

THE UNDERPASS PROJECT AT UPTOWN STATION
BUILD FY 2019 Application
Town of Normal



July 15, 2019

BUILD FY 2019 GRANT APPLICATION: THE UNDERPASS PROJECT AT UPTOWN STATION

Project Name	The Underpass Project at Uptown Station
Applicant	Town of Normal
Project Partners	Illinois Department of Transportation Union Pacific Railroad Illinois Commerce Commission Amtrak
Contact Information	Wayne Aldrich 11 Uptown Circle Normal, Illinois (309)-454-9576
Project Type	Rural – Population of 54,284
Project Description	The Town of Normal, IL, is seeking \$16,000,000 in BUILD assistance to design and construct a pedestrian, cyclist, and passenger underpass (the Underpass Project) at the Uptown Normal Intermodal Passenger Rail Station (Uptown Station). The underpass will provide a safer and more efficient, grade-separated route for pedestrians and bicyclists moving between Uptown Normal and the larger Bloomington-Normal urban area, including integrating the existing Constitution Trail, a 43.5-mile mixed pedestrian and bicycle path that connects the towns of Normal and Bloomington, IL. The project will also provide safe, direct access to a second passenger boarding platform at Uptown Station.
Project Cost	\$24,630,000
BUILD Funds Requested	\$16,000,000 (65% of total project cost)
Local Match Source(s) & Amounts	\$1,250,000 Illinois Commerce Commission Grade Crossing Protection Funds \$7,380,000 Town of Normal Total: \$8,630,000 (35% of total project cost)
NEPA Status	A Categorical Exclusion is in progress for the project. It is anticipated to be ready in Fall 2019 to submit for review and approval upon receipt of federal funds.
Project Schedule	Final Design: January 2020–December 2020 Construction: March 2021–December 2022
Project Benefits	The Underpass Project improves transportation connections, enhances safety around the High-Speed Rail Corridor and station, and fosters redevelopment and investment opportunities in the underserved Uptown South area, as described in this application.
Plans Project is Currently Programmed in	Uptown Normal Master Plan 2.0 Illinois Statewide Transportation Improvement Program McLean County Regional Planning Commission Long-Range Transportation Plan Illinois State Rail Plan

Table of Contents

1	Project Description.....	1
1.1	Project Overview.....	1
1.2	Project History.....	1
1.3	Statement of Work.....	2
1.4	Challenges Addressed by the Project.....	5
1.5	Benefits.....	7
2	Project Location.....	8
2.1	Introduction to Normal, Illinois.....	8
2.2	Connections to Existing Transportation Infrastructure.....	9
3	Grant Funds, Sources, & Uses.....	10
3.1	Project Costs.....	10
3.2	Project Funding.....	12
4	Merit Criteria.....	12
4.1	Safety.....	12
4.2	State of Good Repair.....	13
4.3	Economic Competitiveness.....	14
4.4	Environmental Protection.....	15
4.5	Quality of Life.....	15
4.6	Innovative Project Delivery.....	18
4.7	Partnership.....	18
4.8	Non-Federal Revenue for Transportation Infrastructure Investment.....	20
5	Project Readiness.....	20
5.1	Technical Feasibility.....	20
5.2	Financial Feasibility.....	23
5.3	Project Schedule.....	23
5.4	Required Approvals.....	24
5.5	Assessment of Project Risks & Mitigation Strategies.....	25
6	Benefit-Cost Analysis.....	26
7	Conclusion.....	26
	Appendices & Attachments.....	27

July 15, 2019

The Honorable Elaine L. Chao
Secretary of Transportation
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

The Town of Normal, Illinois, is proud to submit our *Underpass Project at Uptown Station* for consideration of a \$16,000,000 BUILD Fiscal Year 2019 discretionary grant award. As a rural community in Illinois, the Town believes that the *Underpass Project* will catalyze economic growth and private development while improving safety for residents and boosting regional connectivity by enhancing access to our Uptown Station, which serves the Illinois High-Speed Rail service from Chicago to St. Louis.

Through careful planning, design, and community engagement over the past 18 years, the Town of Normal has transformed and rebranded its once sleepy downtown into a vibrant “Uptown” destination with award-winning public spaces and transit-oriented development. While the \$24.63 million *Underpass Project* will provide numerous benefits to the area, it will accomplish four major goals: 1) enhance safety around the railroad tracks; 2) leverage regional rail efficiencies; 3) improve transportation connections; and 4) foster redevelopment and investment opportunities in the underserved Uptown South area.

The existing railroad tracks act as a physical and psychological barrier between Uptown North and Uptown South, severing the widely popular 43.5-mile Constitution Trail. Trail users are currently forced to reroute, via a sloped, 1,000-foot detour, to an at-grade crossing over the railroad tracks before rejoining the trail. This crossing sees 620 cyclists and 1,230 pedestrians on a typical weekday. The *Underpass Project* would provide a safe, grade-separated crossing beneath the railroad tracks for these pedestrians and cyclists, eliminating hazards from oncoming passenger and freight trains. The underpass also is a critical connection between boarding platforms at Uptown Station, eliminating the need for passengers to cross at-grade.

This project is a prime example of a small American community thoughtfully planning infrastructure to best serve the future needs of the community. Federal funding was previously secured to build an overpass for Amtrak passengers at this location, but the Town made the courageous decision in 2014 to work with project partners to seek a better solution. Through master planning and extensive discussion with stakeholders, the Town developed the underpass solution that would not only serve rail passengers, but also a broad swath of Normal residents, effectively removing the barrier of the railroad tracks. Unifying north and south in this way realizes the Town’s vision for the entire Uptown area as a vibrant, mixed-use destination.

We strongly believe that the unique *Underpass Project* at Uptown Station is an ideal candidate for receiving BUILD funding. We are grateful for the opportunity to present this project to USDOT for review, and we invite you to participate in this transformative transportation investment.



Chris Koos
Mayor, Town of Normal

1 PROJECT DESCRIPTION

1.1 Project Overview

The Town of Normal, Illinois, is seeking \$16,000,000 in BUILD assistance for final design and construction of a pedestrian, cyclist, and rail passenger underpass beneath Union Pacific Railroad (UPRR) tracks at Uptown Station (*Underpass Project*). The underpass will provide a *safer and more-efficient grade-separated route for pedestrians and bicyclists* moving between Uptown Normal, the larger Bloomington-Normal urban area, and rural downstate Illinois, including integrating the existing Constitution Trail, a 43.5-mile pedestrian and bicycle path that connects the towns of Normal and Bloomington, Illinois. The *Underpass Project* will also *provide direct access to a second passenger boarding platform* at Uptown Station, which serves as a critical multimodal hub on the Illinois High-Speed Rail corridor for Amtrak's Texas Eagle and Lincoln Services, with 241,844 rail passengers using the station in FY 2017. Currently platforms can only be accessed via nearby at-grade crossings, requiring passengers to travel approximately 1,000 feet to change platforms. By connecting the north and south sides of Uptown, the *Underpass Project* also paves the way for economic development on the south side of the railroad tracks.

The *Underpass Project* includes three phases. Phase I, which is entirely Town funded, is already underway for preliminary engineering and NEPA. Phase I is anticipated to be complete by the end of 2019 with NEPA ready to submit for federal review and approval upon receipt of federal funding. Phase II, the subject of this funding request (along with Phase III), includes final design to prepare contract documents and pre-construction activities. Phase III will complete construction of the *Underpass Project*. Primary components of the *Underpass Project* construction include the tunnel, which will connect the two sides of Uptown with a crossing below the tracks, and the north and south plazas, which will provide ADA-compliant access to the tunnels that weave through active and passive park space. Ample consideration is given for site conditions, including modifications to the drainage network and utility relocations necessary to accommodate lowering the ground elevation. The *Underpass Project* also includes intricate staging to maintain rail operations.

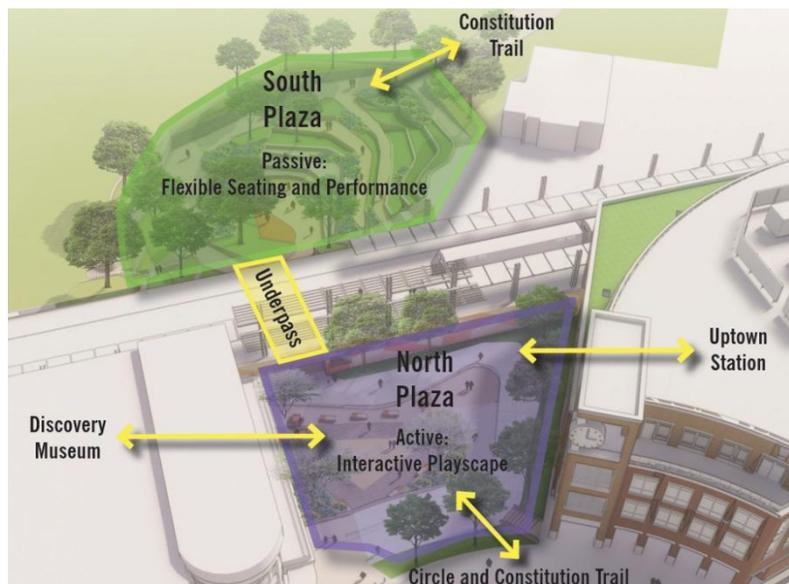


Figure 1-1: The underpass connects the north and south sides of Uptown via plazas surrounded by key destinations

1.2 Project History

The *Underpass Project* is a component of the Town's [Master Plan](#) (the "Plan"), originally adopted in 2000 and updated in 2015 to redevelop and rebrand the downtown as "Uptown Normal," improve the Town's image, create greater retail choices, increase housing and employment options, strengthen the downtown's role as a transit node, enhance the Town's partnership with the adjacent Illinois State

University, and make the Town a regional destination. Created with input from residents and businesses alike, *the Plan paved the way for public and private development projects*, such as the creation of a comprehensive retail strategy and the TIGER I-funded Uptown Station, an intermodal passenger rail, bus, automobile, bike, and pedestrian facility that was *the first TIGER-funded project under construction in the nation*. The *Underpass Project* leverages these successes by creating a gateway to new development consistent with this Master Plan.

