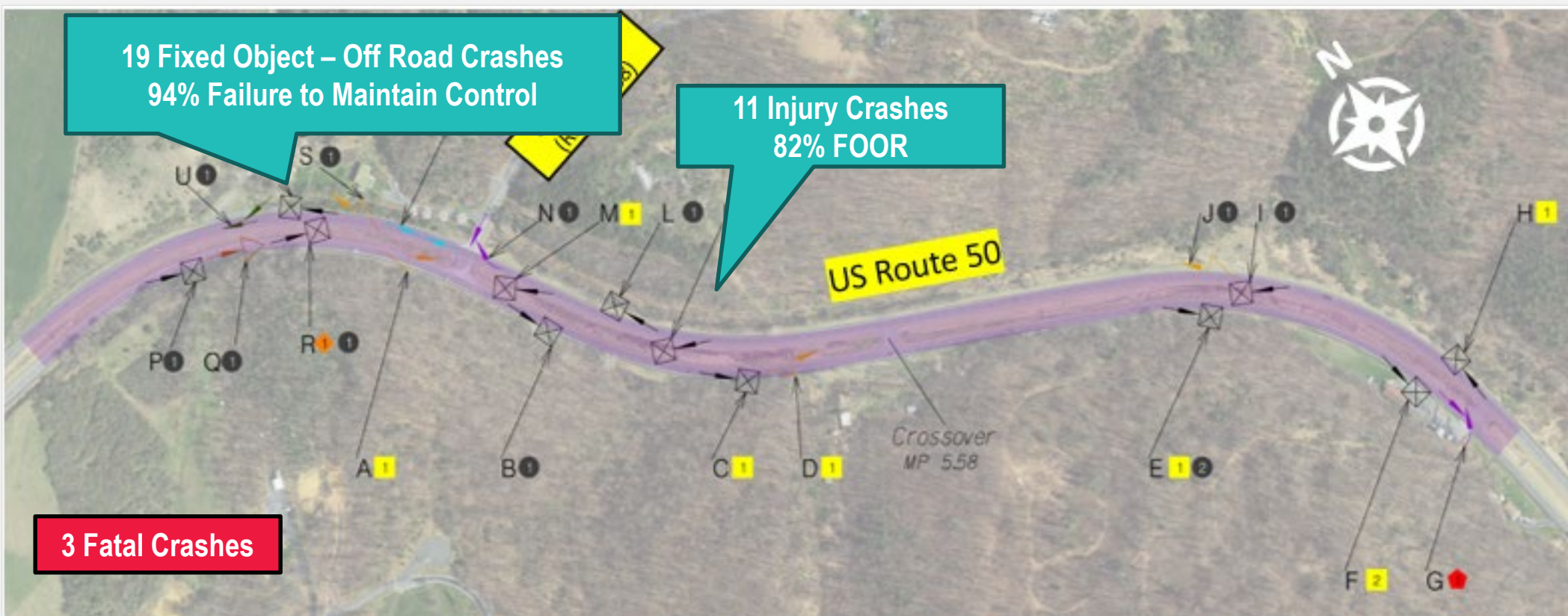


US ROUTE 50 AT STONY HILL ROAD CORRIDOR

Recommended Improvements (Phase 2)



Planning-Level Conceptual Design



Improvement	Crash Cost Savings* (per year)
Shoulder Widening	\$870,945
Improve Clear Zone	\$1,203,163
High Friction Surface Treatment (HFST)	\$1,318,011
Install Chevrons	\$460,992
Dynamic Speed Feedback Sign	\$273,446

