

# MOLINE MULTIMODAL STATION

AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

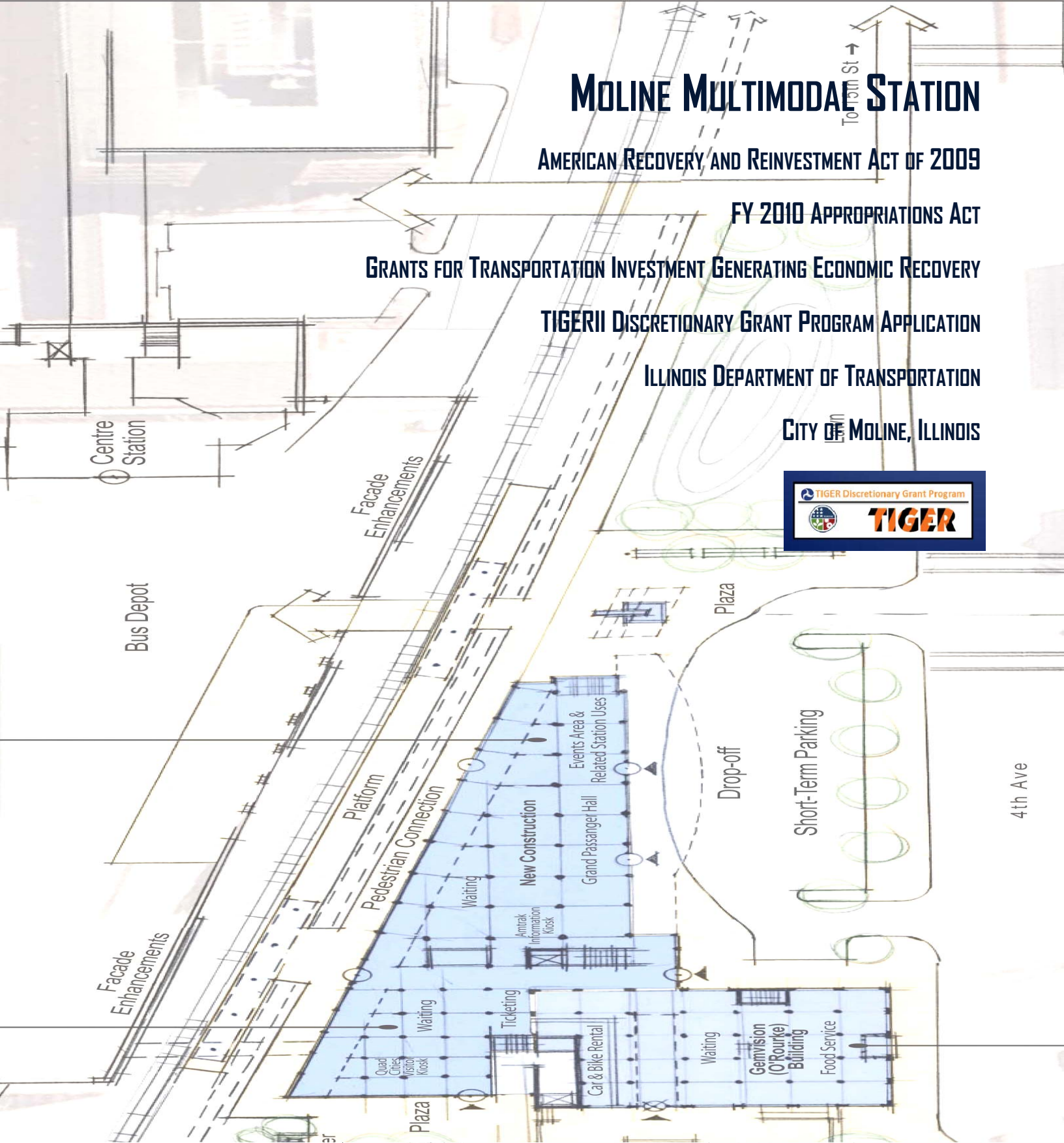
FY 2010 APPROPRIATIONS ACT

GRANTS FOR TRANSPORTATION INVESTMENT GENERATING ECONOMIC RECOVERY

TIGER II DISCRETIONARY GRANT PROGRAM APPLICATION

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF MOLINE, ILLINOIS



# Table of Contents

- 1.0 TIGER II APPLICATION OVERVIEW ..... 1**
  - 1.1 Grant Applicant Information..... 1
  - 1.2 DUNS Number ..... 1
  - 1.3 Project Type ..... 1
  - 1.4 Project Location..... 1
  - 1.5 Benefit-To-Cost Ratio ..... 1
  - 1.6 TIGER II Funds Requested ..... 1
  - 1.7 Project Website ..... 1
- 2.0 PROJECT DESCRIPTION ..... 2**
  - 2.1 Project Location..... 3
  - 2.2 History ..... 4
  - 2.3 Status of Existing Facility ..... 5
  - 2.4 Connections with Existing Transportation Infrastructure ..... 5
  - 2.5 Proposed Improvements ..... 6
- 3.0 PROJECT PARTNERSHIPS..... 6**
- 4.0 PROJECT FUNDING ..... 8**
- 5.0 PRIMARY SELECTION CRITERIA ..... 10**
  - 5.1 Long Term Outcomes..... 10
    - 5.1.1 State of Good Repair..... 10
    - 5.1.2 Economic Competitiveness ..... 10
    - 5.1.3 Livability..... 13
    - 5.1.4 Environmental Sustainability ..... 15
    - 5.1.5 Safety ..... 16
  - 5.2 Job Creation & Economic Stimulus ..... 17
- 6.0 SECONDARY SELECTION CRITERIA..... 18**
  - 6.1 Innovation..... 18
  - 6.2 Partnership ..... 20
    - 6.2.1 Jurisdictional & Stakeholder Collaboration..... 20
    - 6.2.2 Disciplinary Integration ..... 20
- 7.0 BENEFIT – COST ANALYSIS..... 22**
- 8.0 PROJECT SCHEDULE ..... 25**
- 9.0 FEDERAL WAGE RATE REQUIREMENT ..... 25**
- 10.0 NATIONAL ENVIRONMENTAL PROTECTION ACT (NEPA) REQUIREMENT..... 25**
- 11.0 ENVIRONMENTALLY RELATED FEDERAL, STATE & LOCAL ACTIONS ..... 25**
- 12.0 CONFIDENTIAL BUSINESS INFORMATION..... 25**
- 13.0 LETTERS OF SUPPORT & SUPPLEMENTAL INFORMATION..... 25**

## List of Tables

2.2.1	Project History .....	4
4.1	Financial Plan.....	9
7.2	Project Benefits & Costs .....	23

## List of Figures

2.1	Project Location Map .....	3
5.2.1	Job-Years of Full-Time Jobs Generated by Project .....	17
5.2.2	Breakdown of Job Creation by Earnings Rate .....	18
7.1	Project Benefits & Costs .....	22



## 1.0 TIGER II APPLICATION OVERVIEW

### 1.1 Grant Applicant Information

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### 1.2 DUNS Number

133600754

### 1.3 Project Type

Rail – Primary  
Transit – Secondary  
Bicycle & Pedestrian – Additional

### 1.4 Project Location

The Moline Multimodal Station will be located in Moline, Illinois – the Quad Cities' intermodal transportation hub. This station will be an integral stop along the route to re-establish Amtrak service between Chicago, Illinois and Iowa City, Iowa.

### 1.5 Benefit-to-Cost Ratio

29.4:1

### 1.6 TIGER II Funds Requested

IDOT respectfully requests \$12,043,000 through the TIGER II Discretionary Grant Program. Attainment of this request will complete the project's financial package totaling \$16,634,250. Construction of the project can be completed within 2 years of receiving the TIGER II Discretionary Grant funds.

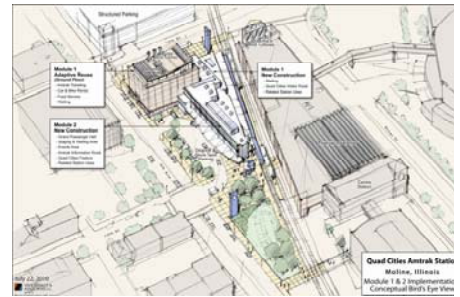
### 1.7 Project Website

[www.renewmoline.com/TIGERIIsite.htm](http://www.renewmoline.com/TIGERIIsite.htm)



## 2.0 Project Description

The Moline Multimodal Station is much more than a passenger rail station to enhance the intermodal connectivity of Downtown Moline and the surrounding Quad Cities Metropolitan area. The station is an integral component of the “*Quad Cities Transit- Oriented Development + Intermodal Plan,*” prepared jointly by the Rock Island County Metropolitan Mass Transit District (MetroLINK), the City of Moline, and Renew Moline. Renew Moline provides economic development and professional services with a primary focus on facilitating private land development investment while helping to secure complementary public improvements. Emphasis remains on partnering with the City of Moline to implement the Moline Centre Plan, adopted November 13, 2001 by the Moline City Council.



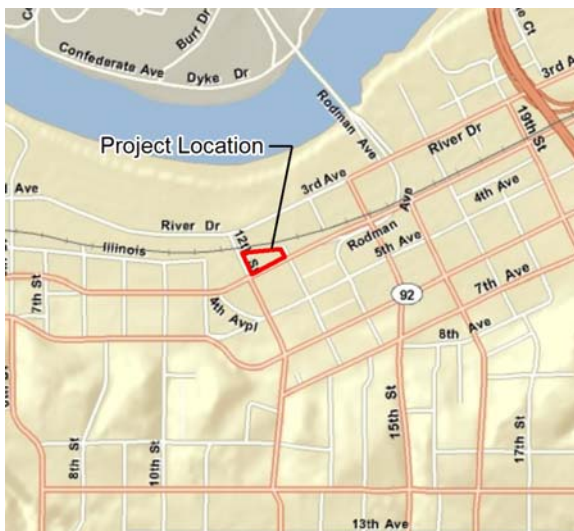
The Moline Multimodal Station will work in partnership with the existing Centre Station and will be the key component of the transit-oriented development (TOD) and Green Enterprise Zone (GEZ). The GEZ is an innovated concept focused on transforming Moline’s riverfront into a focal point for green technology, innovation, energy efficiency, and river restoration. The new Amtrak service will connect the Quad Cities to Chicago and Iowa City, Iowa. The Moline Multimodal Station will tie the new passenger service to the region’s existing inter, intra, and regional bus service, pedestrian, bicycle, and river ferry transportation modes.

