

EXECUTIVE SUMMARY

Introduction and Study Area

Parsons Brinckerhoff was contracted by the Kentucky Transportation Cabinet (KYTC) to perform a study to identify potential improvements at 50 intersections within KYTC District 10. KYTC obtained the ranking of all the intersections within their District from the Kentucky Transportation Center (KTC) Spatial Database for Intersections. Using this information 50 intersections were evaluated for improvement, selected by the following procedure:

- The first five intersections have the highest fatalities and injury collisions rate (according to the KAB scale – fatal injury, incapacitating injury, and non-incapacitating injury) within the District.
- The next 41 intersections are ranked in order by the Potential Crash Reduction factor (PCR) calculation.
- The remaining four intersections on the list have been noted as having safety issues within the District but do not necessarily have a high crash rate factor. These have been included as part of previous District Transportation Plan (DTP) projects.

Study Process

The list of intersections, along with detailed crash information, was given to Parsons Brinckerhoff to evaluate and develop proposed safety improvements for each of the intersections based on crash type and history, intersection characteristics, geometry and other field conditions.

The location, severity, and manner of collision were reviewed for the crashes noted during a five-year period (January 1, 2010 – December 31, 2014). Aerial photography was reviewed to evaluate existing intersection layout and geometrics. This was followed by a field review of each of the intersection locations. Next, preliminary improvements and cost estimates were developed and shared with the project team for feedback. The improvement options for each intersection were revised, and detailed cost estimates were developed for design, construction, right-of-way and utilities. A summary sheet for each intersection was developed, including crash and traffic volume information, intersection issues, a drawing of the proposed improvement options, and cost estimates for the improvements. The following spreadsheet (**Table ES-1**) provides an overall summary of intersection improvements as well as cost estimation information in current year dollars.

Study Conclusion

Projects with a total cost estimate less than \$500,000 may be selected for implementation using Highway Safety Improvement Program (HSIP) funds. Projects exceeding the HSIP amount will require a Project Identification Form (PIF) to be developed by KYTC for consideration in future Six Year Highway Plans.

