MUNSTER - 45TH STREET GRADE SEPARATION FACT SHEET

What is the history of this project?

The concept for this project began in 2005. It had been determined that the traffic congestion along Calumet Avenue and its' intersections with East 45th Street, West 45th Street, and the Canadian National Railroad would continue to worsen over time. All of these intersections are currently at grade. There were several alternatives that were evaluated, including going over and under the railroad with East 45th Street, as well as constructing Calumet Avenue over and under the Railroad.

Roadway bridges over railroads are typically a much more cost effective solution than creating a roadway under the railroad, but the impact to the surrounding area is much more drastic. Due to the fact that the clearance between the bottom a bridge deck going over a railroad is 26', the length of roadway required to return to the existing elevation is much greater. If 45th Street were to be constructed over the railroad, the roadway would not touch down on the west side until it was almost to Calumet Avenue. This would preclude any access for development where Centennial Village is being constructed. A similar situation is true for the overpass evaluation at Calumet Avenue. The southern touchdown would have been south of the existing location of West 45th Street. This would have required that West 45th Street be elevated approximately 5', which would have a negative impact on current businesses in that area.

As a result, the overpass alternatives were discarded and the project proceeded with underpass configurations for 45th Street and Calumet Avenue.

Engineering agreements were in place by the end of 2009. The engineering design was funded at 80% by the federal government with the Town of Munster required to pay 20% of the cost. As the project costs were developed, the Town decided that the optimum strategy to obtain funding was to split the project into two phases. The first phase consists of the construction of the grade separation at 45th Street, and the second phase consists of the construction of the grade separation at Calumet Avenue.

What is the scope of this project?

The project, as presented today, is for the construction of the 45th Street Grade Separation. The reconstruction of the intersection at 45th Street and Calumet Avenue is included in this project, as well as a substantial amount of work on West 45th Street.

The scope of the project involves the realignment of 45th Street East leg to the existing West leg with an underpass to bypass traffic under the CN railroad tracks. Existing 45th

Street from the intersection with Calumet Avenue to about 1250' Eastward will be abandoned and turned into green space. Also, the connection of Columbia Avenue with 45th Street will be closed. The existing sidewalk along the old section of roadway will remain in place with some realignment. The construction is expected to last for two construction seasons.

In order to construct the tunnel section, the existing railroad tracks will be shifted to the north and will run on a temporary track located within what is currently the existing 45th Street ROW. After the tunnel construction is completed, the railroad tracks will be moved back south to their original position.

Existing utilities (water, sanitary) that run along 45th Street which conflict with underpass construction will be rerouted through the alley South of Camellia. This alley will be reconstructed with appropriate drainage.

Are there multiple phases involved in construction?

The 45th Street Grade Separation is expected to consist of the following stages;

- Stage 1 - 45th Street will be closed from Calumet to Southwood.
- Stage 2 - Railroad run around will be constructed on the vacated 45th Street ROW to allow for the construction of the tunnel section.
- Stage 3 - Excavation for the tunnel and retaining walls will commence. A storm water pump station will also be excavated and constructed at this time.
- Stage 4 - After the tunnel and walls have been constructed, the railroad tracks will be shifted back to their original position, and will run over the tunnel.
- Stage 5 - The remaining retaining walls will be constructed and the remaining roadway work east of Calumet Avenue will be completed.
- The west leg of 45th Street will be reconstructed in conjunction with the reconstruction along Calumet Avenue. As the intersection of Calumet Avenue and 45th Street is be reconstructed, Calumet Avenue will be reduced to one lane in each direction along with a designated left turn lane at the intersection.

The grade separation of Calumet Avenue has been studied as a part of this project, but at this time in not funded. This phase can commence after funding is acquired and the Town wishes to move forward. There is no firm date for this work at this time.

What will Munster residents see when construction is complete?

Munster residents will see 45th Street follow a lower profile under the railroad tracks through a tunnel section. Calumet Avenue and 45th Street will have newly reconstructed roadways. In place of the abandoned portion of East 45th Street, there will be green space with the existing sidewalk for pedestrians. Pedestrians and cyclists travelling northwest from the existing Pennsy Greenway path will see a new path that will head north along the west side of Clayhole Lake, crossing over the lowered section of 45th street via a bridge to the south side of the railroad ROW, then northwest to Calumet Avenue.

