

APPENDIX E: Meeting Summaries

Meeting Minutes

TO:	Catherine Davis KYTC Central Office Project Manager KYTC Central Office 200 Mero Street Frankfort, KY 40622	Michael Read District 9 Project Manager KYTC District Office #9 822 Elizaville Avenue Flemingsburg, KY 41041
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FROM: Dan O'Dea
Project Manager
Stantec Consulting Services Inc.

DATE: August 14th, 2023

SUBJECT: KY 716 Corridor Study
Boyd County
KYTC Item No. 9-180.00
Project Team Meeting No. 1

The first Project Team Meeting for the subject project was held at Boyd County Middle School on June 29, 2023, at 10:30 p.m. EDT. The following individuals were in attendance:

Jayalakshmi Balaji*	KYTC – Central Office Planning
Jasper Ball	FIVCO
Catherine Davis	KYTC – Central Office Planning
Dave Heil*	KYTC – Central Office Planning
Blake Jones	KYTC – District 9
Brycen May	FIVCO
Doug Pinkerton	FIVCO
Michael Read	KYTC – District 9
Terri Sicking	KYOVA Interstate Planning Commission
Randy Turner*	KYTC – Central Office Design
Brian Aldridge	Stantec Consulting Services Inc.
Len Harper	Stantec Consulting Services Inc.
Dan O'Dea	Stantec Consulting Services Inc.
Tad Taylor	Stantec Consulting Services Inc.
Graham Winchester	Stantec Consulting Services Inc.

*Joined via Microsoft Teams

Dan O'Dea welcomed everyone and led introductions. The purpose of the meeting was to discuss the existing conditions and preliminary improvement concepts for the KY 716 Corridor Study. Dan O'Dea then delivered a presentation. The following enumerated items were discussed.

1. The objective of the KY 716 Corridor Study is to identify and evaluate the need for and scope of potential options to improve safety, mobility, and capacity on KY 716 between US 60 and Summit Road / KY 3293.
2. The study area, shown on **Figure 1**, includes KY 716 from the US 60 intersection at mile point 0.0 to KY 3293 at mile point 0.56.
3. Armco Park is designated Section 4(f) and 6(f), meaning the property is publicly owned and was purchased / developed with Land and Water Conservation Funds (LWCF). Purchasing right-of-way in this area may be possible but only if the proposed project improves the park or public safety. Right-of-way which is acquired from a 6(f) resource shall also be replaced with land of equal or greater value.
4. There is an active Highway Safety Improvement Program (HSIP) project to construct a mini roundabout at the KY 716 intersection with KY 3293.
5. Highlights from the existing conditions analysis were discussed. Classified as an urban minor arterial, KY 716 has 10-foot lanes and narrow shoulders through the study area. With a speed limit of 35 miles per hour (mph), KY 716 maintains an estimated 40 feet of right-of-way throughout the study corridor.
 - The KYTC HIS database showed the study portion of KY 716 with three-foot shoulders. It was noted that this is likely an overestimation.
 - The KYTC HIS database showed a small section of KY 716 near US 60 as having a 55-mph speed limit. The District subsequently addressed the issue and this section of KY 716 is now shown to be 35 mph.
6. Daily traffic on KY 716 is around 3,900 vehicles per day (vpd) with 4.7 percent trucks. The heaviest daily traffic volumes near the study corridor are on US 60, with 16,100 vpd near the KY 716 intersection. North of the KY 3293 intersection, KY 716 carries 4,800 vpd, while Summit Road carries 3,900 vpd, as shown in **Figure 2**.
7. Crash data from the Kentucky State Police database indicates that in the five years between January 1, 2018, and December 31, 2022, a total of 86 crashes were reported on the study corridor. Of the 86 crashes, rear end collisions were the most common crash type with 25 (29 percent), followed by angle collisions with 24, as shown in **Figure 3**.
 - It was noted most of the “other” category included residents backing out of their driveways and striking other vehicles or being struck.

