Executive Summary

The objective of the KY 290 Corridor Study is to identify potential concepts to improve safety along the KY 290 corridor, as well as evaluate existing and new connecting routes from KY 290 to KY 30 in Jackson County. The study includes short- and long-term improvement strategies that the Kentucky Transportation Cabinet (KYTC) may use for further project development and implementation. The study extends from to KY 3630 in Annville to US 421 in McKee, mile point (MP) 0.000 to MP 8.850, along KY 290, and also includes a larger area surrounding KY 290 south to KY 30

An inventory of roadway characteristics was completed to identify factors that may be contributing to safety or operational issues along KY 290. KY 290 is a low-volume corridor and no traffic operational issues have been identified within the study area. Most recent year Average Annual Daily Traffic (AADT) volumes range from 2,000 to 2,300, and traffic growth is not expected in the study area over the next 20 years. A historical crash analysis was performed to examine traffic safety trends and identify potential safety issues on KY 290 within the study area. The review of historic crashes has shown that relationships exist between high crash segments / intersections and locations with geometric deficiencies and potentially limited sight distance.

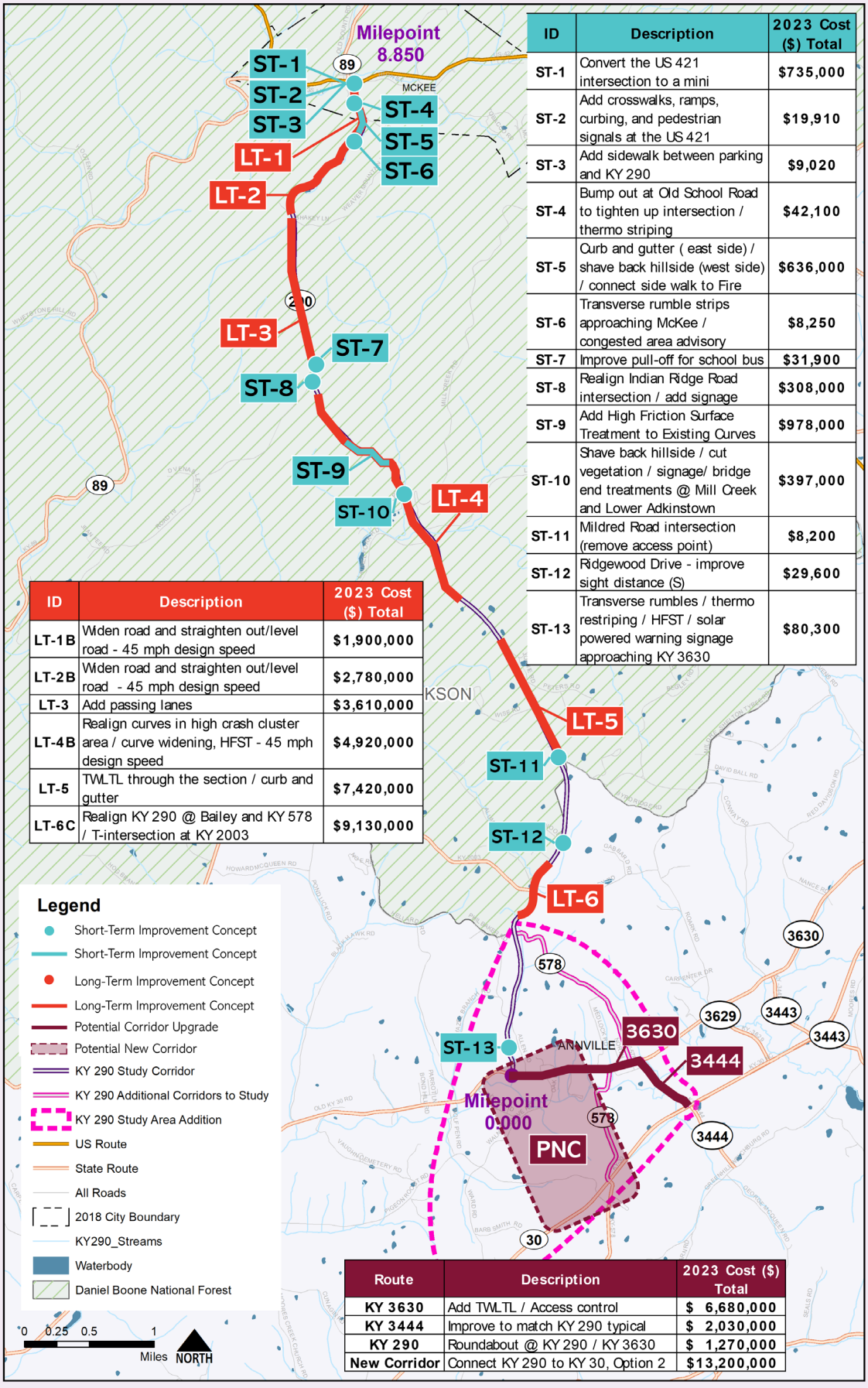
Using the existing conditions, safety analysis, input from Local Elected Officials and Stakeholders (LO/S), and a public survey, an initial list of potential improvement concepts was developed. A high-level analysis of each concept was performed to refine the list of improvements for a detailed evaluation which included Design, Right-of-Way, Utility, and Construction cost estimates in 2023 dollars, an escalated cost in 2033 dollars for longer-term projects, a benefit-cost ratio based on predicted safety benefit, the 20-year total crash reduction and crash savings benefit, and environmental impacts. A planning-level benefit-cost analysis was conducted to determine the value each improvement concept provided.

