



# Federal Fiscal Year 2019

Iowa Clean Air Attainment Program Pre-Applications

August 2017

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**IOWA CLEAN AIR ATTAINMENT PROGRAM PRE-APPLICATION  
FEDERAL FISCAL YEAR 2019**

**1. Contact Information**

Primary Sponsor:	Clive	Date Submitted:	7/21/2017
Contact Person:	Jeff May	Phone Number:	223-6231
		Email Address:	jmay@cityofclive.com
Secondary Sponsor:	Urbandale		

**2. Project Description**

Project Title: US 6 & NW 128th St Improvements

Project Description:  
Construct dual left turn lanes and right turn lanes on all approaches and improve US 6 to six lanes.

Termini Description: US 6 from Walnut Creek Bridge to east of NW 128th St and along NW 128th St from Walnut Creek bridges to north of US 6

Estimated Project Cost: \$3,000,000 to \$4,000,000 ICAAP Request \$750,000 - \$1,000,000

Project Type: Traffic Flow Improvement (Intersection, Signalization, Other)

**3. Project Need**

Explain how the project is consistent with the MPO's Congestion Management Process (CMP)? Specifically what performance measures from the CMP (page 12) does the project address?

US 6 at NW 128th St has significant delays and queues daily for traveling public. During peak hours, the eastbound queue exceeds 1,000 ft in the AM peak and westbound queue exceeds 1,000 ft in the PM peak. At the same time of long queuing on US 6, significant queues form along NW 128th St daily as well. It takes drivers multiple traffic signal cycles (adding up to 5 minutes to their travel) to proceed through the intersection. The capacity improvements will reduce delay incurred by drivers, including reducing the delay experienced by the DART bus route along the corridor.

Explain how the project is consistent with the MPO's Long-Range Transportation Plan Goals?

US 6 is included in the LRTP to be improved to six lanes. This would be the first project to improve US 6 from I-35/80 to west of the NW 128th St intersection. Also, constructing the improvements at this intersection will help alleviate congestion when the US 6 and I-35/80 interchange is reconstructed (also in the LRTP).

ICAAP funds are awarded to projects and programs with the highest potential for reducing transportation-related congestion and air pollution, thereby maintaining Iowa's clean air quality. Explain how your project address this purpose.

The increased capacity at the US 6 & 128th St intersection will reduce delays experienced by drivers, on both US 6 and 128th St. The reduction in delays will reduce the pollutants emitted by vehicles not having to wait at the intersection.

Additional information you would like to share:

The improvements are consistent with the identified capacity deficiencies in the US Hwy 6 Corridor Study as prepared by Iowa Department of Transportation in cooperation with Cities of Clive, Urbandale, Waukee, and Des Moines Area MPO.



**IOWA CLEAN AIR ATTAINMENT PROGRAM PRE-APPLICATION  
FEDERAL FISCAL YEAR 2019**

**1. Contact Information**

Primary Sponsor:	DART	Date Submitted:	7/24/2017
Contact Person:	Debra Meyer	Phone Number:	515-283-5005
		Email Address:	dmeyer@ridedart.com
Secondary Sponsor:	None		

**2. Project Description**

Project Title:	Euclid/Douglas Avenue Crosstown Route		
Project Description:	The proposed Euclid Crosstown route will operate hourly along the Euclid and Douglas Avenue corridor between East 42nd Street and Merle Hay Road. The project was designed to reduce travel times and increase the convenience of DART services by eliminating the need to travel through downtown to access stops within the corridor. The proposed crosstown route adds 5.0 new directional miles to DART's network and connects with seven other bus routes for expanded travel options, including the #1-Fairgrounds, #4-E14th, #5-Franklin, #14-Beaver, #15-6th Avenue, #16-Douglas, and #17-Hubbell/Altoona. Crosstown service along this corridor is an increasingly frequent request from businesses, nonprofits, riders, and others.		
Termini Description:	Euclid and Douglas Avenues from East 42nd Street to Merle Hay Road		
Estimated Project Cost:	\$513,210	ICAAP Request	\$300,408
Project Type:	Transit-Related Improvement		

**3. Project Need**

Explain how the project is consistent with the MPO's Congestion Management Process (CMP)? Specifically what performance measures from the CMP (page 12) does the project address?

DART's project is consistent with the MPO's Congestion Management Process and addresses the following performance measures: modal choice, transit ridership, and vehicle miles traveled. The project is expected to increase transit ridership by 183,000 and reduce VMT by 1,000,000 miles annually.

Explain how the project is consistent with the MPO's Long-Range Transportation Plan Goals?