Table ES-1: Intersection Improvement Summary Sheet

County	Intersection #	Cross Streets	Treatments			Design	Right-of-Way	Utilities	Construction	Total Cost	
Breathitt	1 - 1	KY 15 at Fish Pond Loop	A	Widening	Widen NB approach for left turn lane to Fish Pond Loop and adjust guardrail.	\$50,000	\$10,000	\$10,000	\$133,000	\$270,000	
			B	Pavement	Alter Park and Ride Lot orientation along tree line.						
			C	Realignment	Realign WB approach to improve sight distance on KY 15.	\$50,000			\$17,000		
			D	Delineation	Define access to / from KY 15.						
Breathitt	1 - 2	KY 15 at Fish Pond Loop	A	Widening	Widen NB approach for left turn lane to Fish Pond Loop and adjust guardrail.	\$50,000	\$10,000	\$10,000	\$145,000	\$310,000	
			B	Pavement	Alter Park and Ride Lot orientation along tree line.						
			C	Realignment	Realign WB approach to improve sight distance on KY 15.	\$50,000			\$45,000		
			D	Pavement	Re-stripe EB approach to align with WB approach.						
			E	Delineation	Provide new entrance from Fish Pond Loop and define access to / from KY 15.						
Breathitt	2	KY 15 at KY 1812	A	Delineation	Delineators along center line of KY 15 (Wendy's & gas station).	\$50,000	\$0	\$0	\$52,000	\$102,000	
			B	Access Management	Restrict access to gas station along Washington Avenue.						
			C	Access Management	Limit TWLTL.						
			D	Pavement	Check pavement markings once construction is complete.						
Perry	3	KY 15 at KY 451C	A	Signals	Signalize intersection. Meets Warrants 1, 2, and 3.	\$50,000	\$0	\$0	\$109,400	\$160,000	
			B	Pavement	Move stop bar on KY 451C closer to intersection.	N/A			\$600		
Powell	4	KY 2486 at W Railroad Street	A	Signs	Convert intersection to 4-way stop.	\$50,000	\$0	\$50,000	\$25,800	\$127,000	
			B	Pavement	Paint stop bars on all 4 legs of intersection.						
			C	Pavement	Install rumble strips on KY 2486 approaches.						
			D	Pavement	Stripe center yellow line and edge lines along KY 2486 (from KY 15 to KY 2476).	N/A			\$1,200		
			E	Signs	Change speed limit to 25 mph.						
Morgan	5	KY 7 at KY 519	A	Lighting	Install lighting at intersection.	\$50,000	\$0	\$0	\$39,000	\$440,000	
			B	Pavement / Widening	Add left turn lane on KY 519 to KY 7 NB.	\$50,000			\$218,000		
			C	Signals	Install yellow flashing beacons on KY 519 and red flashing beacon on KY 7.	\$50,000			\$33,000		
Estill	6	KY 52 at KY 499	A	Delineation	Delineators along center line (McDonalds and old gas station).	\$50,000	\$45,000	\$5,000	\$32,000	\$420,000	
			B	Access Management	Close access near intersection, provide channelization for lane reduction on KY 499.	\$50,000			\$93,000		
			C	Access Management	Access point modification on EB approach.	\$50,000			\$95,000		
Perry	7-1	KY 451 at Elm Street / Liberty Street	A	Signs / Pavement	Add stop signs and stop bars to side streets.	N/A	\$0	\$5,000	\$1,500	\$525,000	
			B	Pavement	Create consistent cross section and striping around intersection.	\$100,000			\$418,500		
			C	Delineation	Better define driveways, parking areas, and intersecting street locations.						
Perry	7-2	KY 451 at Elm Street / Liberty Street	A	Signs / Pavement	Add stop signs and stop bars to side streets.	N/A	\$0	\$5,000	\$1,200	\$161,000	
			B	Pavement	Create consistent cross section and striping around intersection.	\$50,000			\$104,800		
Breathitt	8	KY 15 at Indian Hollow	A	Access Management	Limit wide driveway.	\$50,000	\$10,000	\$20,000	\$81,000	\$223,000	
			B	Access Management	Limit TWLTL						
			C	Access Management	Remove parking lot access point.				\$50,000		\$12,000
Perry	9-1	KY 550 at Combs Lane	A	Signs / Pavement	Add stop sign and stop bar at Combs Lane.	N/A	\$90,000	\$120,000	\$800	\$770,000	
			B	Pavement	Widen north side of KY 550 and re-stripe.	\$100,000			\$459,200		
			C	Access Management	Provide designated access points for businesses, separate parking from roadway, and improve intersecting street locations.						
Perry	9-2	KY 550 at Combs Lane	A	Signs / Pavement	Add stop sign and stop bar at Combs Lane.	N/A	\$90,000	\$120,000	\$800	\$720,000	
			B	Pavement	Re-stripe KY 550 by shifting edge of road to the north. Add curb and gutter to north side of KY 550 and define business entrances.	\$100,000			\$409,200		
			C	Access Management	Provide designated access points for businesses and separate parking from roadway on south side of KY 550.						
Powell	10	KY 11 at Airport Road / White Avenue	A	Access Management	Consolidate access points, convert one gas station access to right-in / right-out.	\$50,000	\$10,000	\$45,000	\$92,200	\$251,000	
			B	Pavement	Paint stop bars on Airport Road and White Avenue.	N/A			\$500		
			C	Pavement	Change center line striping to a no passing zone.	\$50,000			\$3,300		
Perry	11-1	KY 550 at Grand Vue Plaza	A	Signals	Signalize intersection. Does not meet volume warrants but could meet crash experience warrant (#7).	\$50,000	\$0	\$0	\$110,000	\$160,000	
			B	Widening / Pavement	Widen north side of KY 550 and re-stripe.	See Costs for 9-1					
			C	Access Management	Separate parking from roadway on south side of KY 550, and designate specific access points to parking area.						
Perry	11-2	KY 550 at Grand Vue Plaza	A	Signals	Signalize intersection. Does not meet volume warrants but could meet crash experience warrant (#7).	\$50,000	\$0	\$0	\$110,000	\$160,000	
			B	Widening / Pavement	Re-stripe KY 550 by shifting edge of road to the north. Add curb and gutter to north side of KY 550 and define business entrances.	See Costs for 9-2					
			C	Access Management	Provide designated access points for businesses and separate parking from roadway on south side of KY 550.						
Powell	12	KY 15 at Powell Valley Road	A	Signs	Straighten directional signs across from ramp.	N/A	\$10,000	\$0	N/A	\$166,000	
			B	Signs	Install signs for "Wrong Way" and "Do Not Enter" (R5-1 and R5-1a).	N/A			\$1,300		
			C	Signs	Replace broken in ground pavement markers.	\$50,000			\$37,700		
			D	Pavement	Channelize left turn lane to a "T" to form 90 degree approach to KY 15.						
			E	Access Management	Close access road; additional access provided from KY 82.	\$50,000			\$17,000		