In addition to evaluating improvement concepts along KY 290, a detailed evaluation was performed to compare the cost and benefits of improving the existing route from KY 290 to KY 30 via KY 3630 and KY 3444, to constructing a new corridor. Each of the options were evaluated based on estimated costs, right-of-way impacts, environmental impacts, and estimated travel times. The safety benefit of improving the existing route was also evaluated. The improvement concepts along KY 290 were categorized into short-term and long-term improvements, and these along with the new alignments and improvements to KY 3630 and KY 3444 were shared with the LO/S.

Feedback from the LO/S along with the detailed evaluation of the potential improvement concepts aided the Project Team in prioritizing the short-term and long-term potential improvement concepts along KY 290. The Project Team agreed that the full-corridor projects would be cost prohibitive, and that moving the spot improvements forward would provide the greatest benefit to the corridor. **Figure ES-1** shows the location, brief description, and cost estimate of the potential improvement concepts.

A new route between KY 290 and KY 30 was supported by stakeholders, however the cost of constructing a new route ($19,600,000) is dramatically higher than improving the existing routes ($10,300,000). Therefore, the Project Team recommends evaluating both a new corridor, and improving KY 3630 and KY 3444 in the future Phase I Design, allowing for more detailed evaluation and design to make the final decision.

Figure ES-1: Potential Improvement Concept Locations



ID	Description	2023 Cost ($) Total
ST-1	Convert the US 421 intersection to a mini	$735,000
ST-2	Add crosswalks, ramps, curbing, and pedestrian signals at the US 421	$19,910
ST-3	Add sidewalk between parking and KY 290	$9,020
ST-4	Bump out at Old School Road to tighten up intersection / thermo striping	$42,100
ST-5	Curb and gutter (east side) / shave back hillside (west side) / connect side walk to Fire	$636,000
ST-6	Transverse rumble strips approaching McKee / congested area advisory	$8,250
ST-7	Improve pull-off for school bus	$31,900
ST-8	Realign Indian Ridge Road intersection / add signage	$308,000
ST-9	Add High Friction Surface Treatment to Existing Curves	$978,000
ST-10	Shave back hillside / cut vegetation / signage/ bridge end treatments @ Mill Creek and Lower Adkinstown	$397,000
ST-11	Mildred Road intersection (remove access point)	$8,200
ST-12	Ridgewood Drive - improve sight distance (S)	$29,600
ST-13	Transverse rumbles / thermo restriping / HFST / solar powered warning signage approaching KY 3630	$80,300

ID	Description	2023 Cost ($) Total
LT-1B	Widen road and straighten out/level road - 45 mph design speed	$1,900,000
LT-2B	Widen road and straighten out/level road - 45 mph design speed	$2,780,000
LT-3	Add passing lanes	$3,610,000
LT-4B	Realign curves in high crash cluster area / curve widening, HFST - 45 mph design speed	$4,920,000
LT-5	TWLTL through the section / curb and gutter	$7,420,000
LT-6C	Realign KY 290 @ Bailey and KY 578 / T-intersection at KY 2003	$9,130,000

Route	Description	2023 Cost ($) Total
KY 3630	Add TWLTL / Access control	$ 6,680,000
KY 3444	Improve to match KY 290 typical	$ 2,030,000
KY 290	Roundabout @ KY 290 / KY 3630	$ 1,270,000
New Corridor	Connect KY 290 to KY 30, Option 2	$13,200,000