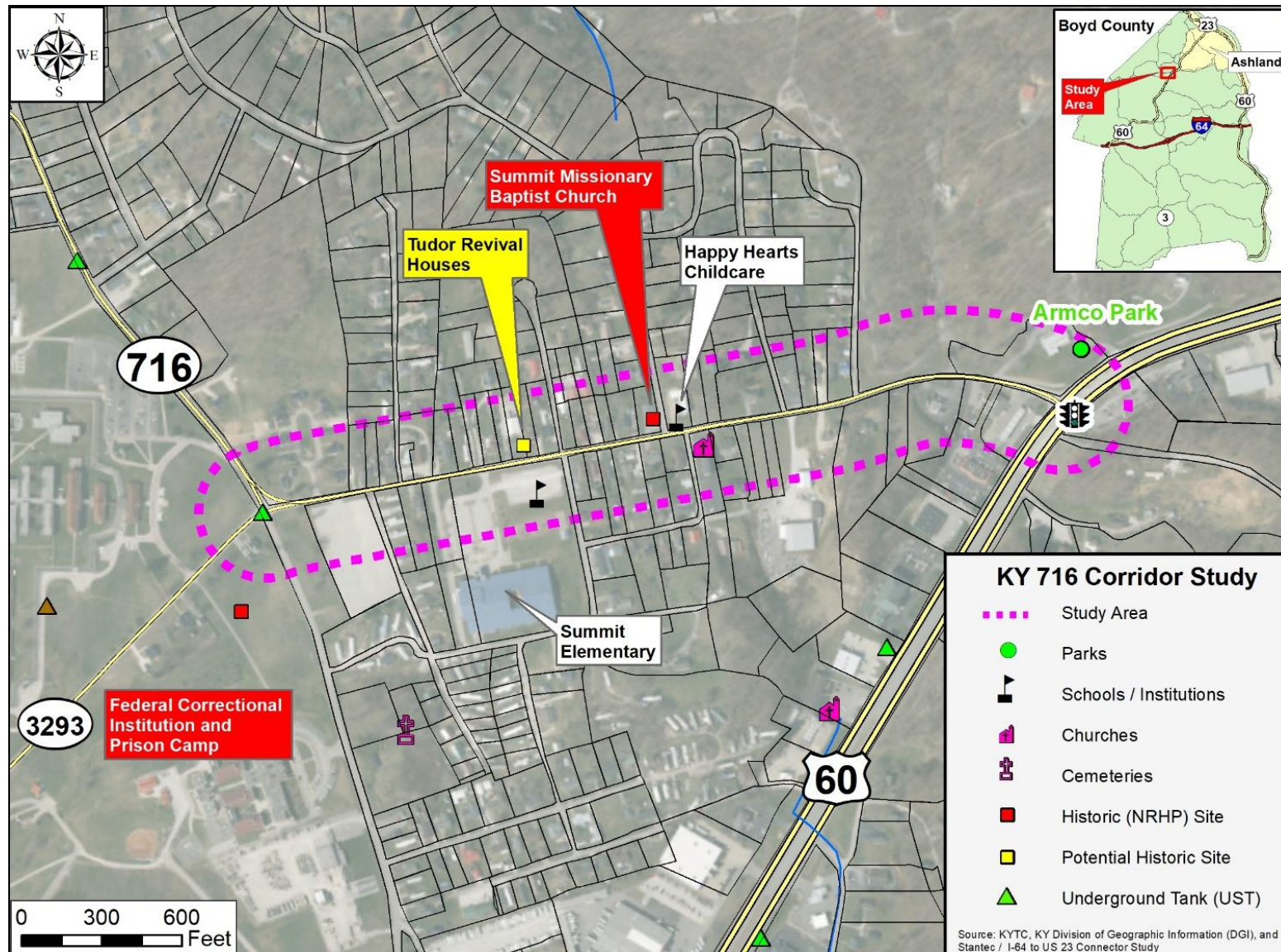


Figure 1: Study Area

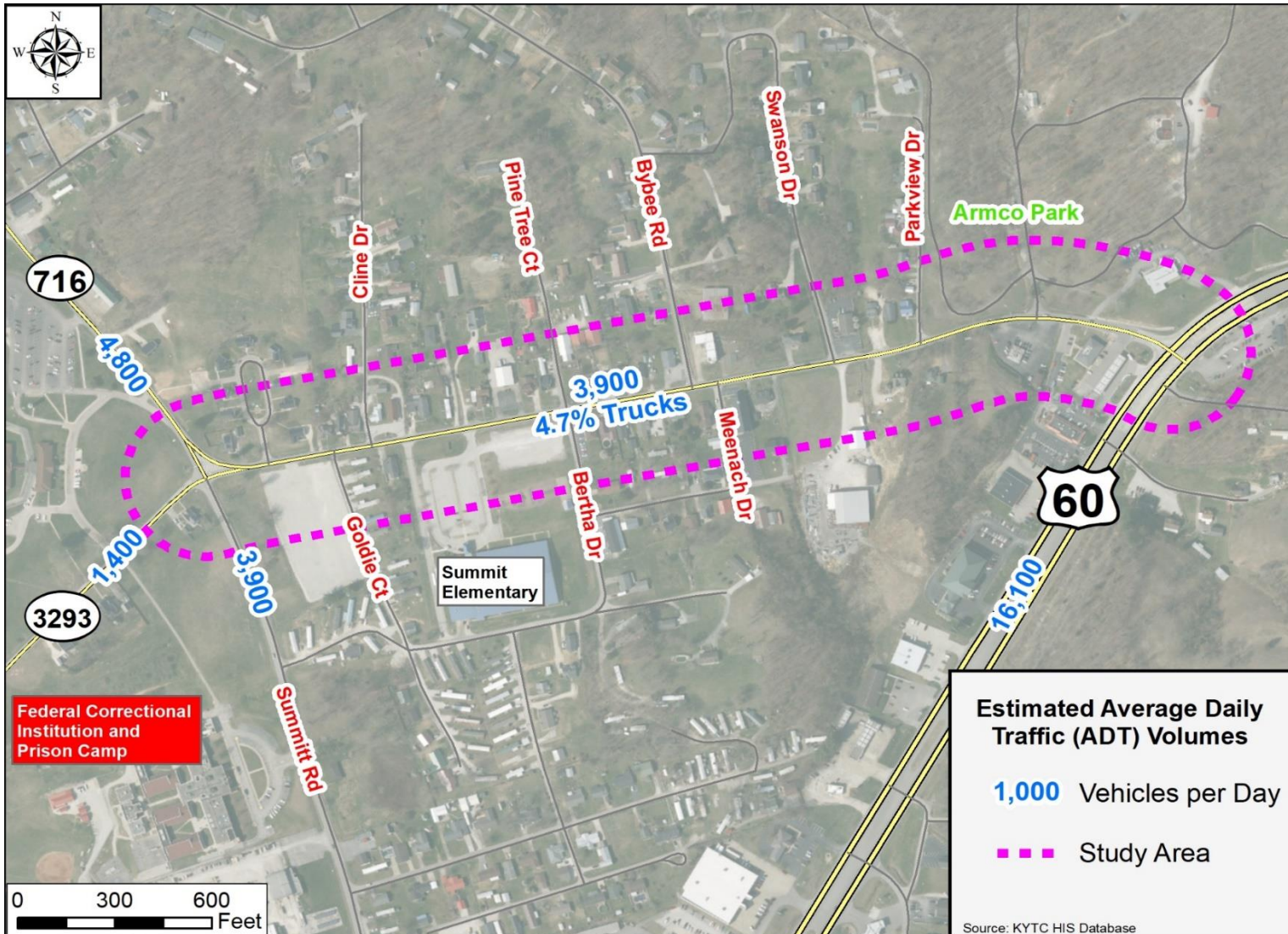


Figure 2: Average Daily Traffic

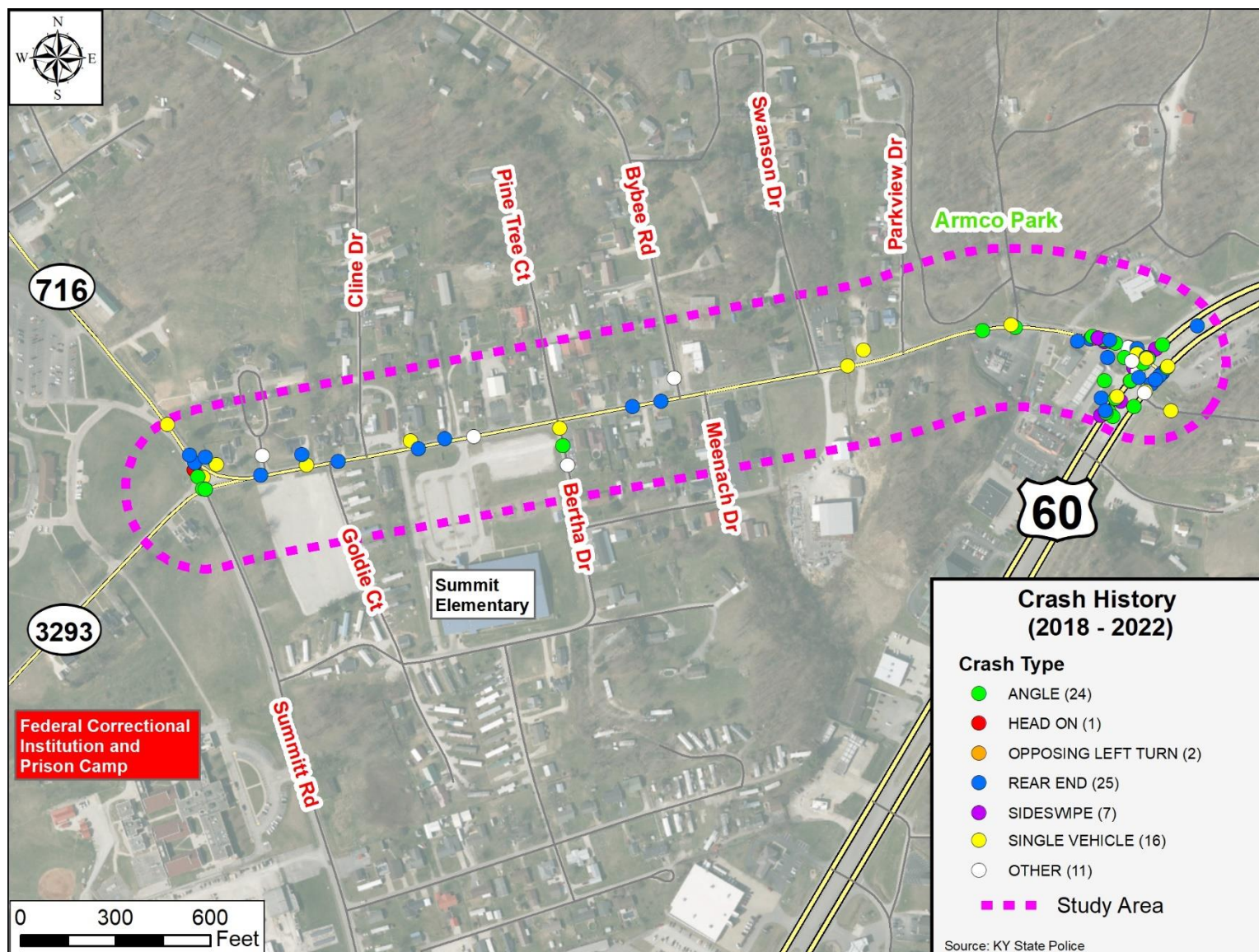


Figure 3: Crash History

Of the 86 reported crashes over the five-year period, 14 resulted in an injury (16 percent) and 72 resulted in property damage only (84 percent).

8. The Crash Data Analysis Tool CDAT was used to perform an Excess Expected Crashes (EEC) analysis. EEC is a measure of the crash frequency at a given site compared to what is expected based on current conditions (geometrics, traffic, etc.). A positive EEC indicates more crashes are occurring than should be expected. The segment of KY 716 from MP 0.00 to MP 0.56 was found to have an EEC of 2.2 crashes per year and a segment level of service safety (LOSS) of 3, which indicates moderate to high potential for crash reduction.
9. Turning movement counts were collected at three intersections on the study portion of KY 716, as shown in **Figure 4**:
 - KY 716 at KY 3293
 - KY 716 at Summit Elementary
 - KY 716 and US 60

During a recent site visit, the drop-off and pick-up traffic patterns at Summit Elementary were observed. During the AM drop-off, drivers are directed to turn into the school's main entrance, complete a full circle, and exit on Bertha Drive via the gravel parking lot. During the PM pick-up, vehicles queue in the gravel parking lot until dismissal, when they are systematically released to pick up their child and then exit from the school's main entrance by a right-only turn onto eastbound KY 716.