TOD is not in itself a type of development or real estate product. Rather, it is a method of creating neighborhoods or districts that are anchored by transit stations and are specifically designed to encourage transit accessibility and reduced automobile usage. TOD typically contains a mix of land uses and interconnected circulation systems to emphasize multiple modes of transportation and integrated within the community to enhance livability thus contributing to a sustainable urban land use and development pattern. The Moline Multimodal Station project will be a key force in the redevelopment and revitalization of Downtown Moline; it will spur new commercial, office, and residential projects. It will provide an additional transportation connection

between large and small business in Moline, Chicago, and beyond. It will provide a cost-effective transportation choice to both drivers and non-drivers the latter including students, the elderly, and the disabled and the low-income population. The Moline Multimodal Station will be an example of the possibilities of the redevelopment of an existing urban Brownfield site to a modern, Leadership in Energy and Environmental Design (LEED) certified intermodal facility.

## 2.1 Project Location

The proposed Moline Multimodal Station is located adjacent to the existing Centre Station in Moline, Illinois. Specifically, it is located east of 12<sup>th</sup> Street, between the railroad tracks and 4<sup>th</sup> Avenue, see Figure 2.1. Centre Station currently serves as a major regional bus transfer station and terminal, operated by MetroLINK. The Moline Multimodal Station will complete the link between passenger rail, commuter rail, local and regional bus, water taxi, and other non-transit modes of transportation such as automobiles and bicycles. The station will be located in Downtown Moline in close proximity to existing activity generators such as the i wireless Center, John Deere Commons with the John Deere Pavilion, specialty shopping, dining, municipal and civic facilities, and riverfront trails. The Moline Multimodal Station will enrich the economic vitality and physical environment of the area while enhancing transportation accessibility.



**Figure 2.1**  
**Project Location Map**



## 2.2 History

<b>Table 2.2.1 Moline Multimodal Station Project History</b>	
1978	Moline to Chicago passenger rail service ends
1993	\$50 million Quad Cities Riverfront Civic Renewal project broke ground
1996	John Deere Pavilion opened
1998	Centre Station, the final major component in John Deere Commons, completed
2006	<i>Midwest Regional Rail Initiative Benefit Cost &amp; Economic Analysis</i>
2007	Quad Cities Passenger Rail Coalition formed
<b>2008</b>	
January	<i>Feasibility Report on Proposed Amtrak Service Quad Cities - Chicago</i>
May	Joint letter signed by 6 U.S. Senators for Amtrak trains being stored in Delaware maintenance yard could be used to restore Amtrak service in Quad Cities
October	Amtrak Reauthorization Bill passed with largest ever funding amount for state intercity passenger rail capital grants (HR2095)
December	Moline's Centre Station recommended as Quad Cities Amtrak Station Site
<b>2009</b>	
February	\$787 billion Economic Stimulus proposal signed which includes largest ever funding amount for passenger rail in U.S. history
March	FY 2009 Omnibus Appropriations Act signed which included \$475,000 earmark for Quad Cities track improvements
April	President Obama's <i>Vision for High-Speed Rail in America</i> released
May	Iowa SF151 signed which included \$3 million for Iowa Passenger Rail Fund
July	\$150 million for Amtrak improvements and \$400 million for high-speed rail improvements in Illinois Capital Bill
July	Memorandum of Understanding signed to coordinate applications for Chicago hub high-speed rail corridor
September	Midwest Regional Rail Initiative, Iowa DOT, IDOT & FRA held open forum meeting
<b>2010</b>	
January	Illinois legislation passed \$45 million to establish passenger rail service from Chicago to Quad Cities
July	TIGER II pre-application submitted

### 2.3 Status of Existing Facility

The Moline Multimodal Station is a new facility for passenger rail service. The site of the proposed Moline Multimodal Station is an urban Brownfield site in the center of downtown. Brownfield sites are underused industrial or commercial facilities available for reuse or infill redevelopment. The site is currently occupied by Moline Automotive Repair Shop and the O'Rourke Building which is currently vacant.



The O'Rourke Building, originally constructed in 1917 as a Sears Roebuck warehouse, is planned for adaptive reuse to give it a new life as a multimodal station. The renovation will allow the structure to accommodate passenger amenities, ticketing for Amtrak, information kiosks, restaurants, retail space, offices, and residential space. This building is a contributing structure to the Moline Downtown Commercial Historic District which was added to the National Register of Historic Places (NRHP) in 2007.



### 2.4 Connections with Existing Transportation Infrastructure

The Moline Multimodal Station will promote local, regional, and international connections to the existing transportation structure. The Station's primary function is to serve as a passenger station for the re-established Amtrak passenger rail service from Chicago to the Quad Cities and eventually onto Iowa City, Iowa.

- Local Connections – The station will connect Amtrak passengers with personal vehicles, pedestrian accommodations, bicycles, buses, taxis, water taxis, and the Quad Cities International Airport.
- Regional Connections – The station will connect Moline and the Quad Cities metropolitan area with greater Chicago area via Amtrak with a proposed three- hour trip time. Illinois and Iowa are jointly pursuing funding to extend Amtrak service from Moline to Iowa City.
- National Connections – The station will connect the Quad Cities metropolitan area with Chicago Union Station and the rest of the Amtrak



- United States Government – U.S. Senators Dick Durbin, Tom Harkin, Tom Carper, and Chuck Grassley and former U.S. Senators Barack Obama and Joseph Biden worked together to identify former Amtrak trains being stored in a Delaware maintenance yard that could be utilized to restore Amtrak service in the Quad Cities. President Barack Obama signed the Federal Economic Stimulus package that included the largest ever funding amount for passenger rail in U.S. history.
- State of Illinois – The State of Illinois has partnered through contributions of over \$45 million in funding for the Chicago – Quad Cities Amtrak Service Extension and \$2,900,250 for the Moline Multimodal Station. \$16 million has been granted for the Quad Cities maintenance facility located just blocks from the Moline Multimodal Station. Governor Quinn has sent an endorsement letter for the project. See the *Letters of Support* section on the project website.
- Amtrak – IDOT and the City of Moline have worked closely with Amtrak officials who have eagerly participated in the planning and design of the Amtrak service expansion and the design of the multimodal station.
- City of Moline – The City has been an active partner in securing the overall Amtrak service extension from Chicago as well as for the Moline Multimodal Station. The City has actively promoted the projects, leveraged funding, and implemented potential site control. The City is contributing \$1,691,000 for the Moline Multimodal Station.
- Quad Cities Passenger Rail Coalition – The organization, consisting of over 8,500 area residents, including Quad-Cities residents, elected officials, community, labor, business leaders, and college students, advocates on behalf of the greater Quad City region for restored passenger rail service to Chicago. Also, over 150 business, labor, community organizations and government entities have become official supporters of QC Rail. QC Rail also has a Facebook page (“Bring Amtrak to the Quad Cities”) and currently has over 3,200 fans. The Facebook page includes links to various articles and video clips on media articles related to the Moline Multimodal Station and the Amtrak passenger service between Chicago and the Quad Cities. Over 96% of the comments are in support of the Moline Multimodal Station and the expansion of Amtrak service to Moline.
- Renew Moline – Renew Moline has been working aggressively with its partners to leverage the Amtrak station into a major public-private transit-oriented development project with the City of Moline. Renew Moline has provided local private sector leadership, procured project funding, provided overall project management, design review, and political advocacy services through the Design-Build Management Team (DBMT) process, and advanced

- the project in context of a broad, long-term regional economic development vision strategy.
- MetroLINK – Partnered with Renew Moline and the City of Moline to manage the Quad Cities *TOD & Intermodal Plan* completed in July 2009. They have sponsored the Quad Cities “Smart Growth” project to address future transportation needs of the region. MetroLINK has also secured project funding, participated in railroad negotiations, managed the local Amtrak station operations, and integrated this role into its current transit services at Centre Station.
  - Local Stakeholders – The Moline Multimodal Station has received strong endorsements for this project from community pillars including neighboring units of local government, regional businesses, economic development organizations, and other similar organizations.
  - Memorandum of Understanding - It should be noted that this project supports the goals and plans outlined in the Memorandum of Understanding (MOU) that was executed on July 27, 2009 by the Governors of an eight-state Midwestern region and Mayor Richard Daley of Chicago. That MOU outlined the broad regional support for a Midwestern high-speed rail hub in Chicago that would serve as a key component to the nation-wide network envisioned by President Barack Obama and Transportation Secretary Ray LaHood. The MOU specifically mentions the critical Midwestern route from Chicago to the Quad Cities and ultimately to Des Moines, Iowa and Omaha, Nebraska.

#### **4.0 PROJECT FUNDING**

IDOT, the City of Moline, and their partners have developed an innovative financial plan for the Moline Multimodal Station. The plan incorporates local, state, and federal funding that has already been secured and calls for additional TIGER II funding to complete the financing package. The project can begin immediately after TIGER II Discretionary Grant funding has been received and be completed within two years.