Note: The costs do not account for any environmental permits, mitigation, fees and other costs that may be incurred such as geotechnical analysis.

Table ES-1: Intersection Improvement Summary Sheet (cont.)

County	Intersection #	Cross Streets	Treatments			Design	Right-of-Way	Utilities	Construction	Total Cost		
Powell	13	KY 11 at KY 2486	A	Realignment	Realign the Kroger entrance to KY 2486.	\$200,000	\$160,000	\$125,000	\$757,500	\$1,245,000		
			B	Access Management	Provide designated access points for businesses, separate parking from roadway, and improve intersecting street locations.							
			C	Pavement	Re-stripe intersection and approaches.							
			D	Drainage	Improve drainage on eastern side of KY 2486.							
			E	Multimodal	Move pedestrian push button signs above push buttons.							
			F	Signs	Add route signs and change speed limit to 25 mph on KY 2486.							
Powell	14-1	KY 15 at River Street	A	Realignment / Widening	Realign River Street to a 4-way intersection with KY 15 at signalized intersection. Widen Black Creek Road to allow for left turn movements.	\$50,000	\$45,000	\$55,000	\$168,400	\$500,000		
			B	Pavement	Re-stripe intersections and approaches.	N/A			\$1,600			
			C	Access Management	Provide designated access points for businesses, separate parking from roadway, and improve intersecting street locations.	\$50,000			\$130,000			
Powell	14-2	KY 15 at River Street	A	Realignment	Realign River Street to a 4-way intersection with KY 15 at signalized intersection.	\$50,000	\$35,000	\$55,000	\$149,400	\$440,000		
			B	Pavement	Re-stripe intersections and approaches.	N/A			\$1,600			
			C	Access Management	Provide designated access points for businesses, separate parking from roadway, and improve intersecting street locations.	\$50,000			\$99,000			
Powell	14-3	KY 15 at River Street	A	Widening / Pavement	Widen River Street and re-stripe to allow for separate right and left turn lanes.	\$50,000	\$0	\$30,000	\$124,400	\$350,000		
			B	Signals	Include River Street as part of signal control at KY 15 and Black Creek Road.	N/A			\$1,600			
			C	Pavement	Re-stripe intersections and approaches.	N/A			\$94,000			
			D	Access Management	Provide designated access points for businesses, separate parking from roadway, and improve intersecting street locations.	\$50,000			\$94,000			
Breathitt	15	KY 15 at KY 1812	A	Realignment	Realign KY 3068.	\$50,000	\$15,000	\$35,000	\$235,000	\$460,000		
			B	Realignment	Realign KY 1812.	\$50,000			\$10,800			
			C	Delineation	Install delineators along NB approach.	\$50,000			\$14,200			
			D	Delineation	Add concrete islands.	\$50,000			\$14,200			
Wolfe	16	KY 15 at KY 191	A	Widening / Pavement	Lengthen KY 15 right turn lanes.	\$100,000	\$0	\$5,000	\$409,500	\$515,000		
			B	Delineation	Improve concrete island to standard.							
			C	Widening / Pavement	Lengthen KY 15 left turn lanes.							
			D	Access Management	Restrict movements into / out of gas station to right-in / right-out along KY 15.							
			E	Access Management	Extend concrete median on NB approach to control access.							
			F	Signs	Add "No Left Turn" sign at private drive on WB approach.						N/A	\$500
			G	Signals	Add protected / permissive phasing for EB and WB approaches.						N/A	N/A
