

# BROADWELL AVENUE & UNION PACIFIC RAILROAD CROSSING PLANNING AND ENVIRONMENTAL LINKAGES STUDY

## Welcome!

The City of Grand Island (City), in coordination with the Nebraska Department of Transportation (NDOT) and the Federal Highway Administration (FHWA), is conducting a Planning and Environmental Linkages (PEL) study for potential improvements at or near the existing Broadwell Avenue and Union Pacific Railroad (UPRR) crossing in Grand Island, Nebraska.

### The purpose of today's meeting is to:

- Present alternatives for the Broadwell Avenue & UPRR Crossing PEL Study.
- Answer your questions and receive comments.

## Project Purpose & Need

### The purpose of the project is to:

- Reduce the potential for train-vehicle and vehicle-vehicle crashes at the at-grade crossing of the Union Pacific Railroad mainline tracks and Broadwell Avenue.
- Reduce traffic delays near the at-grade crossing.

### The project need is based on:

#### Train-Vehicle and Vehicle-Vehicle Collisions

There have been 21 collisions that involved the railroad between 2015 and 2019. Only one was a train-vehicle collision.

Exposure factor is used to quantify the potential for train-vehicle crashes and at-grade railroad crossings. The exposure factor at Broadwell Avenue is 1,143,900 and would increase with additional traffic. Crossings with an exposure factor greater than 50,000 are potentially eligible for grade separation funding.

Year	Average Daily Traffic	Trains per Day	Exposure Factor <sup>1</sup>
2018	12,300	93	1,143,900
2045	16,000	93 <sup>2</sup>	1,488,000

<sup>1</sup> Exposure factor is calculated by multiplying the average daily traffic by the average daily train traffic

<sup>2</sup> Changes in train traffic are unknown and assumed to remain steady

#### Traffic Delay

- Train events also affect traffic at the 2nd Street, 3rd Street, Old Lincoln Highway, North Front Street and 4th Street intersections along Broadwell Avenue.
- Train events cause traffic to backup into adjacent intersections, blocking cross traffic
- After train events it can take two to four traffic signal cycles for the system to return to normal traffic operations
- Traffic backups can lead to vehicle-vehicle crashes
- Traffic stopped on southbound Broadwell Avenue at 3rd Street can back up across the railroad tracks with some drivers stopping on the tracks.

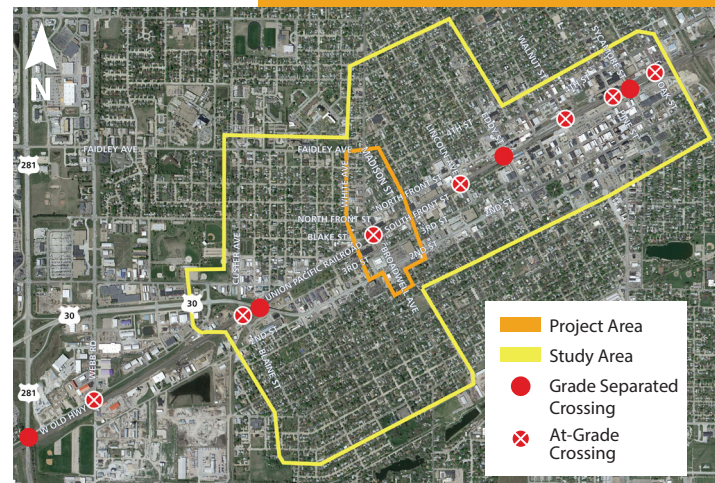
## Project Description & Location

The Study is evaluating options for the at-grade crossing near the existing Broadwell Avenue crossing north of 3rd Street.

Broadwell Avenue is a north-south arterial roadway that serves as a principle connection between the north and south portions of the City.

The Project Area is the area the study team is considering for improvements to address the Project Purpose.

The Study Area encompasses a larger area that includes the potential detour route during construction as well as nearby at-grade crossings that may be closed as part of the project in order to qualify for state funding.



