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Assistance Listing Title:	National Infrastructure Investments
Funding Opportunity Number:	DTOS59-25-RA-RAISE
Funding Opportunity Description:	FY 2025 National Infrastructure Investments
Agency Name:	69A345 Office of the Under Secretary for Policy
Application Name of this Submission:	Windsor Heights 73rd St. Multimodal Connector BUILD Application
Date/Time of Receipt:	Jan 28, 2025 02:30:48 PM EST

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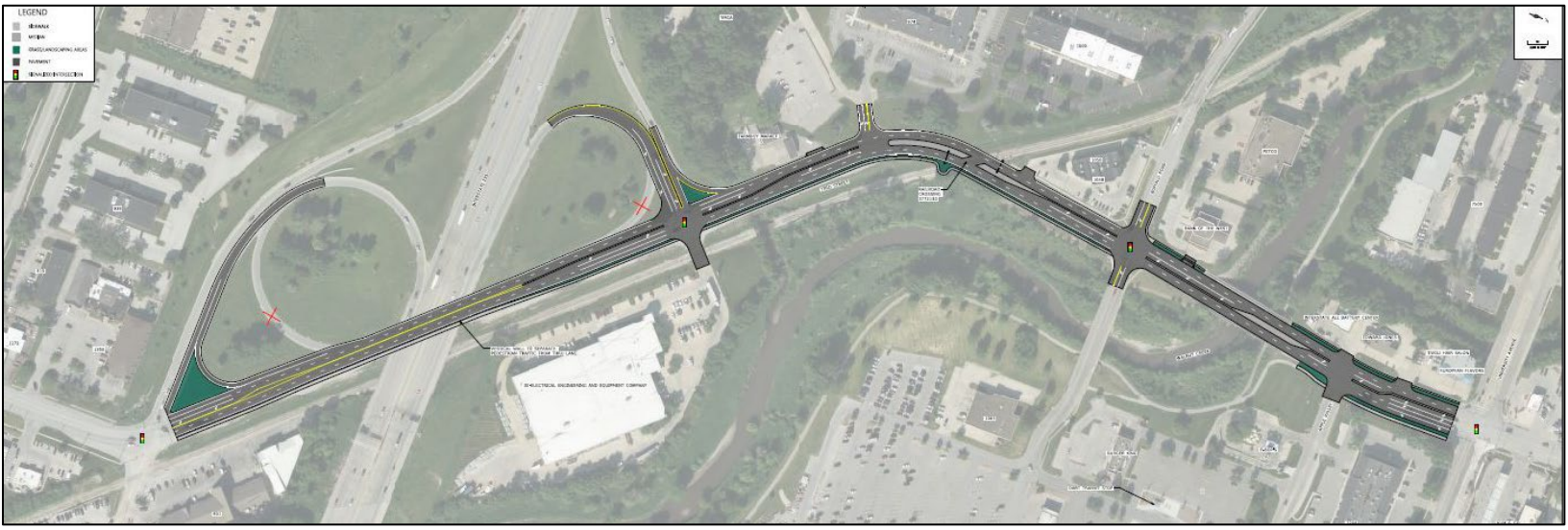


City of Windsor Heights, Iowa 73rd Street Multimodal Connector

Project Description

Better Utilizing Investments to Leverage Development
(BUILD) Grant Application

WINDSOR HEIGHTS
the heart of it all

Project Description

Overview

The City of Windsor Heights, Iowa is a suburban community with a population of 5,252 located within the Greater Des Moines Area. While relatively smaller than the communities surrounding it, thousands of residents from surrounding communities rely on it for daily access to amenities, goods, and jobs. Windsor Heights also provides access to wider regional transportation networks via I-235, public transit pick-ups and drop-offs, and regional trail access.

73rd Street is a minor arterial road that bridges the cities of West Des Moines to the South and Clive to the North through Windsor Heights. The proposed 73rd Street Multimodal Connector Project in this grant application is located within the jurisdiction of Windsor Heights, Iowa and includes a half-mile segment of 73rd Street that extends from University Avenue to the north down south to Center Street at the boundary between Windsor Heights and West Des Moines. To the east of 73rd Street and across Walnut Creek, the Clive Greenbelt Trail is accessible north of I-235.

Currently, pedestrians lack dedicated facilities along this segment of 73rd Street and are forced to walk along a narrow stretch of grass and dirt between the busy road and the Norfolk Southern/Iowa Interstate rail line. This trek culminates in the choice between crossing 73rd Street with no crossing aid, or navigating along the east side of 73rd Street and hiking across a precarious rail bridge that crosses Walnut Creek. Either choice presents a health and safety hazard that is only exacerbated by poor nighttime lighting on the northbound side of the road, a deteriorating roadway surface, rail line crossings providing inadequate warning for drivers and pedestrians along 73rd Street, and a roadway designed for significantly slower traffic than the posted speed limit.

The City is applying for FY25 Better Utilizing Investments to Leverage Deployment (BUILD) grant funds to address these concerns and ensure considerably safer networks for all road users in the area. The proposed Project reconfigures the road from Center Street to University Avenue and enhances signalization at key intersections throughout this corridor. The Project introduces crucial pedestrian facilities along the roadway with concrete barriers. The Project will also include the installation of a pedestrian bridge across Walnut Creek accessible via Center Street which will enable convenient carless access to the regional trail network, nearby amenities and jobs, and provide an alternative means to safely cross I-235 in the area.

Design Elements

Roadway space underneath the I-235 bridge is fully utilized by 73rd Street, and no room exists to add a sidewalk today. Bridge reconstruction to create space for a sidewalk would be incredibly costly and would cause substantial impacts to the busiest road in Iowa (I-235 in this area has an AADT of 116,000). The owners of the adjacent railroad have been approached about providing space for a

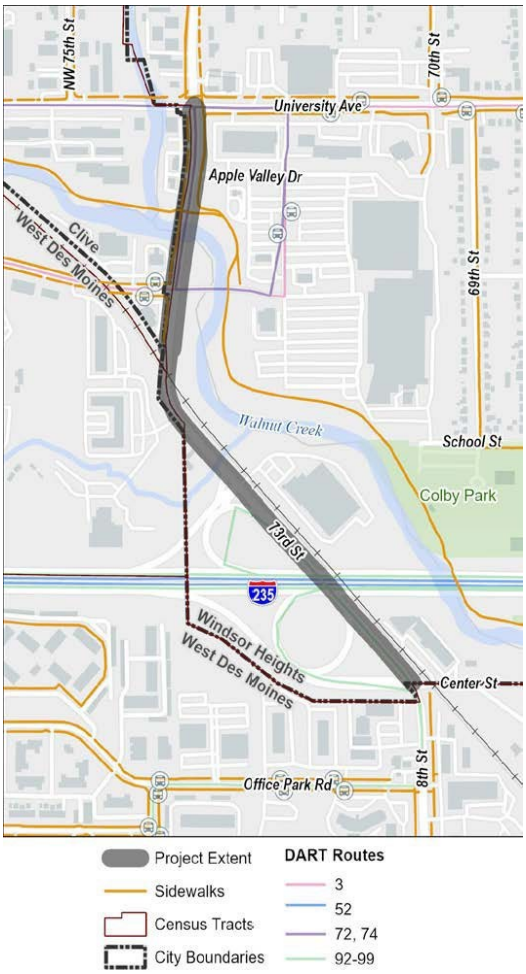


Figure 1 *Project Location for 73rd Street reconstruction*

sidewalk but have been unwilling to do so. The City proposes including pedestrian infrastructure within the existing footprint of the roadway (**Figure 1)** as the best primary means to solve these challenges within the Project area.

The 73rd Street Multimodal Connector presents an innovative approach to reallocate roadway space to include this critical pedestrian facility and is the only viable way to provide this connection proposed to date. At the interchange with I-235, the loop ramp connecting 73rd Street southbound to the I-235 eastbound on-ramp would be realigned closer to the intersection of 73rd Street and Center Street. This ramp/lane realignment is consistent with Iowa DOT's Des Moines Metropolitan Area Integrated Corridor Management (ICM) which includes future ramp metering in this area. The existing westbound off-ramp loop will be removed, so vehicles accessing 73rd Street southbound will navigate the existing loop and turn at the existing signal instead of being channeled into a weaving lane.

The space currently occupied by this weaving lane will instead be utilized by a new eight-foot sidewalk and a concrete barrier to ensure pedestrian safety as shown in **Figure 2**. High visibility pedestrian crosswalk markings will be implemented at all intersections to provide a safer crossing environment and warn drivers that pedestrians could be in the area.