IDOT and the City of Moline respectfully request \$12,043,000 – which exceeds the minimum 20% funding match required by the TIGER II Discretionary Grant – in TIGER II funds to complete the Moline Multimodal Station financial plan, which is detailed in Table 4.1 in 2010 dollars:

**Table 4.1  
Moline Multimodal Station Financial Plan**

<b>Project Expenditures</b>		
Site Acquisition	\$1,313,000	
Building Demolition & Relocation	\$278,000	
Site Demolition & Preparation	\$100,000	
Module One – New Construction	\$2,366,000	
Module One – 1 <sup>st</sup> Floor Renovation	\$2,125,000	
Module Two – New Construction	\$4,190,000	
Pedestrian Concourse	\$450,000	
Passenger Platform & Systems	\$650,000	
Utility Relocation & Site Restoration	\$890,000	
12 <sup>th</sup> Street Plaza	\$400,000	
4 <sup>th</sup> Avenue Station Plaza, Parking & Drop-Off	\$700,000	
Owner's Contingency	\$1,349,900	
Architecture & Engineering	\$1,822,350	
<b>Total Project Expenditures</b>	<b>\$16,634,250</b>	
<b>Project Funding Sources</b>		
Federal – TIGER II Grant	\$12,043,000	(73% of Total Cost)
State of Illinois – Matching Funds	\$2,900,250	(17% of Total Cost)
City of Moline – Local Funds	\$1,691,000	(10% of Total Cost)
<b>Total Project Funding Sources</b>	<b>\$16,634,250</b>	

The above outlined financial plan is an example of exemplary partnership, intergovernmental cooperation, and coordination. This project requires participation from the federal government and the State of Illinois to reap the benefits passenger rail service can offer to the community and region, rather than simply accommodating Amtrak service. With a full multimodal station, complementary site amenities, and civic spaces, the project will spark new development opportunities in Downtown Moline, expand the tourism industry, and allow the Quad Cities to be an attractive location for businesses. The \$12.043 million funding request under the TIGER II program will allow for a complete station experience and the full economic benefits this project can generate.

## 5.0 PRIMARY SELECTION CRITERIA

### 5.1 Long Term Outcomes

#### 5.1.1 State of Good Repair

The Moline Multimodal Station will be a newly constructed facility and consequently does not need to be brought into a state of good repair. However, long-term operations and maintenance of the facility have been carefully thought through and will be diligently managed by the City of Moline and MetroLINK. The City will work closely with Amtrak and MetroLINK officials to coordinate maintenance and operational needs of the first floor lobby and ticketing space.

The design of the Moline Multimodal Station will be done so that the station will be able to be LEED certified. Water and energy efficiency is of key importance and will minimize the operating costs by approximately 25% of a comparable, traditionally designed building.

#### 5.1.2 Economic Competitiveness

The Illinois-Iowa Quad Cities area is a metropolitan area of 400,000 residents. The extension of Amtrak passenger service to Moline will connect the Quad Cities with Downtown Chicago, its suburbs, and beyond. The economic impact this connection will have on the Quad Cities is significant. In President Obama's *Vision for High-Speed Rail in America*, "America's transportation system is the lifeblood of the economy. Providing a robust rail network can help serve the needs of national and regional commerce in a cost-effective, resource-efficient manner, by offering travelers convenient access to economic centers. Investment in rail will not only generate high-skilled construction and operating jobs, but it can provide a steady market for revitalized domestic industries producing such essential components as rail, control systems, locomotives, and passenger cars."

Ongoing redevelopment in Downtown Moline positively impacts the economic competitiveness of Moline, the Quad Cities, and the State of Illinois. Adaptive re-use and redevelopment are key ingredients to local, regional, and national success. The Moline Multimodal Station is the primary component of the TOD effort and is essential to attracting businesses, residents, and visitors.

- Economic Impact – The *Midwest Regional Rail Initiative Benefit Cost & Economic Analysis* indicates that the Amtrak service expansion and the Moline Multimodal Station will:
  - Create up to 825 new, permanent jobs

- Retain 850 permanent jobs
- Create 750 temporary construction jobs
- Increase household income by \$11 - \$16 million
- Increase property values by \$50 - \$100 million
- Transit-Oriented Development – Downtown Moline is an existing entertainment and commercial area that includes the i wireless Center (over 600,000 visitors annually), John Deere Pavilion (over 200,000 annual visitors), restaurants, and shopping. The new facility will allow for easier, more widespread travel to these venues.
- Job Retention – Moline and the Quad Cities is home to a mix of Fortune 500 companies, large corporations, and small businesses. The tourist and entertainment attractions combined with the shopping and offices bring approximately 2,000 workers to Downtown Moline. Downtown Moline has several corporations with a major presence in both Moline and Chicago:
  - KONE’s North American corporate headquarters is located in Lisle, a western Chicago suburb that has a Metra commuter rail stop along the same rail line as the proposed Amtrak service. A transfer opportunity between Amtrak and Metra would exist in Naperville which adjoins Lisle to the west. KONE has made a long-term commitment to Downtown Moline in entering into a 15-year lease to locate its U.S. Operations Center in a new mixed-use riverfront development just two blocks from the station.
  - The largest employer in the Bi-State region, the Rock Island Arsenal, is connected to downtown by a bridge located just two blocks from the station. This U.S. Army installation is home to more than 70 federal and commercial tenants and approximately 7,500 employees. It is estimated that operations add \$1 billion annually to the local economy and impact 14,000 community jobs.
  - Willis Group, a global insurance company, maintains its Quad Cities office in Downtown Moline. Last fall, Willis of Illinois moved into a landmark in Downtown Moline. After assessing various locations in the Quad Cities, the historic old Moline Post Office in downtown was selected to house the local operations and training facility. The company recently relocated its Midwest Headquarters to the Willis Tower (formerly the Sears Tower) which is located just blocks from the Union Station in Chicago.
  - UnitedHealthCare has a major corporate presence in the Quad Cities, employing nearly 600 people – the majority within their regional office located in John Deere Commons.
  - An additional 450 jobs will be retained if a Fortune 500 company corporation can move a division to the location currently occupied by the TOD anchor tenant.

- The John Deere World Headquarters is located in Moline. The John Deere Pavilion and John Deere Store are tourist destinations and attract visitors from all of the United States and the world. The John Deere Pavilion is the fourth largest tourist attraction in the state outside Chicago. John Deere has 5,000 international corporate visitors (channel suppliers and customers) annually. With the expansion of Amtrak passenger service from Chicago to Moline, John Deere will develop a Chicago-Quad Cities package to increase the corporate travel component.
- Workforce Expansion –
  - As part of the Base Realignment and Closure (BRAC) legislation, the First Army is in the process of relocating to the Rock Island Arsenal and will be up in running by June 2011. It is estimated that 550 workers will be relocating with the First Army. This offers a huge opportunity to attract defense contracts and other support industries in the Quad Cities area who want to be “off island” but still in close proximity to the Arsenal. Dell Perot Systems, who recently won a 5-year, \$42 million contract to provide the Rock Island Arsenal with command, control, communications, and computer and information management (C4IM) services is an example.
  - A Fortune 500 corporation is seeking to consolidate its currently fragmented operations into one facility in Downtown Moline and occupy the new site by 2011. This business plans to employ 400 people in Downtown Moline.
  - Construction of the station will also enhance significant reinvestment in the surrounding area and provide new job opportunities for the underemployed workforce in surrounding urban neighborhoods.
- Existing Tourist Destinations – Moline and the Quad Cities metropolitan area is home to several major tourist destinations including the John Deere Pavilion, the John Deere Store, i wireless Center, Niabi Zoo, Figge Art Museum, Putnam Museum and Imax Theatre, Bettendorf Family Museum, Isle of Capri Casino & Hotel, Rhythm City Casino, Jumer Casino Rock Island, 15 public golf courses, and the Mississippi River. The area attractions draw over 5.7 million visitors annually and 17.3% of these visitors are from the Chicago area. With the expansion of Amtrak passenger service between Chicago and Moline and the well-developed transportation system in the Quad Cities metropolitan area, it is likely that the annual visitors to the region will increase. The increase in visitors will directly result in the increase in jobs required to directly support the tourism market.
- More Transportation Alternatives – The Moline Multimodal Station will enhance the existing transportation network in the Quad Cities metropolitan area. The retail space in the new station will also offer bike rentals and the

station will be connected via a pedestrian walkway to Centre Station where bus transit is available. The Quad Cities Airport is located within a few minutes of the station via airport shuttle, bus, or taxi.

- Increased Transit Ridership – Amtrak passengers arriving from Chicago will be able to enjoy all of the amenities of the Quad Cities metropolitan area without the use of a passenger vehicle because an extensive public transportation system is already in place. This system is the result of a comprehensive planning and partnership of local government, business leaders, and non-profit organizations. MetroLINK bus transit ridership is expected to increase significantly with the arrival of the first Amtrak train at the Moline Multimodal Station and as the TOD becomes established.
- Strengthening Urban Neighborhoods – The economic impacts of the Moline Multimodal Station and TOD will be felt by the entire Quad Cities region but most readily by the residents of the downtown neighborhoods including the predominantly Hispanic Floreciente Neighborhood. Nearly 30% of downtown neighborhood residents live below the poverty line and 14% are unemployed. By providing a range of employment opportunities and access to passenger rail within walking distance of these neighborhoods, this investment is being made not only in critical infrastructure but also in the residents themselves.
- Support for Emerging High Speed Rail – The development of the Moline Multimodal Station will directly support the Midwest Regional Rail Initiative (MWRRI), a significant, cooperative plan amongst nine Midwestern states to upgrade 3,000 miles of existing railroads to provide safe and reliable (up to 110 mph) emerging high-speed passenger rail service across 100 Midwestern cities. The Moline Multimodal Station, which lies along the Chicago – Moline – Iowa City route, will satisfy a key component of the initiative – improved station facilities and intermodal connectivity that also supports feeder bus service and access to air transportation.

### 5.1.3 Livability

The Moline Multimodal Station will greatly enhance the livability of Downtown Moline, the City of Moline, and the Quad Cities by completing the vision outlined in the *Moline Centre Master Plan Update* and the *Quad Cities TOD & Intermodal Plan*. The multimodal station will serve as the connection from personal automobiles, buses, water taxis, taxis, bicycles, and pedestrians to passenger trains. With a metropolitan population of 400,000 residents, the Quad Cities area will greatly benefit from the introduction of passenger train service.

- Affected Community – The expansion of passenger rail service from Chicago to the Quad Cities and the construction of the Moline Multimodal Station will benefit many diverse groups of people in the Quad Cities and Chicago areas.

