

APPENDIX

F

POTENTIAL
IMPROVEMENT
CONCEPT
GRAPHICS

Potential Improvement Concepts



Spot Improvement #1

Section 1: MP 8.85

US 421 Intersection

- ❖ Description: Convert to 4-way stop or mini roundabout.
- ❖ District 11 will be performing a 12-hour traffic count so that the traffic implications of removing the signal can be evaluated before making a decision on whether to move forward with either concept.
- ❖ Safety Benefit:
 - ❖ 7 Intersection Crashes
 - ❖ 3 Angle (1 C, 2 PDO)
 - ❖ 2 Rear End (PDO)
 - ❖ 1 Backing (PDO)
 - ❖ 1 Opposing left turn - PDO
 - ❖ Wet Pavement Crashes = 2
- ❖ 20-year Crash Reduction: 9.8
- ❖ Environmental: Possible Historic, Floodplain, UST/HAZ
- ❖ B/C : 0.02



Spot Improvement #2

Section 1: MP 8.85

US 421 Intersection

- ❖ Description: Crosswalks at intersection, including ramps and curbing at the crossing location
- ❖ Safety Benefit :
 - No reported pedestrian crashes
- ❖ Environmental: Possible Historic, Floodplain
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00

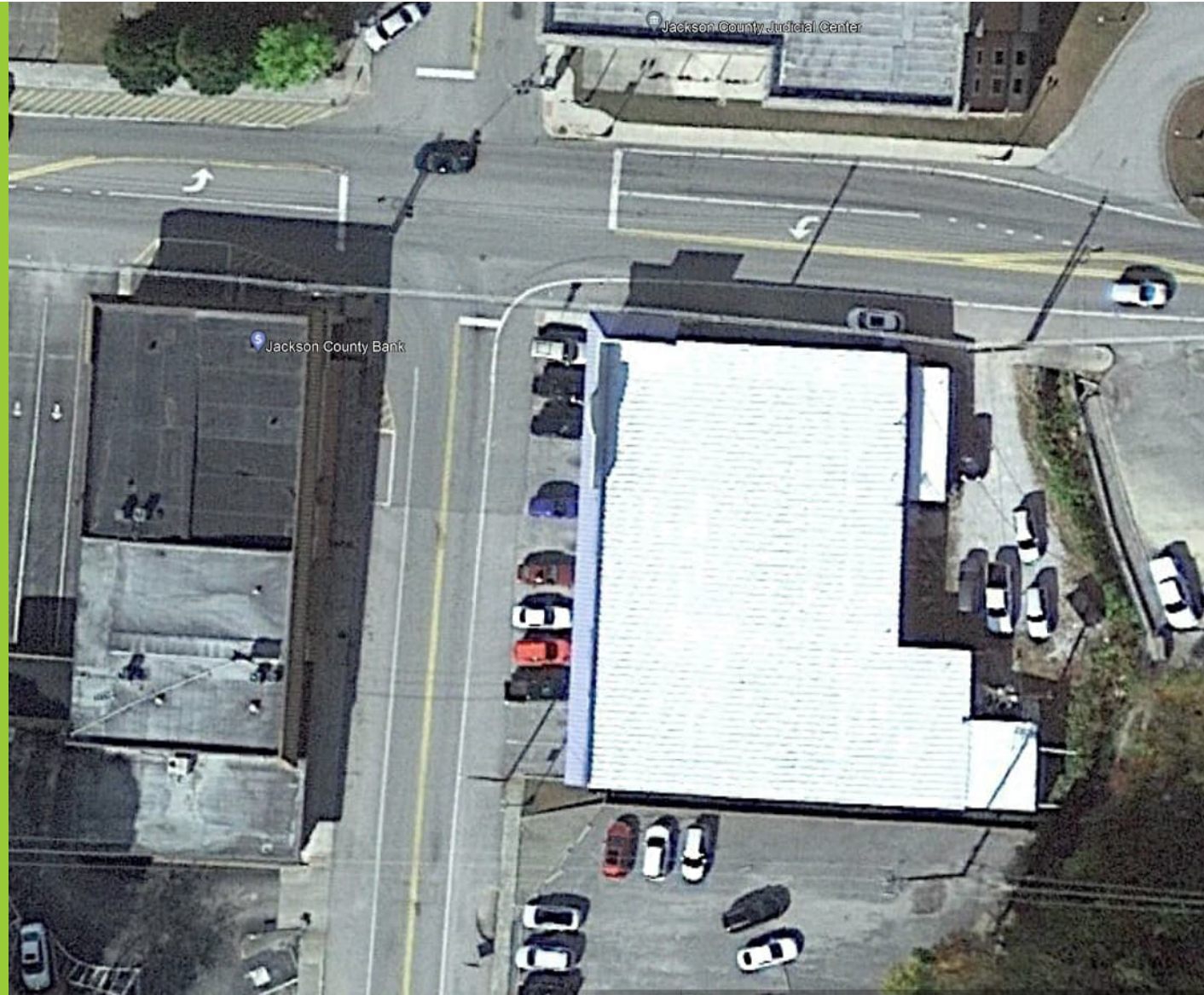


Spot Improvement #3

Section 1: MP 8.83 - 8.85

Just South of US 421

- ❖ Description: Change parking to parallel and connect sidewalk on east side
- ❖ Safety Benefit :
 - 1 Backing - PDO
- ❖ Environmental: Possible Historic, Floodplain, Place of Worship
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00