Currently, the intersection of 73rd Street and the Norfolk Southern/Iowa Interstate railroad has substandard horizontal curvature and poor protection at the rail crossing. At present, the roadway "squeezes in" at the crossing, quickly dropping the median and narrowing travel lanes. This transition also uses substandard roadway curves with a 25mph design speed on the southbound lanes. This Project will correct this curvature and install a raised median between the two directions of travel. Additionally, crossing arms will include warning lights to signal oncoming trains. With the installation of a raised median, one gate arm will be placed on the shoulder of the road and the other will be placed within the median. Currently, the overhead warning lights on the east side of the road (used to signal northbound vehicles on 73rd Street) are missing due to recent damage. This creates a dangerous situation where travelers in the inner northbound travel lane cannot see the warning lights when a larger vehicle blocks them and may erroneously attempt to cross the railroad while

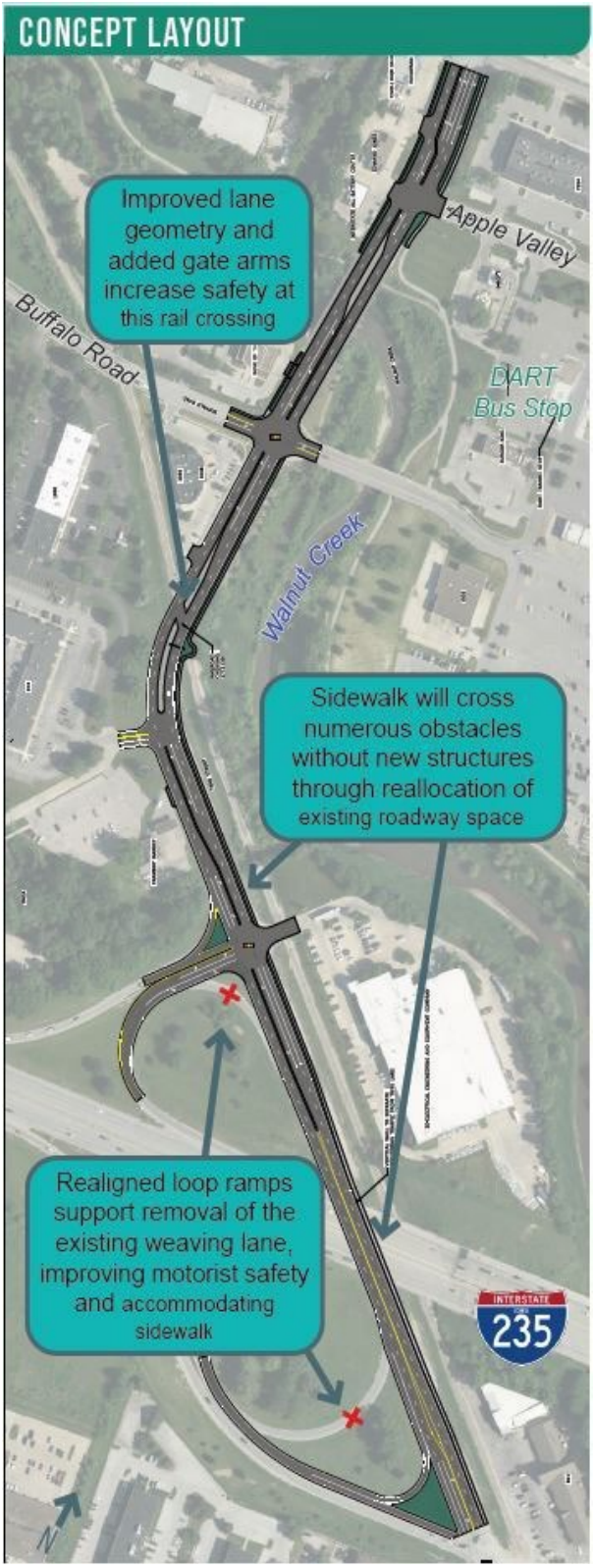


Figure 2 *Conceptual Layout of the New Roadway Design*

a train is on approach. The overhead light assembly is difficult to replace due to non-standard size. Gate arms will provide standardized, improved safety at this location for all roadway users.

Once the sidewalk reaches Buffalo Road, pedestrians can presently can either travel east on an existing sidewalk along Buffalo Road to directly access the Clive Greenbelt Trail or can cross 73rd Street to continue north on an existing sidewalk on the west side of 73rd Street. By creating safe access for pedestrians crossing I-235 and the Norfolk Southern/Iowa Interstate railroad, they will be able to safely access transit, recreation, retail, employment, and other amenities.

In addition, the Project will include the construction of a pedestrian bridge across Walnut Creek on the south side of I-235 (**Figure 3**). The City of Windsor Heights previously hired a consultant in 2019 to perform a hydrological study of Walnut Creek in this area to determine the best location for a pedestrian bridge to connect pedestrian access along Center Street to the existing trail network on the east side of the creek with a bridge crossing the waterway. The pedestrian bridge will be engineered such that there are minimal impacts on the rise of Walnut Creek. The City anticipates that the pedestrian bridge will allow for redundancy in terms of pedestrian access across I-235. This will provide added safety and reduce the risk of conflict between pedestrians and cyclists navigating the area.

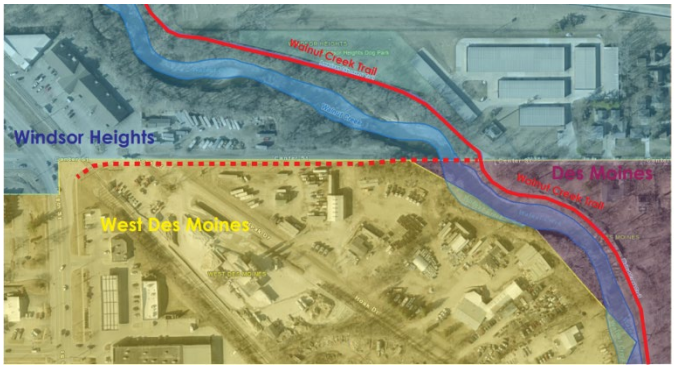


Figure 3 *Connection to Trail Network via Center Street Across Walnut Creek*

Demographic

The population of Windsor Heights is made up of eighty-eight percent of residents who identified as White, six percent as Hispanic or Latino, two percent as Asian, and one percent as Black or African American based on the Climate and Economic Justice Screening Tool (CEJST). Per the 2020 Census, almost nine percent of the 18-64 age group lives below the poverty line and twenty-seven percent of all residents are renters.

The northwest portion of the project shares a border with a Historically Disadvantaged Community (CEJST Tract number 19153011205). No Areas of Persistent Poverty will be affected by this project. According to the USDOT's classification, these areas are highlighted in the US EPA's Environmental Justice Screening tool as having a low-income population in the 80th to 90th percentile (see **Figure 4)**.

The project is located within 2010 and 2020 Census Tract 112.01. The northern section of the project is along the edge of a historically disadvantaged community in tract 111.12. The largest commercial center in Windsor Heights is adjacent to the corridor, I-235 and 73rd Street. This center has Sam's Club and Walmart as anchor stores with many businesses occupying spaces along University Avenue and portions of 73rd Street. According to data acquired from the Greater Des Moines Partnership, the anchor stores alone attracted a combined total of 4.8 million visitors from November 1, 2023 through October 31, 2024, millions of which reside in the greater Des Moines area, underscoring the area's regional importance as a retail hub.

The commercial center's parking lot houses a Des Moines Area Regional Transit (DART) bus stop that currently serves three fixed routes: route 3, route 74, and route 96. This stop is one of the busiest in the entire system with 120 average boardings per day according to DART. This area also has access to the Clive Greenbelt Trail which connects two popular trail systems, the Bill Riley Trail and Great Western Trail.

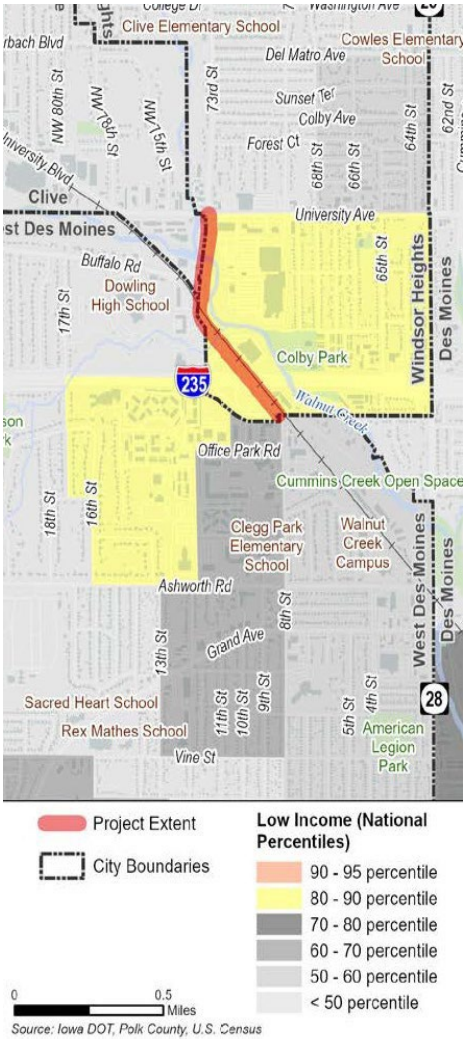


Figure 4 *Low Income Tracts Surrounding Project Area*

Corridor Challenges

Challenge 1: Lack of safe connections for nonmotorists between the North and South side of I-235

• Safety issues for pedestrians, including a gap in connections on the segment, discourage walking and biking.
• This corridor connects various residential communities to commercial centers. Well-connected sidewalk networks exist on either side of I-235 but are not connected to each other.
• Most intersections do not have any pedestrian crosswalk markings.