Normal is part of the \$1.9 billion Chicago-to-St. Louis High Speed Intercity Passenger Rail Program (IL HSR). The Federal Railroad Administration (FRA) and IDOT funded improvements along the 284-mile corridor to reduce travel times, increase service reliability, and improve the passenger experience. IL HSR funded construction of a second boarding platform at Uptown Station, which is the second busiest station in Illinois behind Chicago Union Station.

As a component of IL HSR, a pedestrian overpass comprised of two stair-and-elevator towers connected by a glass-enclosed steel truss was proposed to provide access for Amtrak passengers between Uptown Station on the north side of the tracks and the second boarding platform and auxiliary waiting room on the south side of the tracks. However, through extensive public outreach conducted as part of the 2015 Master Plan Update process, the Town realized that *constructing a passenger overpass would forever forego several opportunities to significantly improve access and mobility* in the Town. The overpass would serve rail passengers, but would not serve general pedestrian and bicycle traffic, missing a key opportunity to improve safety for those groups. Additionally, an overpass would not reconnect the Constitution Trail, which was severed in 2011 when an at-grade pedestrian crossing at the station was closed as part of high-speed rail safety improvements. The larger capacity of the underpass will also allow for more efficient movement of Amtrak passengers, and will serve general pedestrian and bicycle traffic in the area.

In 2016, the Town executed a Memorandum of Understanding (MOU) with UPRR and IDOT allowing the Town to pursue the design of an alternative grade separation, which would provide the required safety, capacity, and connectivity for rail passengers while also meeting the greater development objectives of the Town. The original MOU outlines a project timeline to complete design in 2019, begin construction in 2020, and complete construction by the end of 2021. The preliminary engineering efforts, however, have been delayed by staffing and coordination issues with stakeholders. UPRR, in particular, has experienced significant personnel changes during the preliminary engineering phase and the Town has been actively re-engaging the Railroad, including new points of contact, to expedite design reviews and approvals. The Town is prepared to work with all project stakeholders to revise the MOU project schedule to accurately account for these delays and the planned path forward. The original MOU is included in the appendix.

1.3 Statement of Work

The Town of Normal is requesting \$16 million in FY 2019 BUILD funding to complete the five tasks outlined below:

Task 1: Final Design Services

Final design services will continue the efforts begun in Phase I. Work will begin with addressing stakeholder comments from the 30% design submittal and continue with 60%, 90% and 100% contract documents. Construction plans, specifications and cost estimates will be developed to issue for bid.

Specific disciplines will include structural engineering, civil engineering, geotechnical engineering, architecture, electrical engineering, hydraulic engineering, mechanical engineering, and construction engineering. The civil engineering work will include site design, drainage, grading and utility engineering. Structural engineering will focus on the underpass tunnel and retaining wall systems. MEP will work on site lighting, power, elevators, and pump station design. Construction documents will also include detailed phasing and staging plans to maintain railroad operations and prescribe railroad requirements for construction during permissible track outage windows.

Task 2: Bid Phase Services

Bid phase services will include architectural and engineering support to address questions from prospective bidders and prepare any required addenda. This task will accomplish the evaluation of bids and culminate in a notice of intent to award.

Task 3: Railroad (Signal/Fiber) and Public Utility Relocations

During final design, required utility relocations will be finalized and coordinated with the respective utility owners. This will allow utility owners to complete relocation designs and schedule relocations without delaying the start of construction. This task will complete relocation agreements with the utilities and fund design work required by the various utility owners.

Task 4: Construction Professional Services

Task 4a: Design Services During Construction – The Town will hire an engineering and architecture team to provide design services during construction. The team will review shop drawings and submittals from the contractor. They will also be responsible for preparing responses to requests for information and preparing any required supplemental design information.

Task 4b: Construction Management – The Town will hire a construction manager to be its day-to-day eyes and ears on-site, provide resident engineer services, and serve as the owner’s representative. They will participate in all construction progress meetings, monitor the construction progress and schedule, complete regular field reports, review pay applications, and review change proposals.

Task 5: Construction

The *Underpass Project* will culminate with construction, which will include several primary components:

- **Underpass:** The underpass will form the passageway under the railroad tracks for pedestrians, cyclists, and passengers. It will provide an open and inviting space that promotes safe and efficient movement between Uptown North and Uptown South. In addition to the wide opening, the Town is working to make the tunnel as shallow as possible to ease access and minimize excavation. Architectural finishes, including lighting



and wall treatments coupled with clear sight lines, will provide an inviting and safe atmosphere. Finishes will include resilient materials that will resist damage and be easily maintained.

➤ North Plaza: A plaza area to the north will serve as a gateway to the underpass, further enhancing the open, park-like feel of the facility. A wide sloping walkway rings around the outside of the plaza for vertical access to the underpass, with ample space for passengers, pedestrians, and cyclists to pass. The site design creates a mid-level space with a separate path for access, creating an active space for children and families to gather outside of the Children’s Discovery Museum which serves over 140,000 visitors each year. The museum currently has extremely limited outdoor space, and museum-led groups often need to walk several blocks away to find a shady, safe place for outdoor activities. The approximately 3,600 square-foot mid-level area in the north plaza allows the museum to develop an outdoor exhibit, providing much needed active play space in Uptown paired with educational opportunities for the community.



➤ South Plaza: The south plaza will be a more passive and flexible space. It will connect the underpass to the Constitution Trail and the second boarding platform, and provide a performance space and an accessible, inclusive play space. The performance space provides opportunities for open space programs such as concerts, festivals, and everyday activities. Vertical access will weave through the park via stairs and sloping walkways for users to navigate the change in grade.



➤ Underground Removals, Drainage & Utilities: Extensive utility relocations are anticipated for the various facilities in the project area. The *Underpass Project* will lower the site significantly on both sides of the tracks. Significant impacts to fiber, electric, telecom, gas, water, storm, and sanitary sewers are anticipated. An underground storm water cistern may also need to be modified, and a pump station may need to be installed. Utilities will perform their own relocations or protection in place.

➤ Construction Staging and Railroad Services: Due to the complex nature of working adjacent to live railroad tracks, the *Underpass Project* will include a robust staging plan to ensure continuity of operations and safe completion of construction activities. Continuous production will be required for any work windows in which track is placed out-of-service, which may yield labor premiums. Current concepts ensure at least one track remains in service at all times. Costs are also anticipated for railroad flagging services and railroad protective liability insurance.

1.4 Challenges Addressed by the Project

The *Underpass Project* will provide significant *safety* benefits for Amtrak passengers using Uptown Station and for Constitution Trail users. A convenient, grade-separated crossing will *allow for direct platform connectivity and reconnect the trail* to safely access public spaces on either side of Uptown. The underpass also reduces travel time for Amtrak passengers between platforms, provides greater capacity when compared to the previously proposed overpass, and reduces station dwell time by establishing predictable platform boarding assignments. The underpass also *enables the broader economic development strategy* for Uptown by creating a vital pathway unimpeded by rail traffic. Once the *Underpass Project* is complete, students, workers, families, and trail users will be able to easily cross between Uptown North and South without experiencing the risk associated with at-grade railroad crossings. The *Underpass Project* specifically addresses the following issues:

Issue #1 – Enhance Safety Around the Railroad Tracks Anyone wishing to travel between Uptown North and South currently must cross at-grade at Broadway or Linden. This includes passengers, cyclists, and pedestrians. As an example, passengers currently cross between platforms at-grade via an approximately 1,000 foot detour over the Broadway Avenue grade crossing. Due to the lack of a grade separation, passenger trains are primarily routed to the station side with unpredictable use of the second platform. When passenger trains are routed to the second platform, there is minimal notice for passengers to change sides, leading to confusion and people rushing across the tracks to catch their train. Additionally, there is a likelihood that northbound and southbound trains are stopped at the station at the same time occupying both tracks, which further limits pedestrian access to the other platform via at-grade crossings.

