

US-131/US-131BR Interchange Options Kalamazoo County

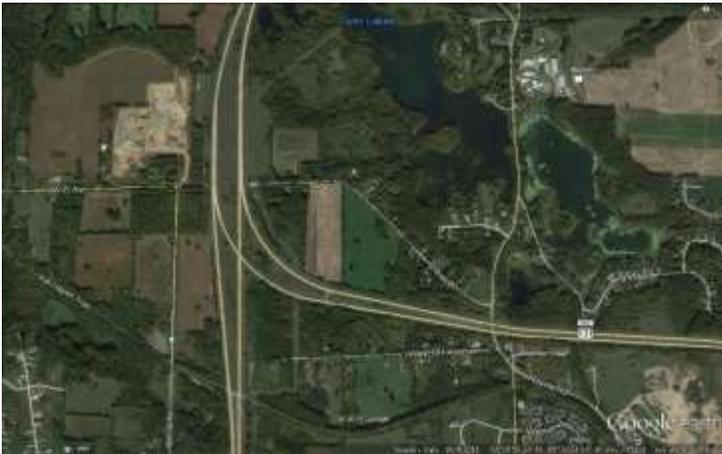
19 March 2015

1 PROBLEM

The Kalamazoo County portion of US-131 was constructed in the early 1960s. The US-131 Business Route (BR) was constructed at that time using a unidirectional interchange design. The US-131/US-131BR limited interchange allows only for:

- 1) Southbound US-131 traffic to access southbound US-131BR, and
- 2) Northbound US-131BR traffic to access northbound US-131.

Northbound US-131BR cannot enter onto southbound US-131 nor can northbound US-131 exit onto southbound US-131BR. In addition, the interchange does not connect to surface streets such as 10th Street or G Avenue.



By the mid-1980s the limitations of the interchange’s design were apparent. Northside businesses (paper, auto & related, bedding plant, industrial) needed a more efficient and effective connection to US-131 & I-94 to stay competitive. Truck traffic was impacting the city of Kalamazoo’s northside residents, and the lack of interstate connectivity to Kalamazoo and Oshtemo townships and the City of Parchment was problematic.

A full interchange at the US-131/US-131BR would facilitate more northbound and southbound traffic to and from the northern portion of Kalamazoo and surrounding areas, linking industrial zones and brownfield development sites, and will enhance the area’s economic development efforts. Spin-off benefits include improved access to specific industrial sites and commercial developments, links with proposed civic enhancement projects, improved traffic safety, congestion mitigation and the reduction of heavy truck traffic from neighborhood areas. Community support has been building for full interchange for the US-131/US-131BR interchange.

2 CONSIDERATIONS

A Public-private partnership was formed when townships of *Kalamazoo* and *Oshtemo*; and the *Northside Business Association* pooled financial resources to retain the professional services of Prein&Newhof to develop viable options for potential interchange layouts. The goal was to develop feasible alternatives to improve the functionality of the interchange in order to address the issues identified above.

The proposed ramp configurations have been drawn based on aerial photography and are meant for visual and discussion purposes. The proposed layouts have been prepared in accordance with MDOT Geometric Design Guides. The lengths of entrance and exit ramps shown allow for sufficient deceleration and acceleration. Actual detailed design of the ramp geometrics using conventional survey topography and design models will result in variations.

3 SOLUTIONS

Previous traffic counts, impacted property, prior reviews of the area, priority of connectivity, and other site issues were studied in order to develop these potential options. Importance of connectivity to 10th Street, G Avenue, H Avenue, and Nichols Road were all prioritized to help determine the best connection points to the local roads.

The proposed options include a very rough estimated costs in order to compare what it would take to improve accessibility at each of these locations. Items such as existing topography, available property, and construction schedule are major unknown factors that are not taken into account in this evaluation.

Three primary options were developed.