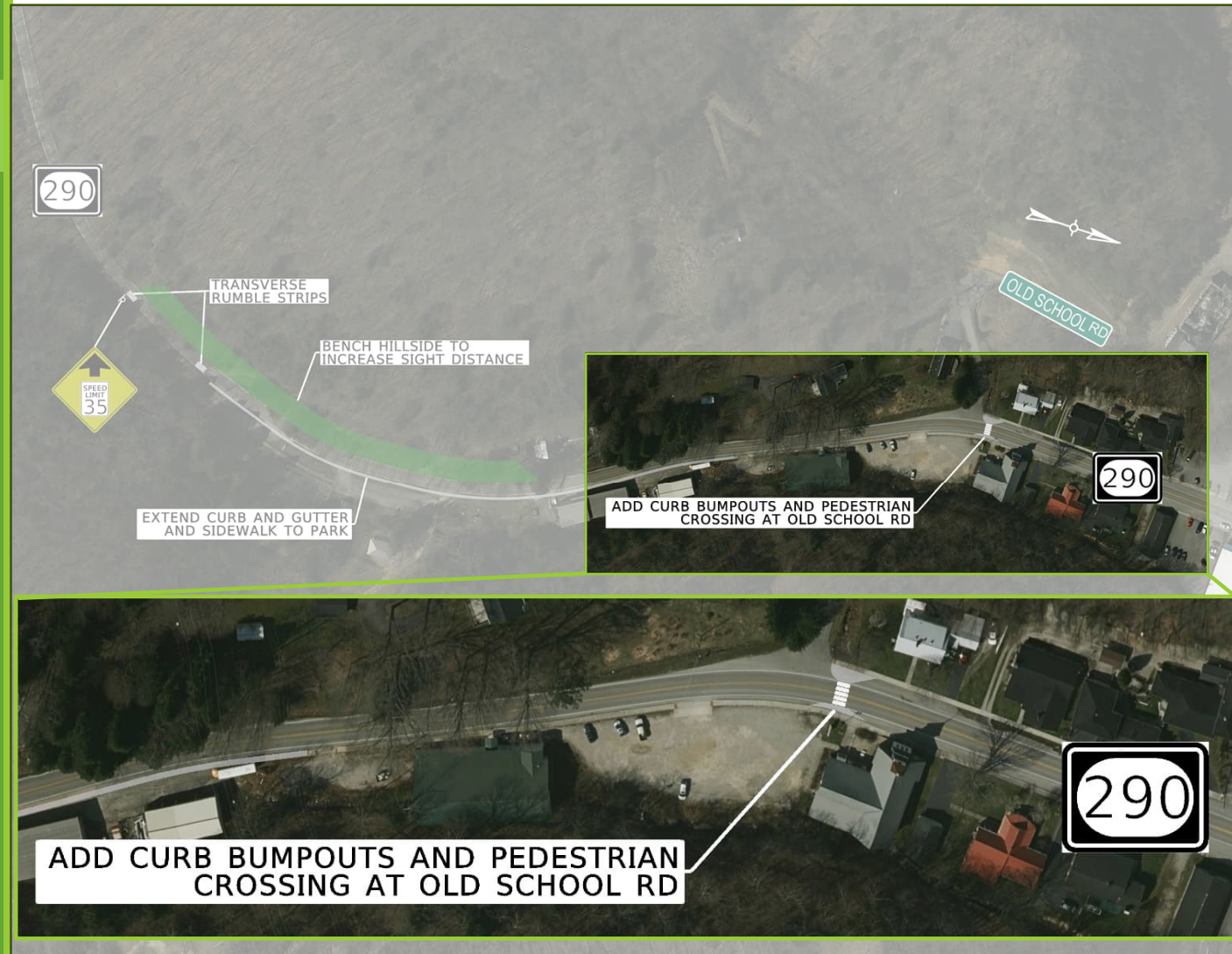


Spot Improvement #4

Section 1: MP 8.726

Old School Road

- ❖ Description: Bump out at Old School Road to tighten up intersection / thermo striping
- ❖ Safety Benefit :
 - No reported crashes
- ❖ Environmental: UST/HAZ (Brownfields), Place of Worship
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement #5

Section 1: MP 8.545 - 8.6

Park

- ❖ Description: Curb and gutter at the park (on east side) / shave hill back on west side / connect sidewalk up to Fire Station, vehicular traversable sidewalk across fire department entrances
- ❖ Safety Benefit:
 - No reported crashes
- ❖ Environmental: Archaeology (ROW), Section 4(f) (Park), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00