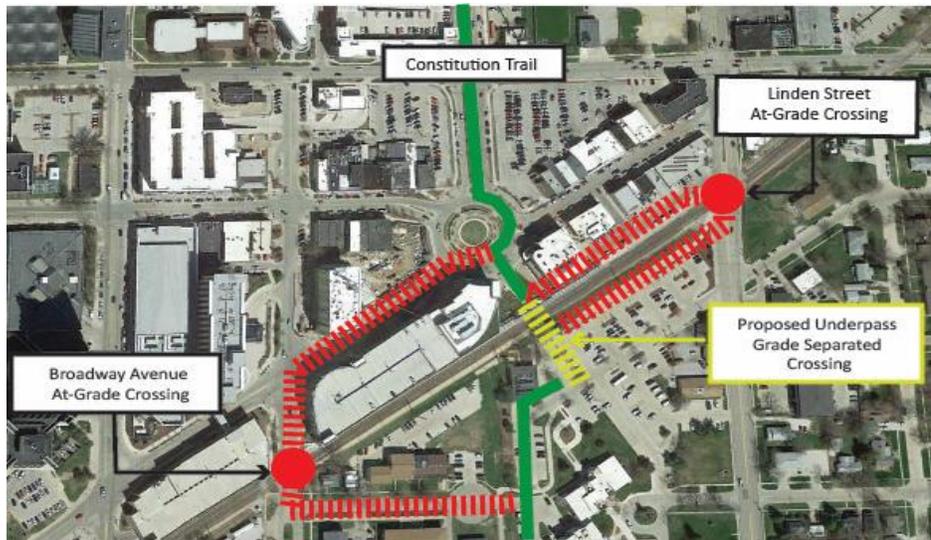


Figure 1-2: An underpass will create a safer way to cross the tracks for passengers and trail users who currently use Broadway and Linden at-grade crossings

Solution Once construction is complete, Amtrak customers will be able to walk between platforms via the underpass, removing their interaction with rail traffic. In addition, residents and visitors will have a safe and welcoming path between Uptown North and South. Specifically for passenger rail traffic, dispatching will switch to directional running such that northbound trains always stop on the station side and southbound trains always stop on the second platform. This will minimize passenger confusion and allow passengers to go to the correct side well in advance of their train's arrival, minimizing risky, "beat the train" behavior.

 **Issue #2 – Leverage Regional Rail Efficiency** The service outcomes agreement (SOA) for IL HSR relies on full utility of the second platform to provide the capacity and flexibility needed for passenger and freight movements. The limited utility due to a lack of grade separation has detrimental ripple effects throughout the corridor, negatively impacting on-time performance.

 **Solution** The underpass removes the unsafe practice of passengers crossing at grade, and will enable better dispatching protocols that will improve on-time performance and throughput for both passenger and freight trains on the corridor.

 **Issue #3 – Improve Transportation Connections** To ride between Uptown North and South, cyclists currently use a 1,000 foot detour over the Linden Street crossing which includes two ninety degree turns over the railroad tracks, presenting an undesirable route for users. The skill level of cyclists on the mixed-use trail varies widely from serious cyclists to children and families out for a leisurely ride. The poor geometry at the Linden Street grade crossing can be challenging for less skilled riders. Similarly, pedestrians in Uptown cross at Broadway or Linden and are often delayed by one of the 10 daily Amtrak trains and average of 17 daily freight trains (with as many as 175 cars per train) traveling through town. On average this delay is three and one half to four minutes.

 **Solution** The *Underpass Project* creates a gently sloping, wide, direct pathway below the tracks to reconnect the severed Constitution Trail, thus improving trail use in Town. The undesirable geometry at Linden Street will no longer be part of the trail's route for cyclists. Pedestrians also will have a means to cross the tracks without having to wait at a blocked grade crossing. This enhanced connectivity will make traveling through Uptown a more desirable and enjoyable experience for all.

 **Issue #4 – Foster Redevelopment and Investment in Uptown** Redevelopment of the Uptown core north of the tracks has been widely successful. As this core approaches full build-out, most of the remaining area available for redevelopment and investment is located in Uptown South. The potential for retail and urban-style housing is strong; however, developers may be deterred by the current lack of direct pedestrian access between the two parts of Uptown.

 **Solution** The *Underpass Project* creates a seemingly effortless connection between the well-established Uptown North and the area south of the tracks, which is ripe with opportunity for equitable economic development. The design will feel natural and intuitive to users, making the barrier of the railroad tracks disappear in many respects. This dramatic improvement to the transportation network is a pivotal piece in the Town's strategy to attract private development south of the railroad and to realize the full potential of this neighborhood that is underserved in regards to connectivity, mobility, and economic opportunity. The area south of the tracks is in a low- to moderate-income census tract. Additionally, within the Normal community, Illinois State University and the surrounding area is a qualified Opportunity Zone.

1.5 Benefits

Through extensive public outreach conducted as part of the 2015 Master Plan Update, the Town determined that an underpass would have greater utility and connectivity than an overpass. An underpass will better serve general pedestrian and bicycle traffic and will convey large numbers of rail passengers much more quickly due to its larger capacity. Further, as part of the Phase I Study, an [alternatives analysis](#) was conducted, which culminated with a public open house and comment period where *over 70 percent of respondents supported the underpass alternative.*

Benefits of the Underpass Project include:

- Channeling pedestrian and bicycle traffic away from nearby at-grade rail crossings will *improve safety for pedestrians and bicyclists* by reducing risky, “beat the train” crossing behaviors and by reducing opportunities for trespassing on the tracks.
- Amtrak passengers at Uptown Station will benefit from *easy access to the second boarding platform* without getting caught on the wrong side of the tracks when a train is approaching the station.
- An underpass will allow general pedestrian and bicycle *traffic to flow freely and safely beneath the railroad tracks* during times that freight trains block the major north-south streets in and around Uptown.
- *Reconnecting the Constitution Trail* will provide a direct route for pedestrians and bicyclists between Uptown North and Uptown South, leading to travel-time savings and increasing the viability of walking and bicycling as options for commuting to jobs and university classes.
- The annual *cost of ongoing operations* and maintenance for the underpass will be less than half that of the overpass. The underpass is expected to last twice as long as the overpass.
- The Project *promotes the walkability of Uptown*, improving residents’ ability to easily connect to and explore iconic local institutions like the Children’s Discovery Museum, Normal Theater, Illinois State University, and a planned public library and park.
- The *Underpass Project* will continue the Town’s commitment to *environmentally sensitive design* in Uptown, employing eco-friendly, resilient materials and sustainable design to reduce the structure’s long-term maintenance costs.
- The *Underpass Project* will *link low-income residents in Uptown with the largest employers in Normal*, including vital education, medical, and service industry jobs.
- The *Underpass Project* creates a seemingly effortless connection between the well-established Uptown North and the area south of the tracks, which is ripe with *opportunity for equitable economic development*. The design will feel natural and intuitive to users, making the barrier of the railroad tracks disappear in many respects. This dramatic improvement to the transportation network is *a pivotal piece in the Town’s strategy to attract private development* south of the railroad and to realize the full potential of this neighborhood.

2 PROJECT LOCATION

2.1 Introduction to Normal, Illinois

The Town of Normal is a rural community in McLean County, Illinois. The *Underpass Project* lies within the 13th Congressional District and borders the 18th Congressional District, both of which serve largely rural populations. The Town itself has a population of 54,000 residents, and the larger Bloomington-Normal Urbanized Area (UA) is home to nearly 170,000 residents. The area also boasts a student population of 28,000 who study at one of the three major higher education institutions in Town.

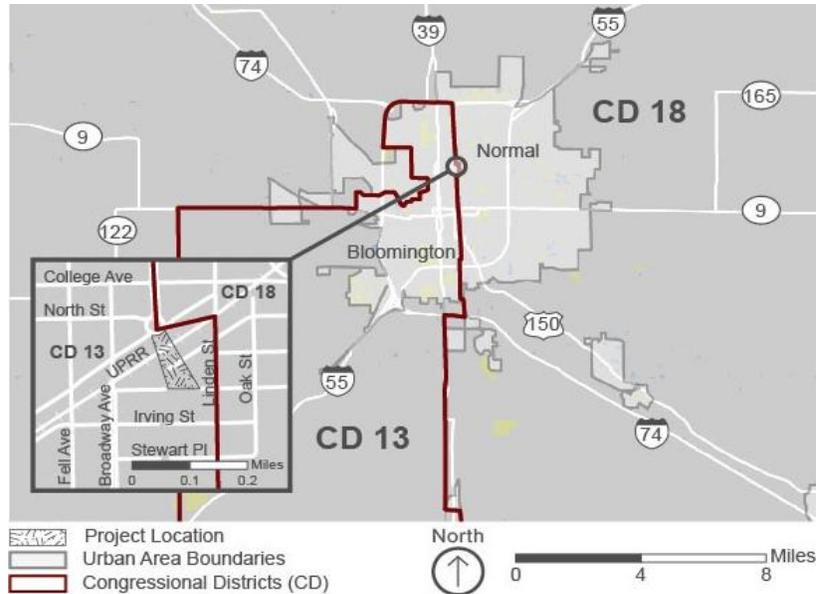


Figure 2-1: Project location map

Per the 2015 Master Plan Update, the Town’s redevelopment strategy focuses on the core Uptown area, with Uptown Station and the Circle serving as the epicenter of activity. The Plan separates the primary development areas into Uptown North and Uptown South, currently divided by the railroad tracks. The *Underpass Project* will provide a critical connection between these areas.