- Option A: Connect G Avenue over US-131
- Option B: Re-align US-131BR to become G Avenue
- Option C: Re-align southbound US-131 and re-align US-131BR to become G Avenue

All of these options include a ramp for northbound US-131 traffic access to eastbound US-131BR. This ramp has been included in all Options.

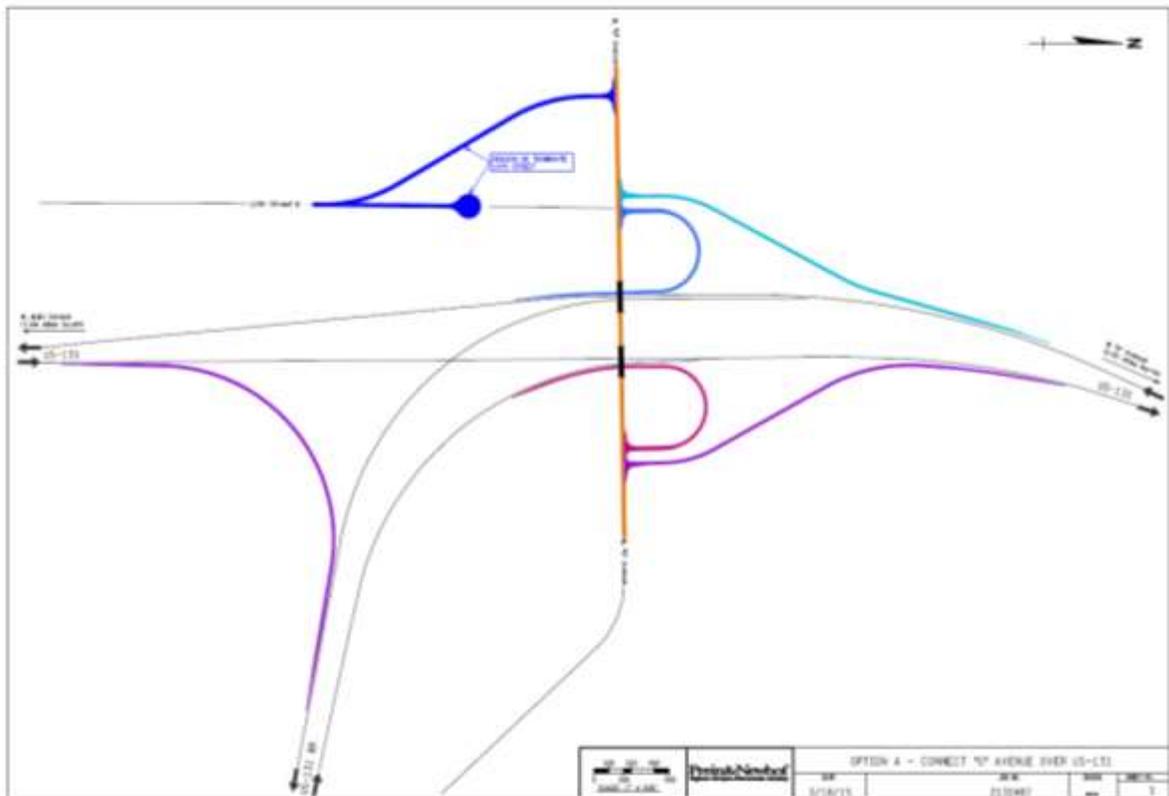
OPTION A: CONNECT G AVENUE OVER US-131

Length of Proposed Road Work – 19,000 Ft	
Estimated Construction Cost –	\$13,500,000
Estimated Design & Construction Engineering Cost –	\$2,700,000
Estimated ROW Acquisition – 43.4 Acres	\$295,000
Estimated total	\$16,495,000

Traffic Movements:

This option would maintain the existing US-131 freeway configuration and new freeway access would be provided via the local street - G Avenue. Currently this street terminates on either side of US-131.