- It was noted that several eastbound vehicles on KY 716 were subsequently observed making a U-turn using the State Farm parking lot to travel westbound on KY 716.
10. Existing peak hour traffic was analyzed at the intersections using Highway Capacity Software (HCS). Level of service (LOS), a qualitative measure describing operational conditions, was used to evaluate the adequacy of the existing roadway. In rural areas, LOS C or better is desirable and in urban areas, LOS D or better is desirable. The existing analysis shows all intersections operating at LOS of B or better, as shown in **Table 1**.
 11. Historical volumes from the KYTC traffic count database show that daily traffic has decreased at a rate of 2.65 percent per year over the past 20 years, as shown in **Figure 5**.
 12. Projections from the KY State Data Center show Boyd County's population has declined at a rate of 0.54 percent per year from 2000 to 2020, as shown in **Figure 6**.

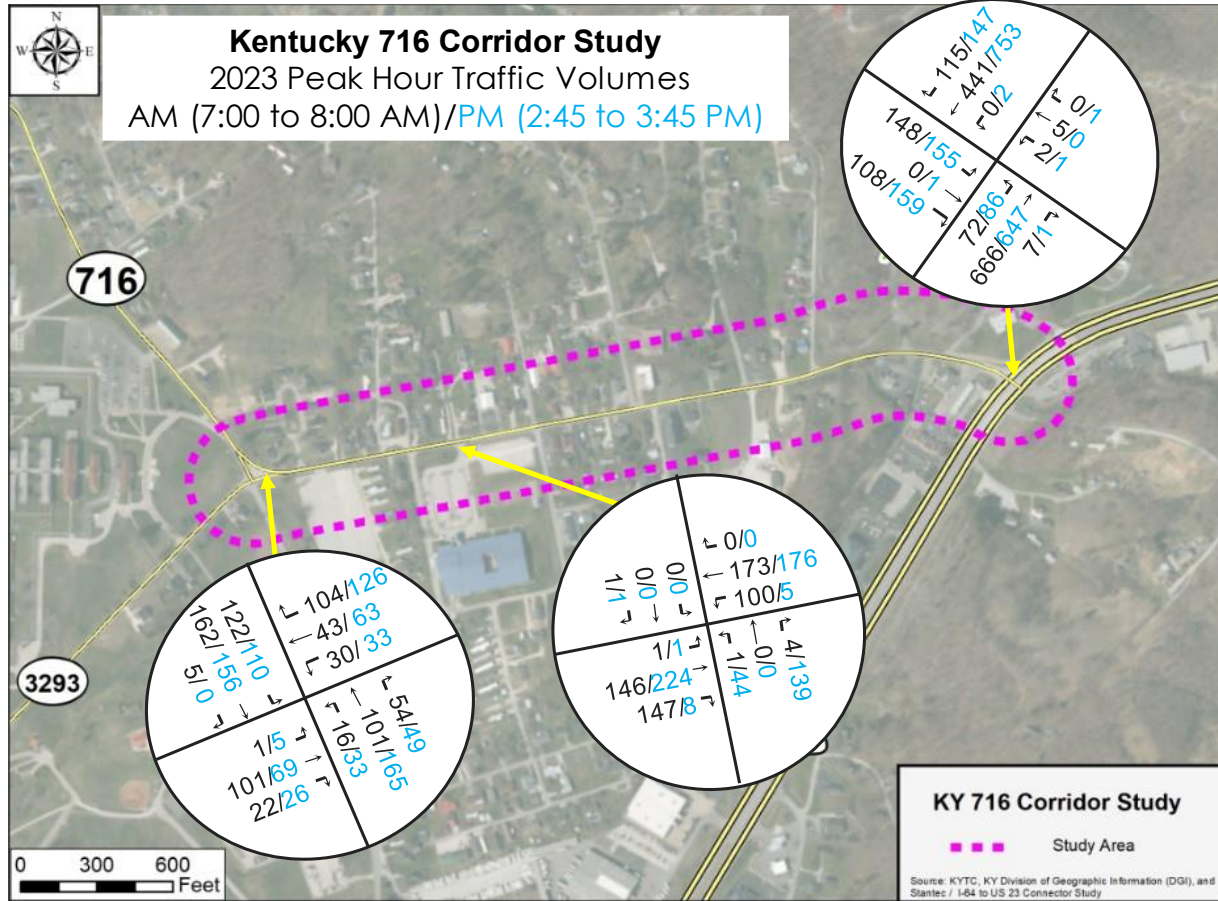


Figure 4: Turning Movement Counts

Table 1: Existing HCS Summary

Intersection	Approach	AM Peak		PM Peak	
		LOS	Delay (s/veh)	LOS	Delay (s/veh)
KY 716 at US 60	EB KY 716	C	27.8	C	28.9
	WB Car Lot	C	23.3	C	23.4
	SB US 60	B	11.9	B	12.9
	NB US 60	A	6.4	A	8.9
	Total	B	11.3	B	13.9
KY 716 at Summit Elementary	EB KY 716	A	0.0	A	0.0
	WB KY 716	A	4.0	A	0.3
	SB Private Dr.	A	9.6	A	9.5
	NB Elementary School	B	12.3	B	14.1
	Total	A	2.0	A	4.4
KY 716 at KY 3293	EB Little Garner Rd.	A	9.5	A	9.7
	WB KY 716	A	9.2	A	9.9
	SB KY 716	B	11.4	B	11.9
	NB Summit Rd.	A	9.3	B	11.1
	Total	B	10.3	B	11.1