Uptown North is a new designation for the traditional downtown core. This 32-acre district has been the focus of redevelopment over the last 18 years. It is nearly complete, and the few remaining development sites are under public control. It is anchored by Uptown Station, serving as the multimodal hub for Amtrak and transit connectivity in the area. In addition to Uptown Station, the Children’s Discovery Museum and the award-winning Uptown Circle are in Uptown North. Some of the primary users of Uptown Station are students from nearby Illinois State University (ISU). The *Underpass Project* is only two blocks away from the eastern border of the 1,000-acre ISU campus. As the largest of three universities in the Bloomington-Normal area, ISU is home to 21,000 of the community’s 28,000 students, many of whom utilize the station, visit the downtown area, and

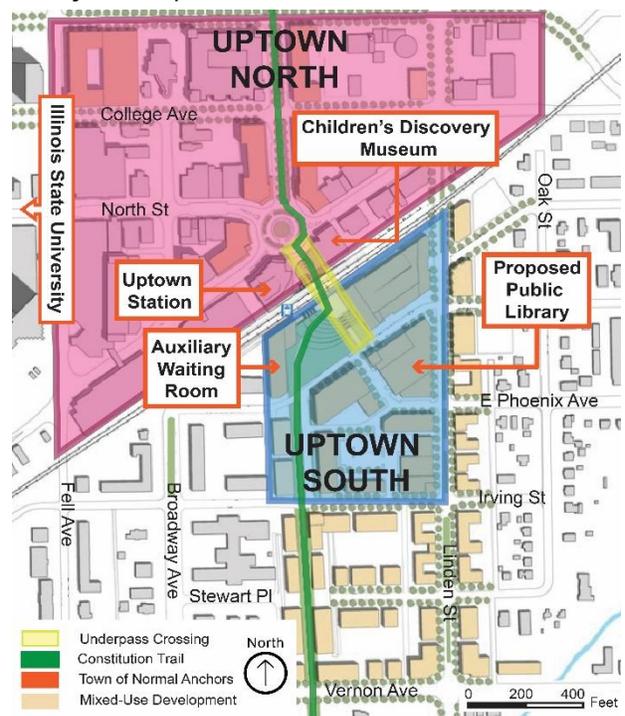


Figure 2-2: Uptown Normal project area map

enjoy the Constitution Trail. Additionally, there are multiple hotels and mixed-use residential buildings in Uptown North.

Uptown South is an eight-acre site almost entirely under the Town's ownership, presenting a tremendous opportunity for the continued redevelopment of Uptown. It is the last large area available for redevelopment; however, the railroad represents a significant barrier to extending the widely successful redevelopment on the north side across the tracks. Portions of Uptown South have been preserved for a new public library and redevelopment into a public park, which will connect to the Constitution Trail and an entrance to the underpass. There are also plans for multiple types of private development, including office space and residential properties. Uptown South will benefit the most from the *Underpass Project*, as it is still largely undeveloped and has the potential for dense, walkable, mixed-use development, with direct access via the underpass to amenities in Uptown North.

"An underpass would be the best option to keep Uptown South as a *viable, fun, safe, attractive community space* that we can all enjoy."

—Public meeting comment from a resident of Normal

2.2 Connections to Existing Transportation Infrastructure

In addition to the Amtrak service at the adjacent Uptown Station, there is a high level of established intercity bus traffic in the community due to Normal's prime interstate access (I-55, I-74, and I-39). Two intercity bus companies, Burlington Trailways and Peoria Charter Coach, both have stops at Uptown Station. Burlington Trailways provides service to Peoria, Indianapolis, and other locations to the east and west, while Peoria Charter offers service to Peoria, Chicago, and Champaign. Similarly, there is a high demand for park-and-ride facilities associated with the intercity bus and Amtrak passenger rail services.

Uptown Station is also the hub of Bloomington-Normal's public transit system, Connect Transit, which provides daily service with 15 area routes. From 2012 to 2017, Connect Transit's ridership increased by 40 percent and, in 2015, the system received an APTA Outstanding Public Transportation System Achievement Award for small cities in recognition of the system's tremendous growth.



Figure 2-3: Connect Transit bus in Uptown

In 2016, the Town of Normal and the City of Bloomington coordinated an increase in the local sales tax with a portion of the new proceeds designated for expanding Connect Transit service. Not only does this represent a big step forward for alternative transportation, but it is also a remarkable political story that illustrates the entire Town's willingness to approve a tax increase to expand transportation choices. This increase expanded service from six to seven days and increased peak-hour service frequency.

Due to its proximity to ISU, Uptown Station is ideally located to serve campus shuttles and related transportation services for ISU's 21,000 students and more than 3,000 faculty and staff. Central Illinois Regional Airport is less than four miles from Uptown Station, making interconnectivity with air travel convenient. Connect Transit operates seven bus routes through the Uptown Station, including bus service

seven days per week between the Uptown Station and the Central Illinois Regional Airport. Lastly, Uptown Station strategically sits on the primary leg of the heavily used Constitution Trail, which provides an important north-south connection for pedestrians and bicyclists.

3 GRANT FUNDS, SOURCES, & USES

3.1 Project Costs

The *Underpass Project* is comprised of five tasks: final design, bid services, advanced utility work, construction services, and project construction. Tables 3-1 through 3-5 detail a cost estimate for each task. The estimates are based on extensive experience with similar projects, conceptual design work completed to date, and the anticipated time needed to complete each item. All estimates include a conservative contingency of 20 percent given work is in the preliminary engineering phase. The estimates are also based on site-specific conditions, including anticipated utility relocations and special conditions for maintenance of railroad operations. Therefore, the estimates are believed to be conservative and adequate to complete the project. Refer to Table 3-6 for a summary of *Underpass Project* costs.

Table 3-1: Task 1 - Final Design Services Cost Estimate

Design Task/Project Element	Estimated Hours	Cost (\$)
Structural Engineering	4,800	720,000
Elevators (MEP)	700	105,000
Civil Site Development	3,600	486,000
Underground Removals, Drainage, Utilities	2,200	297,000
Geotechnical Engineering	800	108,000
Architectural Final Design	1,200	185,000
Electrical Engineering & Pump Station Final Design	750	101,500
Construction Staging Plan	960	160,000
Survey	260	36,000
Utility Coordination & SUE	130	18,000
Stakeholder Coordination	400	53,500
Project Management	400	53,500
Quality Control	400	53,500
FINAL DESIGN SUBTOTAL	16,600	2,377,000
Contingency (20%)	3,320	475,400
FINAL DESIGN GRAND TOTAL	19,920	2,852,400

Table 3-2: Task 2 - Bid Phase Services Cost Estimate

Design Task/Project Element	Estimated Hours	Cost (\$)
Engineering Bid Services	240	43,200
Architectural Bid Services	150	25,000
BID SERVICES SUBTOTAL	390	68,200
Contingency (20%)	80	13,700
BID SERVICES GRAND TOTAL	470	81,900

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Table 3-3: Task 3 - Railroad (Signal/Fiber) & Public Utility Relocation Design Cost Estimate

Design Task/Project Element	Cost (\$)
UPRR Agreement & Permit Fees	30,000
UPRR Signal Line Relocation Design	7,500
UPRR Fiber Relocation Design	39,000
CIRBN Fiber Relocation Design	26,300
Level 3 Fiber Relocation Design	52,600
Sprint Fiber Relocation Design	22,500
RAILROAD & UTILITY RELOCATION DESIGN SUBTOTAL	177,900
Contingency (20%)	35,600
RAILROAD & UTILITY RELOCATION DESIGN GRAND TOTAL	213,500

Table 3-4: Task 4 - Construction Professional Services Cost Estimate

Design Task/Project Element	Estimated Hours	Cost (\$)
Phase III Services – Architectural	800	125,000
Phase III Services – Engineering	960	173,000
Construction Management	7,280	1,004,000
CONSTRUCTION PROFESSIONAL SERVICES SUBTOTAL	9,040	1,302,000
Contingency (20%)	3,220	260,200
CONSTRUCTION PROFESSIONAL SERVICES GRAND TOTAL	12,260	1,562,200

Table 3-5: Task 5 - Construction Cost Estimate

Project Element	Cost (\$)
Tunnel & Structures	5,700,000
Tunnel Architectural Finishes	400,000
Elevators	750,000
Underpass Plaza – North Side	1,500,000
Underpass Plaza – South Side	1,550,000
Underground Removals, Drainage, and Utilities	2,300,000
Construction Staging & Railroad Services	2,750,000
General Conditions, Overhead & Profit	1,650,000
CONSTRUCTION SUBTOTAL	16,600,000
Contingency (20%)	3,320,000
CONSTRUCTION GRAND TOTAL	19,920,000

Table 3-6: Total Project Cost by Task

Task	Cost (\$)
Task 1: Final Design	2,852,400
Task 2: Bid Phase Support	81,900
Task 3: Railroad (Signal/Fiber) & Utility Relocation Design	213,500
Task 4: Construction Professional Services	1,562,200
Task 5: Construction	19,920,000
GRAND TOTAL	24,630,000

3.2 Project Funding

The Town of Normal respectfully requests \$16 million (65 percent of total cost) in FY 2019 BUILD funding to match \$8.63 million (35 percent of total cost) in Illinois Commerce Commission (ICC) and Town funding to implement Phases II and III of the *Underpass Project*. The \$1.25 million in ICC funds must be used for construction, while there are no restrictions on Town funds. The Town is committed to providing \$7.38 million in matching dollars through local resources such as general operating funds and/or general obligation bonds. The Town previously funded a \$1.5 million Phase I study to kick-start the planning and design of the *Underpass Project*, which is not included in the calculation of eligible project costs. Funding commitments from the Town and the ICC are included in the appendix. The proposed funding breakdown for the *Underpass Project* is provided in Table 3-7.