## Initial Concept Screening

Three improvement concepts were identified and evaluated to determine if they would address the Project Purpose & Need and are reasonable to develop further. Concepts that do not meet Purpose & Need were eliminated. Concepts that do meet Purpose & Need were either recommended for further development or not recommended based on preliminary analysis.

### At-Grade Crossing Concepts

- At-grade crossing concepts would have the potential to reduce traffic delays and associated costs but they would not reduce potential for train-vehicle collisions and vehicle-vehicle collisions. Therefore at-grade crossing concepts were ELIMINATED.

### Underpass Concepts

- Underpass concepts would have the potential to reduce traffic delays and associated costs and would have the potential to reduce train-vehicle collisions and vehicle-vehicle collisions. However, underpasses are prone to flooding, rendering them unusable during rain events. Additionally, underpasses require substantial ongoing maintenance and would hinder UPRR's ability for future expansion. Therefore, underpass concepts were NOT RECOMMENDED FOR FURTHER DEVELOPMENT.

### Overpass Concepts

- Overpass concepts would have the potential to reduce traffic delays and associated costs and would have the potential to reduce train-vehicle collisions and vehicle-vehicle collisions. Therefore, overpass concepts were RECOMMENDED FOR FURTHER DEVELOPMENT.

## Proposed Alternatives

The Study team has developed four Build Alternatives for improvements at the Broadwell Avenue crossing. All of the Build Alternatives would include closure of an additional at-grade UPRR crossing.

- Alternative A - Two Lane Overpass
- Alternative B - Three Lane Overpass
- Alternative C - Four Lane Overpass
- Alternative D - Two Lane Overpass with Embankment

A No-Build Alternative would also be evaluated as a baseline comparison for the build alternatives as required by the National Environmental Policy Act (NEPA).

## Evaluation Criteria

The alternatives will be analyzed with consideration of the following:

	ALTERNATIVES				
	No-Build	A	B	C	D
<b>PROJECT BENEFITS</b>					
Potential to reduce train-vehicle and vehicle-vehicle collisions	●	●	●	●	●
Potential to reduce traffic delays during and after train events	●	●	●	●	●
<b>PROJECT IMPACTS</b>					
Potential to impact private properties	●	●	●	●	●
Potential to impact the natural environment	●	●	●	●	●
Potential to encounter regulated materials	●	●	●	●	●
Potential to impact historic properties	●	●	●	●	●
<b>PROJECT COSTS</b>					
Planning level cost estimate (in millions)	\$0	\$25	\$31	\$36	\$26



## What is a Planning and Environmental Linkages (PEL) Study?

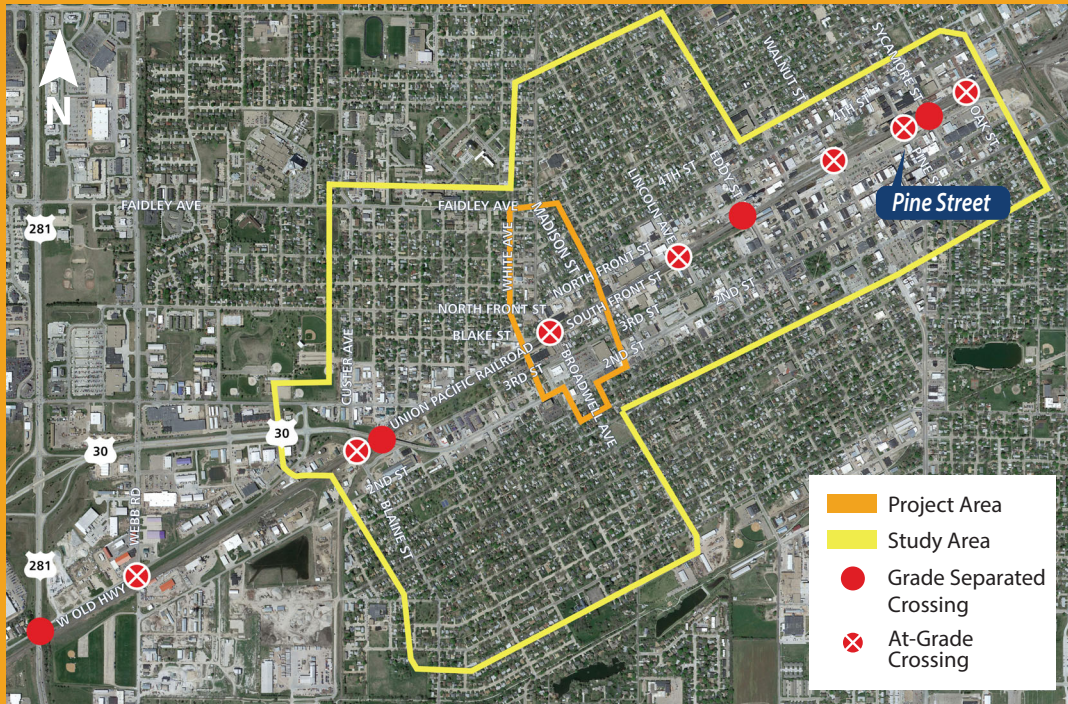
A PEL study represents a collaborative and integrated approach to transportation decision-making that:

- Considers environmental, community, and economic goals early in the transportation process
- Uses the information, analysis, and products developed during planning to inform the environmental review process

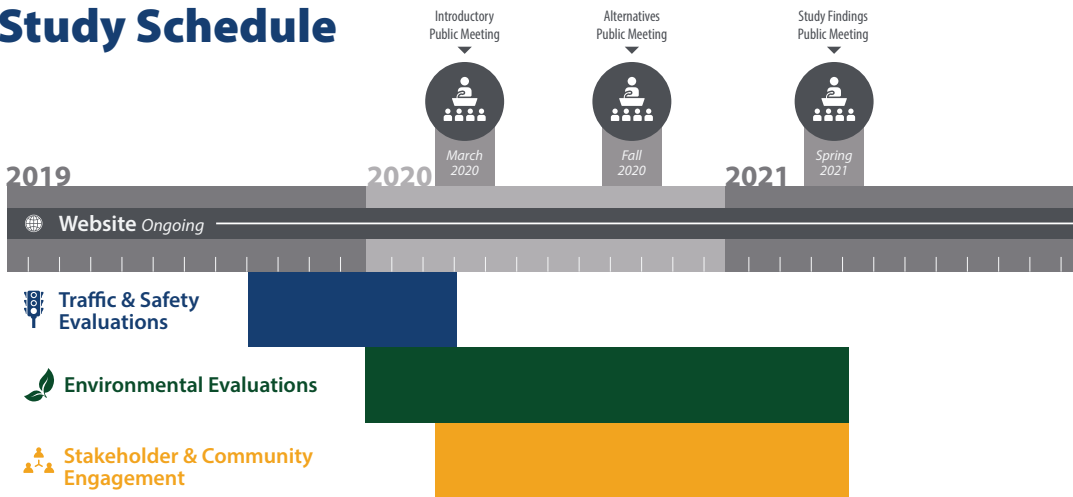
This Study will use PEL principles to provide a smooth transition to future phases of this Project.

# Additional At-Grade Crossing Closure

To qualify for state funding assistance, all Build Alternatives would include the closure of a second at-grade crossing. Pine Street is being considered as the potential closure location.



## Study Schedule



Schedule subject to change

## Next Steps

Following this public meeting, the Study team will:

- Review public feedback on the proposed alternatives.
- Identify a locally recommended alternative and prepare a report.
- Host a public meeting to present the Study's findings.

All materials from today's meeting will be hosted via online meeting from November 12, 2020, through November 27, 2020, at [www.grand-island.com/Broadwell-UPRR](http://www.grand-island.com/Broadwell-UPRR).

Information regarding the Study is available at [www.grand-island.com/Broadwell-UPRR](http://www.grand-island.com/Broadwell-UPRR).

**Comments will be collected through November 27, 2020, and should be submitted to:**

Tim Golka, P.E., City of Grand Island  
 100 East First Street, Grand Island, NE 68801  
[timg@grand-island.com](mailto:timg@grand-island.com) | (308) 385-5455

**For those without internet access, information may be obtained at the City offices or by contacting the City at:**

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