- Students – College students attending Northern Illinois University, Augustana College, St. Ambrose University, Palmer College of Chiropractic, Western Illinois University, and University of Iowa
- Business Community – Business meetings/conferences in Chicago, commuting to/from work, business expansion
- Family/Friends – Former residents returning to Quad Cities to visit, going to visit Chicago or other cities
- Patrons of the arts, sporting events, etc. – Can more easily access their interests due to proposed rail service
- Tourists – Weekend trips to Chicago, Quad Cities, or Iowa City
- Senior Citizens – Driving averse
- Disabled Citizens – A mode of transportation to enhance their mobility and independence
- Economically Disadvantaged – Reasonably priced alternative to travel without the expense of a car (car, insurance, gas, parking, etc.)
- Non-Drivers – Expand new transportation options to travel to Iowa City, Chicago, and beyond
- Scale of Project's Impact – Annual ridership, based upon two daily roundtrip trains between Moline and Chicago, is estimated to be nearly 111,000\* (*\*Executive Summary Feasibility Report on Proposed Amtrak Service Quad Cities – Chicago, Page 16*)
- Transportation Choices – The Moline Multimodal Station will expand the existing transportation choices to include passenger train service. Existing choices include personal vehicles, bus, bicycles, pedestrian, taxis, and water taxis. Passenger trains are safe, reliable, and economical transportation choices, which will decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.
- Cost of User Mobility – The Moline Multimodal Station will provide a cost-effective alternative for people traveling between Chicago and the Quad Cities metropolitan area. Parking fees in Chicago can reach upwards of \$60 per night. By taking the train, travelers to Chicago from Moline do not have to pay these fees.

For those on limited or fixed incomes such as the elderly, students, or low-income populations who may not be able to afford to own and operate a vehicle, the passenger train service will provide a reasonably priced alternative for travel between the Quad Cities and Chicago.

For large and small businesses in the Quad Cities, Chicago, and its suburbs, Amtrak passenger service will provide a practical transportation choice to commute between the two cities. Business expenses to commute between the two cities include car rental or reimbursable mileage for taking a personal vehicle on company business; ownership, operating, and maintenance expenses of a company vehicle; time for travel, including time spent waiting in traffic congestion; vehicle parking costs; and time spent finding parking. Passenger train service will reduce these expenses to a small fraction. Even the time spent traveling onboard a train can be productive for business travelers on the train who can utilize the train's amenities including electrical outlets and connections to high-speed internet.

- Planning Process – The Moline Multimodal Station has long been a part of the *Moline Centre Master Plan Update* (November 2001) and the *Quad Cities TOD & Intermodal Plan* (July 2009). Quad Cities Rail Coalition was developed to support the reintroduction of passenger rail service in Moline.

#### **5.1.4 Environmental Sustainability**

Rail is already among the cleanest and most energy-efficient of the passenger transportation modes and the Moline Multimodal Station will be one of the most energy efficient public buildings in Moline. The Moline Multimodal Station will be LEED certified as a result of such sustainable design features incorporated into the Moline Multimodal Station including:

- Moline Green Enterprise Zone – The Green Enterprise Zone (GEZ) is an innovative concept focused on achieving energy efficiency and deploying advanced renewable energy systems in an area targeted for sustainable economic development. The GEZ is a model for how to link energy innovation to economic development and provide companies with opportunities to differentiate themselves by locating in a setting powered by on-site green energy systems.
- Site Sustainability – Alternative transportation provisions for pedestrians, bicycles, and low-emissions vehicles. Connected to Centre Station, the existing bus transit station. Downtown, central location.
- Adaptive Re-Use of Existing Building – The existing urban Brownfield site, the unique, historical O'Rourke Building, will be transformed from a warehouse into the passenger station including a waiting area, ticketing services, restaurants, retail space on the first floor, as well as office and residential space in the upper floors.
- Water Efficiency – Water-efficient landscaping and facility water use reduction
- Energy Efficiency – Energy-efficient HVAC systems and potential use of green power sources

- Construction Materials – Low construction waste and use of recycled and locally-sourced materials
- Indoor Environmental Quality – Design features to enhance light controllability, thermal comfort, and interior daylight access
- Outdoor Plazas and Green Space – Design outside spaces to include plazas and green space that is landscaped with trees and plants to enhance the urban downtown setting, utilize plants that help remove harmful compounds from the air, and include plants and features that are water efficient.

The Moline Multimodal Station is also predicted to increase transit ridership due to the inherent efficiencies and conveniences associated with consolidating multiple modes of local and intercity transit, bicycle, and parking facilities into a centralized hub.

The Moline Multimodal Station will also benefit the environment by helping to remove passenger vehicles from Interstates 80 and 88. Congestion along Interstate 80 and secondary roadways will be improved since many of the single-occupancy vehicle trips could be made by train. This will reduce the amount of emissions generated, the fuel consumption, and our dependence on foreign and domestic oil resources.

#### **5.1.5 Safety**

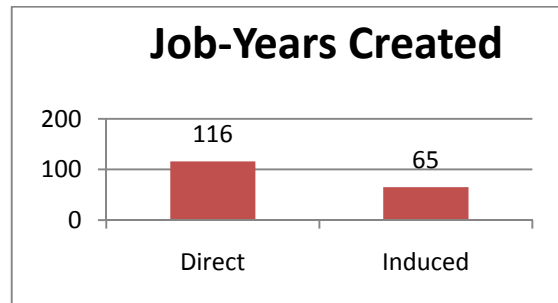
Several safety benefits are directly tied to the Moline Multimodal Station. These include the following:

- Protected indoor waiting areas for rail patrons.
- Covered platforms with more accessible and safer boarding conditions for rail patrons than ground-level boarding, requiring a climb up into the rail cars. This design eliminates the risk of trip-and-fall injuries and from walking on or next to the rail tracks.
- Direct transfer access between modes and access to all platforms, waiting areas, and sidewalks without having to cross vehicular rights-of-way (streets or rails) or busy parking lots.
- Unobstructed visibility at the rail platform and the passenger concourse for increased security.
- Active building frontage at street level, increasing personal safety by attracting more people to the area during the daytime and nighttime.
- Reduced exposure to auto crashes on roadway system.

## 5.2 Job Creation & Economic Stimulus

The Moline Multimodal Station will immediately create hundreds of temporary construction jobs and create hundreds of new, permanent jobs as well as retain hundreds of permanent jobs which will have a positive impact on the unemployment rate of the Quad Cities region. The \$16 million project will have a 24 month design and construction period in which the funds will be expended. Economic benefits from the construction of the Moline Multimodal Station will be classified into three categories: direct impacts, indirect impacts, and induced impacts.

- Direct Impacts – Economic impacts due to new spending, hiring, and production by construction companies to accommodate the demand for resources in order to complete the project. The Moline Multimodal Station will create 750 temporary construction jobs.



- Indirect Impacts – Economic impacts due to the increase in production industries supplying intermediate goods and services to the construction industry. These businesses will also experience increased demand for their products and may hire additional workers, either temporary or permanent, to meet the increased demand. The amount of materials for the project available within the Quad Cities metropolitan region will determine the magnitude of the indirect impacts of the project.

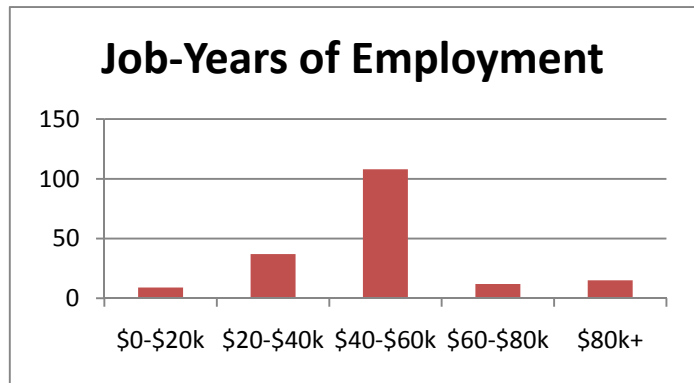
**Figure 5.2.1**  
**Job-Years of Full-Time Jobs**  
**Generated by Project**

Indirectly, the Moline Multimodal Station will create additional jobs due to the development of retail and commercial services to support the TOD. With the construction of the station and the planned economic impacts of the TOD in Downtown Moline, the project will create up to 825 permanent jobs and retain 850 permanent jobs that would otherwise relocate outside of the Downtown Moline area. This will increase the property values by \$50-\$100 million and increase the household income by \$11-\$16 million. Further stimulate real estate development and redevelopment adjacent to the station as per *the Moline Centre Plan* and the *Quad Cities TOD and Intermodal Plan*.

- Induced Impacts – Economic impacts due to the re-spending of wages earned by workers and households benefitting from the direct and indirect construction of the Moline Multimodal Station.

To estimate the short-term economic impacts of the Moline Multimodal Station, a construction cost of \$16,634,250 in real 2010 dollars was utilized. The project is expected to begin generating jobs in 2010 Q4 and maintain job creation until the project is completed in 2012 Q3. As shown in Figure 5.2.1, the Moline Multimodal Station project is expected to generate 116 job-years of direct design and construction labor in the Quad Cities metropolitan area. The project will also generate 65 job-years of induced effects of employees re-spending wages in the local economy.

It is also important to analyze the quality of the jobs that would be created by the Moline Multimodal Station which can be most easily measured by the numbers of jobs created at various levels of compensation. Figure 5.2.2 shows that the majority of job-years of employment generated by the project would receive pre-tax compensation between



**Figure 5.2.2**  
**Breakdown of Job Creation by Earnings Rate**

between \$40,000 and \$60,000 per year, which includes jobs in construction, health care, transportation and warehousing. This indicates that the project would mostly generate well-paying jobs for the middle class that would help stimulate the regional economy. There will also be nearly 50 job-years of employment for lower-skilled workers earning less than \$40,000 annually in industries such as retail sales, other services, administrative services, and food services. Finally, nearly 30 job-years of employment will be generated for workers earning over \$60,000 annually in fields such as professional services, manufacturing, and finance.

