Uptown Connector
Pedestrian Railroad Crossing Project
Town Council Work Session – June 7, 2021
Project Partners

**USDOT** – United States Department of Transportation*

  Secretary Pete Buttigieg

**FRA** – Federal Railroad Administration as BUILD Grant Administrator

**FHWA** – Federal Highway Administration

**FTA** – Federal Transit Administration

**IDOT** – Illinois Department of Transportation*

**ICC** – Illinois Commerce Commission*

**UPRR** – Union Pacific Railroad Company

**Amtrak** – National Passenger Rail Corporation

*funding partner*
Outline

• Project History
• Phase I Engineering
  • Alternatives Analysis
  • Design Considerations
  • Concept Designs
  • Preliminary Engineering
• Funding Plan
• Next Steps
Project History

• January 17, 2012 – Council Authorizes IDOT Agreement
  • Pedestrian Overpass
  • South Platform
  • Old Amtrak Station Improvements
• Summer 2013 - UPRR Removes At-Grade Crossing
• August 18, 2014 – Council Authorizes Uptown Plan Update

Note: Investment made in bridge foundation. Design team reviewing opportunity to use existing foundations for underpass retaining wall support.
Project History

Uptown Master Plan Update

Uptown South (Uptown 2.0) Concept Plan
Project History

Uptown Master Plan Update

• November 16, 2015 – Council Adopts Uptown Normal Master Plan Update
  • Underpass Most Favored Alternative Crossing
  • Staff Begins Discussions with IDOT and UPRR Resulting in MOU

• April 18, 2016 – Council Authorizes Construction of South Boarding Platform and Old Amtrak Station Improvements – Without Bridge
Project History

• May 2, 2016 – Council authorizes modification to IDOT agreement removing overpass
• October 3, 2016 – Contract with WSP for Phase I Engineering
• December 6, 2016 – Memorandum of Understanding (MOU) Executed
  • IDOT
  • UPRR
  • TOWN
Project Phases

**Phase I**
- National Environmental Policy Act (NEPA) documentation
- Alternatives analysis
- Conceptual design
- Preliminary engineering

**Phase II**
- Final design – Construction documents
- Contractor procurement

**Phase III**
- Construction
Phase I - Scope of Work

- Phase I Scope of Work includes:
  - Alternatives Analysis
  - Conceptual Design
  - Preliminary Engineering
  - NEPA documentation
  - Public Involvement
    - Public Open House Meeting – April 2017
    - Virtual public information – 2020
  - Railroad Coordination, including:
    - Conceptual alternatives submittals – February 2018, June 2018, October 2018
    - Design variance request – November 2019
    - Method of construction alternatives submittal – June 2020
  - ICC Coordination
  - Site Survey
  - Utility Survey
  - Geotechnical Report
  - Grant Applications - TIGER (x1), CRISI (x2), BUILD (x2)
Phase I - Alternatives Analysis

• February 6, 2017 – Council Approves:
  • Study Alternatives
  • Project Goals
  • Criteria for Analysis
  • Purpose and Need Statement
Purpose & Need

- Number of trains has increased dramatically
- Average freight train takes 3.5 minutes to clear Linden and Broadway
- Pedestrian and bicycle traffic has increased significantly
- Amtrak passengers need to take non-direct routes
- Tracks are perceived barrier through Uptown
- Need better access to Uptown South including mobility-challenged passengers and pedestrians
Phase I - Alternatives Analysis

Alternatives Analysis Process

Level 1 alternatives screening
Fatal flaw analysis
Generally meets project goals and selection criteria

Level 2 alternatives screening
Improve safety
Improve access
Support economic development

Alternative(s) to be evaluated in NEPA document
(No Build Alternative must be evaluated)

Project Build Alternatives

<table>
<thead>
<tr>
<th>Alt.</th>
<th>Build Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>At-grade Crossing</td>
</tr>
<tr>
<td>2</td>
<td>Enclosed Passenger Overpass</td>
</tr>
<tr>
<td>3a</td>
<td>Public Overpass with Bridge Addition</td>
</tr>
<tr>
<td>3b</td>
<td>Public Overpass with Overlook/Plaza</td>
</tr>
<tr>
<td>4a</td>
<td>Public Underpass</td>
</tr>
<tr>
<td>4b</td>
<td>Public Underpass with Enhanced Access</td>
</tr>
<tr>
<td>4c</td>
<td>Public Underpass with Park</td>
</tr>
</tbody>
</table>