“We are a forward-thinking community...and whatever decision we make will be permanent. *Let's get this right* and create a space that will serve us well far into the future.”

—Public meeting comment from a resident of Normal

Table 3-7: Sources of funds – BUILD

Source	Amount (\$)	Share (%)
The Town of Normal	7,380,000	35 (Non-federal)
Illinois Commerce Commission Grade Crossing Protection Funds	1,250,000	
BUILD	16,000,000	65 (Federal)
TOTAL	24,630,000	

4 MERIT CRITERIA

The *Underpass Project* will provide significant *safety* benefits for all residents and visitors using Uptown Station, accessing the Constitution Trail or visiting amenities in Uptown. It will also meet the highest standards of the Town’s award-winning commitment to *environmental protection*, drawing on the most cutting-edge sustainability practices in construction and design, thereby maintaining a *state of good repair* long into the future. In addition, the *Underpass Project* will leverage existing planning efforts and newly completed and planned investments in the Town to directly enhance *economic competitiveness and quality of life* for its residents. Lastly, the *Underpass Project* uses *innovation* in project delivery, while strengthening existing and fostering new *partnerships* with the federal government, state, private companies, and the community.

4.1 Safety

Grade-separated railroad crossings are the safest form of crossing. Grade separation eliminates potential interaction between pedestrians and trains, eradicating the chance of person-to-train collisions and *minimizing risky, “beat the train” crossing behaviors*. At-grade crossings can be dangerous due to poor visibility of oncoming trains, a lack of pedestrian and bike facilities, and an increasingly distracted traveling public.

Currently, to cross between Uptown North and Uptown South, pedestrians must cross at-grade, typically at one of two crossings (Figure 1-2). This population includes many commuters in a rush and university students traveling from housing in Uptown South to ISU's campus, often while distracted by their phones or listening devices. When a train is boarding on the second platform, *there can be 150 passengers or more for a single train* who are trying to cross between platforms with little time to spare. Additionally, bicyclists using the Constitution Trail must ride over the tracks at Linden Street. When a train is stopped at the station, the railroad gates at Linden Street and Broadway Avenue may be up, permitting cyclists and pedestrians to cross. During this occurrence, there may be risk associated with trains approaching on the second track while the at-grade crossing is still in use by pedestrians and cyclists, particularly related to visibility while crossing.



Figure 4-1: Two trains meet at Normal and passengers must wait to cross the tracks at Broadway

The originally proposed overpass would only be readily accessible to passengers boarding or alighting a train as access is limited through the station buildings.

If the originally proposed overpass were constructed, bicyclists and pedestrians using the Constitution Trail would continue to use the at-grade crossings at Linden Street and Broadway Avenue. The *Underpass Project* provides a convenient, grade-separated railroad crossing that uses the reconnected Constitution Trail to seamlessly connect the public spaces on either side. Students, workers, families, and trail users will be able to easily cross between Uptown North and South. Most bicycle and pedestrian traffic is expected to divert from the two at-grade road crossings to the underpass, resulting in improved safety for passengers, cyclists, and pedestrians. As many as 789,567 bicyclists and pedestrians may divert from the Linden and Broadway crossings annually once the underpass is constructed, which will significantly reduce the likelihood of crashes. At the Linden Street crossing, where 95 percent of pedestrians and cyclists will be diverted, the 0.19 yearly crash rate will decrease to 0.01. The Broadway crossing is expected to see 50 percent of pedestrians and bicyclists divert to the underpass, resulting in the annual crash rate decreasing from 0.083 to 0.041. These crash rate reductions equate to an *estimated 6.35 avoided incidents in the first 30 years of operation*. In addition, 241,844 Amtrak passengers use the station each year (FY 2017 ridership) and will benefit from a grade-separated route between platforms. For more information, refer to the Benefit-Cost Analysis included in the appendix.

The Underpass Project will
*improve safety for
789,567 bicyclists
and pedestrians*
annually, who currently use two
nearby at-grade crossings.

4.2 State of Good Repair

The *Underpass Project* has an expected life of 100 years, based on AREMA standards for structures of this type. This lifespan will decrease the frequency and cost of maintenance for the facility, compared to the originally planned overpass's expected life of 50 years.

BUILD FY 2019 GRANT APPLICATION: THE UNDERPASS PROJECT AT UPTOWN STATION

Long-term operations and maintenance (O&M) of the underpass will be managed by the Town of Normal and will be incorporated into the Town's operating budget. The estimated annual O&M costs of the underpass are provided in Table 4-1.

Table 4-1: Estimate of Annual Operations and Maintenance Costs

Cost Category	No Build O&M Cost (\$)	Underpass Annual O&M Cost (\$)
Routine Custodial Services	0	8,320
Routine Maintenance Services	0	5,000
Utilities	0	1,800
Total	0	15,120

4.3 Economic Competitiveness

The Town of Normal has seen a surge of investment in its Uptown area over the past 18 years. Information on growth rates based on historical assessed valuation data can be found in the Benefit-Cost Analysis. Through extensive planning and community involvement, the Town's 2000 and 2015 Master Plans have prioritized transforming Uptown into a cohesive regional destination. Town Master Planning efforts have acknowledged *the railroad as a significant barrier between Uptown North and Uptown South*. Connecting the two sides with the underpass will provide many opportunities for public and private economic development. Plans for private development currently being discussed include adding office space and developing new residential properties in Uptown South. While the Town often partners with the larger Bloomington-Normal MSA to promote economic opportunities in the region, Uptown Normal itself offers a unique walkable, dense urban area with a "small town" feel that is anchored by Uptown Station. The *Underpass Project* will further reinforce Uptown's existing walkable characteristics.

The Constitution Trail is widely popular with commuters, students, and recreational users alike. The trail provides critical access to employment centers and university facilities in and near Uptown. An average of 1,850 pedestrians and cyclists cross the tracks each day. Trail users would be unlikely to divert to an overpass due to its sole access being through Uptown Station. It is estimated that the *Underpass Project* will save trail users 1,000 feet of distance compared to the Linden Street crossing, resulting in a time savings of 5.6 minutes for pedestrians and 1.2 minutes for bicyclists. In 2022, when the underpass opens, it is estimated that travel time savings will result in a combined savings of \$1.68 million for pedestrians and bicyclists in Normal. Over the next 30 years of operations, the underpass will result in a combined travel time savings of \$73.8 million.

Normal, IL is a key downstate stop on the Chicago-to-St. Louis corridor, which is designated for higher speeds as *Illinois' premier corridor and the spine of the Midwest rail network*. With the fourth highest ridership in the region after Chicago, Milwaukee, and St. Louis, service reliability and safe, accessible connectivity between station platforms are critical to preserve rail competitiveness and encourage additional transit-oriented development in Uptown.

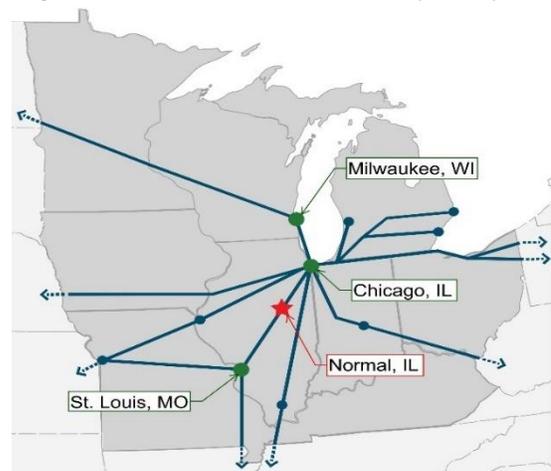


Figure 4-2: The underpass will boost economic competitiveness by improving regional rail connections

An average of 663 passengers use Uptown Station each day. Currently, passengers must walk approximately 1,000 feet via the Broadway grade crossing to change platforms. While the initially proposed overpass would have shortened this distance, its narrow stair towers and three-story elevation over the tracks still presented a risk of congestion. The underpass, with its shallower change in elevation and wide opening, is anticipated to further reduce travel time between platforms, resulting in nearly \$5 million in travel time savings in the first thirty years of operation.



Figure 4-3: Passengers wait to board at Uptown Station

4.4 Environmental Protection

The Town of Normal has a national reputation as one of the most sustainable small towns in America, and the *Underpass Project* represents a further commitment to environmentally conscious design. In November 2005, the Children’s Discovery Museum achieved a Silver rating from the U.S. Green Building Council and was the first children’s museum in the country to be rated LEED Silver or higher. In 2007, Uptown Circle and the five adjacent buildings were among the first projects to register for the LEED Neighborhood Development (LEED ND) Pilot Program, as an innovative combination of traffic control, sustainable storm water management, and vibrant civic space. The Town plans to incorporate lessons learned from this effort as well as other LEED building projects in Uptown North as they progress the Underpass Project and further develop Uptown South.

The *Underpass Project* will use eco-friendly, resilient materials and sustainable design to reduce long-term maintenance costs. Strategic landscaping and storm water management techniques will be employed to help the site achieve water independence. The Town plans to continue its sustainable use of storm water by capturing the runoff and storing it for use as irrigation and/or for water features. The design will also make use of the descending topography within the planted areas of the plazas on either side to filter and cleanse storm water before it enters the watershed.