## 6.0 SECONDARY SELECTION CRITERIA

### 6.1 Innovation

- Environmental Sustainability - The Moline Multimodal Station boasts innovation in the areas of facility siting, use, and design, as well as its expected impact on the transportation network and user travel habits for residents of the Quad Cities metropolitan area, the State of Illinois, the United States, and world-wide. The City of Moline has partnered with the private

sector, academic institutions, non-profits, and Renew Moline to develop the Green Enterprise Zone, discussed in more detail in Section 5.1.4. The Moline Multimodal Station will be designed to achieve a LEED silver certification and will be located along the “Green” Amtrak passenger rail line between Moline and Chicago. The Moline Multimodal Station will be the hub of the TOD and GEZ development. The Station will incorporate many innovative, environmentally sustainable features to achieve its LEED certification and to be an example of development following the GEZ guidelines. Some of these innovative features include:

- Site Sustainability
  - Energy Efficiency
  - Indoor Environmental Quality
  - Adaptive Re-Use of Building
  - Water Efficiency
  - Construction Materials
  - Outdoor Plazas and Green Space
- Mixed-Use Development - The Moline Multimodal Station will not only serve as a passenger train station but will also include the Grand Passenger Hall. The Grand Passenger Hall will be a space which serves as the gateway to the Quad Cities and welcomes travelers from other cities, other states, and other nations to the metropolitan area. The Grand Passenger Hall will also be able to be utilized as a space for civic events and small venues. The upper floors of the O’Rourke Building are reserved for future private development. The renovated O’Rourke Building with the station functions, food and beverage retail areas, and private uses will serve as an example of mixed use, private/public development.
  - Partnership - The Moline Multimodal Station and the expansion of Amtrak Service from Chicago to the Quad Cities exemplifies partnership and teamwork. Leaders from local, state, and federal government have shared the vision and partnered with groups like Renew Moline and the Quad Cities Rail Coalition to develop long-range plans to redevelop Downtown Moline, expand transportation alternatives, and improve the quality of life through the creation of jobs, the retention of jobs, and expansion of tourism to the metropolitan area.
  - Transportation Interconnectivity – The Moline Multimodal Station will be located across from and directly connected to the existing Centre Station, MetroLINK’s facility for bus transit services. The station will bring together various modes of transportation includes passenger vehicles, bicycles, taxis, water taxis, buses, and shuttles to the airport. The station will accommodate pedestrians by being located in an area that is being transformed into a high-density, mixed use area which will include apartments, lofts, and assisted living centers. The station is also located within walking distance to hotels and event and tourist centers.

## **6.2 Partnership**

The Moline Multimodal Station truly embodies a model of collaboration, partnership, and teamwork among local, state, and federal stakeholders. From the conceptual stages through the final design, IDOT and the City of Moline have reached out to various public and private partners to make certain that this project will meet the needs of the regional transportation network, promote sustainable travel, create a more livable community, and spur economic activity.

### **6.2.1 Jurisdictional & Stakeholder Collaboration**

In addition to the federal partners, the Moline Multimodal Station has brought together the State of Illinois, the Illinois Department of Transportation, and the City of Moline. IDOT is the lead applicant of this TIGER II Discretionary Grant application and the City is the co-applicant. The QC Rail was developed to advocate on behalf of the greater Quad City region for restored passenger rail service. Since the development of the QC Rail in May 2007, over 8,500 individuals, including area residents, elected officials, community, labor, business leaders, and college students, have shown their support for the rail service. Additionally, over 150 businesses, labor and community organizations, and governmental entities have become official supporters of QC Rail. QC Rail and its supporters also endorse the Moline Multimodal Station project. Letters of support for the Moline Multimodal Station project and this application for the TIGER II Discretionary Grant can be found on the project's website.

Partnership on this project extends well beyond government agencies. The City and Renew Moline have worked diligently to garner the support and input from transportation providers, local higher education institutions, the business community, and non-profit advocacy groups. Strong partnerships have been established with Amtrak, MetroLINK, and the Quad Cities International Airport. These relationships have been carefully crafted and attended to as they are absolutely critical to meeting the significant transportation efficiency improvement expectations for the project.

### **6.2.2 Disciplinary Integration**

The Moline Multimodal Station has made a concerted effort to solicit input from groups and organizations within the Quad Cities region that will benefit from the station but are non-transportation organizations or groups.

- Business Community – Renew Moline and the City of Moline have reached out to the business community, both large Fortune 500 companies as well as

smaller family-owned companies, to incorporate ideas and features into the station that will benefit the users from the business community.

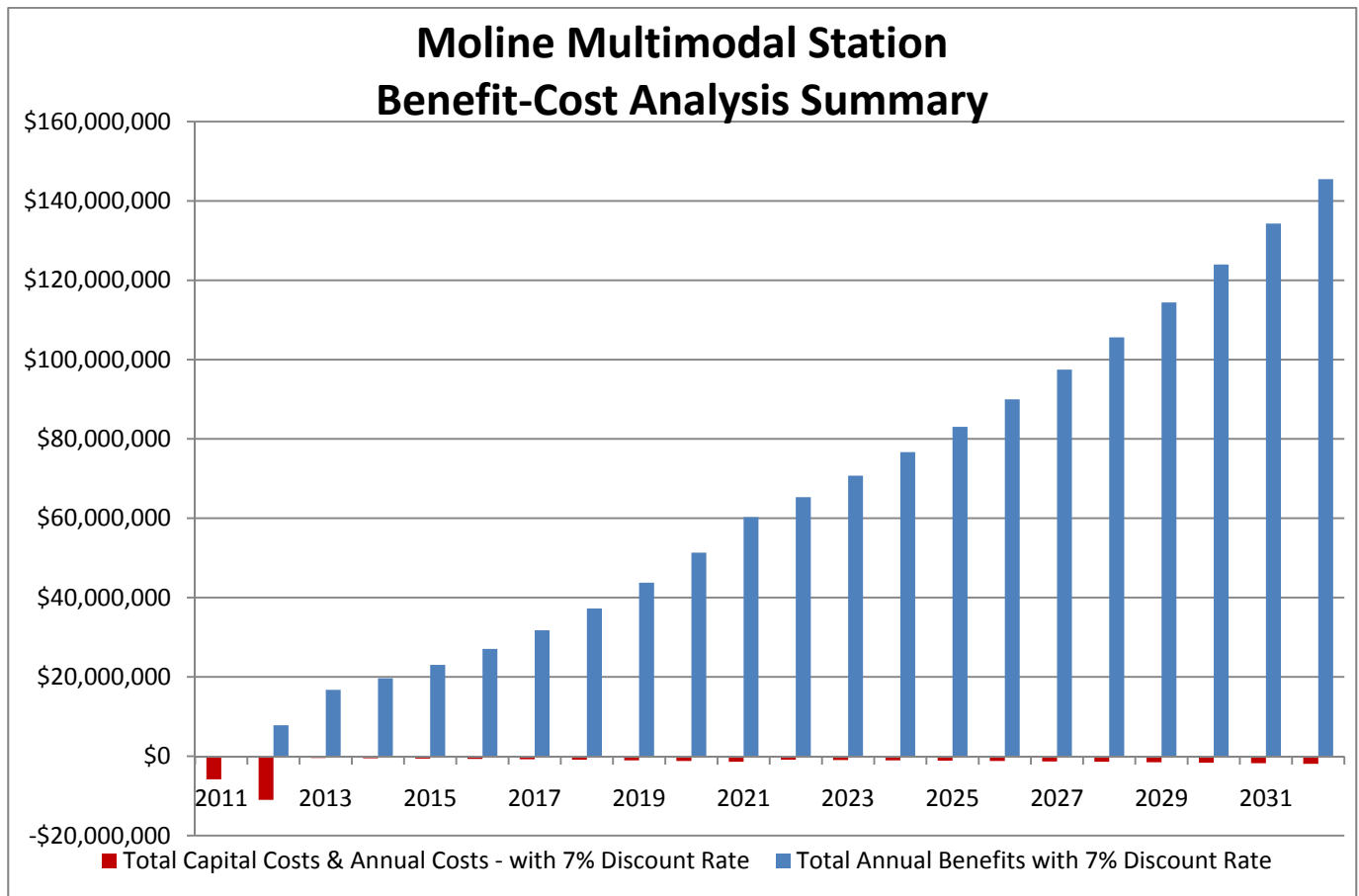
- Renew Moline – A non-profit, economic development group, founded by a group of private sector leaders, partnered with the City of Moline to bring people and jobs back to the Downtown riverfront area after the economic downturns of the 1970s and 1980s. After 20 years of strategic renewal, over \$250 million in investment, retention and growth of over 2,000 jobs, and the strong commitment of determined stakeholders, Moline’s downtown riverfront has been markedly transformed.

Renew Moline and the City of Moline have successfully partnered together to develop several nationally-recognized success stories, including the 40-acre John Deere Commons and 12-acre Bass Street Landing Redevelopment projects that have been hailed as exemplary projects by HUD and EPA. Continuing on the success of these projects, the City of Moline and Renew Moline are leading the development of the TOD – Transit-Oriented Development. The TOD will help build a growing community of residents living downtown within walking distance of employment and recreation/entertainment venues. As the downtown grows with more residents, more shops, restaurants, and employment will follow to support the residential development. The convenient transportation options of Centre Station and the Moline Multimodal Station will enhance the quality of life and affordability of the region and will attract and retain the young, educated workforce that the Quad Cities metropolitan area needs to thrive and grow.

- Western Illinois University – Students of Western Illinois University frequently travel to Chicago for recreational and entertainment opportunities as well as for several educational exchange programs with institutions in Chicago including law school programs and a cooperative marine biology program with the Shedd Aquarium. The University has been involved with the project and it is even in the design phase of its new WIU Riverfront Camps in Downtown Moline.
- Entertainment Destination – Downtown Moline is home to several facilities for entertainment and already draws a substantial number of tourists to the area each year. John Deere Pavilion and i wireless Center draw over 800,000 visitors annually. The insight of these destinations is critical when planning for the connection of tourists from the passenger train to the venues. Nearby lodging is available to encourage and accommodate overnight travel. For example, Radisson and Stoney Creek Inn are within blocks of the station.