Fatal flaw analysis example:
At-grade pedestrian crossing not permitted in High-Speed Rail Corridor, therefore, Alt. 1 cannot advance in analysis
Phase I - Alternatives Analysis

Comment Summary from Public Meeting & 30-Day Comment Period

• April 27, 2017 – Public Open House
• 41 Total Comments
  • 29 Comments Supported Alternative 4c
  • 5 Comments Opposed
  • 3 Comments Supported an Overpass
  • 4 General Comments or Questions

Alternative 4c:
Public Underpass with Park/Plaza

• Wide underpass for passengers, pedestrians, and bicyclists
• Access provided through stairs and ramps or elevators on either side
• Features an adjacent open public space

North Plaza

Draft conceptual renderings

South Plaza
AMVETS, the American Legion, and the Veterans of Foreign Wars expressed support for the project to “allow safe and efficient access for all veterans, including those with disabilities, to navigate the transportation system safely through the Normal-Bloomington community.”

Marcfirst, an organization that supports over 800 children and adults with developmental disabilities in McLean County stated,

“Many of the families and individuals we support rely heavily on community-provided transportation to work, live, learn and recreate in our community. The underpass will allow safe access for people with disabilities to navigate community transportation safely.”
Phase I – Conceptual Design - Existing Conditions

- Double track location
- Uptown Station on the north side of the tracks
- Second boarding platform and auxiliary waiting room on the south side of the tracks
- 1,000 foot detour between platforms using Broadway at-grade crossing
- Constitution Trail detour uses Linden at-grade crossing
Phase I - Conceptual Design - Project Goals

- Provide accessible passage
- Convenient and intuitive to use
- Greater capacity compared to the previously proposed overpass
- Minimize delays and adverse travel
- Improve mobility and connectivity
- Access for economic development
  - Direct link between Uptown North and South
- Maximize access to public transportation
- Promote transportation alternatives to disadvantaged groups
- Direct route for trail
- Improve safety
Phase I – Conceptual Design - Safety Benefits

• Avoids conflicts with trains
  • Minimize use of at-grade crossings
  • Two train issue
• Direct Amtrak platform connectivity
  • Minimize delay
    • Reduce travel time for Amtrak passengers between platforms
    • Reduce delay by eliminating the safety precaution where Amtrak trains stop short of the station to allow straggling passengers to cross the tracks to the correct boarding platform
• Minimize pedestrian trespass on railroad right-of-way
Pedestrian Trespass
Phase I - Conceptual Design - Design Parameters

- Design to support train and track loading
- Wide, unrestricted cross section of 20 ft. x 10 ft.
  - Both bike and pedestrian traffic
  - Includes required side clearances
- Minimize depth of structure
  - Necessary to minimize ramp length
  - Reduced adverse impact to connectivity and mobility
  - Minimize path turns on north side
Phase I - Additional Design Considerations

- Constructability
- Construction risk
- Costs
- Maintenance
- Durability
- Impact to railroad operations
- Other site restrictions/conflicts
Phase I - Public Outreach

Results of 2020 virtual public outreach:

• Online survey & video were available at normaluptownconnector.org
• Majority of survey responses from Normal residents
  • 75 of 103 responses
• Expected users:
  • Pedestrians – nearly 90%
  • Cyclists – nearly 70%
  • Amtrak passengers – over 50%
  • Connect Transit passengers – nearly 20%
• Majority of respondents in favor of adding amenities to the space
• Accessibility – nearly 10% of respondents (or family member) use a mobility assistance device
Phase I – Virtual Public Outreach

Underpass Project at Uptown Station
Phase I - Conceptual Design

Method of Construction Alternatives

- Option 1 – Open Cut Bridge Construction
- Option 2 – Pipe Roof Construction
- Option 3 – Jacked Box Construction
- Option 4 – Box Culvert Construction

Four alternatives were presented to Union Pacific Railroad in various submittals from 2018 to 2020.