Perry	17	KY 15X at Turner Street	A	Signs / Pavement	New stop sign and stop bar at Turner Street approach.	N/A	\$0	\$35,000	\$800	\$705,000		
			B	Pavement / Widening	Add right turn lane onto Turner Street, and left turn lane to Elizabeth Drive.	\$100,000			\$417,200			
			C	Access Management	Define access at property north of the intersection.	\$50,000			\$102,000			
Wolfe	18 - 1	KY 15 at KY 3355	A	Pavement	Add dedicated left turn lanes along KY 15.	\$50,000	\$25,000	\$15,000	\$1,800	\$283,000		
			B	Access Management	Relocate Dollar General driveway and limit access to businesses around intersection.	\$50,000			\$76,100			
			C	Access Management	Add delineators to limit left turns near the intersection.	\$50,000			\$15,100			
Wolfe	18 - 2	KY 15 at KY 3355	A	Pavement	Add dedicated left turn lanes along KY 15.	\$50,000	\$10,000	\$45,000	\$1,800	\$435,000		
			B	Pavement	Realign approaches on KY 3355.	\$50,000			\$195,200			
			C	Access Management	Relocate Dollar General driveway.	\$50,000			\$33,000			
Perry	19	KY 15X at Newland Street	A	Signs / Pavement	Improve Newland Street / KY 15X intersection.	\$100,000	\$0	\$65,000	\$430,200	\$605,000		
			B	Pavement	Add rumble strips to slow vehicles coming down hill toward KY 2451 on KY 15X.	N/A			\$8,600			
			C	Pavement	Stripe center line of Newland Street to KY 15X.	N/A			\$1,200			
Lee	20 - 1	KY 11 at KY 1411	A	Realignment	Realign South Fork Road with River Street.	\$200,000	\$10,000	\$27,500	\$650,000	\$887,500		
			B	Access Management	Provide access to River Street from gas station.							
Lee	20 - 2	KY 11 at KY 1411	A	Realignment	Realign South Fork Road with River Street.	\$200,000	\$95,000	\$25,000	\$880,000	\$1,200,000		
			B	Access Management	Provide access to River Street from gas station.							
			C	Widening / Pavement	Widen KY 11 to add left turn pocket for movement to KY 1411.							
			D	Pavement	Re-stripe WB approach lanes to KY 11.							
Lee	20 - 3	KY 11 at KY 1411	A	Realignment	Realign South Fork Road to roundabout with River Street, and realign KY 11 and KY 1411 to roundabout.	\$200,000	\$15,000	\$35,000	\$940,000	\$1,190,000		
			B	Access Management	Close gas station access along KY 11 and provide new access at River Street and re-stripe access at KY 11 (Broadway).							
Lee	20 - 4	KY 11 at KY 1411	A	Realignment	Realign South Fork Road with River Street.	\$50,000	\$95,000	\$25,000	\$240,000	\$410,000		
			B	Access Management	Provide access to River Street from gas station.							
			C	Widening / Pavement	Widen KY 11 to add left turn pocket for movement to KY 1411.							
			D	Pavement	Re-stripe WB approach lanes to KY 11.							
Perry	21	KY 15 at Brian Lane / KY 1067	A	Access Management	Convert Brian Lane to right-in / right-out and add curb and gutter to control access along KY 15.	\$50,000	\$0	\$0	\$118,600	\$230,000		
			B	Delineation	Add delineators along KY 15 to require left turns at KY 1067.	\$50,000			\$9,900			
			C	Signs / Pavement	Add stop bar and stop sign to Brian Lane.	N/A			\$700			
			D	Signs	Add "Heavy Trucks Entering Highway" sign (W42-7).	N/A			\$800			
Magoffin	22	US 460 at Allen Drive	A	Access Management	Realign so that Allen Drive "T" is away from Sav a Buck parking lot.	\$50,000	\$65,000	\$45,000	\$120,000	\$280,000		
			B	Access Management	Perform Access Management Study in conjunction with Intersection #30.	N/A			N/A			