Public transit is an integral strategy of the MPO's Tomorrow Plan for developing transportation choices in the Des Moines region, and DART's project addresses all four goals of the plan including creating a resilient economy, improving the region's environmental health and access to the outdoors, furthering the health and wellbeing of all residents in the region, and increasing regional cooperation and efficiency at all levels. The benefits of public transit go beyond services provided to passengers, as public transit reduces congestion and the need for costly infrastructure expansion, helps cities maintain air quality standards, promotes economic opportunities, and drives community growth and revitalization.

ICAAP funds are awarded to projects and programs with the highest potential for reducing transportation-related congestion and air pollution, thereby maintaining Iowa's clean air quality. Explain how your project address this purpose.

DART estimates over 161,000 trips a year will be removed from metro roadways by implementing the Euclid/Douglas Avenue crosstown service, reducing congestion and emissions from single occupancy travel. For every mile traveled, public transportation produces only a fraction of the harmful pollution of automobile traffic, making it one of the most effective ways to combat air pollution.

Additional information you would like to share:

None



**IOWA CLEAN AIR ATTAINMENT PROGRAM PRE-APPLICATION  
FEDERAL FISCAL YEAR 2019**

**1. Contact Information**

Primary Sponsor:	DART	Date Submitted:	7/24/2017
Contact Person:	Carl Saxon	Phone Number:	515-283-5038
		Email Address:	csaxon@ridedart.com
Secondary Sponsor:	None		

**2. Project Description**

Project Title: Route 4 DOT Extension

Project Description: The Route 4 DOT Extension is proposed to provide transit service north of Park Fair Mall in Des Moines, along E 14th Street and NE 22nd Street, and continue northwest to the Iowa DOT location off of Corporate Woods Drive in Ankeny. Service to the Iowa DOT and businesses along the proposed route are frequently requested from community members.

Termini Description: Iowa DOT in Ankeny

Estimated Project Cost:	\$447,996	ICAAP Request	\$281,548
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Project Type: Transit-Related Improvement

**3. Project Need**

Explain how the project is consistent with the MPO's Congestion Management Process (CMP)? Specifically what performance measures from the CMP (page 12) does the project address?

DART's project is consistent with the MPO's Congestion Management Process and addresses the following performance measures: modal choice, transit ridership, and vehicle miles traveled. The project is expected to increase transit ridership by over 96,000 rides per year and reduce VMT by 850,000 miles annually. In addition, community members will have access to essential services at the DOT and jobs throughout the corridor.

Explain how the project is consistent with the MPO's Long-Range Transportation Plan Goals?

Public transit is an integral strategy of the MPO's Tomorrow Plan for developing transportation choices in the Des Moines region and DART's project addresses all four goals of the plan including creating a resilient economy, improving the region's environmental health and access to the outdoors, furthering the health and wellbeing of all residents in the region, and increasing regional cooperation and efficiency at all levels. The benefits of public transit go beyond services provided to passengers, as public transit reduces congestion and the need for costly infrastructure expansion, helps cities maintain air quality standards, promotes economic opportunities, and drives community growth and revitalization.

ICAAP funds are awarded to projects and programs with the highest potential for reducing transportation-related congestion and air pollution, thereby maintaining Iowa's clean air quality. Explain how your project address this purpose.

DART estimates over 84,000 trips a year will be removed from metro roadways by implementing the Route 4 DOT Extension, reducing congestion and emissions from single occupancy travel. For every mile traveled, public transportation produces only a fraction of the harmful pollution of automobile traffic, making it one of the most effective ways to combat air pollution.

Additional information you would like to share:

None



**IOWA CLEAN AIR ATTAINMENT PROGRAM PRE-APPLICATION  
FEDERAL FISCAL YEAR 2019**

**1. Contact Information**

Primary Sponsor:	Des Moines	Date Submitted:	7/21/2017
Contact Person:	Calvin Miller	Phone Number:	515-283-4748
		Email Address:	cbmiller@dmgov.org
Secondary Sponsor:	None		

**2. Project Description**

Project Title: Traffic Signal Timing Updates Phase 3

Project Description: Review and update signal timing and phasing plans of the traffic signal systems in Des Moines. This project is the third phase of a multi-phase project to update the signal operation throughout the entire City. SYNCHRO traffic models will be used to help optimize signal cycle lengths, basic timing plans, split times, offsets, and time of day periods for coordination plans.

Termini Description: NE part of Des Moines; generally east of E 14th and north of Des Moines River

Estimated Project Cost: \$200,000 ICAAP Request \$160,000

Project Type: Traffic Flow Improvement (Intersection, Signalization, Other)

**3. Project Need**

Explain how the project is consistent with the MPO's Congestion Management Process (CMP)? Specifically what performance measures from the CMP (page 12) does the project address?