4.5 Quality of Life

Transportation freedom comes from regional and local connections. The *Underpass Project* will provide a critical link to a second boarding platform for high-speed rail passengers at Uptown Station, providing a reliable path that reduces the time passengers require to move between platforms. This will make rail travel more accessible for all members of the community, especially those with limited mobility.

In addition to better serving rail passengers with its more accessible design and greater capacity, the underpass serves as a *transportation link for the Town’s broader traveling public*. The *Underpass Project* will enhance the pedestrian and bicycle network near Uptown Station by providing a safe and seamless connection for the north and south sides of the Constitution Trail, further enhancing Uptown as a transit-oriented development area.

Better bicycle circulation via the *Underpass Project* and Constitution Trail will continue promoting freedom of transportation choice and result in health benefits for users. The underpass will create a new piece of trail, which is expected to bring additional cyclists through this area each year yielding an

estimated \$686,005 in health benefits in the first thirty years of operation. Refer to the Benefit-Cost Analysis for more information on increased bike demand and associated health benefits.

The Constitution Trail, and specifically Uptown, are also key attractions for visitors traveling Historic Route 66. The underpass will provide a more attractive ride for cyclists on the route as they travel through the region. The Town also launched a new bike share program in 2017, which has been immensely successful. A total of 3,189 bicycle trips were taken by 1,001 unique riders in the program's first year, with the Uptown bike station, less than a block from the proposed underpass location, seeing the greatest use. In the second year of the program, the total number of trips increased to 3,327 taken by 1,853 unique users. By reconnecting the severed Constitution Trail, the *Underpass Project* will enhance walkable and bikeable options for residents and visitors.



Figure 4-4: Cyclists at the Uptown bikeshare station

The strategic location of the *Underpass Project* will provide access and connectivity among numerous anchor institutions in and around Uptown, improving quality of life and providing *freedom of transportation choice*. Uptown has increasingly become a place to shop, dine, and live. The area is quickly developing into a dense, walkable, mixed-use community that is home to world-class educational institutions, nationally recognized arts centers, award-winning public spaces, small businesses, and a regional multi-modal transit center. These anchor institutions will directly benefit from the *Underpass Project*.

Uptown Station is a multimodal center opened in 2012. It serves as a hub of activity in Uptown Normal with Amtrak service, local bus transit, and intercity bus service. Municipal offices are also located on the second through fourth floors of the building. In 2018, a second platform was opened in a limited capacity for use by the 241,844 annual Amtrak passengers. Currently, the second platform is only used under exceptional circumstances to limit passengers crossing at grade. Once the underpass is constructed, one platform will be used for northbound Amtrak service, while the other platform will be used for southbound service, creating a safe and reliable boarding process.



Constitution Trail, the multi-use bicycle and pedestrian trail that covers 43.5 miles through Normal (15.2 miles) and Bloomington (28.3 miles), is the spine of the project area and is part of the statewide Route 66 bike route. In Normal, this trail runs through the center of Uptown, providing recreation and transportation for residents, students, and visitors alike. Currently, the trail is disjointed due to the railroad tracks and resulting diversion at Linden Street. Use of the Linden Street crossing for the trail is undesirable, as it slopes downhill from south to north and



requires users to make two 90-degree turns near oncoming lanes of traffic. The *Underpass Project* will provide a direct route for passengers to get from one side of Uptown to the other without having to cross the railroad tracks at grade.

The Children’s Discovery Museum is directly adjacent to Uptown Station and the railroad tracks. It serves as the primary family friendly destination in Uptown and was recently named one of the “200 Great Places” in Illinois. Currently the museum does not have adequate outdoor space. The only access to the larger space in Uptown South for outdoor activities requires museum staff to walk classes of young children across the tracks at Linden Street. The *Underpass Project* will benefit the museum by providing a safe and secure area for an outdoor exhibit on the north side of the tracks as well as direct access to park space on the south side, which can be used for STEAM experiments. The Town is also working with the museum to create an educational STEAM exhibit during construction to teach children about architecture, engineering, and construction.



The Circle is the roundabout that connects Beaufort Street, North Street, and Constitution Boulevard, which has become a symbol for Normal’s commitment to redevelopment, connectivity, and sustainability. The Circle contains a uniquely designed public space used for public events and was certified as part of a LEED Neighborhood Development area in 2009. The Constitution Trail passes through the Circle. The *Underpass Project* will bring these public spaces together with an iconic, cohesive design.



The Normal Public Library has a prominent site in Uptown South reserved to accommodate a new public library to better serve the Town’s growing needs, as included in the Master Plan. There is a strong relationship between the Children’s Discovery Museum and the public library, as many library patrons are school-age children. When the new facility is complete, the underpass will provide a safe, direct path of travel for patrons between the two locations, further enhancing their partnership.



Illinois State University (ISU) was founded in 1857, and is the oldest public university in the state, with over 21,000 students enrolled. It is also the largest employer in town with over 3,000 employees. The edge of campus is located just two blocks west of Uptown Station and the proposed underpass. The station serves as a vital transportation link for ISU students, who make up a large proportion of Amtrak passengers.



In addition to connecting key institutions in Uptown, the *Underpass Project* will *link low-income residents in Uptown with the largest employers in Normal*, including vital education, medical, and service industry jobs. The population living in the census block group directly north and south of the *Underpass Project* is relatively small, with 1,270 residents, all of which are categorized as having a low or moderate income.

The small population immediately surrounding the project area is due in large part to the number of vacant lots, as well as land under commercial use. The *Underpass Project* is a critical component for further development in Uptown South. At full build-out, 980 new housing units are expected in the study area. A housing study conducted by ZVA concluded that the underpass option will maximize dense development surrounding the station, while a passenger overpass will limit such development.

There are also an estimated 2,291 jobs within a half-mile radius of the underpass per the US Census Bureau's 2015 Longitudinal Employer-Household Dynamics (LEHD) dataset. The underpass will *improve access to essential services* at the Town Hall, public library, post office, and police department, all located in Uptown. This improved connectivity will benefit existing residents and attract new ones, with improved accessibility to all of Normal's amenities provided by the *Underpass Project*. Residents will be able to easily integrate walking and biking into their everyday errands, commutes, and routines.

4.6 Innovative Project Delivery

Normal has experience with a variety of contracting methods, which it has used successfully in the past in accordance with state and federal requirements. Methods used previously include requests for proposals/qualifications, low-cost bid, and best value procurements where both price and qualifications are considered. There will be multiple contracts associated with the construction phase of work, including Construction Engineering, Construction Management, and a Construction Contractor.

Normal envisions using a *best value procurement* process to select a contractor team with the experience necessary to complete the *Underpass Project* in an economical, safe, and timely manner. While Normal does not have a construction pre-qualification process, they plan to work with IDOT and UPRR in consideration of their pre-qualification processes to select a contractor with experience working on railroad structure projects. Best value procurement was used successfully on the Uptown Station project in coordination with FTA, as it permitted the Town to select the best, most qualified contractor to perform the work. The Town was able to meet with the full contractor team, understand their approach to the complex project, and select the lowest qualified bidder.

As part of negotiations, additional techniques successfully used in the past and applicable to this project include:

- Project Labor Agreement: The Town will negotiate a Project Labor Agreement with building trades to help prevent delays due to labor issues.
- Construction Partnering Agreement: The Town will require a Partnering Agreement with the Construction Team to promote communication, help resolve disputes and keep the project on time and on budget.
- Incentive/Disincentive Clause: Completion dates will be critical to meeting commitments to project stakeholders. The Town proposes to use an Incentive/Disincentive clause in the construction contract to ensure the *Underpass Project* is completed on time.

4.7 Partnership

The *Underpass Project* has broad stakeholder support. *More than twenty legislators, project partners, and community leaders have expressed support*, including Illinois Senators Durbin and Duckworth, Congressmen Davis and LaHood, the Illinois Secretary of Transportation, UPRR, Amtrak, ISU, and State

Farm. The Town of Normal partnered with IDOT, UPRR, and Amtrak to construct the second platform at Uptown Station as part of IL HSR. Project partners have been working since 2011 to establish passenger access to both platforms in a way that meets the safety and operational needs of the rail system while also achieving the Town's long-term development goals.

Project Implementation Partners



The Town of Normal is the project sponsor and grantee for the *Underpass Project*. Normal has a proven track record of actively engaging its partners to meet the needs and requirements of all stakeholders. Normal signed an MOU with UPRR and IDOT in 2016 outlining roles, responsibilities and commitments.



IDOT partnered with the Town of Normal for IL HSR to construct a second boarding platform and auxiliary waiting room improvements at Uptown Station. A grade separation is required to meet IL HSR commitments in the SOA for service reliability and on-time performance. The *Underpass Project* was also included in the State Transportation Improvement Program (STIP) in July 2016.



UPRR owns the railroad the HSR service operates on through Normal. UPRR has designated Normal as a "Train Town, USA" and has a strong working relationship with the Town. The railroad requires a grade separation at multi-track stations for safe passage between platforms and to promote reliable operations.



The Town worked closely with Amtrak officials in the planning and design of Uptown Station and IL HSR station improvements. Amtrak is supportive of a grade separation at Uptown Station to provide utility and safe passage across the tracks for their patrons.



The Town has engaged the ICC, which has jurisdiction over public rail crossings in Illinois. Normal has worked with ICC and UPRR to supplement the prior crossing order to extend the *Underpass Project* timeline to 2021 for design and construction. Further, ICC has committed \$1.25M in grade crossing protection funds for construction.