Challenge 2: Roadway is not designed to handle the current traffic volumes and speeds the roadway is experiencing

• The radius of the curve near the intersection with Center Street on the segment presents unsafe conditions for motorists.
• 73rd Street and the Norfolk Southern Railway crossing does not have safety arms although it is a four-lane street.
• While the roadway has a posted speed limit of 35mph, in some areas, the current roadway is designed to support 25mph or 30mph travel.

Challenge 3: Existing I-235 bridge constrains new roadway designs

• Underpass space is limited as traffic lanes, utilities, and the railroad share space.
• Large volumes of traffic necessitate multiple lanes.
• Existing auxiliary lane between ramps is substandard.

Eligibility

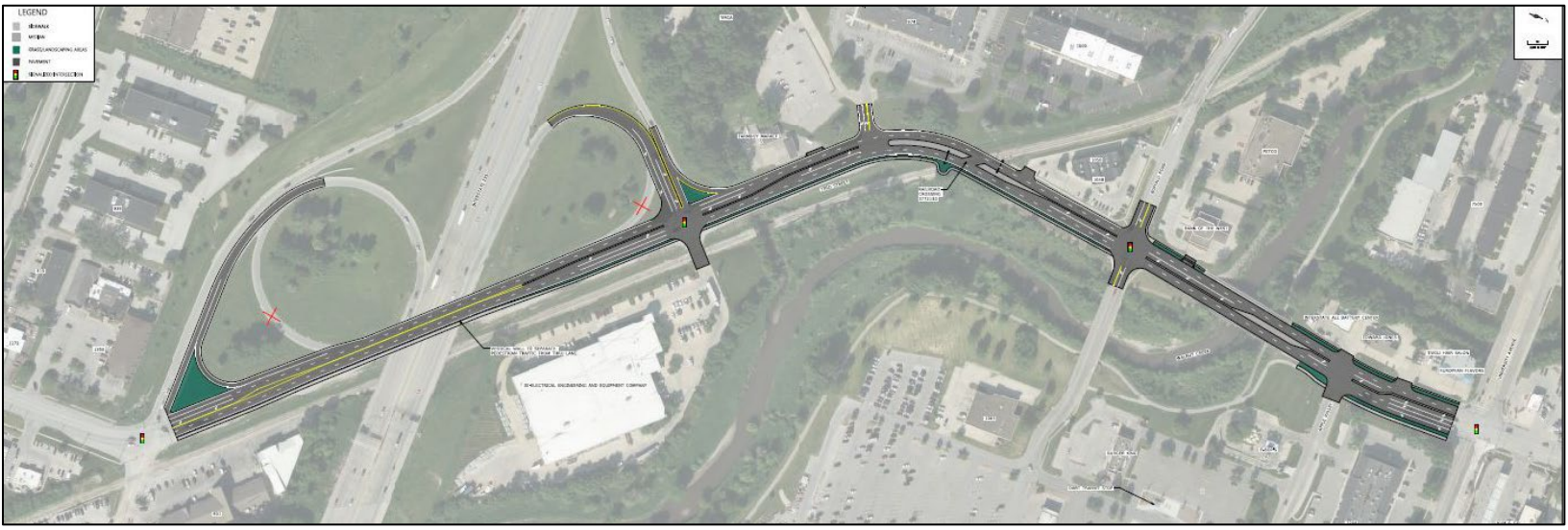
This project meets all eligibility criteria. The points below address the eligibility criteria of this application:

Eligible Applicants: As a unit of local government, the City of Windsor Heights is an eligible applicant for the BUILD capital grant opportunity. The City of Windsor Heights is the lead applicant and will manage and deliver the entirety of the project.

Minimum Funding Request for Capital Projects: The project is located in an urban area and is requesting more than the minimum request of $5 million.

Application Limit: All project components included in this application are related, and this is the only grant application submitted by this applicant.

Cost Sharing: The location for the project is Urban and is neither considered Rural, Area of Persistent Poverty, nor Historically Disadvantaged Community. The project is requesting an 80% Federal Funding match of $16,156,000 out of a total project cost of $21,070,000. Windsor Heights is resolved to provide a 20% non-Federal match of $4,214,000 and the City acknowledges responsibility for addressing any funding shortfalls and maintaining the level of non-Federal funding stated in this application.



City of Windsor Heights, Iowa 73rd Street Multimodal Connector

Merit Criteria

Better Utilizing Investments to Leverage Development
(BUILD) Grant Application

WINDSOR HEIGHTS
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Project Merit Criteria

The City of Windsor Heights proposed 73rd Street Multimodal Connector Project would bring enormous safety benefits to a high-risk and high-injury section of a corridor that bridges multiple jurisdictions and connects residents to regional amenities and services. The primary purpose of the project's improvements is to enable multimodal access to vulnerable road users that have hitherto been unable to cross the 73rd Street underpass at I-235 safely. Improved health, increasing use of sustainable transportation options, and easier access to daily goods and services for residents are three of the main benefits expected to come out of the proposed improvements. The City believes that the grant proposal addresses the required number of merit criteria to receive a rating of "Highly Recommended."

Criteria #1: Safety

Criteria #1: Safety	**HIGHLY QUALIFIED**
	Aligns with two (2) High rating benefits
The Project… *A. Protects non-motorized travelers from safety risks* *B. Reduces fatalities and/or serious injuries in communities to bring them below the state-wide average*	

1.a. Protects non-motorized travelers from safety risks

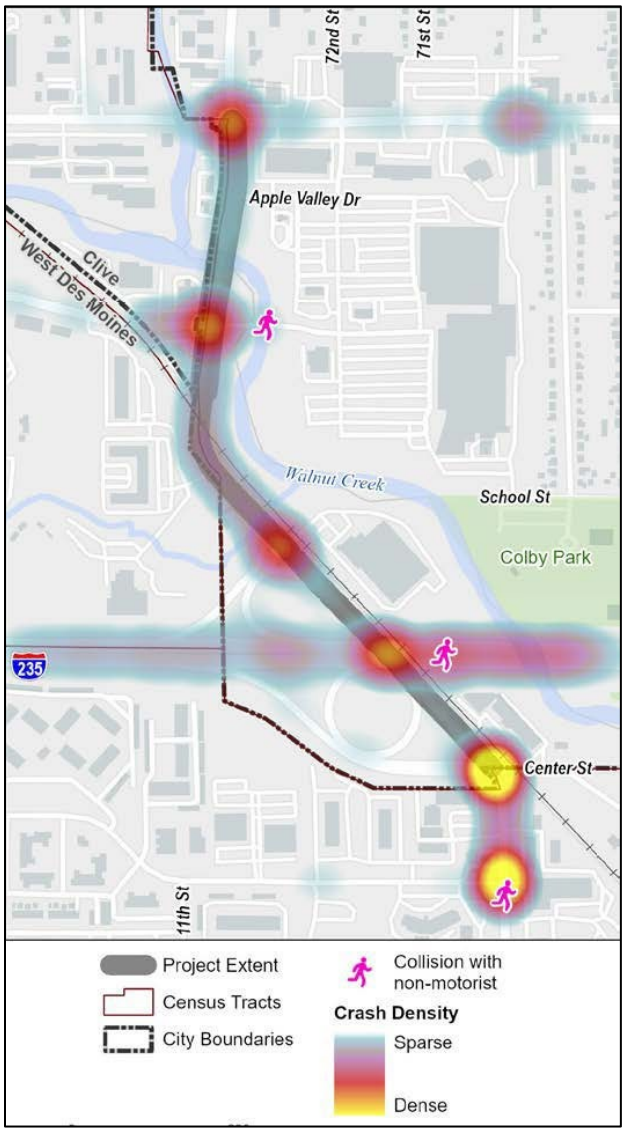


***Figure 1** A Heat Map of Historical Crashes in the Project Area from 2013-2022*

The 73rd Street Multimodal Connector project will address critical safety concerns for non-motorists who are not empowered to safely navigate the corridor at present. The corridor lacks proper pedestrian facilities, with multiple sidewalk gaps, poor crossing safety at the railroad, and substandard roadway geometry. Many pedestrians, including those from nearby low-income communities and residential areas, have little choice but to walk along dangerous stretches of the corridor without safe alternatives. The historical crash record shows how this had led to fatal repercussions (**Figure 1**). Engagement and analysis from the development of the Des Moines Area MPO's Comprehensive Safety Action Plan identified this segment as being a part of the regional High Injury Network and also the High Risk Network, underscoring the necessity of a swift and comprehensive response to the problem.

The Project will install new, and presently non-existent sidewalks along the east side of 73rd Street and a pedestrian bridge over Walnut Creek at Center Street to connect existing pedestrian networks. High visibility pedestrian crossings will be implemented throughout the 73rd Street corridor along all intersections. The installation of these facilities will reduce safety risks and provide safe travel options for non-motorized users. This is particularly important given the area's high pedestrian activity. Pedestrian walkways are Proven Safety Countermeasures according to US DOT's National Roadway Safety Strategy[1].