Note: The costs do not account for any environmental permits, mitigation, fees and other costs that may be incurred such as geotechnical analysis.

Table ES-1: Intersection Improvement Summary Sheet (cont.)

County	Intersection #	Cross Streets	Treatments		Design	Right-of-Way	Utilities	Construction	Total Cost			
Breathitt	23	KY 15 at KY 3232	A	Delineation	Reduce width of NB approach.	\$50,000	\$10,000	\$17,000	\$29,200	\$107,000		
			B	Sight Distance	Regrade NB approach.							
			C	Sight Distance	Increase signage height on EB approach to not impede sight triangle.				\$800			
Powell	24	KY 213 at Pendleton Street	A	Pavement	Install stop bars at Pendleton Street approaches.	N/A	\$0	\$0	\$8,700	\$16,000		
			B	Pavement	Install rumble strips on KY 213 NB approaching interchange.				\$7,300			
Perry	25	KY 451 at Glomawr Stormking Rd.	A	Signs	Add retroreflective warning signs.	N/A	\$0	\$0	\$6,000	\$6,000		
			B	Pavement	Add retroreflective pavement markings and in ground reflective pavement markers.							
			C	Pavement	Add centerline rumble strips.							
Powell	26	KY 2476 at KY 2486	A	Pavement / Parking	Convert to reverse angle parking .	\$100,000	\$15,000	\$55,000	\$278,600	\$450,000		
			B	Pavement	Add centerline striping, crosswalks, and stop bars around the Court House.							
			C	Pavement / Signs	Convert KY 2486 between Atkinson Street and KY 2476 to one way SB.							
			D	Pavement	Add median to Atkinson, Breckenridge and Court Streets.							
			E	Signs	Change speed limit on KY 2486 to 25 mph.				\$1,400			
Perry	27-1	KY 550 at Smitty Drive	A	Signs / Pavement	Add stop sign and stop bar at Smitty Drive.	N/A	\$0	\$0	\$900	\$900		
			B	Widening / Pavement	Widen north side of KY 550 and re-stripe.							
			C	Access Management	Provide designated access points for businesses, separate parking from roadway, and improve intersecting street locations.						See Costs for 9-1	
Perry	27-2	KY 550 at Smitty Drive	A	Signs / Pavement	Add stop sign and stop bar at Smitty Drive.	N/A	\$0	\$0	\$900	\$900		
			B	Widening / Pavement	Re-stripe KY 550 by shifting edge of road to the north. Add curb and gutter to north side of KY 550 and define business entrances.						See Costs for 9-2	
			C	Access Management	Provide designated access points for businesses and separate parking from roadway on south side of KY 550.							
Magoffin	28-1	KY 7 at KY 867	A	Sight Distance	Improve curve north of intersection.	\$100,000	\$10,000	\$30,000	\$350,000	\$490,000		
			B	Alignment	Improve intersection by providing 90 degree approach at KY 867 / KY 7 intersection.							
Magoffin	28-2	KY 7 at KY 867	A	Pavement	Add stop bar to KY 867 approach realignment and raise grade.	\$50,000	\$0	\$15,000	\$39,100	\$106,000		
			B	Signs	Reduce posted speed on KY 7 and add curve warning sign.				\$1,900			
Estill	29	KY 52 at Old KY 52 Connector	A	Pavement	Widen KY 52 and add EB left turn lane.	\$50,000	\$10,000	\$15,000	\$150,850	\$725,000		
			B	Sight Distance	Cut slope excavation.	\$100,000			\$396,750			
			C	Pavement	Move stop bar on SB approach.	N/A			\$400			
			D	Drainage	Fix washout on NE corner.	N/A			\$2,000			