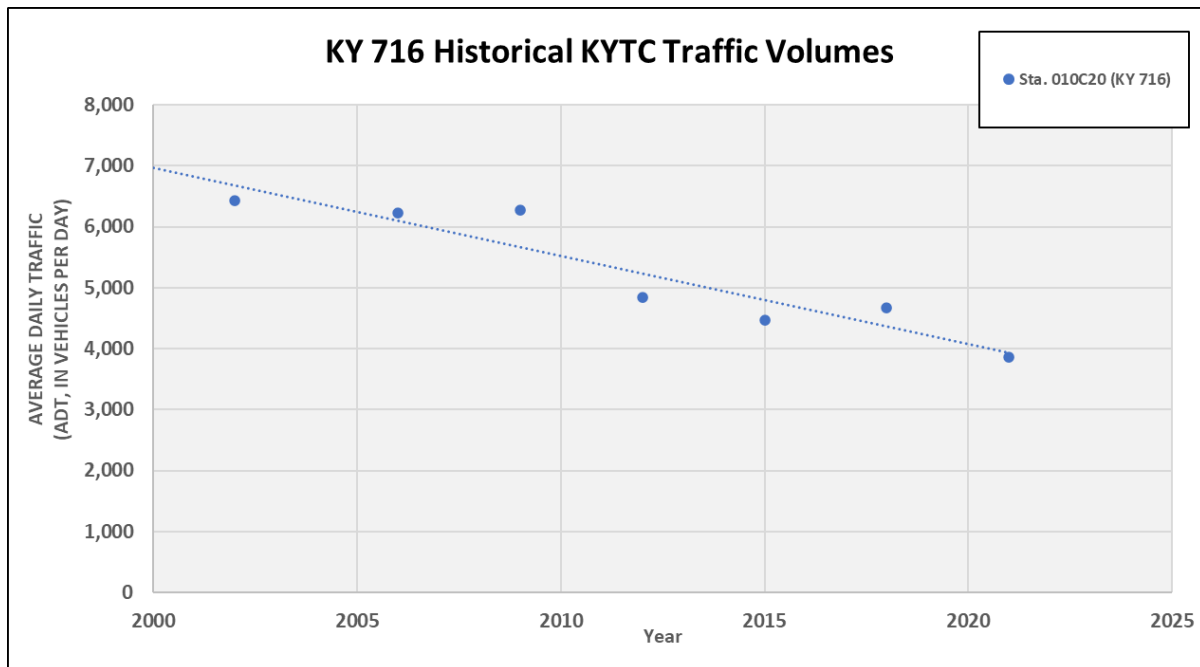


Figure 5: Historical Traffic Volumes

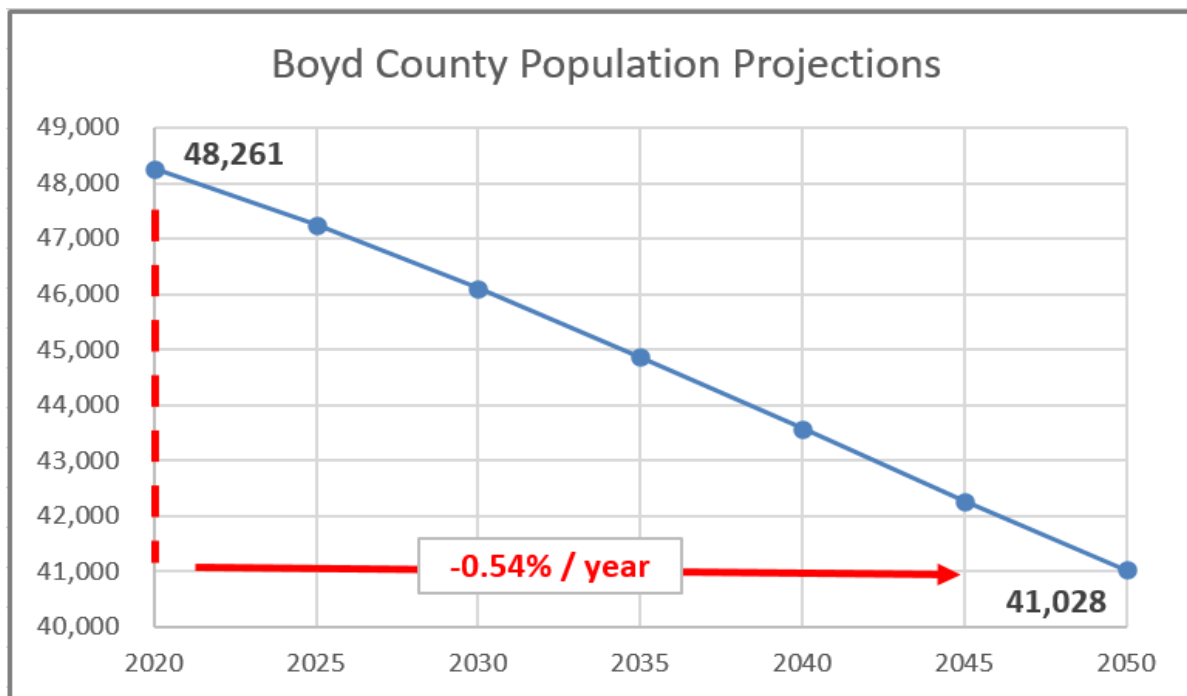


Figure 6: Population Projections

13. Outputs from the KYOVA Travel Demand Model (TDM) were used to develop growth rates on KY 716 from 2020 to 2040. As shown in **Figure 7**, growth rates range from 0.39 to 0.73 percent per year.
14. Based on outputs from the KYOVA TDM, population projections, and historical traffic, two growth rates were used to forecast traffic: 0.5 percent and 0.75 percent. These two scenarios were developed to show a range of potential traffic on KY 716, with 0.75 percent representing the high end of what is expected.
15. Two daily traffic forecast scenarios were developed using the proposed 2045 growth rates. Under the 0.5 percent growth rate scenario, KY 716 is expected to carry 4,300 vpd in 2045, as shown in **Figure 8**. Under the 0.75 percent growth rate scenario, KY 716 is expected to carry 4,600 vpd, as shown in **Figure 9**.
16. 2045 weekday peak hour traffic was analyzed at the three intersections using HCS. The analysis revealed all intersections are expected to operate at LOS of B or better in 2045, as shown in **Table 2** and **Table 3**.
17. Three potential improvement concepts were then presented: three-lane widening with multimodal improvements, improved two lane section with sidewalks, and spot improvements along the corridor.
 - A 1960 water main extension plan was found to contain plans for future five-foot sidewalks along each side of KY 716.
 - The project team discussed the possibility of constructing sidewalks on one side of the roadway to minimize impacts due to the large number of utilities along the corridor both aerial and buried.
 - There is potential for KYOVA to fund a portion of the project along the corridor if the concept increased public safety and reduced emissions. Utilizing KYOVA funding and additional sources such as Safe Routes to School and Highway Safety Improvement Program (HSIP), there is a possibility of full funding for the project with no match necessary.

Multiple spot improvements were also discussed. Signing and marking improvements were noted to be cost effective safety improvements. The main subject of marking improvements was the US 60 intersection. Multiple safety concerns were noted on the northbound portion of the intersection as a 20-foot unmarked median is in place. Additionally, the left-turn from northbound US 60 was noted to have unclear and faded striping.

- It was noted that the US 60 intersection had been remarked in the last three years. All signals and detectors are currently working properly.
18. The next steps are to meet with Local Officials, develop final traffic forecasts, and develop improvement concepts.

The meeting ended at approximately 11:30 AM EDT.