Private Foundations

Normal is excited to partner with the Children's Discovery Museum to jointly seek private investment in a museum exhibit during construction to teach children about architecture, engineering, and construction as well as develop a permanent outdoor exhibit and active play space in the North Plaza. The museum is perfectly situated to use construction of the *Underpass Project* as a teaching opportunity by creating a temporary exhibit with time-lapse videos of construction and progress updates displayed adjacent to floor-to-ceiling windows and balconies directly overlooking the site (see Figure 4-5). Ideas for the permanent outdoor exhibit include an active space that teaches children about different types of renewable energy and associated engineering principles. This is one of the state education standards, which schools repeatedly ask the museum for assistance with.

Two examples of foundations the museum and Town are in contact with include UPRR and State Farm.



UPRR is an active project partner. The Union Pacific Foundation supports a variety of initiatives in their partner communities. Some of the key initiatives include safety efforts for projects focusing on rail, bike, and pedestrian improvements as well as community spaces to create destinations where families, businesses, and visitors want to be.



State Farm Insurance is headquartered in and is the largest employer in neighboring Bloomington, IL. State Farm supports continued development in Uptown Normal as it enhances livability and makes the Bloomington-Normal region a more attractive place to call home. The State Farm Foundation supports projects that enhance safety, education, and community development.



Figure 4-5: View from museum windows overlooking the construction site (left) and view of construction site from Uptown Station entrance (right)

4.8 Non-Federal Revenue for Transportation Infrastructure Investment

This criterion does not apply. The *Underpass Project* is not anticipated to generate non-federal revenue sources.

5 PROJECT READINESS

5.1 Technical Feasibility

Past Performance. The Town of Normal has managed, planned, designed, and constructed numerous complex infrastructure projects demonstrating its *capacity and technical expertise as a smaller municipality to work effectively with state and federal agencies*. Uptown Station was the first TIGER discretionary project under construction in the nation and has since been looked to as a great TIGER program success story. Further, Uptown Station, in conjunction with redevelopment in Uptown North, is looked to as a *national example of transit-oriented development done right*. Normal did such an exemplary job that when the IL HSR program began, IDOT trusted Normal to lead design and construction

of the second platform and waiting room improvements. Normal completed IL HSR improvements on time and within budget. The Town has been recognized for its exemplary efforts through multiple awards, including the 2012 Transportation Planning Excellence Award from FHWA and FTA.

Engineering Design Studies & Activities. The Town of Normal first developed the *Underpass Project* through extensive master planning efforts and public outreach as a part of its 2015 Master Plan Update. At the time, an overpass was being designed as part of the IL HSR Program. The Town worked with IDOT and Union Pacific Railroad to craft and execute an MOU for the Town to design, gain stakeholder approval, and construct an alternate design that would better meet Town goals and objectives.

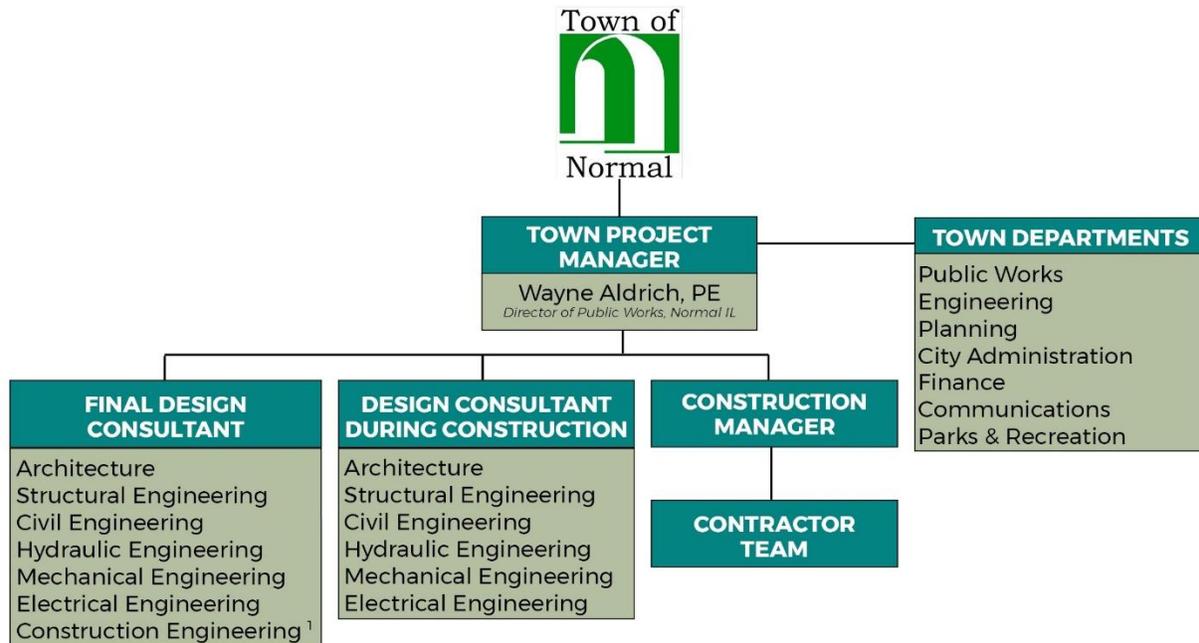
Normal has retained a consultant team to perform preliminary engineering and draft NEPA documentation. The underpass design is based on a variety of industry best practices and standards including AASHTO design guidelines, IDOT design guidelines and railroad requirements. The Town submitted conceptual underpass alternatives for Union Pacific Railroad and IDOT review in June 2018 and October 2018. Because of significant personnel changes within UPRR, design reviews and approvals have been delayed. The Town has been actively working with UPRR to re-engage and accelerate the design review process with their new points of contact.

The Town's preferred concept uses accelerated bridge construction to minimize impacts to rail operations. It involves an open cut with driven pile foundations, which minimizes the structure depth, thereby making access for users more convenient. Completion of 30% preliminary engineering and environmental planning is anticipated by the end of 2019.

Project Management & Team Organization. The *Underpass Project* is led by Mr. Wayne Aldrich, PE. Mr. Aldrich was previously the Uptown Development Director in charge of overseeing the improvements in Uptown North, including Uptown Station and improvements for IL HSR. Currently, he is the Town's Public Works Director and is managing Phase I for the project. He is recognized as an industry leader in transit-oriented development and is often invited to speak at conferences, including the 2016 Standing Committee on Rail Transportation conference to discuss Uptown Station. Mr. Aldrich is supported by the Town engineering staff, which includes five professionally licensed engineers *who collectively have over 90 years of experience* with construction management and infrastructure projects. The Town of Normal will follow similar methods of contract oversight as implemented for Uptown Station, IL HSR improvements, and Phase I. The Town performs periodic performance reviews with consultant project principals no less than annually. This model will continue during Phases II and III.

Mr. Aldrich is supported by several departments that provide expertise and peer review during project development. The Town will utilize the services of a consultant team to complete 100% contract plans and specifications for bidding. This team will also support the Town during the bid phase. The final design consultant team will include a mix of architects and a variety of engineering disciplines. Due to the complex nature of working adjacent to active railroad tracks, Normal is including construction engineering as a component of final design to develop practical staging plans for UPRR review and approval.

There will be multiple contracts associated with the construction phase of work, including construction engineering, construction management, and a construction contractor. The construction engineer will be a consultant team who is responsible for addressing all design related items during construction. The construction manager will oversee day-to-day project implementation on-site and act as the owner’s representative. Refer to Figure 5-1 for an *Underpass Project* organization chart.



Notes:

1. Construction Engineering may be performed by a contractor specializing in tunnel construction and/or railroad construction.

Figure 5-1: Project organization chart

Project Contracting. Normal released a Request for Proposals (RFP) in Summer 2016 for a Phase I consultant to perform preliminary engineering and draft NEPA documentation. Through this qualifications-based selection, the Town contracted with WSP USA (IL HSR Program Manager) and RATIO Architects (Uptown Station and Second Platform Designers) to perform the work. The RFP states that with Town Council approval, the Town may amend the Phase I team’s contract to include Phase II services without a separate procurement process. This provides flexibility to streamline the contracting process and continue project development without delay presuming satisfactory completion of Phase I.

The Town of Normal is *committed* to *supporting* Disadvantaged Business Enterprises (DBE) through their *inclusionary DBE program*:

- ☺ Phase I: **10%** DBE goal
- ☺ Phase II: **15%** DBE goal
- ☺ Phase III: **5%** DBE goal

Normal envisions using a best value procurement process to select a contractor team with the experience necessary to complete the *Underpass Project*. By using a best value procurement, Normal is *structuring the Underpass Project to reduce change orders from the start* with selection of an experienced contractor. For changes that arise during construction, Normal plans to use unit cost (rather than lump

sum) construction pricing to form the basis of any future change orders and avoid prolonged negotiations. In the event of a negotiated change order, Normal requires a detailed breakdown of direct and indirect costs, including labor, materials, equipment, workers' compensation and liability insurance, employment taxes, and overhead and profit (limited to certain percentages). Normal's change order process conforms to state statute and mirrors that of larger agencies in Illinois. Change orders are reviewed by the design consultant, require the project manager's approval, and per the Town's procurement policy, the Town Council must be informed of all change orders.