* Crash cost savings are mutually exclusive

Preliminary Cost Estimate

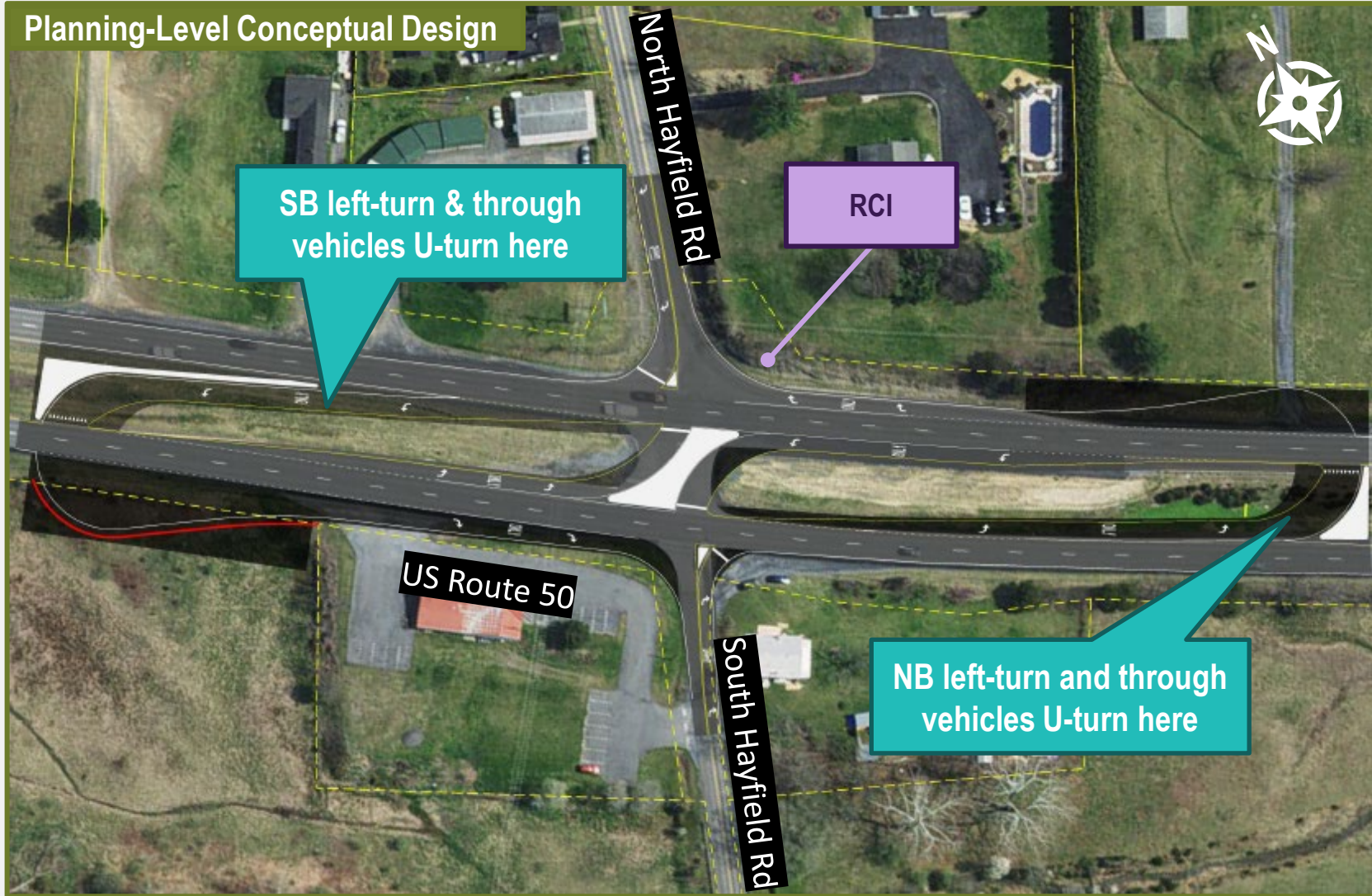
Phase	Cost Estimate (2024 Dollars)
Preliminary Engineering	\$1,161,000
ROW and Utility Relocation	\$1,020,600
Construction	\$7,219,729
Total Cost	\$9,401,330

US ROUTE 50 AT HAYFIELD ROAD

Recommended Improvements (Phase 2)