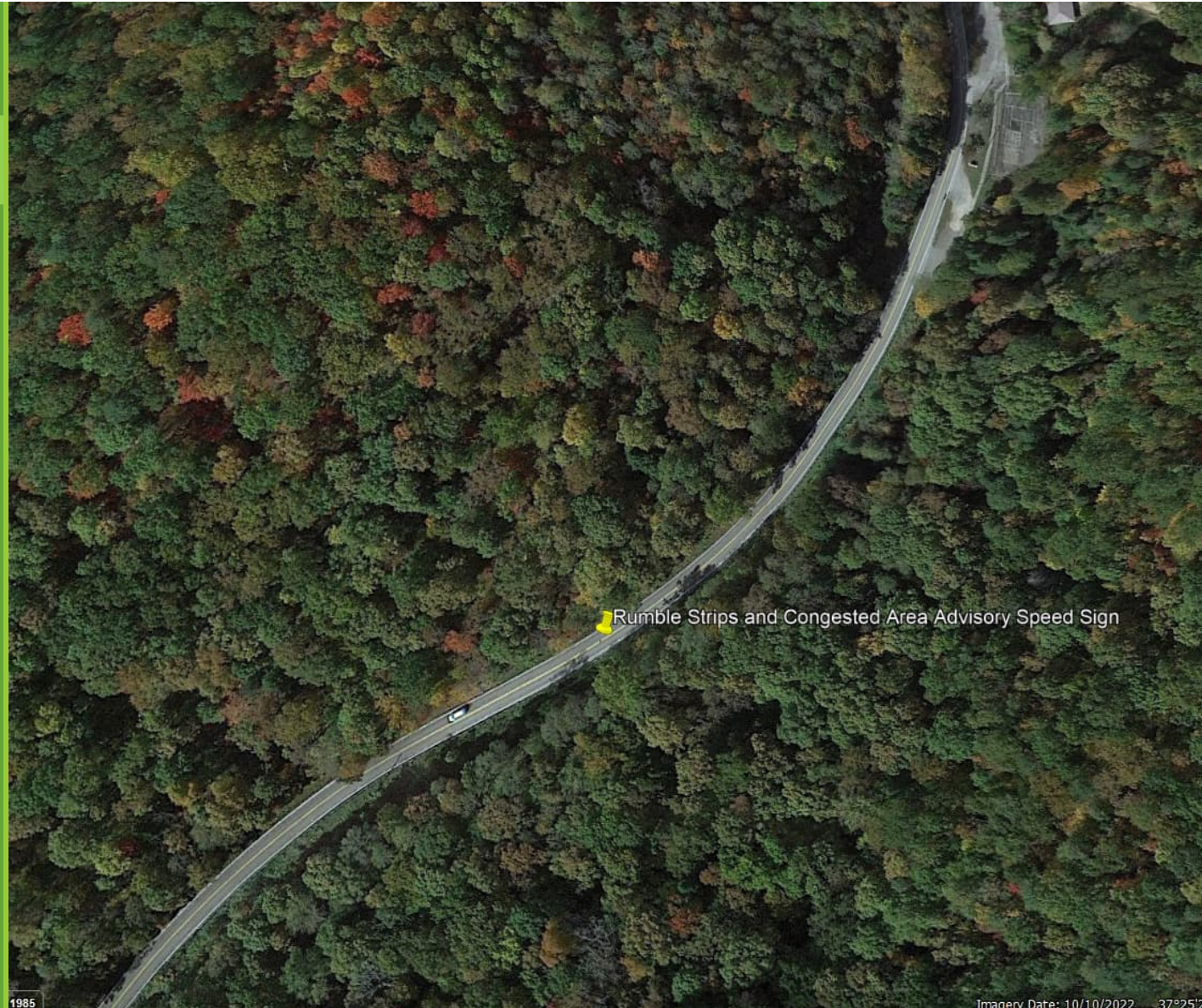


Spot Improvement #6

Section 1: MP 8.4

Approaching McKee

- ❖ Description: Transverse rumble strips approaching McKee / congested area advisory speed to 25 mph
- ❖ Safety Benefit:
 - 1 Single Vehicle - PDO
 - Wet Pavement Crashes = 1
- ❖ Environmental: None
- ❖ 20-year Crash Reduction: 0.8
- ❖ B/C : 0.04



Spot Improvement #7

Section 1: MP 8.0 - 8.4

- ❖ Description: Widen road and straighten out/level road (45 mph)
- ❖ Safety Benefit :
 - 1 Angle - Severe Injury
 - 1 Sideswipe Opposite Direction - PDO
 - 9 Single Vehicle (1 animal) - 1 B, 8 PDO
 - Wet Pavement Crashes = 9
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 16.9
- ❖ B/C : 0.41



Spot Improvement #8A

Section 1: MP 7.5 - 7.85

Option 1

- ❖ Description: New alignment to go around curvature - south of Tower Road to the north above curves - make local road for bike/ped connectivity
- ❖ Safety Benefit:
 - 1 Sideswipe Opposite Direction - C
 - 3 Single Vehicle - 2 C, 1 PDO
 - Wet Pavement Crashes = 4
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 9.7
- ❖ B/C : 0.02



Spot Improvement #8B

Section 1: MP 7.5 - 7.85

Option 2

- ❖ Description: Widen road and straighten out/level road (45 mph)
- ❖ Safety Benefit:
 - 1 Sideswipe Opposite Direction - C
 - 3 Single Vehicle - 2 C, 1 PDO
 - Wet Pavement Crashes = 4
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 8.3
- ❖ B/C : 0.10



Spot Improvement #9

Section 2: MP 6.3 - 7.0

North of Indian Ridge

- ❖ Description: Add passing lanes
- ❖ Safety Benefit:
 - 1 Rear End - PDO
 - 1 Sideswipe Opposite Direction - PDO
 - 1 Sideswipe Same Direction - PDO
 - 1 Opposing Left Turn - PDO
 - 2 Single Vehicle - 1 B, 1 PDO
 - Wet Pavement Crashes = 1
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 1.68
- ❖ B/C : 0.03



Spot Improvement #10

Section 2: MP ~6.3

Bus Pull-Off

- ❖ Description: Improve pull-off for school bus
- ❖ Safety Benefit:
 - No reported crashes
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00