## 7.0 BENEFIT-COST ANALYSIS

The Moline Multimodal Station is a project in which the DBMT has carefully weighed the benefits and costs of the project at several key steps along the development of the project. In conformance with the TIGER II Discretionary Grant application, a benefit-cost (B/C) analysis has been prepared and the resulting benefit-to-cost ratio is 29.4:1. The B/C ratio was prepared for the 20 year period after construction of the station is completed. The discount rate of 7% per the Federal Register was utilized to compared costs and benefits in present-day dollars. Figure 7.1 depicts the benefits and the costs included for the B/C analysis. Exhibit A includes the Benefit-Cost Analysis.



**Figure 7.1  
Project Benefits & Costs**

Table 7.2 includes the quantifiable average annual benefits and costs which were included in the benefit-cost analysis.

<b>Table 7.2 Moline Multimodal Station Project Benefits &amp; Costs</b>	
<b>Costs</b>	
<b>Capital Costs</b>	<b>\$16,634,250</b>
Building Operations & Maintenance (including Staffing) – Average Annual Cost	\$97,740
Redistribution of Ridership from Princeton – Average Annual Cost	\$584,983
<b>Total Average Annual Costs</b>	<b>\$682,723</b>
<b>Benefits</b>	
Emissions Reduction – Average Annual Savings	\$720,154
Fuel Savings – Average Annual Savings	\$5,999,177
Time Savings (Congestion) – Average Annual Savings	\$1,990,939
Time Savings (Commuting) – Average Annual Savings	\$3,632,635
Crash Reduction – Average Annual Savings	\$2,110,698
Passenger Rail Mobility – Average Annual Savings	\$14,451,938
Time Savings (Redistribution of Ridership from Princeton) – Average Annual Savings	\$616,679
Fuel Savings (Redistribution of Ridership from Princeton) – Average Annual Savings	\$361,965
Emissions Reduction (Redistribution of Ridership from Princeton) – Average Annual Savings	\$43,451
<b>Total Average Annual Benefits</b>	<b>\$8,195,957</b>
<b>Project Benefit to Cost Ratio for 20-year period = 29.4:1</b>	

In addition to the quantifiable benefits and costs associated directly with the Moline Multimodal Station, there are numerous additional benefits that can be derived due to the construction of the station. Additional benefits include:

- Increased travel options – Daily trips between Chicago and the Quad Cities via passenger train.
- Cost Effective Transportation – A low-cost alternative mode of transportation.
- Roadway Transportation Systems Expansion Savings – The existing roadway corridor, I-88, will not need to be widened to accommodate growing traffic demands with the expansion of Amtrak service to carry travelers between Chicago and the Quad Cities. For expansion of Amtrak service as ridership grows, additional cars can be added to existing trains

or additional train frequencies can be added. This results in a savings of land, materials for road construction, and time due to delays of congestion.

- Parking Fees in Chicago – Chicago visitors arriving by train will save on parking fees in Chicago which are substantial.
- Toll Roads – The Quad Cities area residents will also save on the costs of roadway tolls when traveling to Chicago.
- Business Travel Expenses – Corporations and businesses can reduce travel business expenses between Chicago and the Quad Cities. Reimbursable expenses for mileage for travel and rental car expenses can be reduced from \$170 to less than \$50 for the price of a round trip ticket.
- Increased Tax Revenue – Additional tax revenues for visitors in both Chicago and the Quad Cities metropolitan area will be generated. Taxes such as state and local sales tax and hotel taxes will be generated by the increased number of tourists coming to the cities each year. Federal and state income taxes will also be increased due to the additional jobs created directly and indirectly by the station and the expansion of Amtrak service.
- Increased Transit Ridership – Visitors in both Chicago and the Quad Cities will be able to take advantage of the well developed transit systems in both regions after arriving via Amtrak. Ridership will increase on all forms of public transit due to the increased number of visitors.
- Adaptive Reuse – The adaptive reuse of the O'Rourke building preserves an important piece of history in Downtown Moline. It also saves costs of demolition and disposal of a building into the landfills.
- TOD Anchor – The Moline Multimodal Station will serve as the anchor of the TOD. As part of the TOD plan, new residential lofts, apartments, and assisted living facilities will be developed, many being constructed using adaptive reuse. As the density of residential use increases, retail and commercial developments will come and will encourage more residential development. The station is the hub of the planned development of Downtown Moline.
- Link between Lake Michigan & Mississippi River – The expansion of Amtrak service to the Quad Cities will create a link between Lake Michigan and the Mississippi River. Visitors to the Great Lakes can board a train and arrive in Moline on the riverfront and experience the Mississippi River.
- Bicycle Rentals – Bicycles will be rented at the Moline Station which will expand the transportation choices for visitors to the Quad Cities area. The City has a network of bicycle paths and Amtrak promotes bringing your bike on the train.
- Creation of Jobs – In addition to the jobs created for workers at the Moline Station, additional jobs will be created as the TOD in Downtown Moline develops.

## **8.0 Project Schedule**

Design of the Moline Multimodal Station is expected to begin shortly after of the award of the TIGER II Discretionary Grant funding. Construction is expected to last approximately 24 months. A detailed construction schedule has been created for this project and IDOT and the City of Moline are confident that the project will be able to have the TIGER II Discretionary Funds obligated by the September 30, 2012 deadline as listed in the Federal Register.

## **9.0 FEDERAL WAGE RATE REQUIREMENT**

IDOT has signed the federal wage rate certification stating that it will comply with Subchapter 31 of Title 40 of the United States code. A copy of this letter is available on the project website of supporting documentation.

## **10.0 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENT**

This project is being processed as a Categorical Exclusion (CE). The project will not significantly impact the natural, social and/or economic environment. The anticipated completion date of the CE is November 15, 2010.

## **11.0 ENVIRONMENTALLY RELATED FEDERAL, STATE, & LOCAL ACTIONS**

The project must comply with Section 106 of the Historic Preservation Act, Section 4(f) of the Transportation Act, the Executive Order on Floodplains, and the Moline Flood Code. The project is in a developed commercial area and will not impact wetlands, result in residential displacements, cause community disruption, impact water quality or threatened or endangered species, have noise or vibration impacts, affect air quality (attainment area) or impact prime or unique farmlands. The project includes adaptive reuse of a contributing structure within the Moline Downtown Commercial Historic District, which is listed on the National Register of Historic Places. The Illinois Historic Preservation Agency has concurred that the proposed undertaking will not have an adverse effect on historic resources. Based on this finding, the proposed transportation use of this property is a de minimus 4(f) impact. The project area lies within the 100 year floodplain of the Mississippi River. The project will comply with the City of Moline Flood Code Section 13-11-1(6) and will not adversely impact natural and beneficial floodplain values. One business will be displaced for the project. The business is a willing seller and will relocate within Moline.

## **12.0 CONFIDENTIAL BUSINESS INFORMATION**

There is no confidential information related to this project's application.

## **13.0 LETTERS OF SUPPORT & SUPPLEMENTAL INFORMATION**

The letters of support can be viewed along with additional supplemental application materials at the Moline Multimodal Station TIGER II Discretionary Grant website ([www.renewmoline.com/TIGERIIsite.htm](http://www.renewmoline.com/TIGERIIsite.htm)).

**BENEFIT-COST ANALYSIS  
FOR  
MOLINE MULTIMODAL STATION  
TIGER II DISCRETIONARY GRANT APPLICATION**

This document provides a description of the input data and the methodological standards used for the analysis of the Moline Multimodal Station project as submitted by the Illinois Department of Transportation for the TIGER II Discretionary Grant Funding.

**ANALYSIS FRAMEWORK**

The TIGER II project is expected to produce both quantifiable and less tangible qualitative benefits. The benefit-cost analysis conducted for the Moline Multimodal Station project includes the quantifiable benefits and considers impacts and externalities of sufficient quality.

The benefit-cost analysis was conducted in accordance with the procedures outlined in the Federal Register for the TIGER II Discretionary Grant program, the American Association of State Highway and Transportation Officials (AASHTO) guide *User Benefit Analysis for Highways (August 2003)*, and the *Midwest Regional Rail Initiative Benefit Cost & Economic Analysis (November 2006)*.

A benefit-cost analysis uses a standard 20-year lifecycle to facilitate comparisons across projects. A typical benefit-cost analysis measures four primary categories of user benefits:

- Travel time savings
- Vehicle operating cost reductions
- Safety improvements
- Emission reductions, including greenhouse gases

For the TIGER II Discretionary Grant application, the benefit-cost analysis has been expanded to include vehicle crash reductions.

The benefit-cost analysis estimates annual user benefits over a 20-year lifecycle in constant dollars for each benefit category. Future benefits are discounted to present values using a real discount rate. The real discount rate used in this analysis is 7.0% as specified in the TIGER II Discretionary Grant application instructions. Benefits are estimated separately for multiple groups defined by types of users, modes, facilities, and times of day.

Project capital costs are estimated annually from the start of construction to 20 years after the project construction is completed and the facility opened to users. Project capital costs include:

- Property acquisition
- Engineering
- Construction
- Project support costs

In addition to project capital costs, the project will have annual costs after construction is completed and the station is opened to users. These annual costs include operation and maintenance (O&M) costs. The O&M costs include items such as:

- Station cleaning
- Utilities
- Routine maintenance to facilities
- Lawn and landscaping maintenance
- Snow removal
- Trash removal

The definition of project cost is more inclusive than construction costs or the funding requested from the TIGER II Discretionary Grants. This methodology is conservative but it reflects the true agency costs over the lifecycle of the proposed project.

Several sources of input data were consulted. Examples include:

- *Amtrak Feasibility Report on Proposed Amtrak Service Quad-Cities Chicago*
- *Midwest Regional Rail Initiative Benefit Cost & Economic Analysis*
- Traffic Counts
- Regional Planning Studies
- Amtrak ridership statistics
- Roadway crash data

## **ECONOMIC ASSUMPTIONS**

This section summarizes the economic assumptions utilized for the benefit-cost analysis for the Moline Multimodal Station to comply with the guidelines of the TIGER II Discretionary Grant. In the cases where the TIGER II Discretionary Grant guidelines did not specify value, documented standard values were utilized. All benefits and costs are valued at 2010 dollars.