This project would support Goal 2 (Peak Hour Level of Service) is maintaining greater than 90% of non-congested roadways in the region.

Explain how the project is consistent with the MPO's Long-Range Transportation Plan Goals?

This project is consistent with Goal 2 (Manage and Optimize Transportation Infrastructure and Services) as the City works towards modernizing our traffic management processes.

ICAAP funds are awarded to projects and programs with the highest potential for reducing transportation-related congestion and air pollution, thereby maintaining Iowa's clean air quality. Explain how your project address this purpose.

The current traffic signal timing and coordination plans were developed many years ago and need to be updated to better accommodate current traffic counts and patterns throughout the City. The project will result in decreased travel times, reduce or maintain levels of congestion, ultimately leading to a reduction in vehicle emissions. Corridors that include bicycle facilities will be analyzed for bicycle traffic as well in our effort to enhance bicycle travel and encourage increased ridership.

Additional information you would like to share:

The multi-phase effort to update the traffic signal timing and phasing plans for the City of Des Moines will provide a current base-line of operations that will benefit our current efforts to modernize our traffic signal equipment, central management software, and traffic management practices. Having a current baseline for traffic signal timings will be critical prior to implementing more advanced traffic management practices such as adaptive and responsive traffic signal operation.



**IOWA CLEAN AIR ATTAINMENT PROGRAM PRE-APPLICATION  
FEDERAL FISCAL YEAR 2019**

**1. Contact Information**

Primary Sponsor:	West Des Moines	Date Submitted:	7/24/2017
Contact Person:	Jim Dickinson, PE	Phone Number:	515-222-3480
		Email Address:	Jim.Dickinson@wdm.iowa.gov
Secondary Sponsor:	None		

**2. Project Description**

Project Title: Ashworth Road Adaptive Traffic Signal Control System

Project Description: Installation of adaptive traffic signal control equipment at seven intersections along Ashworth Road. The intersections are Ashworth Road with 19th Street, 22nd Street, 28th Street, 39th Street, 42nd Street, Prairie View Drive and 72nd Street.

Termini Description: Ashworth Road from 19th Street to 72nd Street

Estimated Project Cost:	\$329,000	ICAAP Request	\$263,200
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Project Type: Traffic Flow Improvement (Intersection, Signalization, Other)

**3. Project Need**

Explain how the project is consistent with the MPO's Congestion Management Process (CMP)? Specifically what performance measures from the CMP (page 12) does the project address?

The Ashworth Road adaptive traffic signal control system project is consistent with the MPO's Congestion Management Process in that it addresses Goal 2 Level of Service – Peak Hour for Non-Congested Roads. Adaptive Signal Control Technology (ASCT) can assist to some extent in improving the level of service for a roadway. This is done by efficiently and automatically in real-time providing signal timings with the goal of optimizing traffic flow on the arterial while minimizing delay for the total intersection.

The project also addresses the CMP's Demand Management Strategies of Intelligent Transportation System as well as Signal Timing and Interconnectedness. Adaptive traffic signal control uses ITS technology in the operation of the system. The system addresses the Signal Timing and Interconnectedness strategy since, in the words of the CMP, "Coordinated operations strategies promote the smooth flow of traffic along an arterial to minimize stops, avoid congestion, fuel consumption and air quality impacts resulting from the acceleration and idling of vehicles. Operational strategies consistent with the objectives of coordination include Adaptive Signal Control Technology (ASCT) and Traffic Responsive."

The Ashworth Road adaptive traffic signal control system will provide the decrease in travel time, stops, delay, fuel consumption and air quality impacts that will be consistent with the CMP.

Explain how the project is consistent with the MPO's Long-Range Transportation Plan Goals?

The Ashworth Road adaptive traffic signal control system project is consistent with several of the MPO's Long-Range Transportation Plan goals. The first is Goal 2: Manage and Optimize Transportation Infrastructure and Services. One of the measures of this goal is Non-congested roads which utilizes a peak hour Level of Service. The project will assist in optimizing the traffic flow along Ashworth Road to maintain a good Level of Service.

The project is also consistent with Goal 3: Improve the Region's Environmental Health. One of the areas of emphasis under this goal is to reduce energy consumption, transportation-related emissions, congestion and the occurrence of crashes. Existing adaptive traffic signal control systems have been shown to reduce energy consumption, transportation-related emissions, congestion and the occurrence of crashes. It makes sense that when traffic is kept moving there is a reduction in these items.