Planning-Level Conceptual Design



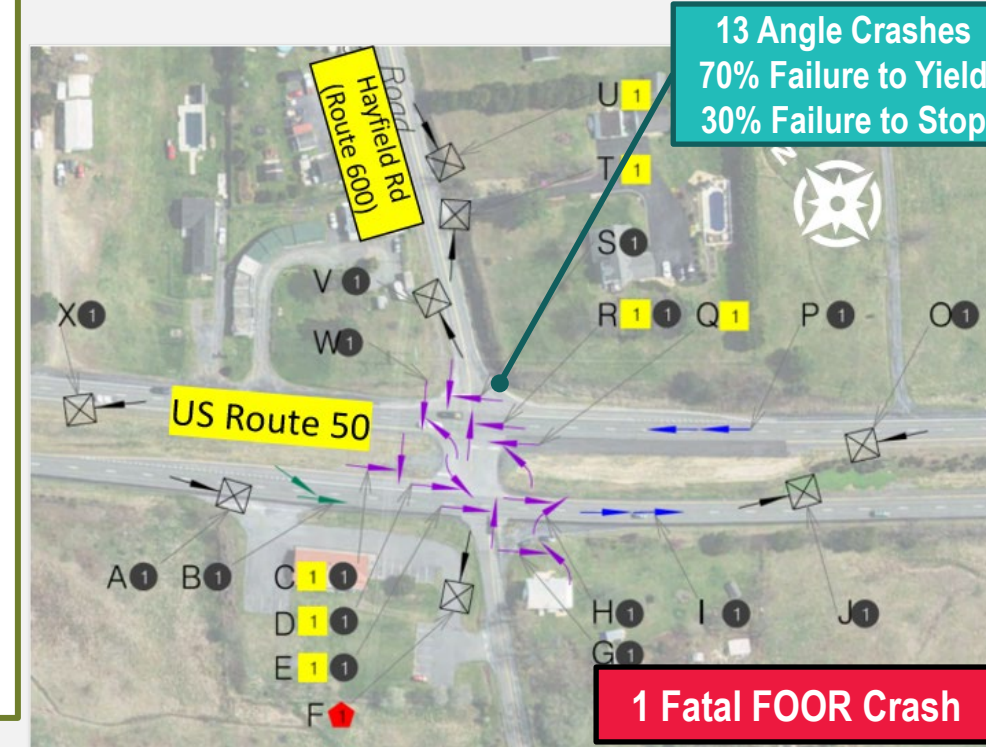
Improvement Description

The improvement proposed at this location is the installation of a Reduced Conflict Intersection (RCI).

- Reduction in the number of conflict points from 32 to 18
- Increase in capacity by lowering the volume-to-capacity (v/c) ratio from 0.56 to 0.28 in the future year (2034) PM peak hour
- Projected to reduce the average number of future injury crash incidents by 63%

Crash Cost Savings (per year)

\$1,161,700



Traffic Operations Results

With the Hayfield Road left turns and thru movement being rerouted to a median opening downstream, the Experienced Travel Time (ETT) to traverse the extra distance in a future RCI was compared against the no-build scenario where existing geometric configuration is maintained. The comparison shows that the ETT is comparable between future no-build and RCI

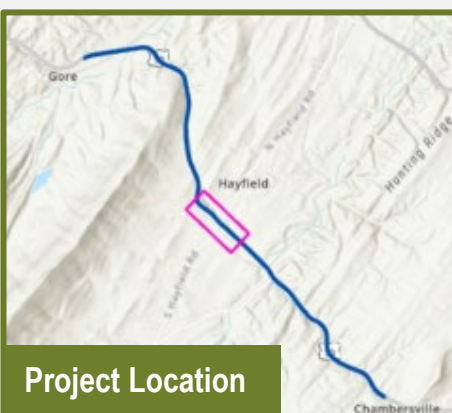
Experienced Travel Time (in seconds)

Alternative	AM Peak		PM Peak	
	NB Hayfield Rd	SB Hayfield Rd	NB Hayfield Rd	SB Hayfield Rd
2034 No-Build	37	39	37	45
2034 RCI	39	38	39	40
Change in Travel Time	+ 2	- 1	+ 2	- 5

Preliminary Cost Estimate

Phase	Cost Estimate (2024 Dollars)
Preliminary Engineering	\$1,264,200
ROW and Utility Relocation	\$2,124,150
Construction	\$8,705,682
Total Cost	\$12,094,032

Project schedules and cost estimates were developed based on information available at the time of study and should be reassessed before submitting funding applications.