Magoffin	30	US 460 at Ward Road	A	Access Management	Install island to reduce driveway width.	\$50,000	\$10,000	\$15,000	\$14,700	\$92,000		
			B	Pavement	Repaint stop bar and striping.				N/A		\$2,300	
			C	Access Management	Perform Access Management Study in conjunction with Intersection #22.				N/A		N/A	
Powell	31	KY 15 at KY 82	A	Signs	Install reflective back plates on signals.	N/A	\$0	\$0	\$2,300	\$280,000		
			B	Pavement	Add "puppy tracks" for left turns on KY 82 EB and WB.				N/A		\$700	
			C	Pavement / Signal	Change the shared-left turn lanes on KY 82 EB and WB approaches to exclusive left turn lanes. Add exclusive left turn phasing.				\$50,000		\$225,000	
			D	Signs	Provide overhead directional arrow signs on span wire and refresh paint and pavement markings.				N/A		\$2,000	
Powell	32	KY 2486 at Bright Street	A	Sight Distance	Cut trees back on either side of east leg (Bright Street) approach to improve sight distance.	N/A	\$0	\$30,000	\$4,000	\$55,000		
			B	Pavement	Add stop bars on Bright Street approaches.				N/A		\$800	
			C	Pavement	Install rumble strips on KY 2486 approaches.				N/A		\$15,900	
			D	Pavement	Stripe center yellow line and edge lines along KY 2486 (from KY 15 to KY 2476).				N/A		\$1,200	
			E	Drainage	Improve drainage on eastern side of KY 2486.				N/A		Further Study	
			F	Signs	Replace "Stop Ahead" sign that meets current MUTCD standards (Sign W3-1) on west approach (Bright Street).				N/A		\$1,700	
			G	Signs	Change speed limit to 25 mph.				N/A		\$1,400	
Perry	33	KY 476 at Peavley Street Connector	A	Access Management	Convert Peavley Street Connector to a one-way street.	\$50,000	\$0	\$0	\$1,700	\$158,000		
			B	Access Improvement	Add curbing and improve access points along KY 476.				\$50,000		\$56,300	
Perry	34	KY 476 at Cole Avenue	A	Signs / Pavement	Relocate Stop sign on Cole Avenue and re-stripe pavement markings.	N/A	\$10,000	\$85,000	\$1,500	\$365,000		
			B	Access Management	Provide designated access points for businesses, separate parking from roadway, and improve intersecting street locations.				\$50,000		\$215,300	
			C	Pavement / Delineation	Improve striping and driveway delineation along KY 476.				N/A		\$1,500	
			D	Signs	Add "Congested Area" signs.				N/A		\$1,700	
Perry	35-1	KY 15 at Entertainment Drive	A	Realignment	Realign intersection.	\$200,000	\$12,000	\$25,000	\$536,800	\$827,000		
			B	Pavement	Add dedicated right turn lane to Entertainment Drive.	\$50,000			\$3,200			
Perry	35-2	KY 15 at Entertainment Drive	A	Striping	Re-stripe approaches to intersection.	\$50,000	\$0	\$50,000	\$177,300	\$330,000		
			B	Pavement	Add dedicated right turn lane to Entertainment Drive.	\$50,000			\$2,700			
Magoffin	36-1	KY 40 at Coal Branch Road	A	Signs	Sign Coal Branch Road to be one-way.	\$50,000	\$0	\$15,000	\$28,600	\$94,000		
			B	Realignment	Realign Flint Street and Higgin Street to accommodate new traffic pattern.							
			C	Signs	Install "No Parking" signs (R8-3a) in front of the bank on KY 40.				N/A		\$400	

Note: The costs do not account for any environmental permits, mitigation, fees and other costs that may be incurred such as geotechnical analysis.