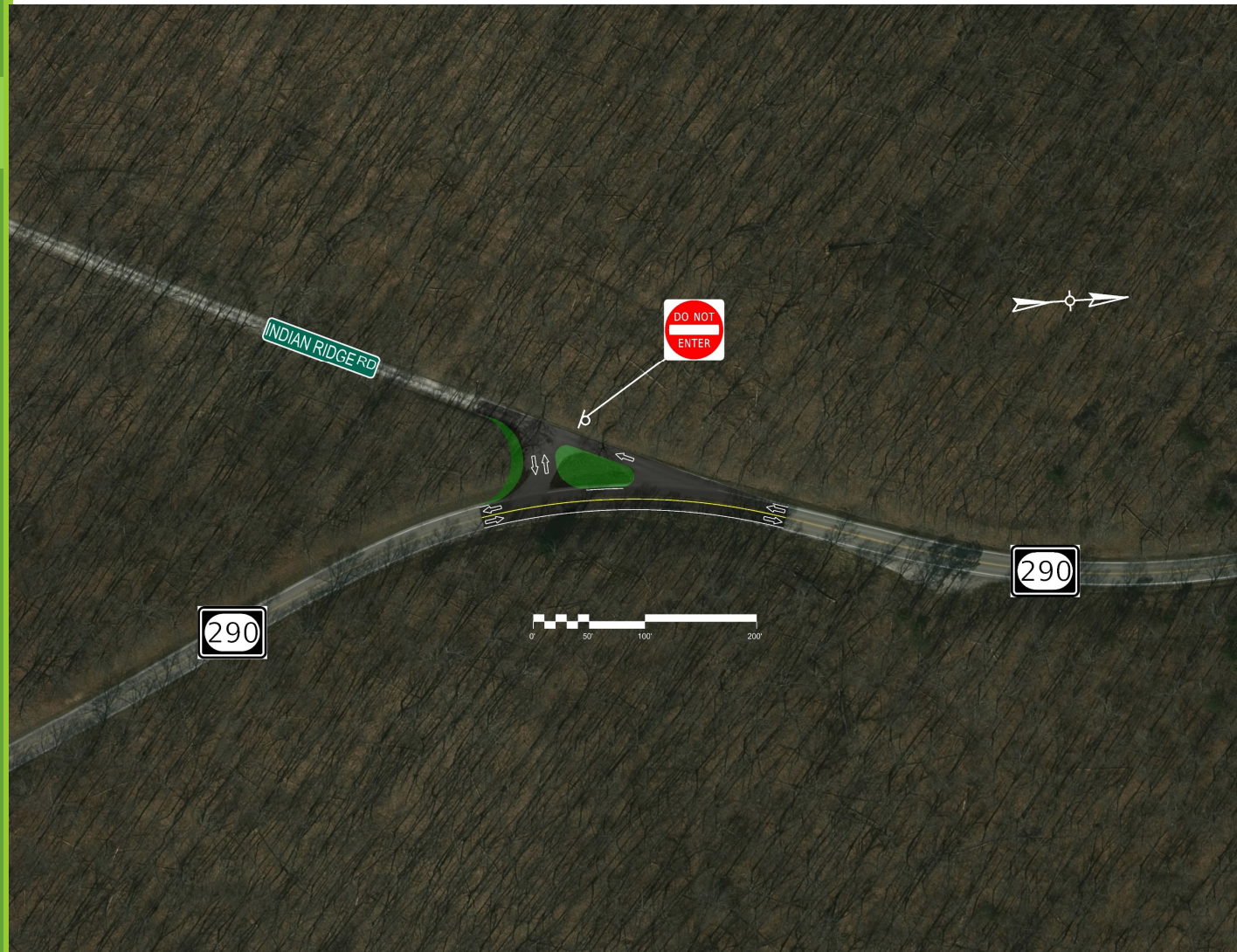


Spot Improvement #11A

Section 2: MP ~6.255

Indian Ridge

- ❖ Description: Realign Indian Ridge Road intersection / add signage
- ❖ Safety Benefit:
 - No reported crashes
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement #11B

Section 2: MP 6.19 - 6.26

Indian Ridge

- ❖ Description: Straighten out curves at Indian Ridge Road
- ❖ Safety Benefit:
 - 1 Single Vehicle PDO
 - Wet Pavement Crashes = 1
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 2.6
- ❖ B/C : 0.00

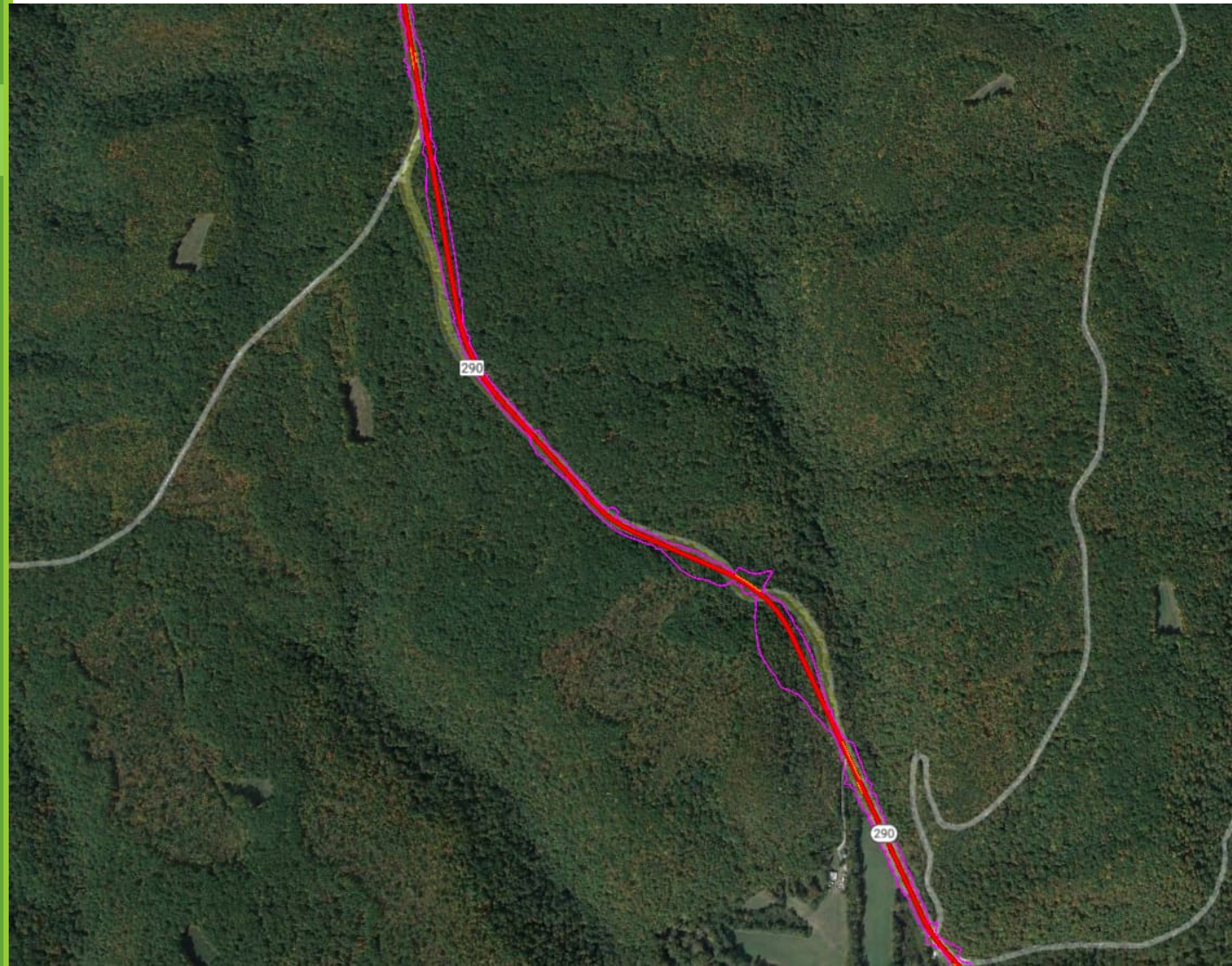


Spot Improvement #12

Section 3: MP 4.71 - 6.22

Laurel Fork to Indian Ridge

- ❖ Description: Realign curves in high crash cluster area / curve widening, high friction surface treatment
- ❖ Safety Benefit:
 - 1 Angle - K
 - 1 Sideswipe Opposite Direction - PDO
 - 9 Single Vehicle - 2 B, 1 C, 7 PDO
 - Wet Pavement Crashes = 4
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 14.2
- ❖ B/C : 0.72



