) - only for Sheboygan Metropolitan Planning Area ☐ Non Metropolitan Planning Area

Project Description - Be Brief But Complete

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to stripe an additional 30 miles this summer. This project will allow the City of Milwaukee to continue to install bike lanes on many of the roadways previously identified as being appropriate for bike lanes. It is the City's desire to install approximately 20 to 30 miles of new bicycle lanes per year.

2. Why is the project necessary? How will it contribute to improving air quality?

One of the stated goals in the Wisconsin Bicycle Transportation Plan 2020 is to increase levels of bicycling throughout Wisconsin. And the 2035 plan advises that: "All arterial streets and highways (including their bridge and underpass facilities) except freeways should provide accommodation for bicyclists."

This goal is to be accomplished by providing new and improved transportation facilities to accommodate and encourage use by bicyclists, i.e. providing bike lane, and by expanding the statewide network of safe and convenient routes for bicycle transportation. The State Bicycle Plan and the Facilities Development Manual also recommends that bicycle provisions be provided on urban arterial roadways unless the costs or adverse impacts of such accommodations are excessively disproportionate to expected usage. The State Bicycle Plan also states that the WISDOT will cooperate with local jurisdictions to help develop "stand alone" bikeway projects. This project is consistent with the State Bicycle Plan in that the bicycle route network will be expanded and improved accommodations will be provided for bicyclists. This will encourage the use of bicycles for utilitarian trips that are now being made by automobile.

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4. What is the project timeline? How will the sponsor ensure that the project is implemented in a timely manner?

It is the City's intent to install approximately 20 to 30 miles of new bicycle lanes per year. Since the Bicycle Federation of Wisconsin has identified 145 miles of roadway as "high priority" for bicycle lanes, there is no doubt that the goal of 20 to 30 miles per year can be met, assuming funding is in place. It is our intention to let a pavement marking installation project in each of the three program years. The Milwaukee Bike Lane Design Guide identifies the candidate roadways and provides guidance in the proper location of the pavement markings for various roadway widths, with and without parking. The City will be able to put together the necessary documents for a local let pavement

marking installation project immediately following authorization to expend the funds.

5. What obstacles or problems must be overcome to implement this project?

Once the funding is in place, the only obstacle is to dedicate appropriate staff time to implement the projects.

6. What will make this project a success?

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Providing additional bicycle lanes on arterial roadways within the City of Milwaukee will help to move forward with that goal. Providing additional bicycle lanes will add to an already impressive bikeway system in the City of Milwaukee. It will compliment the County's Oak Leaf Trail system and the State's Hank Aaron State Trail. This project is just one more element in making the City of Milwaukee a first class bicycling city.

Project Cost Estimate & Timetable[1]

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