Table ES-1: Intersection Improvement Summary Sheet (cont.)

County	Intersection #	Cross Streets	Treatments			Design	Right-of-Way	Utilities	Construction	Total Cost
Magoffin	36-2	KY 40 at Coal Branch Road	A	Realignment	Shift intersection away from building to improve sight distance.	\$50,000	\$48,000	\$25,000	\$81,600	\$205,000
			B	Widening	Widen Coal Branch Road.					
			C	Signs	Install "No Parking" signs (R8-3a) in front of the bank on KY 40.					
Magoffin	36-3	KY 40 at Coal Branch Road	A	Signs	Sign Coal Branch Road to be one-way.	\$50,000	\$75,000	\$15,000	\$109,600	\$250,000
			B	Realignment	Widen and realign Flint Street and Higgin Street to accommodate new traffic pattern.					
			C	Signs	Install "No Parking" signs (R8-3a) in front of the bank on KY 40.					
Breathitt	37-1	KY 15 at Thorpe Road	A	Pavement	Add full lane rumble strips to slow vehicles through curve.	\$50,000	\$55,000	\$15,000	\$360,000	\$480,000
			B	Sight Distance	Improve sight distance with slope removal near corner of Thorpe Road.					
Breathitt	37-2	KY 15 at Thorpe Road	A	Pavement	Add new roadway between Thorpe Road and Fish Pond Loop.	\$50,000	\$300,000	\$25,000	\$180,000	\$555,000
			B	Access Management	Close Thorpe Road and access points between Thorpe Road and Fish Pond Loop.					
Menifee	38-1	US 460 at KY 746	A	Delineation	Add delineators to require utilization of the center turn lane.	\$50,000	\$0	\$10,000	\$45,300	\$106,000
			B	Pavement	Add left turn receiving pocket on US 460.					
			C	Pavement	Paint stop bar on KY 746.					
Menifee	38-2	US 460 at KY 746	A	Access Management	Close access points on east side of US 460.	\$50,000	\$0	\$10,000	\$13,300	\$74,000
			B	Pavement	Paint stop bar on KY 746.	N/A			\$700	
Wolfe	39 - 1	KY 15 at Swift Camp Creek	A	Pavement	Add SB left turn pocket.	\$200,000	\$0	\$10,000	\$761,000	\$1,090,000
			B	Access Management	Realign Swift Camp Creek Road.	\$50,000			\$69,000	
Wolfe	39 - 2	KY 15 at Swift Camp Creek	A	Access Management	Close road access and provide driveway for resident only.	\$50,000	\$0	\$0	\$35,000	\$85,000
Perry	40 - 1	KY 15 at Scuddy Mountain Rd.	A	Pavement	Install Stop signs and stop bar on driveways.	N/A	\$0	\$10,000	\$3,100	\$250,000
			B	Pavement	Re-stripe dedicated left turn lanes on KY 15.				\$39,100	
			C	Pavement	Improve access for Scuddy Branch Road.				\$147,800	
Perry	40 - 2	KY 15 at Scuddy Mountain Rd.	A	Pavement	Install stop signs and stop bar on driveways.	N/A	\$10,000	\$15,000	\$3,100	\$305,000
			B	Pavement	Re-stripe dedicated left turn lanes on KY 15.				\$39,400	
			C	Pavement	Change access to Scuddy Mountain Road from Scuddy Branch Road.				\$187,500	
Wolfe	41	KY 191 at KY 746	A	Sight Distance	Trim trees inside of curve on KY 191.	N/A	\$10,000	\$25,000	\$2,700	\$295,000
			B	Realignment	Realign for 90 degree intersection.					
			C	Realignment	Extend driveway to access center of the curve.					
Perry	42	KY 476 at KY 1146	A	Signs	Move stop sign on KY 1146 closer to intersection.	N/A	\$0	\$35,000	\$800	\$335,000
			B	Pavement	Add stop bar on KY 1146.				\$700	
			C	Delineation	Delineate KY 476 from parking area.				\$248,500	