Spot Improvement #12B

Section 3: MP 4.71 - 6.22

Laurel Fork to Indian Ridge

- ❖ Description: Add high friction surface treatment to existing compound curves
- ❖ Safety Benefit:
 - 5 Crashes (1B, 1C, 3O)
 - Wet Pavement Crashes = 4
- ❖ Environmental: N/A
- ❖ 20-year Crash Reduction: 8.32
- ❖ B/C : 0.22



Spot Improvement #13A

Section 3: MP 4.71 - 6.757

Lower Adkinstown & Mill Creek

- ❖ Description: Shave back hillside and cut vegetation @ Mill Creek and Lower Adkinstown
- ❖ Safety Benefit:
 - 3 Single Vehicle (2 animal) - 1 C, 2 PDO
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats)
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.03



Spot Improvement #13B

Section 3: MP 4.71 - 6.757

Lower Adkinstown & Mill Creek

- ❖ Description: Intersection warning signage @ Mill Creek and Lower Adkinstown
- ❖ Safety Benefit :
 - No intersection related crashes at either intersection
- ❖ Environmental: None
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement #13C

Section : MP 4.699

Lower Adkinstown & Mill Creek

- ❖ Description: Add end treatments to bridge
- ❖ Safety Benefit:
 - No reported crashes at bridge
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats), Special Use Water
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement #14

Section 3 : MP 4.699

Laurel Fork Bridge

- ❖ Description: Replace bridge with a wider one
- ❖ Safety Benefit :
 - No reported crashes at bridge
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats), Special Use Water
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement: #15

Section 3 : MP 4.65 - 6.1 or 4.2 - 6.25

- ❖ Description: Full new alignment from North of bridge to south of Indian Ridge
- ❖ Safety Benefit:
 - 1 Angle - K
 - 1 Sideswipe Opposite Direction - PDO
 - 12 Single Vehicle (2 animal) - 2 B, 2 C, 8 PDO
 - Wet Pavement Crashes = 4
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats), Special Use Water
- ❖ 20-year Crash Reduction: 24.1
- ❖ B/C : 0.02



Spot Improvement #16

Section 4 : MP 2.6 - 3.589

- ❖ Description: TWLTL through shoulder
- ❖ Safety Benefit :
 - 3 Angle - 1 C, 2 PDO
 - 7 Single Vehicle (5 animal) - 1 B, 1 C, 5 PDO
- ❖ Environmental: Archaeology (ROW), Section 4(f) (WMA), Tree Removal (Bats), Special Use Water
- ❖ 20-year Crash Reduction: 14.4
- ❖ B/C : 0.04



Spot Improvement #17

Section 4 : MP 2.6

Mildred Road

- ❖ Description :
 - Mildred Road intersection – remove access point.
- ❖ Safety Benefit :
 - No reported crashes at intersection or access point to cemetery
- ❖ Environmental: Cemetery
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement - #18

Section 4 : MP 1.941

Ridgewood Drive

- ❖ Description: Ridgewood Drive - improve sight distance (S)
- ❖ Safety Benefit :
 - No reported crashes at intersection
- ❖ Environmental: Archaeology (ROW)
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement #19A

Section 5 : MP 1.524 - 1.551

Bailey Road and KY 2003

- ❖ Description: Improve sight distance @ Bailey and KY 2003 via mainline improvements / vegetation control
- ❖ Safety Benefit :
 - No reported crashes at intersection
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Stream Crossing
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00