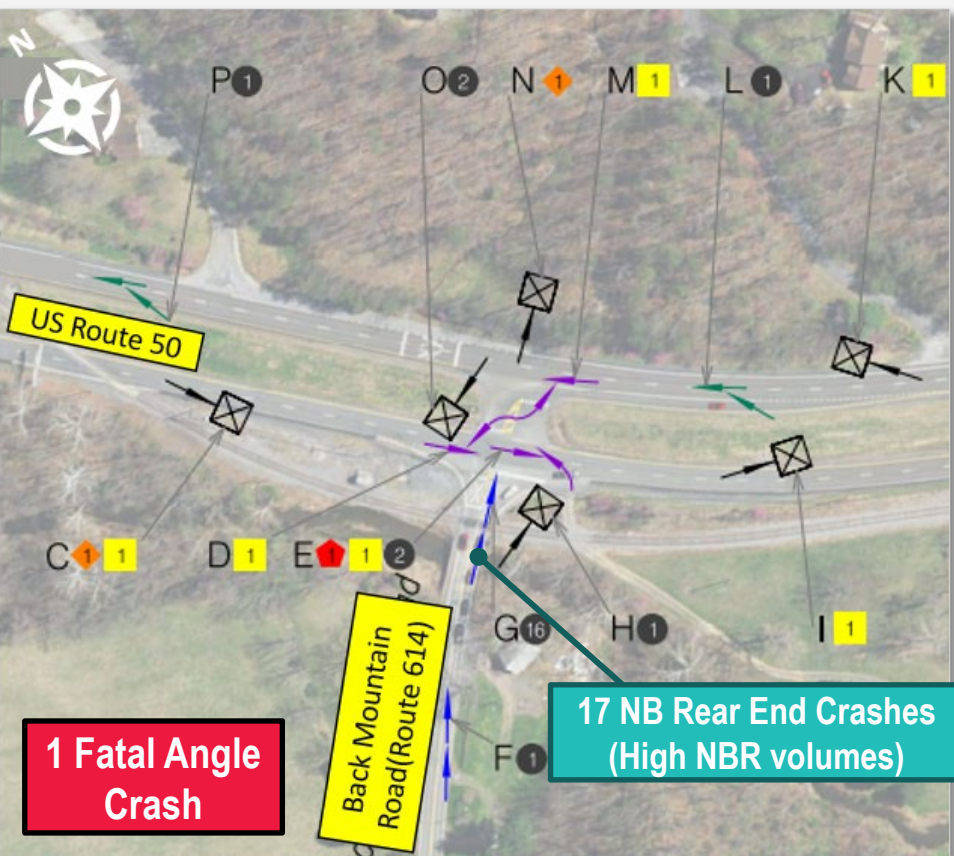
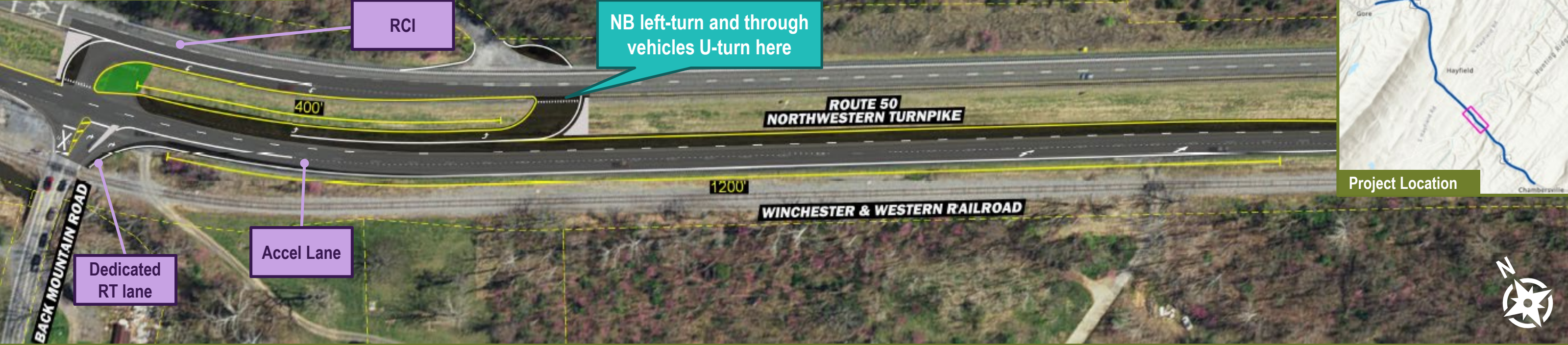
Project Location

US ROUTE 50 AT BACK MOUNTAIN ROAD

Recommended Improvements (Phase 2)



Planning-Level Conceptual Design



Improvements Description

The improvements proposed at this location include:

- Installing a Reduced Conflict Intersection (RCI)
- Installing an acceleration lane along eastbound US Route 50 for northbound right turns from Back Mountain Road.

Installation of the RCI is projected to increase capacity, decrease queue lengths, and improve ETT.

Installation of the RCI is projected to decrease crashes by more than 50%.