## **DISCOUNT RATE**

The guidance in the Federal Register for the discount rate is 7%.

## **STUDY PERIOD**

The Moline Multimodal Station will begin design during the fourth quarter of 2010. Design and construction of the station are expected to last 24 months. The station is

expected to open in late 2012. The first full year of operation of the station is 2013. The benefit-cost analysis study period is 20 years, beginning in 2013.

## **RIDERSHIP**

Since the Moline Multimodal Station is a new station with no current passenger train service, the ridership projections were taken from the *Amtrak Feasibility Study* and the *MRRRI Benefit Cost & Economic Analysis*. The initial ridership (of the first full year of operation) is 110,000. The ridership at 2020 and 2030 were also given at 233,067 and 264,005 respectively. For the intermediate years, the annual growth rate between 2013-2020 and 2020-2030 was calculated. The annual growth rate between 2013 and 2020 is 9.84% per year. The annual growth rate of riders between 2020 and 2030 is 1.25% per year. For the years following 2030, the rate of 1.25% per year was applied.

## **COST: CAPITAL COSTS**

The Moline Multimodal Station capital costs, detailed in Table 4.1 of the TIGER II Grant Application, were provided by Renew Moline. These costs include site acquisition, building demolition and relocation, site demolition and preparation, new construction, renovation, utility relocation and site service, architecture and engineering, and owner's contingency. The project capital costs are \$16,634,250. These costs will be spent over a 2 year design and construction period. It was determined that 35% of these costs will be spent during 2011 and the remaining 65% spend during 2012. The station will open in 2012. No additional expansions for the station are anticipated. The initial design and construction are the only project capital costs.

## **COST: BUILDING OPERATION & MAINTENANCE COSTS**

The Moline Multimodal Station building operation and maintenance costs were derived from the 2010 operating budget of Centre Station as provided by MetroLINK. The budget included all items required to operate and maintain the existing Centre Station. Budget items included cleaning, trash service, lawn care, landscaping care, maintenance supplies, contract cleaning costs, HVAC maintenance, electrical maintenance, and snow removal. These costs also included some staffing costs for the station. Even though volunteers will provide some of the staffing of the Moline Multimodal Station, the station will be professionally managed and will include some staffing costs. The Centre Station budget also included security and parking garage maintenance which the Moline Multimodal Station will not have. The budget did not include utilities such as water, gas, electricity, etc. These costs for Centre Station were divided by the building's area to calculate an operation and maintenance cost per square foot (s.f.). This rate is \$16.29/s.f.

The Moline Multimodal Station will be a LEED certified building. LEED certified buildings are typically 25% - 30% more efficient than a comparable sized and located building that has been traditionally designed. Centre Station is a traditionally designed building. It was estimated that the additional budget items for Centre Station (security,

parking garage maintenance, and additional staffing) will be comparable to the utility costs for the LEED certified Moline Multimodal Station.

The area of the Moline Multimodal Station was scaled from the concept drawings provided by Renew Moline. The first floor building area was utilized for the benefit cost analysis. The remaining five floors of the O'Rourke Building will be developed at a later date. It is assumed that the public-private partnership will develop agreements to cover all operation and maintenance expenses of the remaining floors. The annual station operation and maintenance cost (including staffing) was \$97,740. This annual cost was used throughout the 20-year analysis period. No station expansions are anticipated so no additional operation and maintenance costs are expected.

#### **COST: REDISTRIBUTION OF AMTRAK RIDERSHIP FROM PRINCETON TO MOLINE**

Princeton is located 61 miles from Moline (city center to city center as calculated by *Mapquest*). Princeton currently has an Amtrak station. Approximately 5% of the comments on the QC Rail Facebook page (*Bring Amtrak to the Quad Cities*) indicated that people from the Quad Cities metropolitan region are driving to Princeton to take the Amtrak to Chicago. It was estimated, based on research of the Facebook site, newspaper articles, and conversations with representatives from Renew Moline and QC Rail, that a redistribution of riders from the Princeton station to the Moline station will occur. This decrease in ridership at the Princeton station is classified as a cost in the benefit-cost analysis. Per the Amtrak website ([www.Amtrak.com](http://www.Amtrak.com)), the current one-way ticket price between Princeton and Chicago Union Station is \$34.00. The 2009 ridership at Princeton is 30,787 according to Amtrak. In order to determine the future ridership at Princeton, a 6% per year growth factor was applied to the 2009 ridership until 2020. This rate was determined based upon the restoration of Amtrak service on other lines in northern Illinois and the Midwest and the positive public feedback for passenger rail service in the Midwest. After 2020, the ridership is expected to increase at a rate of 1.25%. This rate was taken from the *Midwest Regional Rail Initiative Benefit Cost & Economic Analysis* for the Chicago – Quad Cities line and applied to the Chicago – Princeton line.

The redistribution of riders from Princeton to Moline was estimated based upon the geographic locations of both cities and their relationship to Chicago. Moline is located approximately 3 hours west of Chicago. Princeton is located approximately 1 hour east of Moline (or 2 hours west of Chicago). It is anticipated that 30% of the riders at the Princeton station will be located closer to the Moline station and will use the Moline station rather than the Princeton station. The cost of the redistribution of riders from Princeton to Moline was calculated by taking 30% of the annual ridership at Princeton and multiplying that by the \$34.00 one-way ticket price. Since the annual ridership at the Princeton station is increasing, this value varies from year to year in the 20-year study period. The average annual cost for redistribution is \$584,983, as shown in Table 7.2 of the grant application.

## **BENEFIT: FUEL SAVINGS**

The current AAA average fuel price for gasoline was used to determine the fuel savings. The distance between Moline and Chicago Union Station is 169.5 miles (per *Mapquest*). The AAA average fuel price for gasoline in the Quad Cities area (the Illinois side only) on August 9, 2010 was \$2.849 per gallon. The average fuel economy of passenger cars currently on the roadways is 17.1 miles per gallon (mpg) (per *Wikipedia*). By dividing the one-way trip distance (169.5 miles) by the average fuel economy (17.1 mpg) resulted in 9.9 gallons of gasoline needed for one trip between Moline and Chicago Union Station. Multiplying the 9.9 gallons of gasoline needed by the current average fuel price (\$2.849 per gallon) resulted in a one-way fuel savings of \$28.21. It was estimated that all trips arriving or departing at the Moline Multimodal Station will be to/from Chicago Union Station. The one-way fuel savings was multiplied by the annual ridership at the station for each year of the study. Since the ridership varies from year to year, the average annual fuel savings is \$5,999,177 based on 2010 dollars.

## **BENEFIT: EMISSIONS SAVINGS**

The benefit-cost analysis includes reduction of emissions from vehicles. The emissions savings of \$0.02 per vehicle mile saved for trips diverted from passenger car to rail were taken from the *MRRRI Benefit Cost & Economic Analysis*. Using the distance between Moline and Chicago Union Station (169.5 miles), the annual ridership (all trips between Moline and Chicago Union Station), the emissions savings was calculated for each year of the benefit-cost analysis study period. Since the ridership of the station varies yearly, the average annual emission savings is \$720,154 based on 2010 dollars and as shown in Table 7.2 of the grant application.

## **BENEFIT: TRAVEL TIME SAVINGS (CONGESTION)**

Per the *MRRRI Benefit Cost & Economic Analysis*, travel time savings for trips being diverted from passenger car to train will result. Roadway congestion in Chicago and its suburbs is significant. It is estimate that 40% of the trips between Moline and Chicago will occur at times of roadway congestion. The rate of \$23.43 per passenger trip for trips diverted from passenger vehicle to passenger train per the *MRRRI Benefit Cost & Economic Analysis* was utilized in the benefit-cost analysis. Since the ridership of the station varies from year to year, the average annual travel time savings due to congestion is \$1,990,939 in 2010 dollars, as shown in Table 7.2 of the grant application.

## **BENEFIT: TRAVEL TIME SAVINGS (COMMUTING)**

For the benefit-cost analysis it was determined from *Mapquest* that the travel time between Moline and Chicago Union Station, without traffic congestion, is 3 hours. Three hours is the projected length of the passenger train trip. During this time, business commuters can be productive by working on business projects. It was estimated that 20% of the annual riders will be business commuters working on the train. The average wage rate of \$28.50 per hour was utilized for the calculations. Since

the average annual ridership varies throughout the 20-year analysis period, the average annual travel time savings (commuting) is \$3,632,635 in 2010 dollars, as shown in Table 7.2 of the grant application.

#### **BENEFIT: CRASH REDUCTION**

The probability of roadway crashes will be reduced between Moline and Chicago due to the diversion of trips from passenger vehicles to passenger rail. The 2008 Illinois average vehicle crash rate of 0.386 per 100,000 vehicle miles was calculated. The total average cost of accidents (including Type A, Type B, Type C, and Property Damage Only crashes) was \$6,200,000,000 and the total number of reported roadway crashes in Illinois in 2008 was 408,258. This resulted in a cost per crash of \$15,186. The annual passenger train trips at the Moline station were multiplied by the distance between Moline and Chicago Union Station to determine the yearly total number of vehicle miles diverted from passenger vehicle to passenger train. This rate was then divided by the average vehicle crash rate (0.386 per 100,000 vehicle miles) to determine the number of crashes diverted per year. The crashes were multiplied by the average crash cost. Since the ridership varies annually for each year of the study, the average annual crash reduction savings is \$2,110,698 in 2010 dollars, as shown in Table 7.2 of the grant application.

#### **BENEFIT: PASSENGER RAIL MOBILITY SAVINGS**

The savings to riders based on the expenses to own and operate personal vehicles, excluding fuel, was determined to be \$0.54 per mile. Using the one-way distance between Moline and Chicago Union Station, the cost to travel via passenger vehicle is \$91.53 per trip. The one-way ticket price for the trip between Moline and Chicago is expected to be \$23.50 per the *Amtrak Feasibility Study*. The savings to divert trips from passenger vehicles to the train is \$68.03 per trip. This rate was multiplied by the annual trips. Since the annual ridership varies throughout the study period, the average annual passenger rail mobility savings is \$14,451,938 in 2010 dollars, as shown in Table 7.2 of the grant application.