Perry	43	KY 15X at Elizabeth Drive	A	Signs / Pavement	Add stop sign and stop bar at Elizabeth Drive approach.	N/A	\$0	\$0	\$900	\$900
			B	Pavement	Install left turn lane from KY 15 to Elizabeth Drive.				See Costs for 17-B	
			C	Access Management	Provide designated access points for businesses and separate parking from roadway.				See Costs for 17-C	
Powell	44	KY 2486 at Halls Road	A	Signs	Install retroreflective pavement markings and signs.	N/A	\$0	\$0	\$2,000	\$6,000
			B	Access Management	Consider closing west approach to thru traffic.					
			C	Signs	Stripe center yellow line and edge lines along KY 2486 (from KY 15 to KY 2476).					
			D	Pavement	Move stop bar on east leg closer to intersection to improve sight distance.					
			E	Signs	Change speed limit to 25 mph on KY 2486.					
Perry	45	KY 1762 at Oakhurst	A	Pavement	Add edge line striping on all approaches.	N/A	\$0	\$0	\$1,000	\$6,000
			B	Pavement	Re-apply stop bars on all approaches.				\$3,000	
			C	Signs	Install new stop signs.					
Lee	46	KY 52 at Old KY 52 / Carlisle	A	Realignment	Realign curve to West Main Street and adjust guard rail.	\$50,000	\$0	\$5,000	\$62,900	\$230,000
			B	Access Management	Eliminate driveway access to KY 52 and install end treatment.	\$50,000			\$5,500	
			C	Access Management	Eliminate business entrance along KY 52 and utilize new access point.	\$50,000			\$6,600	
Wolfe	47	KY 191 at KY 1812	A	Sight Distance	Cut back slope on inside of KY 191 curve.	\$50,000	\$15,000	\$35,000	\$118,400	\$460,000
			B	Realignment	Improve sight distance, realign intersection to "T" in curve.	\$50,000			\$191,600	
Perry	48	KY 476 at KY 3351	A	Realignment	Improve connection of KY 3351 to KY 476.	\$200,000	\$77,500	\$15,000	\$2,480,000	\$2,772,500
			B	Maintenance	Cut back trees on KY 476 EB so flashers are visible.	N/A			N/A	
Breathitt	49 - 1	KY 1812 at Snowden Branch Rd	A	Realignment	Provide 90 degree approach for Snowden Branch Road intersection with KY 1812.	\$50,000	\$10,000	\$15,000	\$80,000	\$339,000
			B	Sight Distance	Regrade / repave pavement west of intersection to improve sight distance.	\$50,000			\$50,000	
			C	Sight Distance	Improve sight distance with tree removal in curve and widen ditch.	\$50,000			\$34,000	
Breathitt	49 - 2	KY 1812 at Snowden Branch Rd	A	Widening	Increase shoulder width and eliminate on-street parking. Turn lane added.	\$100,000	\$10,000	\$30,000	\$408,000	\$780,000
			B	Realignment	Provide 90 degree approach for Snowden Branch Road intersection with KY 1812.	\$50,000			\$76,000	
			C	Sight Distance	Improve sight distance with tree removal in curve.	N/A			\$3,000	
			D	Sight Distance	Widen ditch and lay back slopes.	\$50,000			\$53,000	
Wolfe	50-1	KY 191 at KY 1010	A	Realignment	Improve sight distance, realign intersection to "T" away from curve.	\$50,000	\$25,000	\$10,000	\$180,000	\$265,000
Wolfe	50-2	KY 191 at KY 1010	A	Sight Distance	Cut back slopes and widen ditch along KY 191 to improve sight distance.	N/A	\$0	\$0	\$210,000	\$210,000

Note: The costs do not account for any environmental permits, mitigation, fees and other costs that may be incurred such as geotechnical analysis.