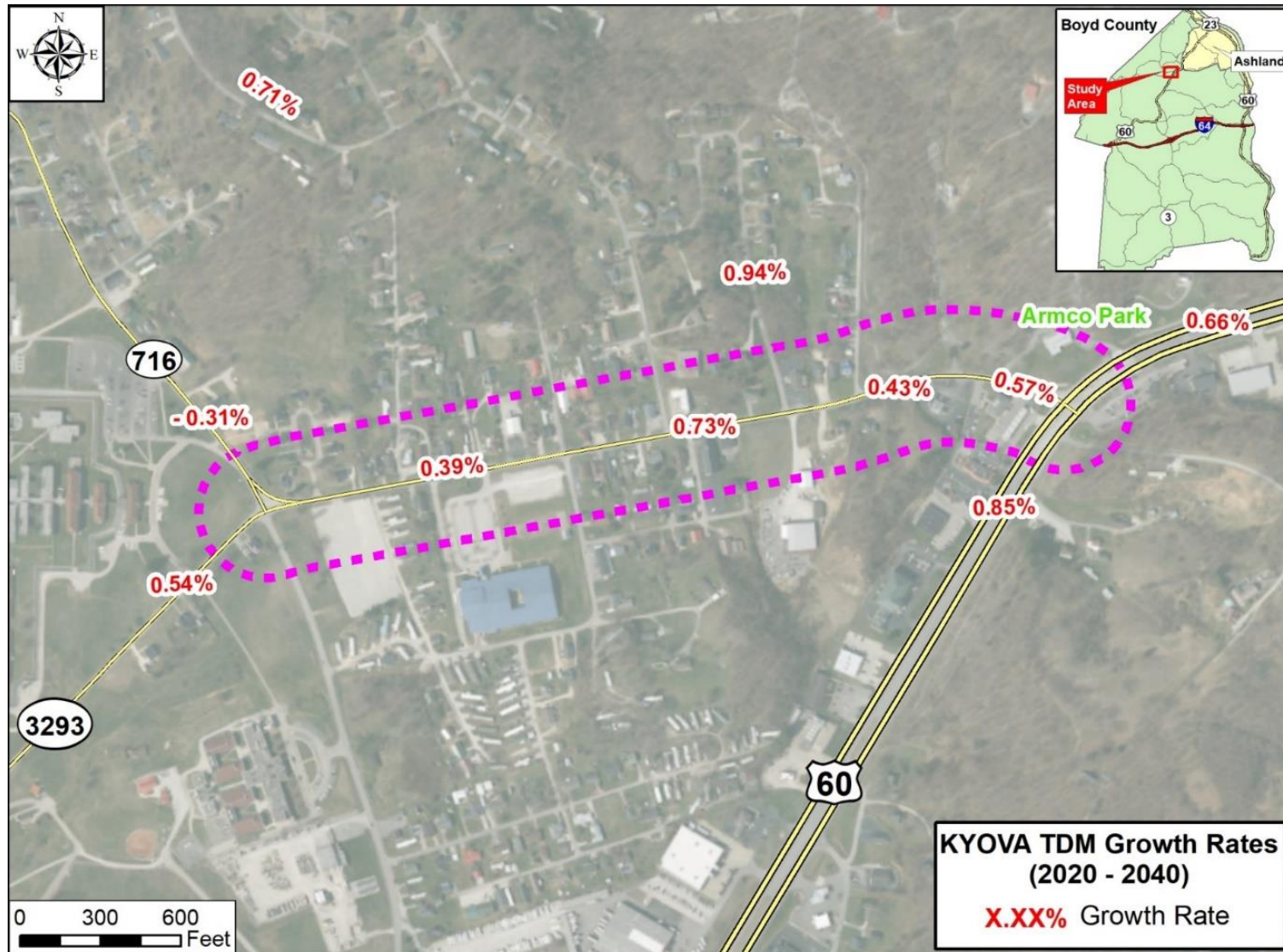
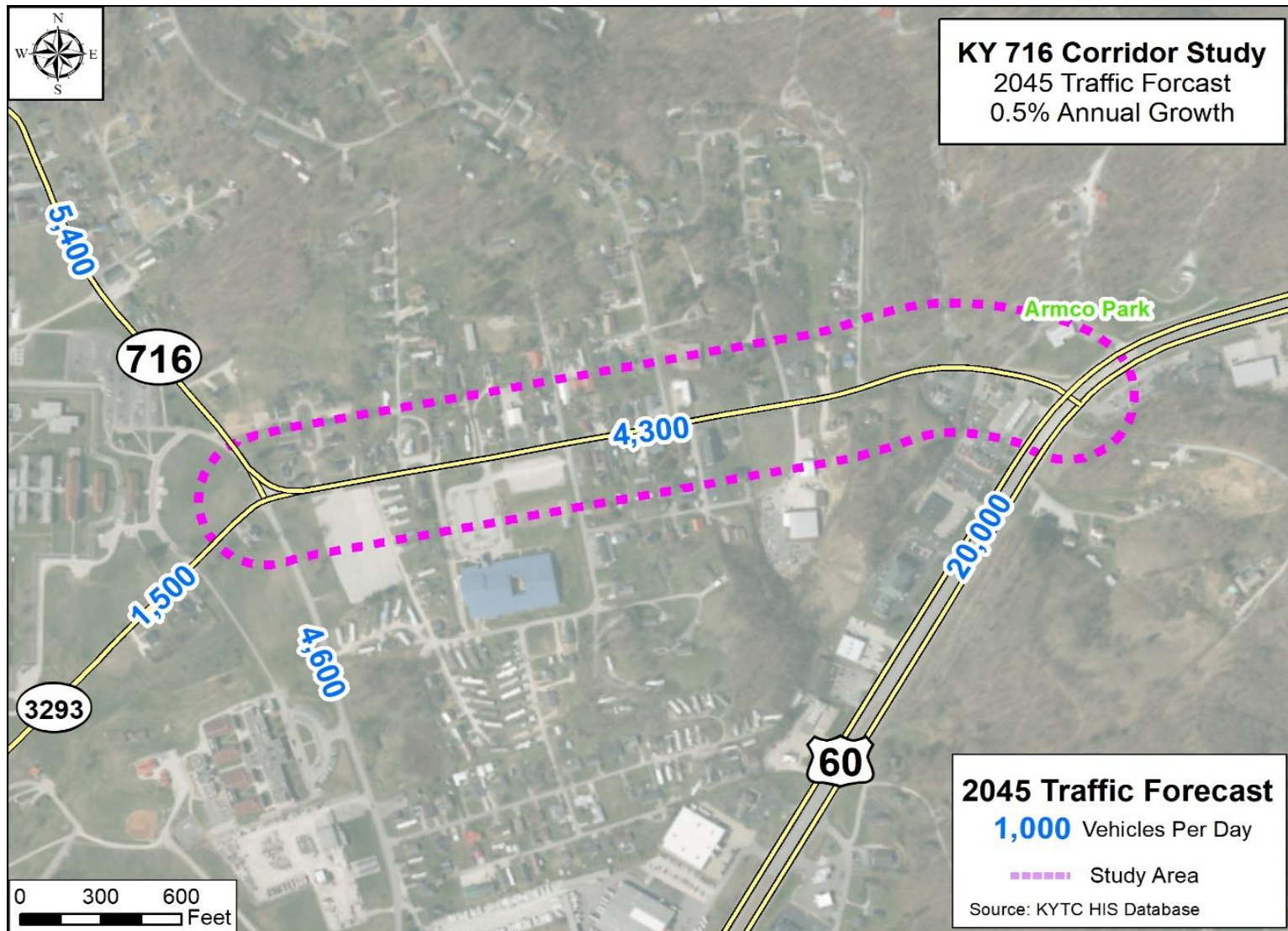


Figure 7: KYOVA Growth Model



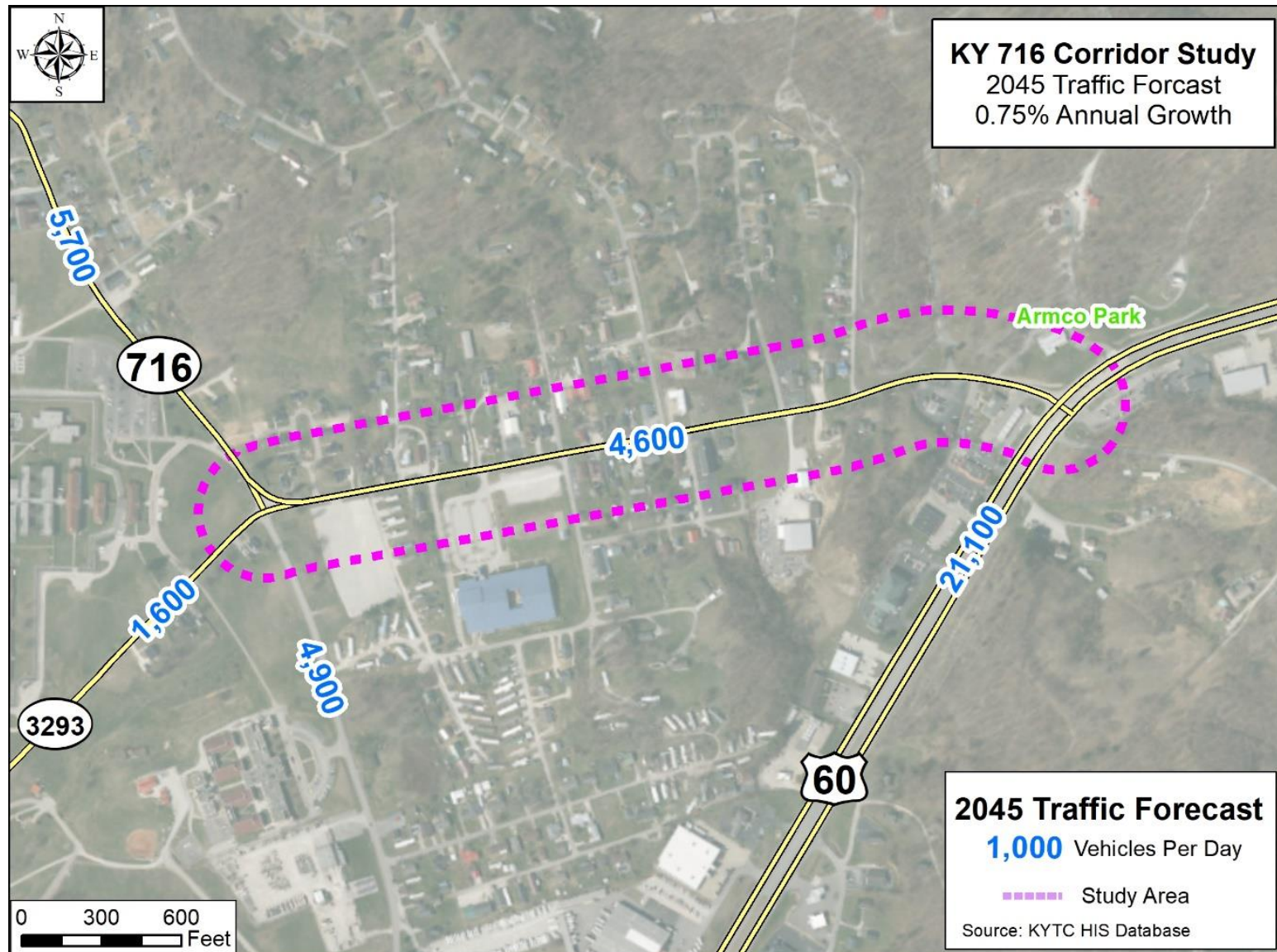


Figure 9: 2045 Daily Traffic Forecasts (0.75% Annual Growth)

Table 2: 2045 HCS Results (0.5% Annual Growth)