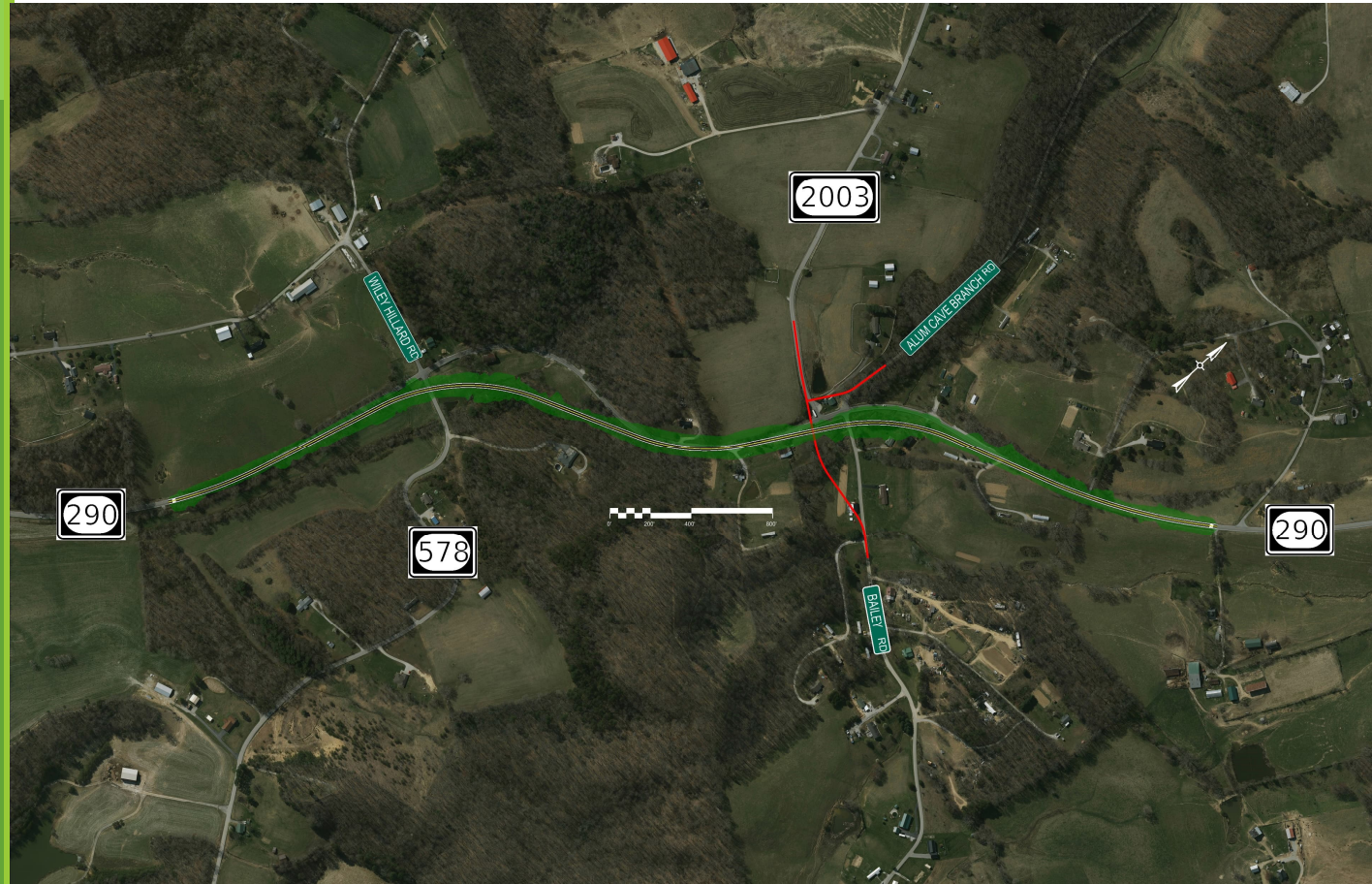


Spot Improvement #19B

Section 5 : MP 1.1 - 1.7

Bailey Road and KY 2003

- ❖ Description: Realign 290 @ Bailey / combine KY 2003 and Alum Branch together for 1 access point / Continue south past KY 578
- ❖ Safety Benefit:
 - 1 angle - PDO
 - 1 Head On - C
 - 1 Rear End - PDO
 - 8 Single Vehicle (1 animal) - 1 B, 1 C, 6 PDO
 - Wet Pavement Crashes = 2
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Stream Crossing
- ❖ 20-year Crash Reduction: 1.0
- ❖ B/C : 0.01

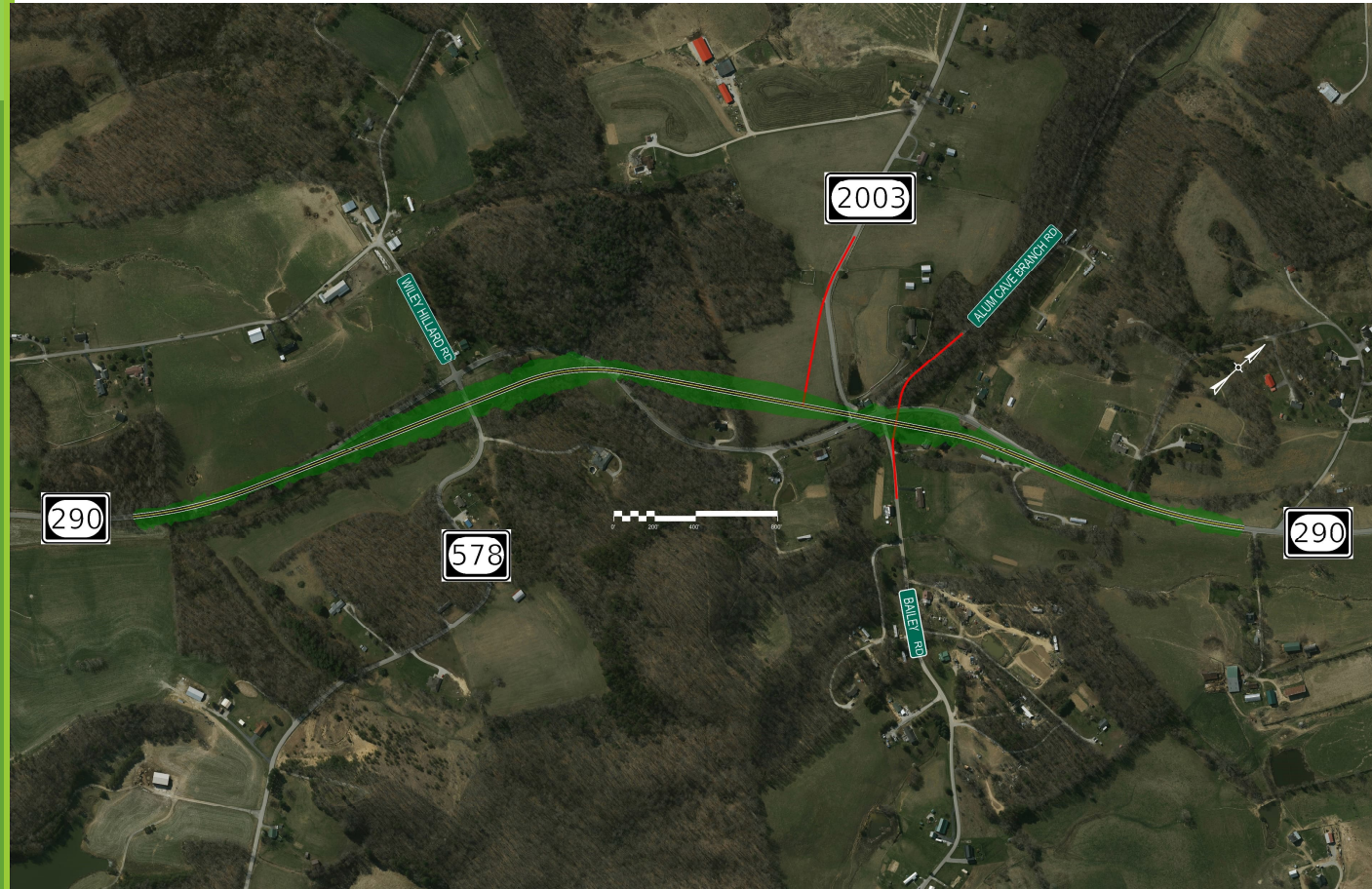


Spot Improvement #19C

Section 5 : MP 1.1 - 1.7

Bailey Road and KY 2003

- ❖ Description: Realign KY 290 @ Bailey / T- intersection at KY 2003 separate from Bailey / realign KY 290 @ KY 578
- ❖ Safety Benefit:
 - 1 angle - PDO
 - 1 Head On - C
 - 1 Rear End - PDO
 - 8 Single Vehicle (1 animal) - 1 B, 1 C, 6 PDO
 - Wet Pavement Crashes = 2
- ❖ Environmental :
 - Archaeology (ROW), Tree Removal (bats), Stream Crossing
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00