[1] https://highways.dot.gov/safety/proven-safety-countermeasures/walkways

1.b. Reduce fatalities and serious injuries in communities to bring them below the state-wide average

The 73rd Street corridor currently experiences crash rates well above both local and state-wide averages, with a 15% higher crash rate than City streets and more than double the statewide average (**Table 1**).

Table 1 Historic Crash Rates in the Project area compared to statewide averages

Total Crashes in Project Area (2013-2022)	236
Average AADT 2013-2022	21,233
Crash Rate (Crashes per 100 Million Vehicle Miles Traveled)	448
Statewide Crash Rate (2013-2016, All Roads)	162
Statewide Crash Rate (2013-2016, City Streets within Incorporated Municipalities)	389

All data in the table based on data from Iowa DOT
Crash Data | Statewide Average Rates

The Project aims to reduce fatalities and serious injuries by improving both roadway geometry and safety features. At the Norfolk Southern/Iowa Interstate railroad crossing, the project will enhance the roadway's curve to meet a reduced speed limit, which will help prevent crashes. Additionally, the crossing will be upgraded with new crossing gates, replacing the current warning lights, and a raised median will be added (**Figure 2**). These improvements are expected to significantly reduce the likelihood of automobile-train collisions. By addressing these safety concerns, the project will work towards bringing crash rates on the corridor below the statewide average, making the roadway safer for all users.

Figure 2 Existing (left) and Proposed Condition (right) at Rail Crossing

Criteria #2: Environmental Sustainability

Criteria #2: Environmental Sustainability	**HIGHLY QUALIFIED**
	Aligns with three (3) High rating benefits
The Project… *A. Reduce VMT through modal shift to active transit* *B. Expands transportation-efficient land-use and design* *C. Addresses the negative environmental effects of transportation infrastructure to disadvantaged communities*	

2.a. Reduce vehicle miles traveled specifically through modal shift to transit, rail, or active transportation:

Through the Project, the City aims to reduce single-occupancy vehicle usage by providing multiple means of access to active transportation. This will be accomplished through the installation of sidewalks along 73rd Street and a pedestrian bridge crossing Walnut Creek which will connect the south side of the 73rd Street overpass to the Clive Greenbelt Trail. Lower-carbon travel modes by foot or wheel that were previously inaccessible will be enabled by the inclusion of these active transportation facilities. Furthermore, residents of the area will have expanded access to bus services provided by DART at multiple stops north of the 73rd Street overpass. The City anticipates that these improvements in access to active and public transit will decrease vehicle miles traveled (VMT) through the area and thus a reduction in greenhouse gas (GHG) emissions as a result. In an area that is already flush with automobiles and heavy traffic, any reduction would be an improvement in traffic and environmental quality.

2.b. Implement transportation-efficient land use and design

While a sizable portion of the area surrounding the project does not exemplify transportation-efficient land use and design, there are signs that the area's development patterns are moving in a more compact direction and towards becoming more walkable. The City's 2017 Comprehensive Plan names walkability and complete streets a major goal in tangent with encouraging mixed-use development. To that end the City has made progress by improving pedestrian facilities along University Avenue to the Northeast of the project area and a number of infill developments such as a new Aldi have complemented what was already a well-trafficked shopping center in the region. The City anticipates that the 73rd Street Multimodal Connector Project improvements will serve to encourage attractive, sustainable, and efficient land-uses both within Windsor Heights and in jurisdictions immediately surrounding the area. The area to the south of the project on 73rd Street within West Des Moines' jurisdiction has already seen development that supports this notion with the recent construction of a multi-use, 42-apartment building with ground-floor commercial space.

2.c. Address the disproportionately negative environmental impacts of transportation on disadvantaged communities such as by reducing exposure to elevated levels of air, water, and noise pollution

The City of Windsor Heights is committed to pursuing initiatives aimed at growing as a thriving community for all residents regardless of age, race, sexual orientation, or physical disability. This project will avoid adverse impacts to air and water quality as well as to wetlands and endangered species and will incur no negative environmental impacts on nearby communities.

Figure 3 *CEJST Disadvantaged Track 112.05 intersecting with and extending North of the Project area*

This project area includes many features that serve disadvantaged persons within the disadvantaged census tract within the Project area. The risks and hazards that the current state of the roadway presents to disadvantaged persons, is not providing them a safe crossing of a railroad, proper lighting for vehicles to see them as they walk along the roadway, as well as not providing a dedicated pathway for them to go to and from home, grocery stores, community events, Walmart, and the DART bus stops. This project will address each of those system barriers and serve as a direct positive impact to the human health hazard that it currently presents.

Criteria #3: Quality of Life

Criteria #3: Quality of Life	**HIGHLY QUALIFIED**
	Aligns with three (3) High rating benefits
The Project… *A. Increases affordable transportation options* *B. Improves access to daily destinations* *C. Improves public health*	

3.a. Increase affordable transportation choices

This Project increases affordable transportation choices by creating a safer and more accessible environment for active transportation modes such as walking and cycling. By improving street design and eliminating dangerous exit ramps from I-235, the Project connects residents to an expanded network of active transportation routes and public transit options.

These changes provide residents who previously were forced to rely on a vehicle multiple alternatives to walk or cycle to their desired destinations in the vicinity. By reducing dependence on single-occupancy vehicles, the Project fosters a more connected and cost-effective transportation system for the community.

3.b. Improve access to daily destinations like jobs, healthcare, grocery stores, schools, places of worship, recreation, or parks through transit and active transportation

As a result of this Project, residents to the south of the I-235 overpass over who are currently unable to safely access the north side will have access to a wide range of daily destinations serving a diversity of cultural, economic, and situational needs. The connection will enable residents to safely access the Windsor Trail which accesses hundreds of regional destinations. Nearby, residents will have quicker and safer access to Windsor Heights' Colby Park which makes further connections to the Bill Riley and Great Western Trails. Large-chain grocery and ethnic grocery stores that populate the North side of the overpass will be safely accessible to nearby residents as a result of the Project, as well as a plethora of restaurants, coffee shops, and locally owned retail establishments.

Figure 4 *Pedestrians photographed walking along the railroad tracks adjacent to 73rd Street*

3.c. Improve public health by adding new facilities that promote walking, biking, and other forms of active transportation

The public health benefits of the Project will be realized through the encouragement of active transportation options and enhanced walkability. According to the CDC walkable communities

and transportation facilities that promote walking and cycling increase physical activity and the overall quality of life. The improvements to the pavement quality within the Project area from its current PCI score of less than 25 will allow for smoother and quieter driving conditions for motorists and heavy freight, reducing the burden of noise pollution to nearby residents and businesses from what is already a loud area from the traffic on I-235.

Criteria #4: Mobility and Community Connectivity

Criteria #4: Mobility and Community Connectivity	**HIGHLY QUALIFIED**
	Aligns with three (3) High rating benefits
The Project… *A. Improves system-wide connectivity with access to transit* *B. Addresses community-identified gaps in the existing network* *C. Removes physical barriers for individuals and reconnects communities to affordable transportation*	

4.a. Improve system-wide connectivity with access to transit, micro-mobility, and mobility on-demand

The new sidewalk along 73rd Street as well as the Walnut Creek trail-connection bridge will allow residents to access numerous commercial centers and make the connection to the DART bus station that serves routes 3, 74, and 96 while reducing dependence on automobiles. These connections will be enhanced with high-visibility crosswalks at all signalized intersections, connecting the new sidewalk to existing land uses and facilities on the west side of the road. When not constrained by the I-235 bridge, the sidewalk will be built farther away from the roadway and be separated from the roadway with a grassy planting strip. Currently, there is no Americans with Disabilities Act (ADA) compliant access along this roadway. The sidewalk will be built according to ADA design requirements to ensure all users can safely utilize the new transportation network.

4.b. Implement plans, based on community participation and data, that addresses gaps identified in the existing network

This project has been considered by Windsor Heights for years, warranting inclusion in the City's 2017 comprehensive plan. The 2022 West Des Moines comprehensive plan also includes reference to the barriers imposed by the road's design and included a resident's suggestion to provide a pedestrian bridge over Walnut Creek to allow for safe access. West Des Moines constructed improvements along 8th Street at the southern end of the project corridor (8th Street in West Des Moines and 73rd Street in Windsor Heights are the same roadway). The reconstruction of 73rd Street and inclusion of the Walnut Creek pedestrian bridge will continue those improvements into Windsor Heights, making for a safe, seamless pedestrian experience between the two communities.

This project is consistent with the Des Moines Area MPO's metro-wide Tomorrow Plan that guides how the Greater Des Moines region will grow sustainably over the next 40 years. The

project upholds Tomorrow Plan Goal 3: Further the Health and Well-Being of All Residents in the Region by filling in gaps to the sidewalk network so residents can access hubs of commerce and transportation without the use of a personal automobile.

The Windsor Heights 2017 Comprehensive Plan and its goals strongly support the 73rd Street Multimodal Connector. A few leading goals providing support for this project are:

1. Neighborhood Enhancement: Make improvements to streets and other infrastructure to enhance neighborhood quality and;
2. Complete Streets: Provide safe and peasant streets that allow travel by car, foot, or bicycle and create a connected sidewalk network, especially along arterial roads, schools, parks, trails, and retail and embrace an expansive view of "walkability" that includes creating a pleasant walking environment and encouraging mixed-use development.