Goal 4: Further the Health, Safety, and Well Being of All Residents in the Region is also consistent with the project. One of the measures of this goal is crashes. Where many adaptive traffic signal control systems have been installed, there has been a reduction in crashes on the arterials. On many arterials, the predominate type of crash is the rear-end crash. Good signal timing may reduce this to a point but the distracted driver plays a major role in causing this type of crash.

ICAAP funds are awarded to projects and programs with the highest potential for reducing transportation-related congestion and air pollution, thereby maintaining Iowa's clean air quality. Explain how your project address this purpose.

The City of West Des Moines currently has 81 of its 117 signalized intersections under adaptive traffic signal control. Adaptive traffic signal control equipment is installed on ten corridors ranging from two intersections to eighteen intersections carrying annual daily traffic of 26,000 to 50,000 vehicles per day. The first intersections were placed under adaptive traffic signal control in October, 2011 so we have had over five years of experience with this technology. Before and after travel time runs were conducted on most corridors when adaptive traffic signal control was installed. The travel time data indicated reductions in delay, stops, travel time, fuel consumption and emissions. One crash data review that was conducted also indicated a reduction in crashes on the corridor after the installation of the adaptive traffic signal control equipment.

The before and after travel time data, averaged for all corridors studied, indicated travel times are down 18%, stops have been reduced 49% and delay has been by 40%. An analysis of the north section Jordan Creek Parkway adaptive traffic signal equipment installation indicated \$1.2 million of annual user savings with the adaptive traffic signal system over the previous time-of-day system. Our years of experience with adaptive traffic signal control systems has shown the technology works and the installation of the equipment on Ashworth could be expected to also have impacts in reducing congestion and air pollution, thereby maintaining Iowa's clean air quality.

Additional information you would like to share:

The City of West Des Moines has considerable experience in operating and maintaining its adaptive traffic signal control system. The City has used Iowa Clean Air Attainment funds to assist in the expansion of the system with excellent results and benefits to the motorists using the adaptive traffic signal control corridors. The Ashworth Road Adaptive Traffic Signal Control System is expected provide the same benefits as our previous installations in maintaining Iowa's clean air quality.



**IOWA CLEAN AIR ATTAINMENT PROGRAM PRE-APPLICATION  
FEDERAL FISCAL YEAR 2019**

**1. Contact Information**

Primary Sponsor:	Windsor Heights	Date Submitted:	7/14/2017
Contact Person:	Elizabeth A. Hansen	Phone Number:	515-279-3662
		Email Address:	ehansen@windsorheights.org
Secondary Sponsor:	None		

**2. Project Description**

Project Title: University Avenue Multi-Purpose Transportation Improvements

Project Description: The project includes rehabilitating the existing road from a 4-lane to a 2-lane for traffic movement, it will include a center turn lane, on-street parking, protected bike lanes, and increased sidewalk widths. The project coincides with the recent Complete Streets grant the city was awarded for public spaces and amenities.

Termini Description: 63rd Street to 73rd Street

Estimated Project Cost:	\$2,500,000	ICAAP Request	\$2,000,000
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Project Type: Bicycle or Pedestrian Facility, Transit-Related Improvement, Traffic Flow Improvement (Intersection, Signalization, Other)

**3. Project Need**

Explain how the project is consistent with the MPO's Congestion Management Process (CMP)? Specifically what performance measures from the CMP (page 12) does the project address?

This project is consistent with the objectives of the MPO's Congestive Management Process as it preserves and promote the quality of life and the economic vitality of the greater Des Moines metropolitan area by providing an accessible, integrated, efficient, safe, and environmentally responsible multimodal transportation system that supports balanced growth by encouraging economic development in all areas of the metropolitan region.

Explain how the project is consistent with the MPO's Long-Range Transportation Plan Goals?

The Long Range Transportation Plan guides the City of Windsor Heights in its redesign on University Avenue; considering all modes of transportation for the quality of life of our residents, commuters and visitors; choosing alternative modes of transportation; considering economics and opportunities for redevelopment; and considering safety, maintenance factors, environmental mitigation and regional needs throughout the corridor.

ICAAP funds are awarded to projects and programs with the highest potential for reducing transportation-related congestion and air pollution, thereby maintaining Iowa's clean air quality. Explain how your project address this purpose.

By complying with a wide array of standards and procedures, communities can promote walkability through smart design decisions for roadways and sidewalks. It is the overall goal that, by designing to standards that promote walkable communities, dependence on the automobile will begin to decrease and, in the process, provide numerous benefits to the social, environmental, and economic characteristics of communities. The City is confident this project will achieve the ICAAP goals of congestion mitigation and air quality improvement.

Additional information you would like to share:

We appreciate the continued support from the MPO.