In January 2021, the Box Culvert alternative was selected to advance into preliminary engineering.
## Phase I - Conceptual Design

<table>
<thead>
<tr>
<th>Option 1 – Open Cut Bridge Construction</th>
<th>Option 2 – Pipe Roof Construction</th>
<th>Option 3 – Jacked Box Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortest ramp lengths - most desirable for users</td>
<td>Longest ramp lengths - may be prohibitive for users</td>
<td>Ramp lengths may be acceptable if underpass reduced from 10 ft. to 9 ft.</td>
</tr>
<tr>
<td>Common construction method</td>
<td>Specialty construction</td>
<td>High relative construction cost</td>
</tr>
<tr>
<td>Ease of maintenance</td>
<td>Settlement potential</td>
<td>Specialty construction</td>
</tr>
<tr>
<td>High utility impacts</td>
<td>Maintenance concerns</td>
<td>May be constructed within allowable railroad work windows</td>
</tr>
<tr>
<td>Moderate construction costs</td>
<td>High construction cost</td>
<td></td>
</tr>
</tbody>
</table>

Eliminated – work windows did not meet railroad requirements

Eliminated – excessive ramp lengths caused by depth

Ranked as second preference
Phase I - Conceptual Design – Box Culvert Construction

- Shortest ramp lengths - most desirable for users
- Conventional Construction
- Quickest Overall Method
- Similar to Dixon, CA
- Moderate Construction Cost
- Staged RR work windows
  - One track closed
  - One track remains in service
  - Track closure: 48 to 60-hour window (such as weekend closure)

Selected to advance into preliminary engineering design.
Phase I - Preliminary Engineering – Consultant Team

- WSP (Prime Consultant) – RATIO Architects, Kaskaskia Engineering, American Surveying and Engineering (ASE)
- WSP’s nationwide expertise supports railroad coordination and tunnel design efforts
- WSP, having served as construction management consultant, had detailed knowledge of the Dixon, CA underpass example, paving way for railroad approval of the alternative and prompt turnaround on 30% design
Phase I - Preliminary Engineering

- April 1, 2021 - Preliminary engineering (30%) design submitted to FRA, IDOT, ICC, and Union Pacific Railroad
- Union Pacific’s concurrence required prior to FRA’s obligation of the BUILD grant for Phases II and III of the project
  - Concurrence received May 5, 2021
- NEPA Approval from FRA May 21, 2021
Phase I - Preliminary Engineering
Phase I - Preliminary Engineering
Phase I - Timeline

- **Alternatives Analysis**
  - Town Council Approves Underpass Option 4c as the Preferred Alt.

- **Conceptual Design**
  - USDOT Secretary Chao Announces $13M BUILD Grant
  - 1st conceptual design submittal to Union Pacific
  - Virtual Public Outreach – Online Survey & Video

- **Preliminary Engineering**
  - Selection of box culvert method of construction
  - Preliminary engineering submittal to FRA, IDOT, ICC, and Union Pacific Railroad
# Funding Plan - Project Estimate

## Phase II
- **Final Design**: $2.85M
- **Bid Services**: $82k
- **Utility Relocation**: $214k
- **Subtotal**: $3.15M

## Phase III
- **Construction Services**: $1.56M
- **Construction**: $17.98M
- **Subtotal**: $19.54M

## Total
- **TOTAL**: $22.69M
## Funding Plan - Sources

<table>
<thead>
<tr>
<th>Source</th>
<th>Funding Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal</strong></td>
<td></td>
</tr>
<tr>
<td>BUILD Grant (FRA)</td>
<td>$13M</td>
</tr>
<tr>
<td>Section 130 (FRA &amp; IDOT)</td>
<td>$3M</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$16M</td>
</tr>
<tr>
<td><strong>State &amp; Local</strong></td>
<td></td>
</tr>
<tr>
<td>Rebuild Illinois (ICC)</td>
<td>$5M</td>
</tr>
<tr>
<td>Town of Normal</td>
<td>$1.69M</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>$6.69M</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$22.69M</strong></td>
</tr>
</tbody>
</table>
Funding Plan – Additional Funding Sources

- ICC Grade Crossing Protection Funds (GCPF) $1.25M

Phase I Investment (2016-2021)

- Town of Normal $1.5M
Next Steps

**BUILD Grant Agreement**

**Phase II Consultant Award**

**Union Pacific Phase II Reimbursement Agreement**

**By Oct. 2021**

**Nov. 2021**

**Sep. 2022**

**By Nov. 2022**

**Dec. 2022**

**Sep. 2024**

- Start of Phase II including Final Design, Utility Coordination, & Project Partner Coordination
- Final Design Completion Construction Advertisement
- Utility Agreements
  - Union Pacific C&M Agreement
- Contract Award
  - Start of Phase III - Construction
- Construction Completion

*Includes Council Approval*