The Project also implements some of the goals of The CONNECT: Central Iowa Bicycle and Pedestrian Transportation Action Plan 2020 hopes to increase the number of trips taken by foot or bicycle while decreasing the number of injury and fatalities.

Finally, the Project also addresses the forthcoming regional Comprehensive Safety Action Plan that involved substantial community outreach across the region. The Plan identifies 73rd Street as being a part of both the High Risk Network and High Injury Network through comprehensive data analysis. The segment of roadway also received multiple comments from community outreach efforts highlighting its safety issues.

4.c. Remove physical barriers for individuals by reconnecting communities to direct, affordable transportation options

The Project removes barriers to safe, easy access along 73rd Street under I-235 for pedestrians and cyclists and connects them to a wider range of public transportation options on the North side of the Project area. Furthermore, the pedestrian bridge across Walnut Creek allows for nearby and easy access to the metropolitan and regional trail network that connects to the wider Des Moines area.

Figure 5 *A photo of the area under I-235 along 73rd Street*

Criteria #5: Economic Competitiveness and Opportunity

Criteria #5: Economic Competitiveness and Opportunity	**HIGHLY QUALIFIED**
	Aligns with two (2) High rating benefits
The Project… *A. Promote long-term economic growth and other broader economic and fiscal benefits* *B. Improves travel time reliability for vulnerable road users*	

5.a. Promote long-term economic growth and other broader economic and fiscal benefits

The Project's main anticipated improvement to the local economy is expanding local residents' access to jobs and daily destinations while also improving the safety of accessing the local shopping hub. The Project expands active transportation access to local goods and services which is recognized by the US DOT as a strategy that brings a community together and generates a prosperous local economy. While the benefits to larger businesses in the area are expected to be realized, the City hopes that the Project supports local businesses that otherwise would have needed to contribute their own resources to upgrade public infrastructure which can instead be invested in the success of their own businesses. Beyond the businesses within the vicinity of the Project area, the Project will provide enhanced access for transit-dependent individuals to DART bus routes 3, 74, and 96—connecting them to economic opportunities within the region that may otherwise have been inaccessible for them.

5.b. Improve travel time reliability

The Project aims to improve travel time reliability by improving road-user safety and thereby reducing the frequency of traffic incidents, as well as providing well-designed pedestrian facilities which connect users to public transit and daily destinations. The Project includes a sidewalk along 73rd Street as well as a pedestrian bridge connecting the south side of the area to the already-existing trail. The combination of safety improvements to road-users with the separation of two dedicated pedestrian options reduce the likelihood of delays which may be caused by individuals sharing the road with motor vehicles. Additionally, the inclusion of proper sidewalk infrastructure—e.g. lighting, smooth surfaces—ensure that vulnerable users in the area will be able to navigate regardless of time of day and weather conditions.

Criteria #6: State of Good Repair

Criteria #6: State of Good Repair	**HIGHLY QUALIFIED**
	Aligns with two (2) High rating benefits
The Project… *A. Addresses current transportation system vulnerabilities for communities* *B. Prioritizes improvements of existing transportation facilities within the existing footprint*	

6.a. Address current or projected transportation system vulnerabilities for communities

The City of Windsor Heights aims to improve multimodal connections across I-235 with this Project, addressing current vulnerabilities in the transportation system. The corridor faces issues such as roadway deterioration, a lack of pedestrian facilities, and the challenges posed by a nearby aging population—18% of Windsor Heights residents are over the age of 65, according to the U.S. Census Bureau. The project will enhance the resilience of this corridor in both the short and long term, accommodating future increases in traffic and population. Specific improvements include the realignment and repaving of roadways, the update of an unsafe railroad crossing, and the construction of new walkways, all of which will enhance safety and access for all users. By addressing these vulnerabilities, the project will support more reliable and equitable transportation options for vulnerable, carless populations.

6.b. Prioritize improvement of the condition and safety of existing transportation infrastructure within the existing footprint

The Project will prioritize the improvement of the condition and safety of existing transportation infrastructure within the existing footprint. The lack of dedicated pedestrian infrastructure will be filled within the existing footprint of the corridor. 73rd Street also has substandard horizontal curvature near its crossing of the Norfolk Southern/Iowa Interstate railroad. This curve will be redesigned to meet modern design standards for a 30 mph speed limit, improving both safety and traffic flow. Additionally, the railroad crossing currently equipped with only warning lights will be upgraded to include crossing gates, providing a higher level of protection for all road users. These changes will ensure that the existing infrastructure better serves the community and remains functional as traffic and population continue to grow. Even after the project's completion, the City of Windsor Heights will continue to maintain and improve the corridor to meet the needs of all road users, further strengthening the overall transportation system.

Minimal right-of-way acquisition is anticipated (approximately 0.1 acres) based on the current layout so no disruption to the community is anticipated. Right-of-way availability is also limited, which ensures that no disruption to the community outside of typical construction activities will occur.

Criteria #7: Partnership and Collaboration

Criteria #7: Partnership and Collaboration	**HIGHLY QUALIFIED**
	Aligns with one (1) High rating benefits
The Project… *A. Engages residents to ensure communities are meaningfully integrated throughout the lifecycle of the project* *B. Has documented supported from local, regional, and national levels*	

7.a. Engage residents and community-based organizations to ensure communities are meaningfully integrated throughout the lifecycle of the project

Over multiple years, residents of Windsor Heights and surrounding communities have expressed concern for the barrier that this area of 73rd Street creates for its residents. A key issue discussed at community events, such as the Windsor Wonderland held in December, 2023, was how to safely connect people and improve access to and from the community. The event attracted over 1,000 residents, providing an opportunity for attendees to learn about the project, ask questions, and offer feedback to City staff.

During Windsor Wonderland, the project board was on display (see **Figure 6)** and City staff were available to engage with residents. A QR code on the board allowed attendees to submit their feedback digitally. In addition, the City has taken additional steps to ensure they engage a diverse audience, ensuring diverse voices are heard. Project boards with the same QR codes and project details were also strategically placed at locations like an ethnic grocery store and the Walnut Creek YMCA adjacent to the project area.

Figure 6 *Project board on display at community event*

The City is committed to engaging residents throughout the process and collaborating with nearby jurisdictions whose residents will also benefitted from the Project. To that end, the Project is receiving financial support from the cities of Des Moines and West Des Moines. The City Council and staff view collaboration with nearby jurisdictions and equitable engagement as a top priority, ensuring the Project meets the needs of all residents and creates a safer, more efficient corridor into the community.

7.b. Documenting support from local, regional, or national levels

Partnering with local businesses, national businesses within Windsor Heights, neighboring communities and public figures is crucial in a project of this size. Windsor Heights representatives (staff, City Council, etc.) have discussed this project at length with many public and private partners and have acquired letters of support from the following stakeholders:

- Senator Joni Ernst, Senator Charles Grassley, Senator Claire Celsi, Congressman Zach Nunn -Political representatives who see the impact this project will make for Iowa and are eager to see funding support for the project.
- City of Clive and the City of West Des Moines – Neighboring communities that will see a direct impact of the roadway project to help better connect its residents and communities to Windsor Heights amenities
- The Des Moines Area MPO – A significant regional coordinating body that has expressed its eagerness for the safety benefits to be realized through this Project
- Dowling Catholic School – A school located near 73rd Street that many of its workers and visitors use 73rd Street to access.
- DART– the Des Moines Area Regional Transit Authority is the local bus system that is located directly on 73rd Street and serves to connect people to and from workforce, housing, essential services, and recreational amenities.
- Colby Interests, Hy-Vee, Kum & Go, Wal-Mart, Walnut Creek YMCA –businesses located along or near the project site that will see the economic development opportunities this project brings once completed by bringing more people to and from their businesses.
- Clive Chamber of Commerce, Des Moines Metropolitan Planning Organization, Valley Square Owners Association, West Des Moines Chamber of Commerce – Community organizations that serve a diverse group of individuals who use 73rdStreet to attend their events/meetings

Each of these stakeholders will be key to seeing this Project through to its completion. They will continue to be invited to participate in public participation meetings, as well as continue to help spread the word about this impactful project in Windsor Heights. A full selection of letters of support received to date can be viewed on the project website.