Spot Improvement #20

Section 5 : MP 0.0 - 0.2

KY 3630

- ❖ Description: Transverse rumbles thermo restriping, HSFT, solar powered warning signage approaching KY 3630
- ❖ Safety Benefit:
 - No reported crashes at intersection
- ❖ Environmental: None
- ❖ 20-year Crash Reduction: 0.0
- ❖ B/C : 0.00

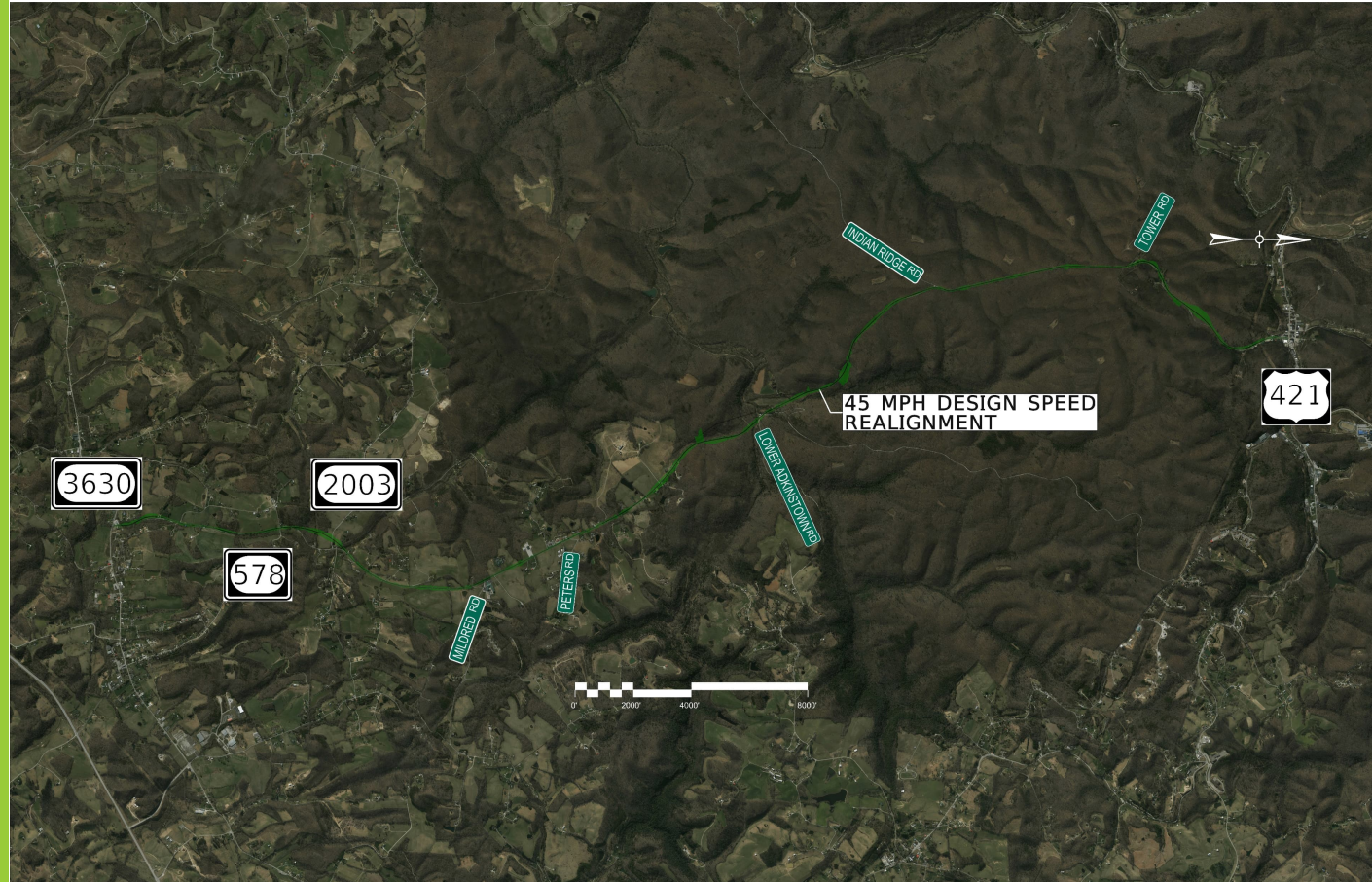


Full Corridor

ALL : MP 0 - 8.85

45 mph

- ❖ Description: 11' lanes, 2' shoulders, 45 mph design speed, update signing, striping, guardrail, etc.
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Stream Crossing, Floodplain, Possible Historic UST/HAZ, Special Use Water, Places of Worship, Cemetery, Section 4(f) (Park, WMA), Wetlands
- ❖ 20-year Crash Reduction: 122.62
- ❖ B/C : 0.30