#### **BENEFIT: LOCAL STATION TRAVEL TIME SAVINGS**

As outlined in the previous section *Cost: Redistribution of Amtrak Ridership from Princeton to Moline*, a travel time savings will occur due to having a local station in Moline rather than having to travel to Princeton to take the train. It was estimated that the diverted trips from Princeton to Moline will be two-way trips (people dropping off a passenger station and then returning home). The one-way travel time between Princeton and Moline (city center to city center using Mapquest) is 1 hour. Using 50% of the average wage rate, the time savings rate for the local station will be \$17.40 per hour. The benefit-cost analysis only included the travel time savings for the driver of the passenger vehicle, not any other passengers in the vehicle or the rider of Amtrak. Since the ridership of the Princeton station is variable during the years of the study, the

time savings will also vary yearly. The average annual local station travel time savings is \$616,679 in 2010 dollars, as shown in Table 7.2 of the grant application.

#### **BENEFIT: LOCAL STATION FUEL SAVINGS**

In addition to the travel time savings for the redistribution of Amtrak riders from Princeton to Moline, fuel savings will also be a benefit in the study. The fuel savings was calculated based upon the round trip distance between Princeton and Moline for the 30% of Princeton trips diverted to Moline, the average fuel economy of passenger vehicles, and the average fuel price in the Quad Cities region (all as described previously). Since the ridership varies for each year of the study, the average annual fuel savings by having a local station is \$361,965 in 2010 dollars, as shown in Table 7.2 of the grant application.

#### **BENEFIT: LOCAL STATION EMISSIONS SAVINGS**

As discussed previously, the emissions savings per trip is \$0.02 per vehicle mile. Using the round trip distance between Princeton and Moline and the 30% of Princeton riders being diverted to Moline, the annual emissions savings for having a local station was calculated. Since the ridership of the station varies for each year of the study, the average annual fuel savings for passenger train trips diverted from the Princeton station to the Moline Multimodal Station is \$43,451 in 2010 dollars, as shown in Table 7.2 of the grant application.

#### **Summary of Results**

Table A.1 of this exhibit includes the yearly costs and benefits of the Moline Multimodal Station project for each year of the analysis period. This table also includes the average annual values for each annual cost and each annual benefit. These are the average annual values shown in Table 7.2 of the grant application.

Table A.2 of this exhibit includes the yearly discounted costs and benefits for the project. Table A.2 also includes the benefit-cost ratio for the Moline Multimodal Station project. **The Moline Multimodal Station benefit to cost ratio is 29.4:1.**

All dollar amounts shown are in 2010 dollars. They are not adjusted by the 7% factor per the Federal Register guidelines!

**Table A.1**

		Costs				Benefits									
Year	Riders	Total Yearly Costs	Design, Construction	Maintenance & Operation @ \$16.29/sf for 6,000 sf	Decrease in Ridership at Princeton @ \$34.00/each	Total Yearly Benefits	Fuel Savings @ \$2.849/Gal	Emissions Savings @ \$0.02/veh mile	Travel Time Savings - Congestion @ \$23.43/pass trip	Travel Time Savings - Commuting @ 3 hour travel time @ \$28.50/hr	Crash Reduction @ \$15,186/crash	Passenger Rail Mobility Savings (Amtrak vs. Passenger Car) @ \$68.03/trip	Local Station - Travel Time Savings @ \$17.40/hr	Local Station - Fuel Savings @ \$2.849/Gal	Local Station - Emissions Savings @ \$0.02/veh mile
2011	0	\$5,821,988	\$5,821,988	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2012	55,000	\$11,037,552	\$10,812,263	\$48,870	\$176,419	\$7,800,968	\$1,553,205	\$186,450	\$515,460	\$940,500	\$546,466	\$3,741,650	\$191,404	\$112,347	\$13,486
2013	110,000	\$471,749	\$0	\$97,740	\$374,009	\$15,640,005	\$3,106,410	\$372,900	\$1,030,920	\$1,881,000	\$1,092,932	\$7,483,300	\$405,777	\$238,175	\$28,591
2014	120,824	\$494,189	\$0	\$97,740	\$396,449	\$17,153,170	\$3,412,083	\$409,594	\$1,132,364	\$2,066,092	\$1,200,477	\$8,219,664	\$430,124	\$252,465	\$30,306
2015	132,713	\$517,976	\$0	\$97,740	\$420,236	\$18,813,684	\$3,747,836	\$449,898	\$1,243,789	\$2,269,398	\$1,318,606	\$9,028,487	\$455,932	\$267,613	\$32,125
2016	145,772	\$543,190	\$0	\$97,740	\$445,450	\$20,635,950	\$4,116,627	\$494,169	\$1,366,179	\$2,492,709	\$1,448,358	\$9,916,900	\$483,287	\$283,670	\$34,052
2017	160,117	\$569,917	\$0	\$97,740	\$472,177	\$22,635,789	\$4,521,707	\$542,795	\$1,500,613	\$2,737,994	\$1,590,878	\$10,892,732	\$512,285	\$300,690	\$36,095
2018	175,872	\$598,248	\$0	\$97,740	\$500,508	\$24,830,568	\$4,966,647	\$596,207	\$1,648,275	\$3,007,415	\$1,747,422	\$11,964,588	\$543,022	\$318,731	\$38,261
2019	193,178	\$628,278	\$0	\$97,740	\$530,538	\$27,239,359	\$5,455,370	\$654,874	\$1,810,466	\$3,303,348	\$1,919,370	\$13,141,916	\$575,603	\$337,855	\$40,557
2020	212,187	\$660,111	\$0	\$97,740	\$562,371	\$29,883,104	\$5,992,184	\$719,315	\$1,988,618	\$3,628,401	\$2,108,237	\$14,435,093	\$610,139	\$358,127	\$42,990
2021	233,067	\$693,853	\$0	\$97,740	\$596,113	\$32,784,798	\$6,581,821	\$790,096	\$2,184,300	\$3,985,439	\$2,315,690	\$15,855,521	\$646,748	\$379,614	\$45,570
2022	235,990	\$729,620	\$0	\$97,740	\$631,880	\$33,195,956	\$6,664,374	\$800,006	\$2,211,697	\$4,035,426	\$2,344,735	\$16,054,389	\$654,832	\$384,359	\$46,139
2023	238,950	\$737,518	\$0	\$97,740	\$639,778	\$33,612,270	\$6,747,962	\$810,040	\$2,239,437	\$4,086,041	\$2,374,144	\$16,255,751	\$663,017	\$389,164	\$46,716
2024	241,947	\$745,516	\$0	\$97,740	\$647,776	\$34,033,806	\$6,832,598	\$820,200	\$2,267,525	\$4,137,290	\$2,403,921	\$16,459,639	\$671,305	\$394,028	\$47,300
2025	244,981	\$753,613	\$0	\$97,740	\$655,873	\$34,460,627	\$6,918,296	\$830,487	\$2,295,966	\$4,189,182	\$2,434,072	\$16,666,084	\$679,696	\$398,954	\$47,891
2026	248,054	\$761,811	\$0	\$97,740	\$664,071	\$34,892,802	\$7,005,069	\$840,903	\$2,324,763	\$4,241,725	\$2,464,602	\$16,875,118	\$688,193	\$403,941	\$48,490
2027	251,165	\$770,112	\$0	\$97,740	\$672,372	\$35,330,396	\$7,092,930	\$851,450	\$2,353,921	\$4,294,926	\$2,495,514	\$17,086,774	\$696,795	\$408,990	\$49,096
2028	254,316	\$778,517	\$0	\$97,740	\$680,777	\$35,773,479	\$7,181,893	\$862,130	\$2,383,445	\$4,348,795	\$2,526,814	\$17,301,085	\$705,505	\$414,102	\$49,710
2029	257,505	\$787,026	\$0	\$97,740	\$689,286	\$36,222,118	\$7,271,972	\$872,943	\$2,413,339	\$4,403,340	\$2,558,507	\$17,518,084	\$714,324	\$419,279	\$50,331
2030	260,735	\$795,642	\$0	\$97,740	\$697,902	\$36,676,384	\$7,363,180	\$883,892	\$2,443,609	\$4,458,569	\$2,590,597	\$17,737,804	\$723,253	\$424,520	\$50,960
2031	264,005	\$804,366	\$0	\$97,740	\$706,626	\$37,136,346	\$7,455,533	\$894,978	\$2,474,258	\$4,514,491	\$2,623,089	\$17,960,281	\$732,293	\$429,826	\$51,597
2032	267,317	\$813,199	\$0	\$97,740	\$715,459	\$37,602,077	\$7,549,044	\$906,203	\$2,505,291	\$4,571,114	\$2,655,989	\$18,185,548	\$741,447	\$435,199	\$52,242

**Table A.2  
Moline Multimodal Station  
Benefit-Cost Analysis Results**

<b>Year</b>	<b>Total Discounted Costs (\$ in Millions)</b>	<b>Total Discounted Benefits (\$ in Millions)</b>
2011	\$5.82	\$0.00
2012	\$11.04	\$7.80
2013	\$0.50	\$16.73
2014	\$0.57	\$19.64
2015	\$0.63	\$23.05
2016	\$0.71	\$27.05
2017	\$0.80	\$31.75
2018	\$0.90	\$37.26
2019	\$1.00	\$43.74
2020	\$1.13	\$51.34
2021	\$1.28	\$60.27
2022	\$1.44	\$65.30
2023	\$1.55	\$70.75
2024	\$1.68	\$76.65
2025	\$1.82	\$83.04
2026	\$1.96	\$89.97
2027	\$2.12	\$97.48
2028	\$2.30	\$105.61
2029	\$2.49	\$114.42
2030	\$2.69	\$123.96
2031	\$2.91	\$134.30
2032	\$3.15	\$145.51
<b>Total</b>	<b>\$48.49</b>	<b>\$1,425.64</b>

**Benefit to Cost Ratio = 29.4:1**