5.2 Financial Feasibility

The Town of Normal has the experience to manage the *Underpass Project* and is committed to delivering the project within budget. Annually, the Town manages a budget of \$110 million and has successfully administered prior grants, as evidenced by the Uptown Station project. A further example is the sub-recipient relationship between Normal and IDOT, where *the Town was entrusted to deliver enhancements at Uptown Station for the IL HSR program*. For many years, the Town has maintained among the highest bond ratings from independent bond rating agencies, including ratings of Aa1 from Moody's, AA from Standard and Poor's and AAA from Fitch. The Town is routinely awarded the Certificate of Achievement for Excellence in Financial Reporting by the GFOA.

Town funds in the amount of \$7.38 million are available through Town revenue sources such as the General Fund and bonds to provide a local match. The Town has also secured \$1.25M from the ICC for use during construction. Collectively, these funds provide a 35 percent match. However, the Town does not have available capital resources to fund the full cost of the *Underpass Project* and is thus seeking additional funding through this BUILD grant application. Refer to Section 3 for a detailed overview of costs and sources of funding.

"Yes, [the underpass] is an expensive option. Nothing is done for free. But the advantages of the access will be *worth the wait and expense.*"

—Public meeting comment from a resident of Normal

5.3 Project Schedule

The Town began Phase I planning, environmental, and engineering work in the fall of 2016. Completion of Phase I, including draft NEPA documentation and preliminary engineering, will prepare Normal to actively continue the *Underpass Project* upon receipt of further funding, beginning with final design (Phase II) and continuing with construction (Phase III). No right-of-way acquisition is required. The schedule includes the Town's commitment and ability to complete all pre-construction activities and obligate funding in advance of September 30, 2021 and expend all funds well in advance of the September 30, 2026 deadline.

Key project milestones include:

Phase I	
NEPA	Completion Dec. 2019
Preliminary Engineering	Completion Dec. 2019
Phase II	
Final Design Plans, Specifications, & Estimates	Jan. 2020 to Dec. 2020
Contractor Procurement	Dec. 2020 to Mar. 2021
Phase III	
Construction	Mar. 2021 to Dec. 2022

5.4 Required Approvals

NEPA Activities. Extensive environmental analysis has been done in the vicinity for various projects in Uptown. The IDOT High Speed Rail program has a [2004 Record of Decision](#) for the rail corridor and completed a Categorical Exclusion for the previously designed overpass and station improvements. NEPA was also completed and approved for the Uptown Station project. Considering the results of the environmental work already completed in the project area, no major issues are anticipated and a Categorical Exclusion (CE) is the appropriate Class of Action to comply with the National Environmental Policy Act.

The Phase I project team has had preliminary discussions with FRA about the *Underpass Project* and how it relates to IL HSR. The team confirmed that FRA will not review NEPA documentation until federal funding is established for the *Underpass Project*. Therefore, to streamline the process, the project team is preparing a draft CE that can be submitted to FRA for approval after funding is awarded. In addition, the project team will coordinate with FRA to add Normal to the Section 106 Programmatic Agreement after funding is awarded.

Public Involvement. The Town is committed to continued public engagement. In April 2017, Normal hosted a public open house to present the results of an [alternatives analysis](#) for a grade separation adjacent to Uptown Station, which determined that an underpass would best meet the needs of rail passengers and trail users. *It received overwhelming support from the public, with over 70 percent of commenters in favor of the proposed underpass solution.* This recommendation was adopted by the Town Council in [June 2017](#), allowing the conceptual design and NEPA processes

“I am in support of [the underpass], an option that *beautifies our public spaces and provides ease of movement* for pedestrians and cyclists. I strongly believe that a vibrant community is one where residents and guests can move about easily in a pleasant and entertaining environment. I also believe that this option will help *build the local economy and support local business*. When you visit a well-developed town, you know the difference and you remember it. I want residents and visitors to think of Normal as *a memorable place they want to return to.*”

—Public meeting comment from a resident of Normal

to begin. The next public meeting is planned for Fall 2019 to update the public on the preliminary engineering effort.

State & Local Planning. Normal has actively engaged the Town Council and the public to obtain support for the *Underpass Project*. The *Underpass Project* is a key piece of the Uptown Master Plan 2.0 and is included in the McLean County Long Range Transportation Plan; it was also added to the State Transportation Improvement Program (STIP) in July 2016. Locally, the *Underpass Project* is believed to provide numerous public benefits when compared to the previously envisioned overpass and therefore has garnered strong support. IDOT is also engaged through regular coordination meetings and design reviews. No issues are foreseen with state or local approvals to continue project delivery.

Stakeholder Engagement. The Town has broad community support for the *Underpass Project* from local businesses, healthcare providers, and educational institutions. The Town has also received letters of support from legislators, state agencies, and the railroads involved. See the attached package of support letters from more than twenty stakeholders included in the appendix.

Normal has been working closely with the railroads and state agencies involved in the *Underpass Project* for many years to ensure stakeholder consensus. The MOU between Normal, UPRR, and IDOT, executed in December 2016, includes the necessary agreements required to deliver the *Underpass Project* and includes Union Pacific's commitment to support the *Underpass Project*. In December 2017, UPRR signed a Project Agreement Letter with Normal, which provides for UPRR design review. The ICC has also issued a supplemental crossing order, which amends the timeline to construct a grade separation in this location. Normal continues to work with both organizations on additional required agreements and status updates. Refer to the attachments for the agreements and orders referenced above.

5.5 Assessment of Project Risks & Mitigation Strategies

Given Normal's long history of working on construction projects with the stakeholders involved in the *Underpass Project*, the Town can effectively anticipate, manage, and mitigate project risks. The team responsible for final design will be required to designate an individual responsible for managing monthly risk reporting in the form of a risk register. This individual will work closely with Wayne Aldrich and the rest of the Normal engineering staff to anticipate risks. The register will identify each potential risk, assign a risk level, determine potential impacts to cost and schedule, identify mitigation measures and responsible parties, and document risk resolution.

The schedule and budget will be used to ensure *Underpass Project* is on track. The schedule will account for milestones, review periods, required deliverables, and will distinguish items on the critical path, as risks affecting those items are especially important. Examples of risks and mitigation strategies include:

- **Railroad Staging:** There is insufficient space to construct a temporary shoo-fly track to route trains around the construction site. This means trains will continue to run in the project area throughout the construction process with extremely limited windows for track outages. To maintain railroad operations, careful planning and intricate railroad coordination will be required. Continuous production is assumed for any track outages that are agreed to by UPRR. The project team is discussing opportunities with UPRR to take one track out of service at a time by using the crossovers located approximately 2,000 feet to either side of the project area.

➤ **Underground Conditions:** Multiple utilities including Town and private fiber optic lines as well as UPRR fiber and signal communication lines run through the project area and will require relocation or protection in place during construction. The construction budget includes conservative allowances for these items to accommodate the necessary relocations. A survey completed in winter 2017 located all utilities in the project area. Subsurface exploration is also underway. Soil borings were completed in May 2018, and additional survey work to confirm utility elevations occurred in July 2018. Utility conflicts are being proactively assessed as part of the preliminary engineering process so that discussions with utilities can begin well in advance of construction. This will allow the necessary relocations to be designed and performed to mitigate potential construction delays.

6 BENEFIT-COST ANALYSIS

A benefit-cost analysis was conducted for constructing a rail passenger, pedestrian, and bicyclist underpass adjacent to Uptown Station. The analysis considers the full life cycle costs of the *Underpass Project*, including capital costs for planning, design and construction as well as operating costs for future maintenance. The base case for this analysis is constructing a rail passenger overpass that connects passengers from the station to the new platform on the south side of the tracks as agreed to in the 2016 MOU between Normal, IDOT, and UPRR.

The underpass would provide several benefits that would not be provided by an overpass, including travel time savings and improved safety for rail passengers, pedestrians and cyclists. The *Underpass Project* also yields a reduction in operations and maintenance costs.

Constructing the underpass has a *benefit-cost ratio of 1.27* using a 7 percent discount rate, with a net present value of \$5.3 million. The benefit-cost analysis is summarized in Table 6-1. Refer to the attached Benefit-Cost Analysis for further detail.

Table 6-1: Summary of Benefit-Cost Analysis

Discount Rate	Discounted at 7%
BCR	1.27
Total Benefits	\$24,984,719
Total Costs	\$19,707,698
Net Present Value	\$5,277,021

7 CONCLUSION

The Town of Normal is committed to pursuing its vision for the vibrant future of Uptown with the *Underpass Project* as a critical step to connect north and south. Normal has already invested \$1.5 million to kick-start the project and is ready to invest \$8.63 million in additional non-Federal funds for final design and construction. The requested \$16 million in federal funding for final design and construction will allow the *Underpass Project* to successfully move forward.

APPENDICES & ATTACHMENTS

- [↗ Wage Rate Certification](#)
- [↗ Benefit-Cost Analysis Report and Excel Model](#)
- [↗ Letters of Support](#)
- [↗ 2019 BUILD Info Spreadsheet](#)
- [↗ SF 424](#)
- [↗ SF 424C](#)
- [↗ SF 424D](#)
- [↗ Financial Commitment Letter](#)
- [↗ Memorandum of Understanding](#)
- [↗ Illinois Commerce Commission Order T14-0014](#)
- [↗ Illinois Commerce Commission Supplemental Order T14-0014](#)
- [↗ UPRR Project Agreement Letter](#)
- [↗ Train Town USA Designation](#)