Traffic travelling westbound US-131BR to southbound US-131 would exit to G Avenue, crossing over US-131, and enter southbound US-131 from the ramp on the west side of the freeway.



OPTION B: RE-ALIGN US-131BR TO BECOME G AVENUE

Length of Proposed Road Work – 20,000 Ft	
Estimated Construction Cost –	\$12,000,000
Estimated Design & Construction Engineering Cost –	\$2,400,000
Estimated ROW Acquisition – 26.2 Acres	\$165,000
Estimated total	\$14,565,000

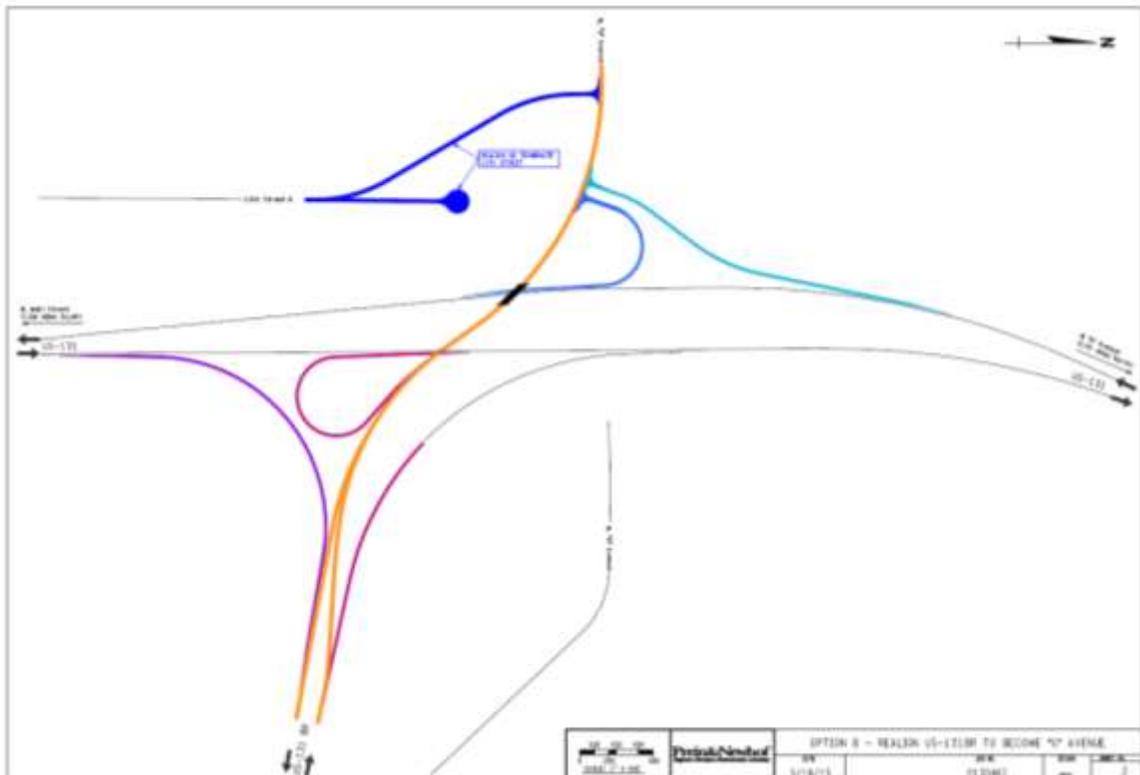
Traffic Movements:

This option combines G Avenue with US-131BR. US-131BR would be reduced from a divided freeway on the east side of US-131, to a two lane road, becoming G Avenue to the west.

This option would eliminate the free-flow movement of the southbound US-131 ramp to eastbound US-131BR. Traffic travelling southbound US-131 to eastbound US-131BR would exist the freeway, travel east on G Avenue crossing the freeway, and then would continue on US-131BR towards Kalamazoo. This traffic configuration is not ideal.