Intersection	Approach	AM Peak		PM Peak	
		LOS	Delay (s/veh)	LOS	Delay (s/veh)
KY 716 at US 60	EB KY 716	C	27.9	C	29.0
	WB Car Lot	C	23.0	C	23.1
	SB US 60	B	11.8	B	14.0
	NB US 60	A	7.2	A	9.8
	Total	B	12.3	B	14.7
KY 716 at Summit Elementary	EB KY 716	A	0.0	A	0.0
	WB KY 716	A	4.4	A	0.3
	SB Private Drive	A	9.8	A	9.6
	NB Elementary School	B	13.2	C	16.0
	Total	A	2.5	A	4.7
KY 716 at KY 3293	EB KY 716	A	9.7	B	10.0
	WB KY 716	A	9.4	B	10.2
	SB Summit Road	A	11.9	B	12.6
	NB Summit Road	B	9.6	B	11.7
	Total	B	10.6	B	11.1

Table 3: 2045 HCS Results (0.75% Annual Growth)

Intersection	Approach	AM Peak		PM Peak	
		LOS	Delay (s/veh)	LOS	Delay (s/veh)
KY 716 at US 60	EB KY 716	C	27.9	C	29.4
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	NB US 60	A	7.7	B	15.5
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KY 716 at Summit Elementary	EB KY 716	A	0.0	A	0.0
	WB KY 716	A	4.5	A	0.3
	SB Private Drive	A	9.9	A	9.7
	NB Elementary School	B	13.2	C	17.3
	Total	A	2.7	A	4.9
KY 716 at KY 3293	EB KY 716	A	9.8	B	10.1
	WB KY 716	A	9.5	B	10.4
	SB Summit Road	B	12.2	B	13.0
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	Total	B	10.8	B	11.9

Meeting Minutes

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FROM: Dan O'Dea
Project Manager
Stantec Consulting Services Inc.

DATE: August 14th, 2023

SUBJECT: KY 716 Corridor Study
Boyd County
KYTC Item No. 9-180.00
Local Officials Team Meeting No. 1

The first Local Officials Meeting for the subject project was held at the Boyd County Middle School on June 29, 2023, at 1:00 p.m. EDT. The following individuals were in attendance:

Tim England	Boyd Co. EMA
Pete Farley	Boyd County Public Schools
Charlie Kits	FBOP Ashland
Justin Pruitt	Boyd Co. Fiscal Court
Randy Stapleton	Commissioner
Catherine Davis	KYTC – Central Office Planning
*Dave Heil	KYTC – Central Office Planning
Blake Jones	KYTC – District 9
Michael Read	KYTC – District 9
*Terri Sicking	KYOVA Interstate Planning Commission
Brent Sweger	KYTC – Central Office Design
*Randy Turner	KYTC – Central Office Design
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 - It was noted most of the “other” category included residents backing out of their driveways and striking other vehicles or being struck.