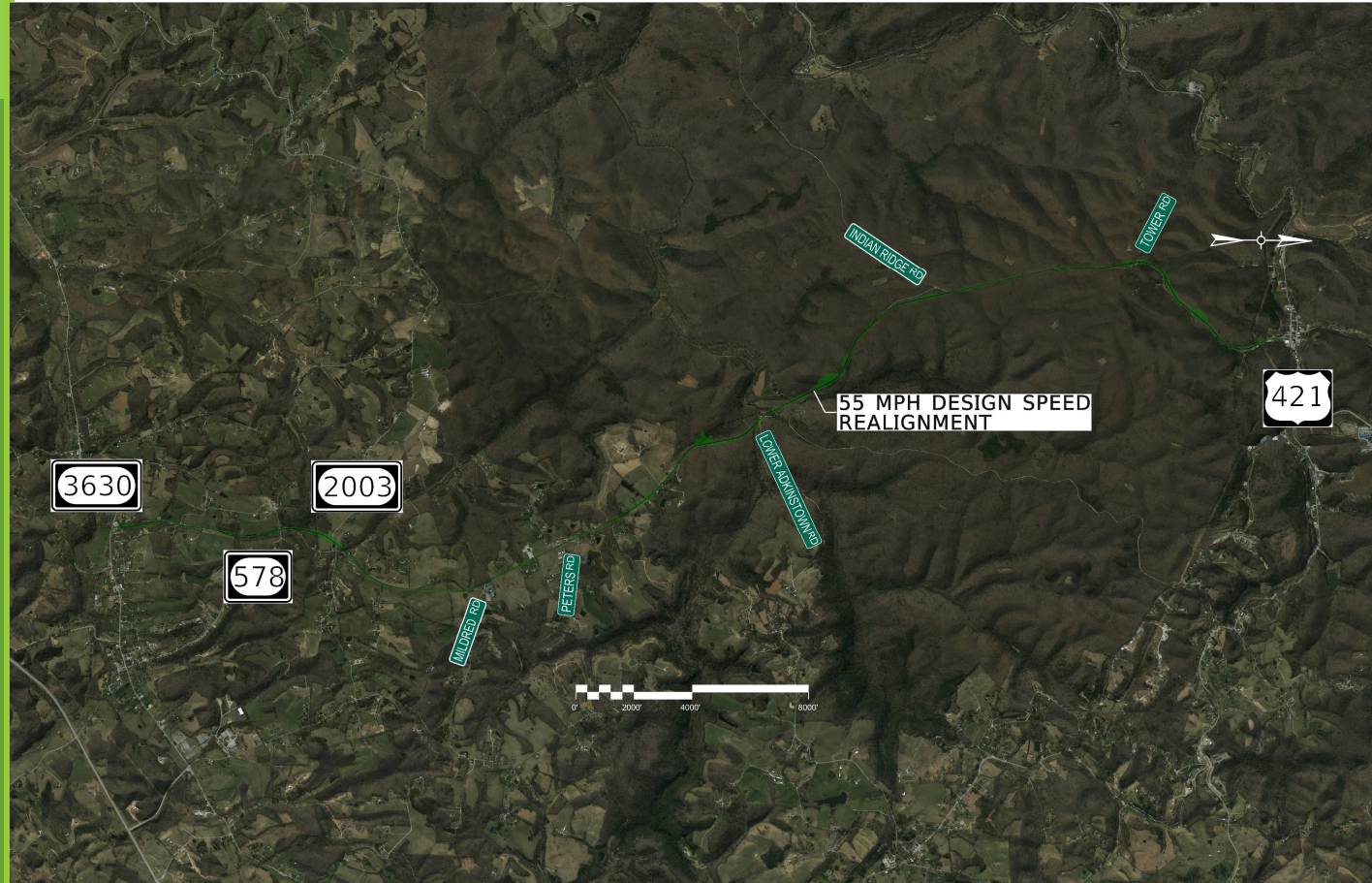


Full Corridor

ALL : MP 0 - 8.85

55 mph

- ❖ Description: 11' lanes, 2' shoulders, 45 mph design speed, update signing, striping, guardrail, etc.
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Stream Crossing, Floodplain, Possible Historic UST/HAZ, Special Use Water, Places of Worship, Cemetery, Section 4(f) (Park, WMA), Wetlands
- ❖ 20-year Crash Reduction: 134.29
- ❖ B/C : 0.28



Connection to KY 30

KY 3630 to KY 3444

- ❖ Description: KY 290 to KY 3630 to KY 3444 to KY 30; Add TWLTL and access control along KY 3630; Improve KY 3444 to match KY 290 improved typical
- ❖ Safety Benefit (KY 3630):
 - ❖ 1 Sideswipe Same Direction - PDO
 - ❖ 2 Sideswipe Opposite Direction - 1 B, 1 PDO
 - ❖ 1 Opposing Left Turn - PDO
 - ❖ 4 Single Vehicle - 4 PDO
 - ❖ Wet Pavement Crashes = 2
- ❖ Estimated Travel Time (Total):
 - ❖ NB: 11.9 min
 - ❖ SB: 11.8 min
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Floodplain UST/HAZ, Stream Crossings, Places of Worship, Possible Historic
- ❖ 20-year Crash Reduction (KY 3630): 10.05
- ❖ B/C : 0.02



Connection to KY 30

Via KY 3444

- ❖ Description: KY 290 to KY 3630 to KY 3444 to KY 30; Add TWLTL and access control along KY 3630; Improve KY 3444 to match KY 290 improved typical
- ❖ Safety Benefit (KY 3444):
 - ❖ 5 Angle (4 at KY 30 intersection) - 1 B, 4 PDO
 - ❖ 1 Sideswipe Opposite Direction - 1 PDO
 - ❖ 4 Single Vehicle - 4 PDO
 - ❖ Wet Pavement Crashes = 2
- ❖ Estimated Travel Time (Total):
 - ❖ NB: 11.9 min
 - ❖ SB: 11.8 min
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Floodplain UST/HAZ, Stream Crossings, Places of Worship
- ❖ 20-year Crash Reduction (KY 3444): 3.96
- ❖ B/C : 0.01



Connection to KY 30

New Route – Option 1

- ❖ Description: New route from KY 290 to KY 30; 11' lanes, 2' shoulders, 45 mph design speed, update signing, striping, guardrail, etc.
- ❖ Estimated Travel Time:
 - ❖ NB: 11.2 minutes
 - ❖ SB 11.0 minutes
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Stream Crossing, Wetlands, Floodplain, UST/HAZ



Connection to KY 30

New Route – Option 2

- ❖ Description: New route from KY 290 to KY 30; 11' lanes, 2' shoulders, 45 mph design speed, update signing, striping, guardrail, etc.
- ❖ Estimated Travel Time:
 - ❖ NB: 11.0 minutes
 - ❖ SB: 10.9 minutes
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), Stream Crossing, Wetlands, Floodplain, UST/HAZ



Connection to KY 30

Roundabout at KY 290

- ❖ Description: 11' lanes, 2' shoulders, 45 mph design speed, update signing, striping, guardrail, etc.
- ❖ Safety Benefit:
 - ❖ 2 Single Vehicle - 2 PDO KY 3630 approaches
- ❖ Environmental: Archaeology (ROW), Tree Removal (bats), UST/HAZ
- ❖ 20-year Crash Reduction: 4.64
- ❖ B/C : 0.01