Criteria #8: Innovation

Criteria #8: Mobility and Community Connectivity	**HIGHLY QUALIFIED**
	Aligns with two (2) High rating benefits
The Project… *A. Uses innovative materials* *B. Uses sensors to monitor real-time conditions of pavement quality*	

8.a. Use low-carbon or other innovative materials

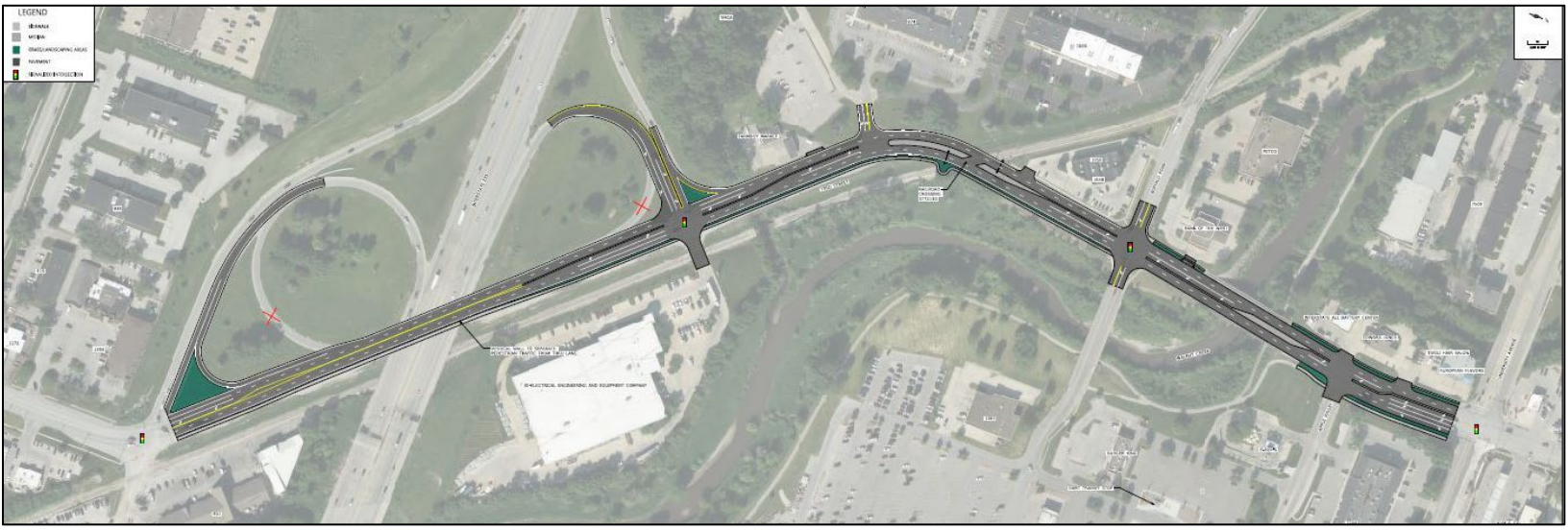
The Project will use recycled concrete from the existing roadway facilities and include low carbon concrete from CarbonCure in the new pavement to reduce the amount of embodied carbon from the roadway reconstruction. CarbonCure technology in roadway reconstruction is an innovative and environmentally sustainable technique for the community. The product strengthens the material while also reducing the amount of cement needed, reducing the overall carbon footprint of the construction process.

Repainting of the roadway as well as the introduction of markings signaling pedestrian crossings will be supportive of the navigation of autonomous vehicles through the Project area. Modern roadway paintings contribute to improved lane detection, intersection navigation, and improve the overall reliability of Avs' navigation systems.

8.b. Use sensors to monitor real-time conditions of pavement quality, signage, crosswalks, transit headways, or other public infrastructure

The Project will introduce to the community Vaisala Xcast Sensors that provide real-time monitoring of roadway conditions, driver behavior in adverse winter weather conditions, and predictive technology to make maintenance actions more effective and efficient. The City will install two such sensors along 73rd Street within the Project area to monitor road conditions and make efficient use of salt inputs during the winter months as well as contribute to the safety of the roadway.

Additionally, the Project will include the installation of fiber connectivity to traffic signals within the project area and installation of McCain Monitoring to synchronize signals which will contribute to decreased energy and maintenance costs in the future. Resynchronization of the traffic signals will contribute to more efficient signal maintenance and improve safety in the area.



City of Windsor Heights, Iowa
73rd Street Multimodal Connector

Project Budget

Better Utilizing Investments to Leverage Development (BUILD)
Grant Application

January 2025

WINDSOR HEIGHTS
the heart of it all

Project Budget

As part of this grant application process, a complete project budget has been identified and is shown in **Table 1**. The full Opinion of Probably Cost for the project can be found on the project website. This budget is based on the conceptual design that has been completed (updated in January 2024) and is shown in other sections of this application. To date only preliminary engineering has been completed in order to produce a conceptual design and cost estimate. A contingency of 20% has been incorporated into the project cost to support any unanticipated costs increases or overruns.

Funding for the 73rd Street Multimodal Corridor is detailed by source in **Table 2**. Funding commitments include STBG funds and funds raised directly by the City of Windsor Heights. The Non-Federal portion of 20% will be met by these local funds. Costs separated by Census tract are shown in **Table 3** as well as Urban/Rural cost expectations for the project outlined in **Table 4**. None of the costs detailed in these tables have been previously incurred. This RAISE grant request is the only federal grant request planned for this project. No expenses are anticipated between time of award and obligation. None of these funds are expected to have specific conditions or time constraints beyond those in place for BUILD grants.

Table 1 Project Budget

Category	**Cost**	**%**
Engineering	$5,911,000	27%
Right of Way	$30,000	<1%
Construction	$15,156,000	72%
Grading and Drainage	$3,411,000	16%
Subbase/Base	$1,800,000	9%
Surfacing	$4,368,000	23%
Major Structures	$632,000	3%
Lighting/Signals	$1,440,000	7%
Other Costs	$4,111,000	15%
Total	$17,686,000	100%

Table 2 Funding by Source

Funding Source	**Funding Amount**	**%**
BUILD Funds	$16,156,000	77%
Other Federal Funds	$700,000	3%
Non-Federal Funds	$4,214,000	20%
Total	$21,070,000	100%

Table 3 Cost by Census Tract

Project Costs	**%**
$21,070,000	100%
$21,070,000	100%

Table 4 Cost by Urban/Rural Designation

Designation	**Project Costs**	**%**
Urban	$21,070,000	100%
Rural	$0	0%

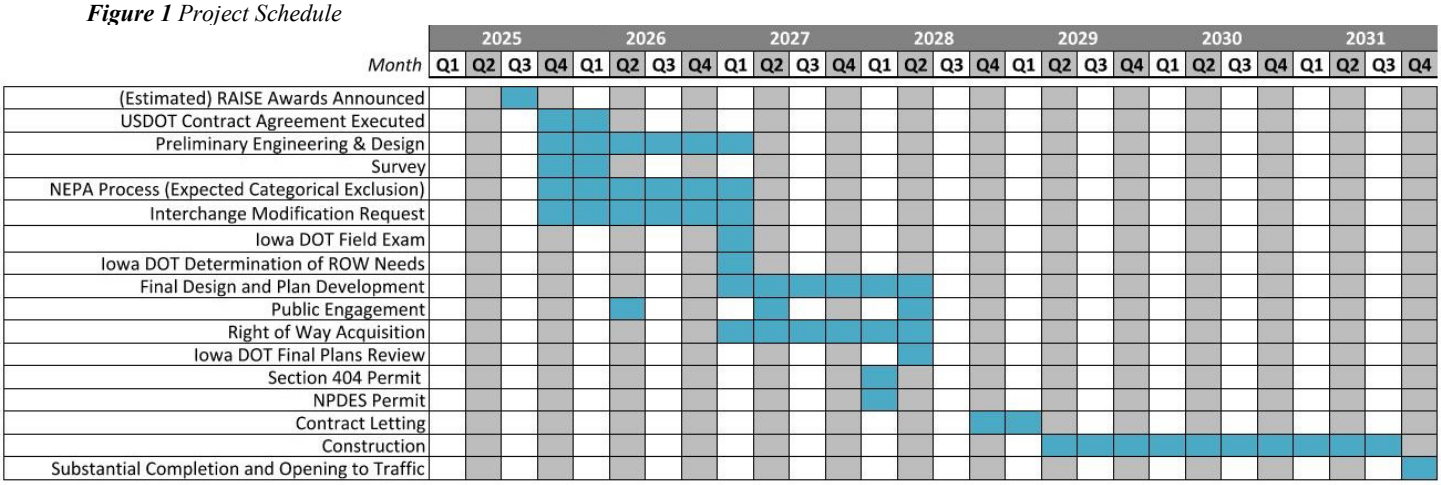
Project Readiness

Environmental Risk

Project Schedule

The project schedule ensures that BUILD funds will be obligated well in advance of September 30, 2029, as required for BUILD FY 2024 funds. As shown in **Figure 1**, BUILD funding assistance will enable construction to start in Spring 2029 and reach substantial completion by Winter 2031. All BUILD funds will be used before the deadline of September 30, 2034. All necessary acquisitions will be completed on time and in compliance with 49 CFR part 24, 23 CFR part 710, and other applicable legal requirements.

Figure 1 *Project Schedule*



Required Approvals

The proposed project comprises a comprehensive reconstruction of the existing 73rd Street roadway surface from Center Street to University Avenue. Additionally, it includes the installation of a sidewalk on the east side of 73rd Street, extending from Center Street to Buffalo Road, as well as the construction of a pedestrian bridge over Walnut Creek, located south of I-235. According to the proposed conceptual design, the project is expected to require minimal additional right-of-way (ROW) acquisition, estimated at approximately 0.1 acres, for the complete reconstruction and sidewalk improvements. Given the small and peripheral nature of these land parcels, it is anticipated that their acquisition will not present significant challenges.