Traffic Operations Results

Experienced Travel Time		
Alternative	AM Peak	PM Peak
	NB Back Mtn Rd Travel Time (s)	NB Back Mtn Rd Travel Time (s)
2034 No-Build	68	46
2034 RCI	39	35
Change in Travel Time	- 29	- 11

Preliminary Cost Estimate

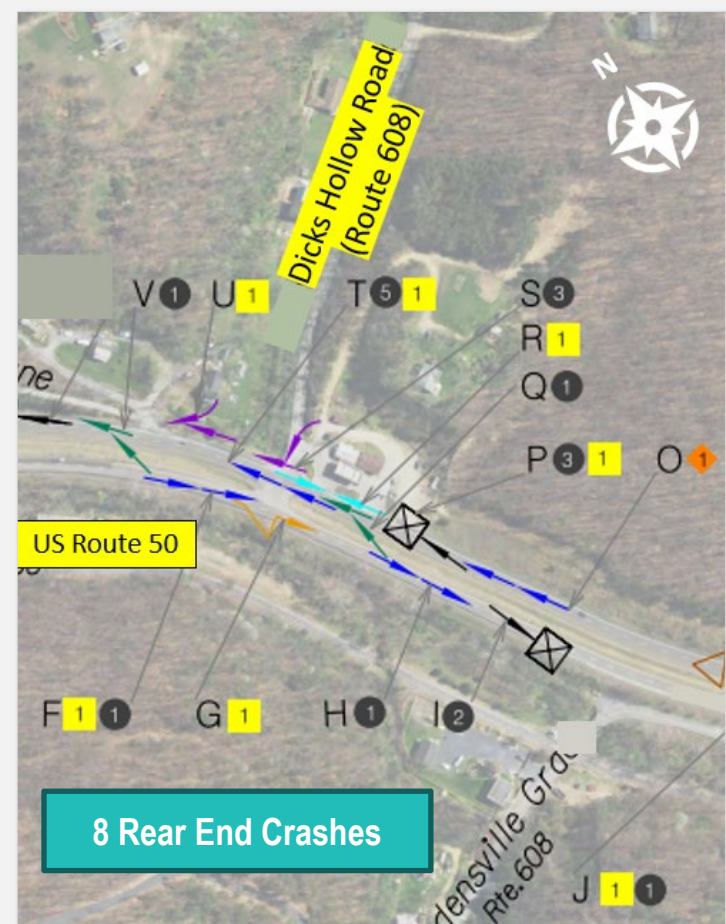
Project schedules and cost estimates were developed based on information available at the time of study and should be reassessed prior to submitting funding applications.

Phase	Cost Estimate (2024 Dollars)
Preliminary Engineering	\$879,000
ROW and Utility Relocation	\$1,023,000
Construction	\$3,048,346
Total Cost	\$4,950,346

Improvement	Crash Cost Savings (per year)	Applicable Crash Types
RCI & Accel Lane	\$1,265,781	All

US ROUTE 50 AT DICKS HOLLOW ROAD

Recommended Improvements (Phase 2)



Improvements Description

The improvements proposed at this location include:

- Installing a turn lane for the eastbound left-turn movement.
- Installing a turn lane for the westbound right-turn movement.
- Adding stop bars and double yellow pavement markings within the median for clarity.

These improvements are expected to improve safety by creating separate lanes for the turning movements and increase efficiency by allowing US Route 50 to operate independently of the turning movements. Installation of the turn lanes is projected to decrease crashes by more than 60%.

Improvement	Crash Cost Savings (per year)	Applicable Crash Types
Install Turn Lanes	\$98,325	All

Traffic Operations Results

The proposed improvements at this location improve operations by allowing the EBL and WBR turning movements to have a dedicated lane which improves efficiency for traffic along US Route 50.

Safety Results

Improvement	Crash Reduction Factor
EBL Turn Lane	27%
WBR Turn Lane	9%
Cumulative	34%

Preliminary Cost Estimate

Project schedules and cost estimates were developed based on information available at the time of study and should be reassessed prior to submitting funding applications.