Traffic travelling westbound US-131BR to southbound US-131 would merge down to one lane, cross over US-131, and enter southbound US-131 from the ramp on the west side of the freeway.

Traffic travelling westbound US-131BR to northbound US-131 would be able to use the existing ramp.



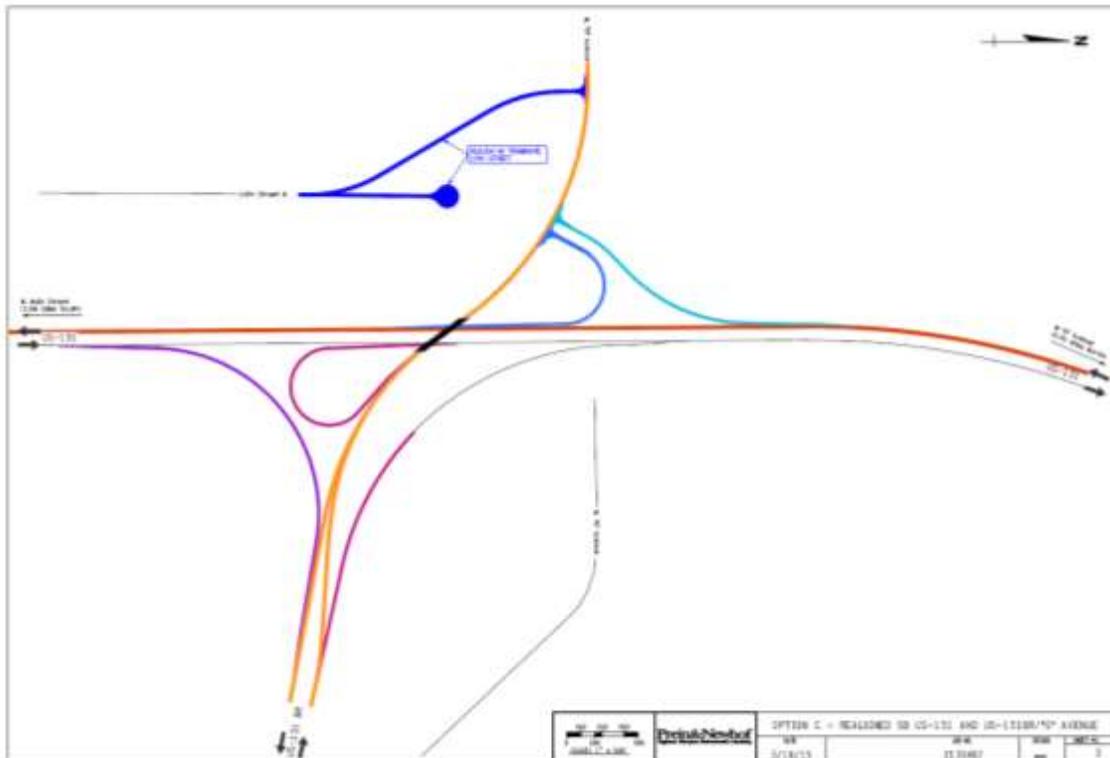
OPTION C: RE-ALIGN SB US-131 AND RE-ALIGN US-131BR TO BECOME G AVENUE

Length of Proposed Road Work – 27,500 Ft	
Estimated Construction Cost –	\$19,000,000
Estimated Design & Construction Engineering Cost –	\$3,800,000
Estimated ROW Acquisition – 18.7 Acres	\$125,000
Estimated total	\$22,925,000

Traffic Movements:

This option is identical to Option B except it also would include the re-alignment of southbound US-131 to parallel the northbound lanes. This option would reduce the amount of ROW acquisition required as a majority of existing freeway ROW would be available.

This option would eliminate the free-flow movement of southbound US-131 to eastbound US-131BR. The US-131 Business Route would be reduced from a divided freeway to a two lane road, becoming G Avenue to the west.



4 NEXT STEPS