Windsor Heights expects to receive all required environmental approvals and permits on time for construction, as outlined in the project schedule to meet legal deadlines, including Federal, State, and local requirements and the NEPA process. The additional ROW area is cleared, and no environmental impacts are anticipated. Currently, none of these processes have formally begun or been completed.

Anticipated Federal and State agency approvals and permits are identified in **Table 1**

NEPA Class of Action & Status

Windsor Heights will enter into further discussions with the Iowa Department of Transportation (DOT) concerning the completion of project development, final design, and construction of the proposed project. To ensure compliance with the National Environmental Policy Act (NEPA) and/or the State Environmental Policy Act (SEPA), it is anticipated that these enhancements and improvements will necessitate the preparation of a Categorical Exclusion (CE) document for approval by the Iowa DOT and potentially the Federal Highway Administration (FHWA).

Agency	Action
US EPA	NEPA, Categorical Exclusion (CE)
US EPA	Section 404 Permit
US EPA	NPDES Permit
FHWA	Interchange Modification Report (IMR)
Iowa DNR	Floodplain Development Permit
Iowa DOT	Conceptual Design
Iowa DOT	Field Examination
Iowa DOT	Right of Way Plans
Iowa DOT	Work Within ROW Permit
Iowa DOT	Final Design
US ACE	404 Permit
City	Floodplain Permit

Table 1 *Anticipated Permits and Approvals*

Public Involvement

The project area includes low-income populations (80th to 90th national percentile) around 73rd Street and I-235, and a significant non-white population (60th to 80th national percentile) south of these locations. These demographics are shown in Figures 7 and 8. Their presence underscores the need for public involvement in the proposed improvements.

As a municipal partner of the Des Moines Area Metropolitan Planning Organization (MPO), Windsor Heights has commenced equitable and inclusive planning and public involvement initiatives concerning this proposed project. Furthermore, Windsor Heights will persist in engaging residents, business owners, DART, and other project partners as the project progresses towards construction.

The Des Moines Area MPO conducts a continuous, cooperative, and comprehensive (3-C) transportation planning process for the greater Des Moines metropolitan area. As part of this planning process, the MPO requests public review and comment on the proposed work, projects, and products. Residents of Greater Des Moines are encouraged to provide their feedback on which local transportation projects should receive funding from the Des Moines Area MPO.

The 73rd Street Multimodal Connector project was included in the MPO's public input process for the Surface Transportation Block Grant (STBG) Program in 2023. It received one comment from the public. Since then, the MPO Policy Board's Funding Subcommittee awarded the project $700,000 in STBG funds to be allocated in federal fiscal year 2028.

Figure 7 *US EPA Low Income Environmental Justice*

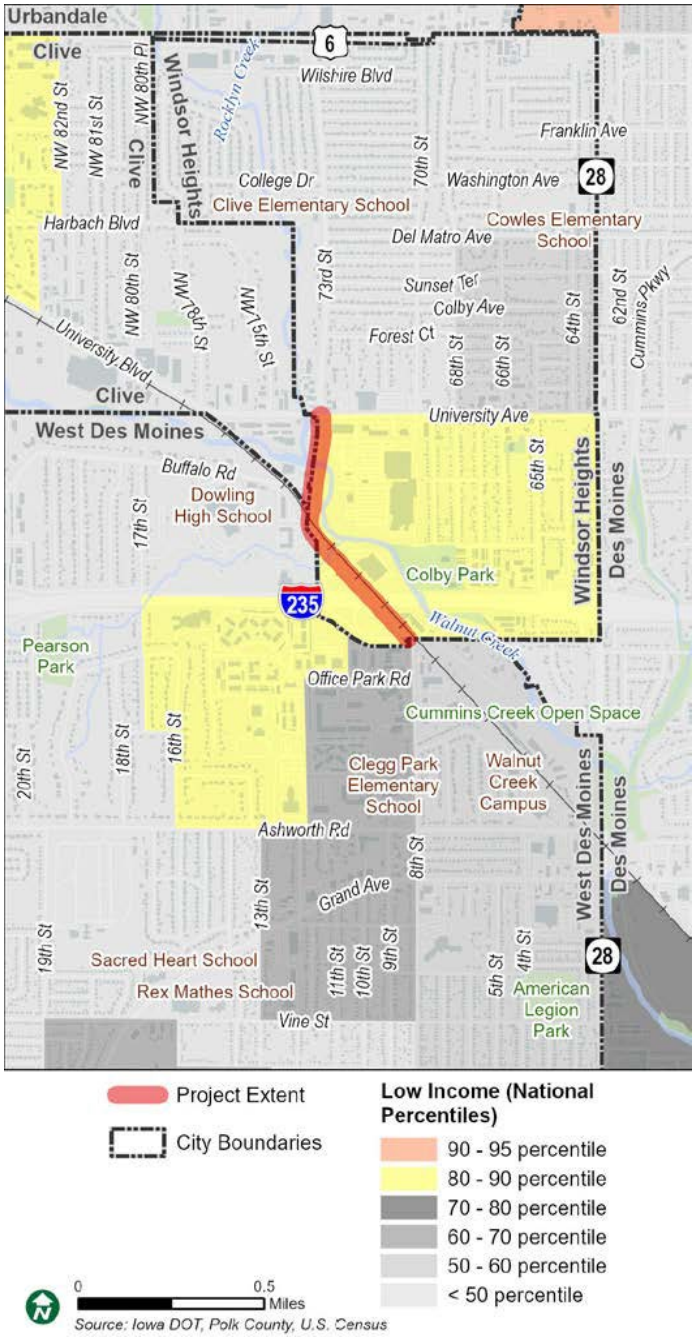
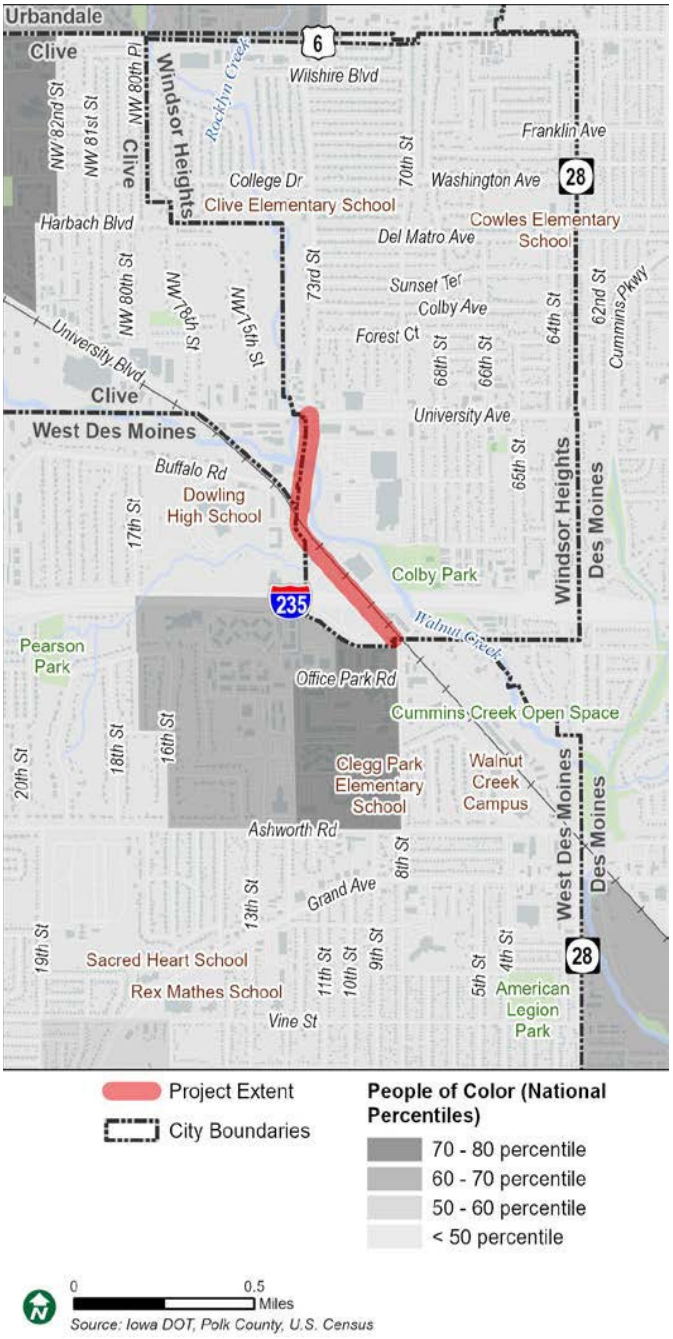


Figure 8 *US EPA People of Color Environmental Justice*



Project Risks and Mitigation Strategies

Table 7 identifies risk factors and associated mitigation strategies for the proposed project.