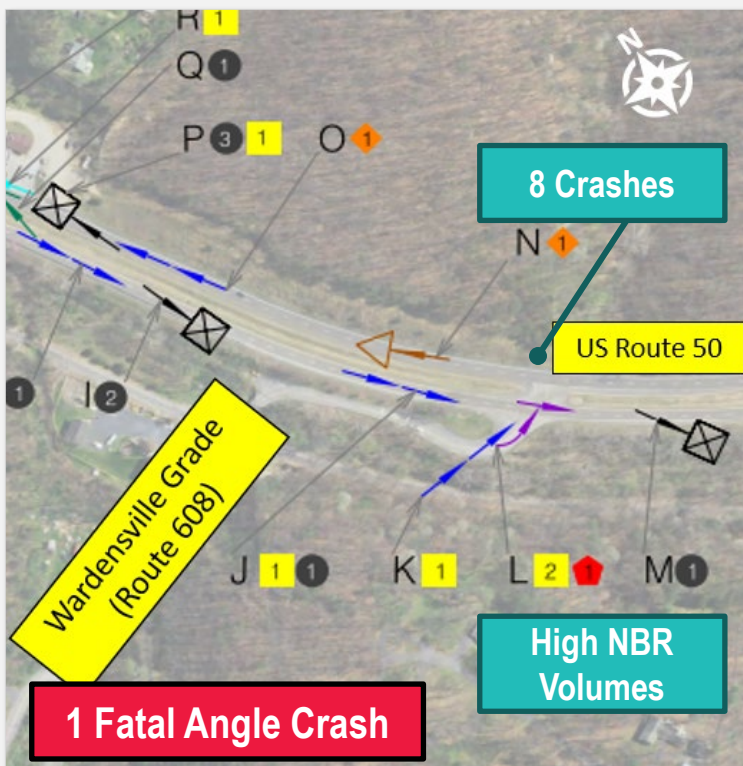
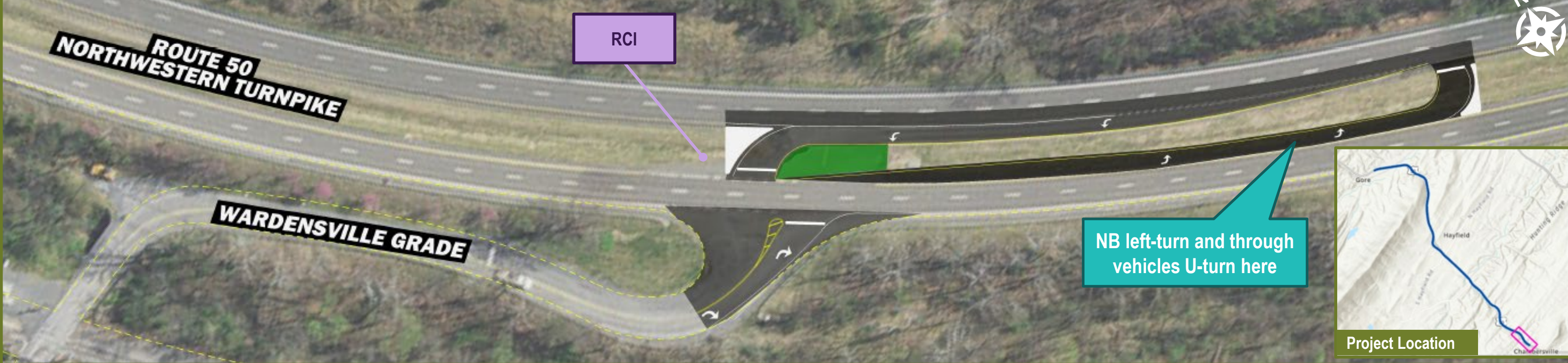
Phase	Cost Estimate (2024 Dollars)
Preliminary Engineering	\$796,500
ROW and Utility Relocation	\$359,700
Construction	\$2,076,520
Total Cost	\$3,232,720

US ROUTE 50 AT WARDENSVILLE GRADE

Recommended Improvements (Phase 2)



Planning-Level Conceptual Design



Improvements Description

The improvement proposed at this location includes installing a Reduced Conflict Intersection (RCI)

These improvements are expected to improve safety by reducing the number of conflict points and increase efficiency by allowing US Route 50 to operate independently of Wardensville Grade. Installation of the RCI is projected to decrease crashes by more than 50% and only cause minimal additional travel time (less than 15 seconds).

Traffic Operations Results

Alternative	Experienced Travel Time	
	AM Peak	PM Peak
	NB Wardensville Gr Travel Time (s)	NB Wardensville Gr Travel Time (s)
2034 No-Build	37	35
2034 RCI	48	43
Change in Travel Time	+ 11	+ 8

Preliminary Cost Estimate

Project schedules and cost estimates were developed based on information available at the time of study and should be reassessed prior to submitting funding applications.

Phase	Cost Estimate (2024 Dollars)
Preliminary Engineering	\$967,500
ROW and Utility Relocation	\$397,800
Construction	\$2,106,639
Total Cost	\$3,471,939

Improvement	Crash Cost Savings (per year)	Applicable Crash Types
RCI	\$1,141,318	All