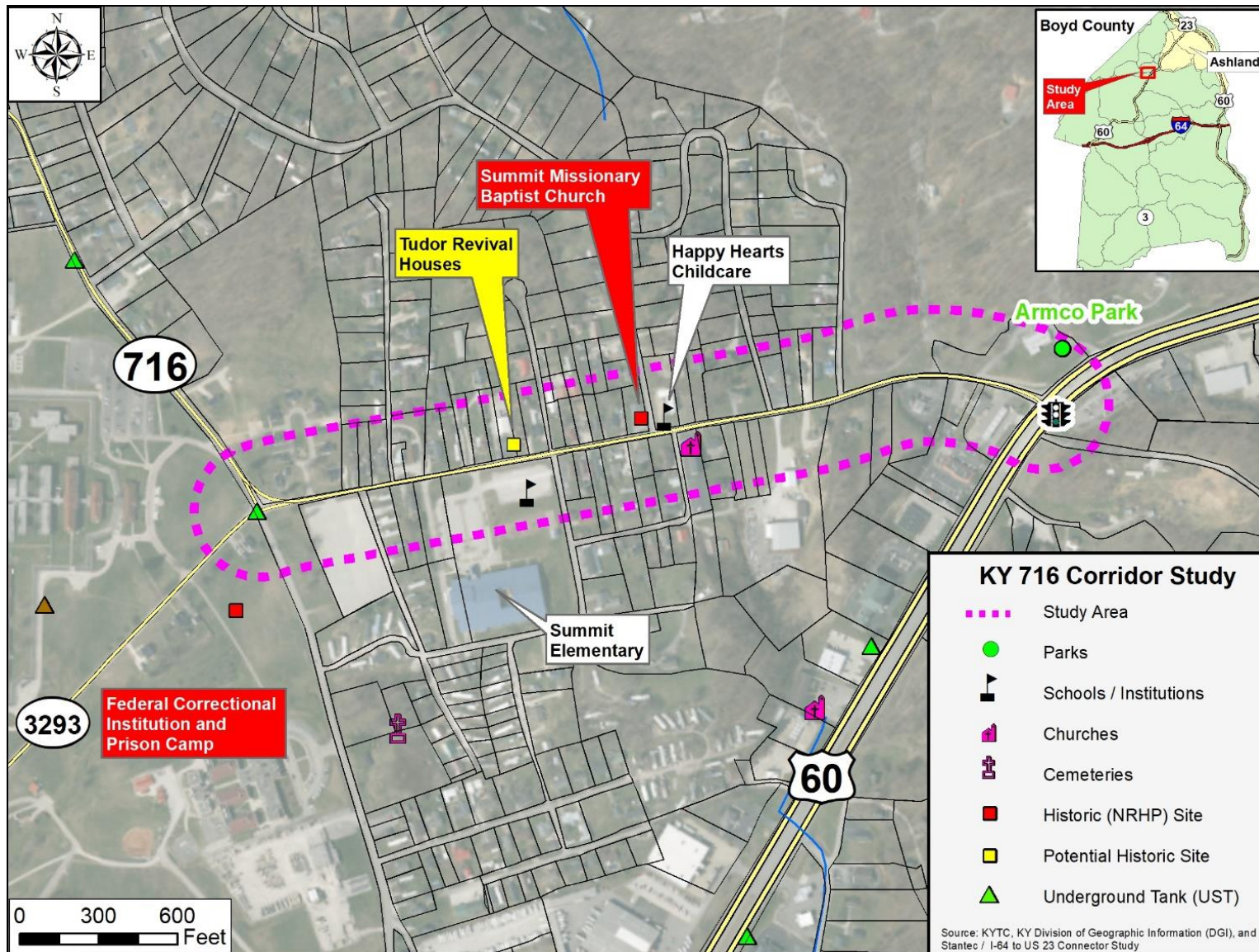


Figure 1: Study Area

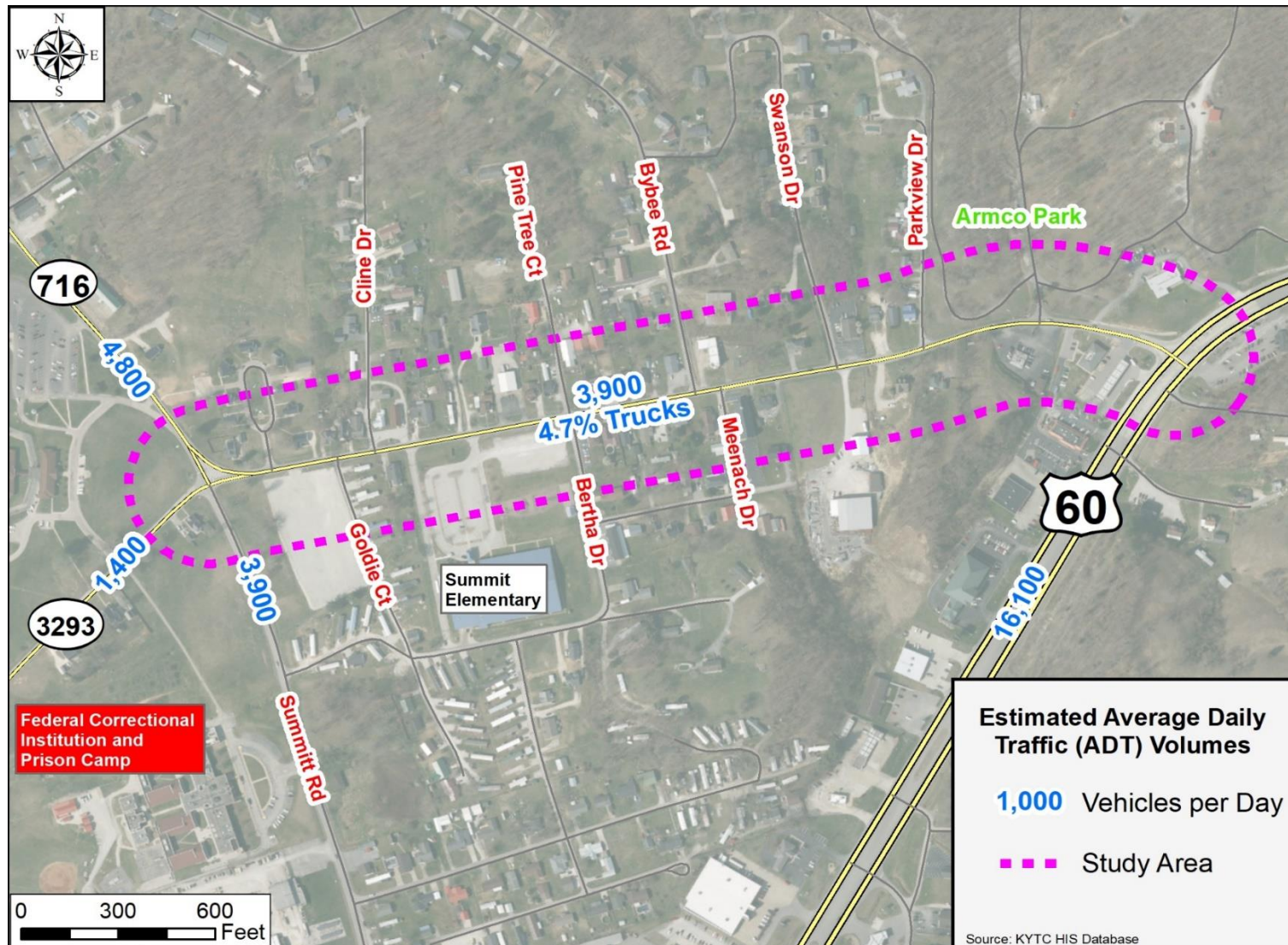


Figure 2: Average Daily Traffic

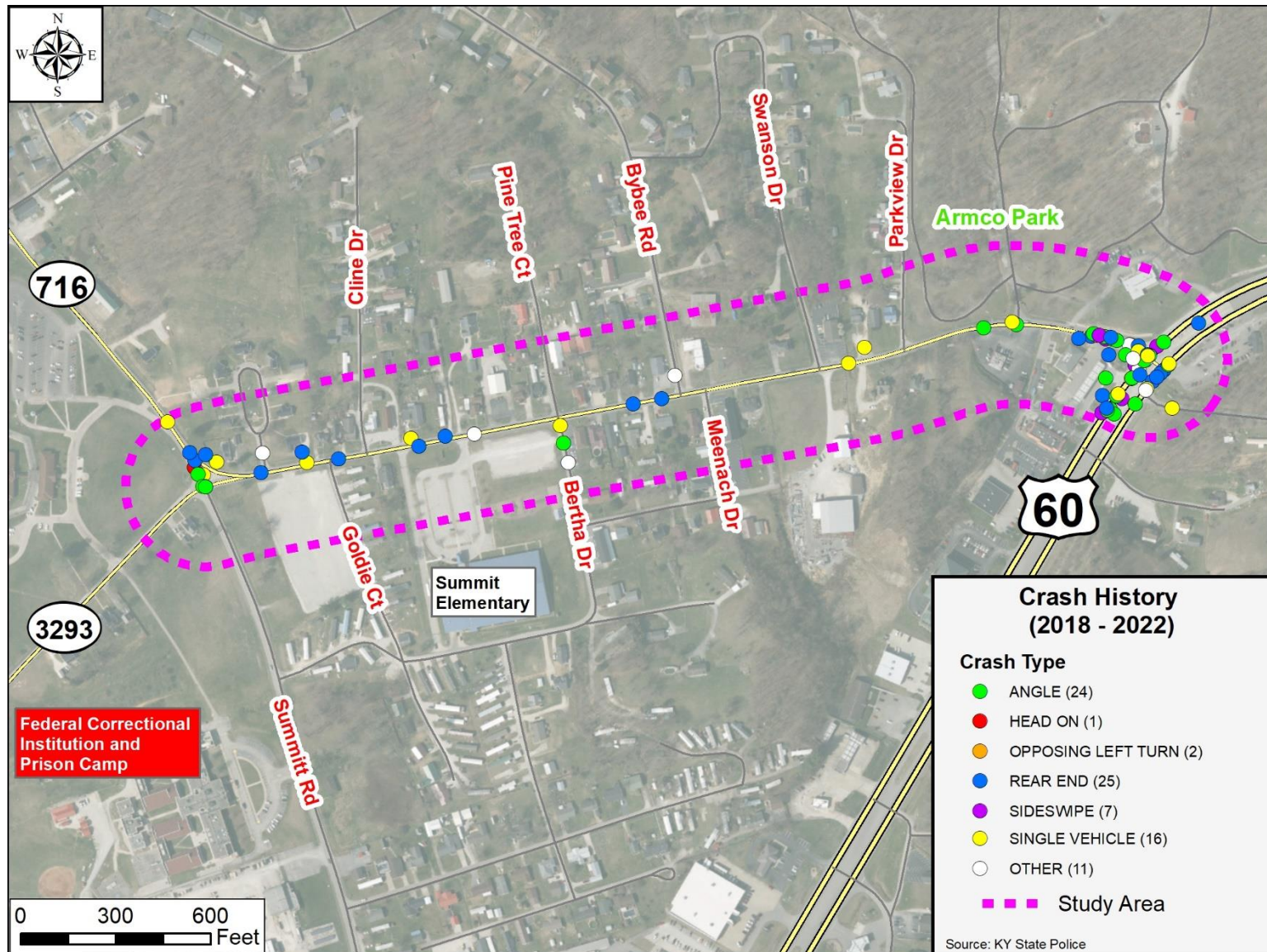


Figure 3: Crash History

Of the 86 reported crashes over the five-year period, 14 resulted in an injury (16 percent) and 72 resulted in property damage only (84 percent).

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9. Turning movement counts were collected at three intersections on the study portion of KY 716, as shown in **Figure 4**:
 - KY 716 at KY 3293
 - KY 716 at Summit Elementary
 - KY 716 and US 60

During a recent site visit, the drop-off and pick-up traffic patterns at Summit Elementary were observed. During the AM drop-off, drivers are directed to turn into the school's main entrance, complete a full circle, and exit on Bertha Drive via the gravel parking lot. During the PM pick-up, vehicles queue in the gravel parking lot until dismissal, when they are systematically released to pick up their child and then exit from the school's main entrance by a right-only turn onto eastbound KY 716.

- It was noted that several eastbound vehicles on KY 716 were observed making a U-turn using the State Farm parking lot to travel westbound on KY 716.
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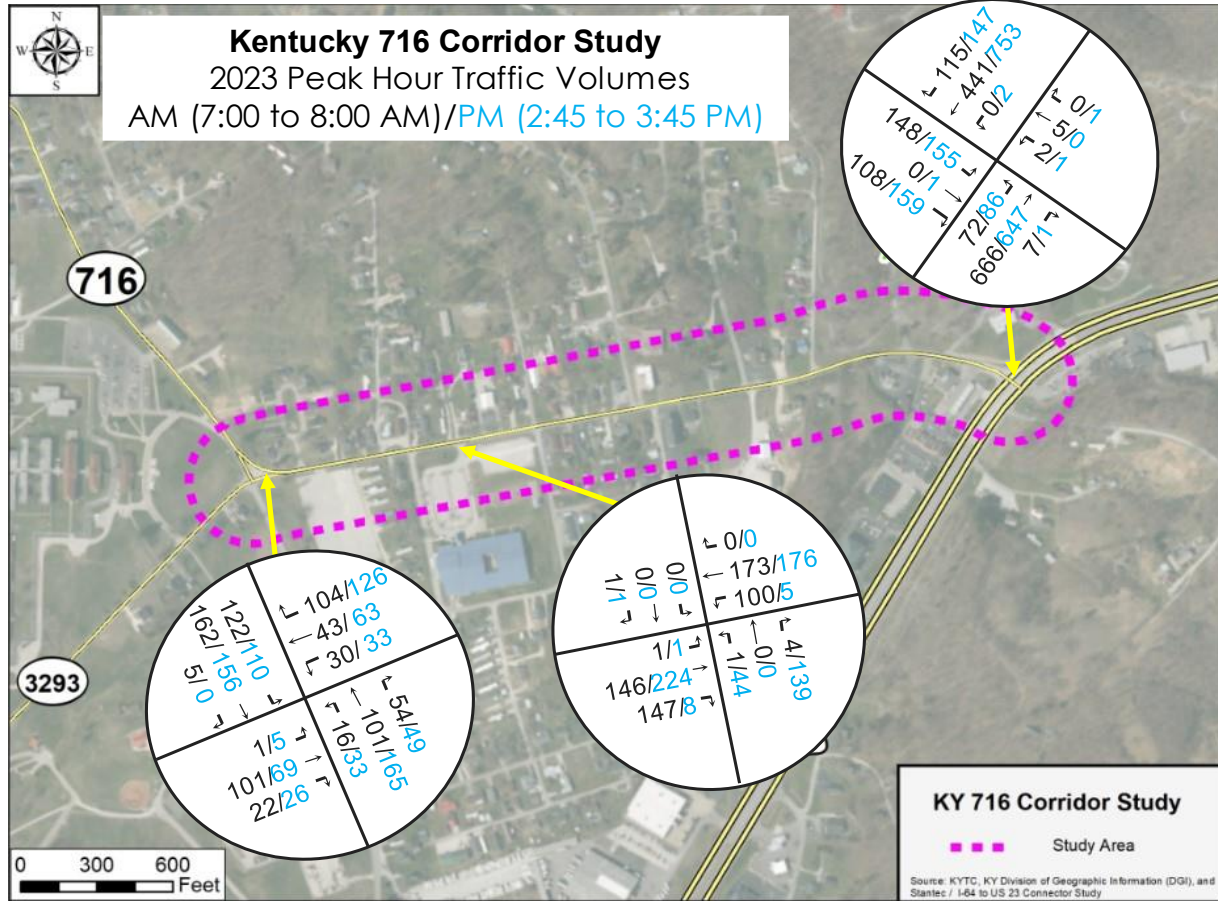