How will residents be able to receive updated project information?

Updated project information can be found on the Village of Munster's website. There will be occasional news articles to talk about project updates.

How are pedestrians and bicyclists accommodated at the underpass?

Pedestrians and cyclists travelling northwest from the existing Pennsy Greenway path will see a new path that will head north along the west side of Clayhole Lake, crossing over the lowered section of 45th street via a bridge to the south side of the railroad ROW, then northwest to Calumet Avenue.

The existing walk along the north side of the 45th Street ROW will remain in place (with a few realignments).

How are large trucks and fire equipment accommodated at the underpass?

The underpass is designed with a 14'9" clearance. This clearance will allow for typically sized vehicles such as semi-trucks and straight trucks with 13'6" standard vertical heights. The lane width of 11' is adequate for all typically sized vehicles Oversize loads will need to detour through another route or the underpass will have to close in order to get the load through.

Fire equipment will be able to accessing the tunnel due to height clearances and lane widths. Fire trucks will have access to new proposed fire hydrants which will be placed near the proposed retaining walls.

How will traffic be directed during construction?

Non-truck traffic will be routed along Fran-Lin Parkway/Southwood Drive. Through truck traffic will not be allowed along this detour route. All through truck traffic will be detoured along Ridge Road, Torrence Avenue, Glenwood Dyer Road, Route 30, and Indianapolis Blvd. The detour routes are included in this document.

What kind of effects will the underpass have on surrounding neighborhoods?

Positive effects such as traffic alleviation from the delays that normally happen during the daily railroad crossings near the intersection of Calumet and 45th Street. Residents living near the underpass will not have to deal with the long queues of cars waiting in line to head West towards Calumet Avenue. The major reduction in long queues of cars will also help with the air quality in the area, by reducing the emissions. Pedestrians will be able to travel freely and safely over 45th Street in order to bypass vehicle traffic.

How can residents be educated about underpasses?

Residents can go to the following sources in order to learn more about underpasses.

Grade Separated Intersection-Lecture notes in Traffic Engineering and Management https://www.civil.iitb.ac.in/tvm/1111 nptel/567_Grade/plain/plain.html

HONOLULUTRAFFIC.COM- Low-height urban underpasses http://www.honolulutraffic.com/ALTunderpasses.pdf

Pedestrian and Bicycle Information Center- Overpasses/Underpasses http://www.pedbikeinfo.org/planning/faci lities crossings over-underpasses.cfm

SooperArticles- Grade Separation- Advantages/Disadvantages And Types http://www.sooperarticles.com/law-articles/grade-separation-advantages-disadvantages-types-694340.html

Is the underpass a necessary expense and how is it going to be paid for?

Yes, the underpass will alleviate the traffic congestion problem at the intersection of Calumet Avenue and 45th Street during an active railroad crossing. The project is funded by several different sources, including;

Construction Funding Model					
	Construction	RR Force Account	Utility Relocation	Construction Engineering	Total
NIRPC	$6,900,000.00				$6,900,000.00
INDOT	$9,531,076.80	$1,600,000.00			$11,131,076.80
RDA	$4,107,769.20	$400,000.00			$4,507,769.20
Town	$0.00	$0.00	$1,600,000.00	$2,909,270.00	$4,509,270.00
Total	$20,538,846.00	$2,000,000.00	$1,600,000.00	$2,909,270.00	$27,048,116.00

How does the public perceive Underpasses, both before and after construction?
Public perception of underpasses before construction is wide ranging in the positive and negative. Positive public perception comes from the traffic congestion alleviation that will accompany the newly built structure. Negative public perception is the pedestrian safety concerns with crime in the underpass.

Public perception of underpasses after construction is generally positive, because of the traffic congestion alleviation that happens.

Where will the storm water from the tunnel be diverted to? Will the underpass ever experience flooding?
The storm water will be collected under the tunnel via drain pipe and taken to the southeast via a gravity flow storm sewer into the storm water pump station. The water is the pumped in to Clayhole Lake. The storm water quality is being addressed so that any impacts to Clayhole Lake will be minimized. The tunnel drainage was designed to handle a 100-year rainfall event.