Table 7 Project Risks and Mitigation Strategies

Risk Description	Project Phase	Probability	Risk Assessment	Mitigation Strategy	Project Effect
ROW constraints	Prelim, Final, Construction	Low	Schedule	Strong communication with affected owners	May constrain/guide solutions
Cost increases	Preliminary	High	Budget & Schedule	QA/QC; Value engineering to ensure optimal design	Manage project costs and schedule
Detouring and access challenges	Preliminary, Construction	Medium	Budget & Schedule	Strong communications with stakeholders and partners	Effective traffic management plan and project phasing. May affect cost and duration
Addressing Stakeholder needs	Preliminary	Medium	Schedule	Public engagement strategies for stakeholders. Railroad coordination on proposed improvements within their R/W.	Stakeholder support
Environmental Issues	Preliminary, Final, Construction	Medium	Budget & Schedule	NEPA and required regulatory processes	May affect cost, staging, ped. bridge location and project duration
Utilities adding relocation/ replacement costs	Preliminary, Design, Construction	Low	Schedule and Budget	Strong communications with affected owners	May affect cost, staging, and duration

Technical Capacity

Windsor Heights is the applicant for the BUILD grant funding and will contribute a minimum of 20% of the non-federal funding match toward the 73rd Street Multimodal Connector project described in this application. In partnership with Iowa Department of Transportation, Windsor Heights will conduct all necessary natural and human environment analysis in accordance with NEPA requirements. Windsor Heights will continue the public engagement process initiated as part of the Des Moines Area MPO outreach.

Throughout the course of project development, Windsor Heights has the resources to complete this project with minimal ROW acquisition and will continue to coordinate with the Iowa DOT

to ensure compliance with their Complete Streets Policy and others as necessary to obtain the Federal and State permits and approvals needed prior to construction.

Windsor Heights has experience utilizing federal discretionary funding in the delivery of transportation infrastructure improvement projects, such as a recent grant from US DNR for a new bicycle and pedestrian trail on University Avenue. Windsor Heights appreciates and sincerely thanks the many parties and partners who have pledged support to the 73rd Street Multimodal Connector including State and Local representatives, businesses, who unanimously support this proposed project. A letter from the Windsor Heights Council expressing unanimous support for the project and support letters from the MPO and other partners who have expressed support for the project can be found in on the project website.

Financial Completeness

At least $700,000 in matching funds will be received from Des Moines MPO STBG funds, $50,000 from adjoining City of Des Moines, $50,000 from the adjoining City of West Des Moines and a minimum of a $2,214,000 match directly from the City of Windsor Heights. Any cost overruns incurred beyond the budget stated in this application will be addressed by the City of Windsor Heights. Other non-federal funding sources may be sought out to help cover any overruns as well. Also, the project cost includes a contingency to help cover any overruns on project costs.

Benefit-Cost Analysis Narrative

Introduction

The City of Windsor Heights, Iowa is applying to the 2025 Better Utilizing Investments to Leverage Development (BUILD) grant program for the 73rd Street Multimodal Connector Project. The project will reconstruct approximately 1.67 miles of urban arterial street to enhance a primary corridor into the city. Once complete, the corridor will have new sidewalks and improved access to regional trails for residents of the community. Additionally, the project is anticipated to improve safety for users on the corridor and improve traffic operations at key intersections throughout the corridor.

Benefit & Cost Summary

A benefit cost analysis was completed for the proposed project using the USDOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs document updated in November of 2024 and the USDOT Benefit-Cost Analysis Speadsheet Template. The proposed project is anticipated to start final design and construction activities beginning in 2025 with completion by 2030. The opening year for the project will be 2030 with an operational period of 20 years used for the analysis. Based on the anticipated outcomes of the project, the following benefits were calculated:

- Corridor Operation and Maintenance Savings
- Reduction in Vehicle Crashes
- Corridor Travel Time Savings
- Vehicle Operating Costs
- Changes in Vehicle Emissions
- Pavement Condition Improvements
- Residual Value

Capital costs were estimated for the BUILD grant submission and include costs for engineering, right-of-way, and construction activities. In the current year, capital costs are estimated at $21.07 million. The benefit cost analysis uses a 3.1 percent discount rate for future costs and benefits. A two percent discount rate is used for carbon emissions. Based on the estimated costs and benefits of the project, the estimated benefit cost ratio of the project is 4.43. The table below summarizes the costs and benefits of the project.

Category	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Operations and Maintenance	3.53	1.98
Safety	20.18	12.39
Travel Time Savings	8.11	4.97
Vehicle Operating Cost Savings	0.00	0.00
Non-CO2 Emissions Reduction	-0.15	-0.09
CO2 Emissions Reduction	0.00	0.00
Pavement Condition Improvement	93.81	57.50
Residual Value	7.02	3.18
Total Benefits	**132.51**	**79.92**
Total Cost	**21.07**	**18.05**
Benefit Cost Ratio		**4.43**

Scenario Assumptions

There are two scenarios being analyzed in the benefit cost analysis a no-build scenario and a build scenario. The no-build scenario includes no changes on the existing corridor for safety or traffic operations. On-going routine maintenance and planned maintenance occurs throughout the analysis period on the corridor, but conditions remain relatively unchanged.

The build scenario includes the construction of a raised median, improve roadway alignment near the railroad crossing, a speed limit reduction to 30 miles per hour, and the installation of sidewalks along the corridor. Routine maintenance occurs throughout the analysis period to maintain the improved condition of the corridor. Traffic operations are improved through signal retiming and fiber connectivity between signals on the corridor.

Traffic volumes for the no-build and build scenarios do not change as the facility does not significantly change in function, land use, or capacity between the scenarios. The Des Moines Area MPO travel demand model was used to develop annual traffic volumes on the corridor with forecasted growth between 2030 and 2050.

Benefit Descriptions

This section outlines in more detail the data used to estimate the benefits of the 73rd Street Multimodal Connector Project.

Operations and Maintenance

Operation and maintenance costs for the 73rd Street corridor were prepared by the City of Windsor Heights on-call consultants for the years 2021 to 2050. In the no-build scenario, the cost of maintenance is greater and more frequent due to the existing condition of the street. In the build scenario, maintenance costs are lower and do not start until 10 years following construction completion as the reconstruction project improves the condition of 73rd Street.

	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Operations and Maintenance	3.53	1.98

Safety

Crash data for 2020 to 2024 was gathered from the Iowa DOT Iowa Crash Analysis Tool (ICAT) for the 73rd Street corridor. During the five-year crash period, 146 crashes occurred on the corridor with 105 property damage only (PDO), 32 possible injury (C), 7 non-incapacitating (B), and 2 incapacitating (A). The annual average number of crashes for each crash level was calculated. In the no-build scenario, the average annual number of crashes by level continues as no improvements for safety are constructed. In the build scenario, future crashes are reduced based on crash modification factors for lowering the speed limit, resurfacing the pavement, and providing a raised median.

	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Safety	20.18	12.39

Travel Time Savings

Corridor level peak hour delays were developed by the City of Windsor Heights on-call consultants in a traffic study supporting the proposed improvements. Based on PM peak hour delays for both north and southbound directions, the future build analysis shows traffic operations improvement in the northbound direction and increased delays in the southbound direction. Applying the future no-build vehicle delays to no-build traffic volumes results in travel time costs for the no-build scenario. Applying future build vehicle delays to build traffic volumes results in travel time costs for the build scenario.

	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Travel Time Savings	8.11	4.97

Vehicle Operating Costs

USDOT guidance for vehicle operating costs is estimated on a per mile basis. Due to no forecasted change in traffic volumes between the no-build and build scenarios, there is no measurable benefit between the two scenarios in terms of vehicle operating costs.

	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Vehicle Operating Cost Savings	0.00	0.00

Emissions

Emissions for the no-build and build scenarios were calculated using forecasted traffic volumes, existing and proposed speed limits, and emissions factors provided by the Iowa DOT. The emissions factors are the same used for the Iowa Clean Air Attainment Program (ICAAP) for estimating emissions reductions in accordance with the state's CMAQ funding. Emissions rates were calculated for both light duty passenger vehicles and heavy-duty vehicles at 30 and 35 miles per hour. Due to slightly higher emissions at lower speeds, the build scenario produces more emissions than the no-build scenario. Therefore, emissions are a disbenefit of this project.

	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Non-CO2 Emissions Reduction	-0.15	-0.09
CO2 Emissions Reduction	0.00	0.00

Pavement Condition Improvement

While vehicle operating costs capture costs for gasoline, maintenance, tires, and depreciation, these capture only those regular on-going and routine costs. According to TRIP, a national transportation research nonprofit, Iowans pay $428 per driver per year for additional repairs due to poor road conditions. As the 73rd Street project will reconstruct street segments with poor pavement conditions, this increased cost is applicable to the drivers on 73rd Street. In the build scenario, the cost is reduced as the road condition is improved. The number of drivers was estimated to be half the AADT on the corridor per year.

	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Pavement Condition Improvement	93.81	57.50

Residual Value

The residual value of the project was estimated using the predefined formula in the USDOT template to account for benefit of the project beyond the analysis period. It is assumed the useful life of the project is 30 years.

	Undiscounted Total (in millions $)	Discounted Total (in millions $)
Residual Value	7.02	3.18