Figure 4: Turning Movement Counts

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	SB US 60	B	11.9	B	12.9
	NB US 60	A	6.4	A	8.9
	Total	B	11.3	B	13.9
KY 716 at Summit Elementary	EB KY 716	A	0.0	A	0.0
	WB KY 716	A	4.0	A	0.3
	SB Private Dr.	A	9.6	A	9.5
	NB Elementary School	B	12.3	B	14.1
	Total	A	2.0	A	4.4
KY 716 at KY 3293	EB Little Garner Rd.	A	9.5	A	9.7
	WB KY 716	A	9.2	A	9.9
	SB KY 716	B	11.4	B	11.9
	NB Summit Rd.	A	9.3	B	11.1
	Total	B	10.3	B	11.1

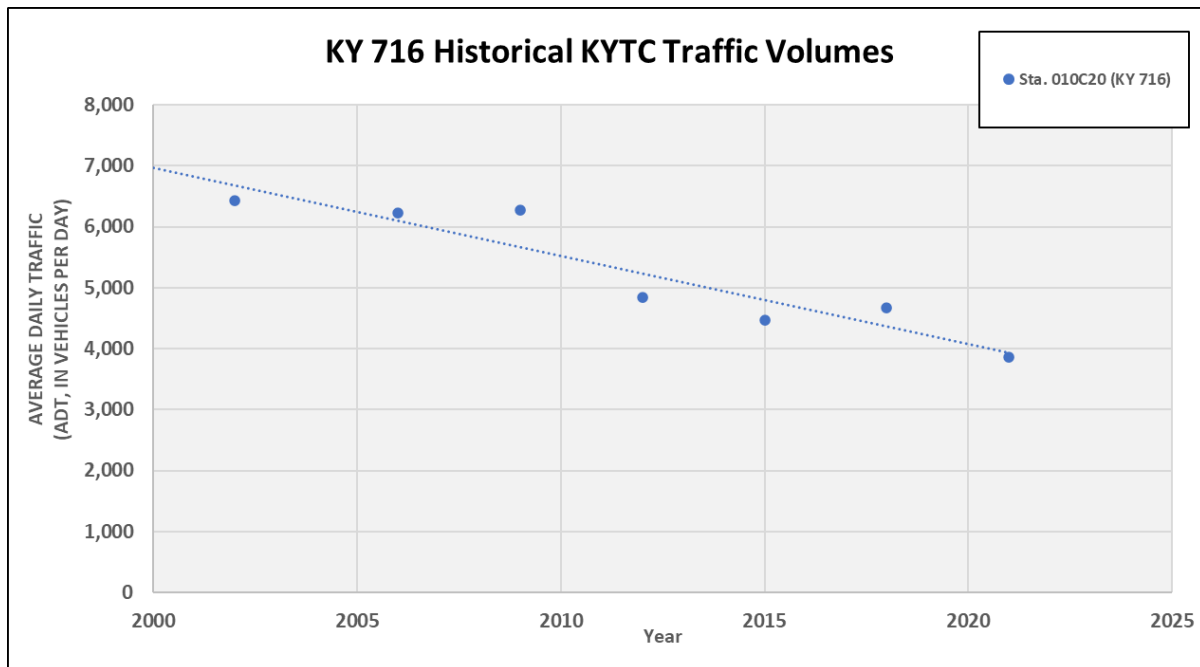


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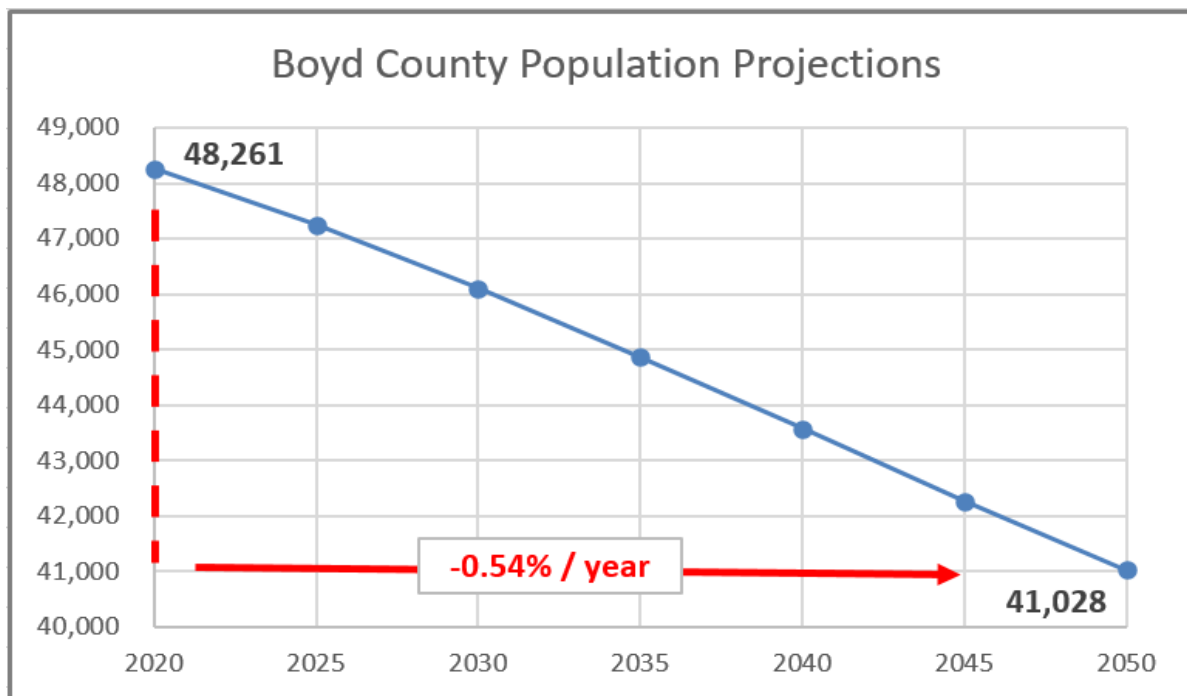


Figure 6: Population Projections

13. Outputs from the KYOVA Travel Demand Model (TDM) were used to develop growth rates on KY 716 from 2020 to 2040. As shown in **Figure 7**, growth rates range from 0.39 to 0.73 percent per year.
14. Based on outputs from the KYOVA TDM, population projections, and historical traffic, two growth rates were used to forecast traffic: 0.5 percent and 0.75 percent. These two scenarios were developed to show a range of potential traffic on KY 716, with 0.75 percent representing the high end of what is expected.
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16. 2045 weekday peak hour traffic was analyzed at the three intersections using HCS. The analysis revealed all intersections are expected to operate at LOS of B or better in 2045, as shown in **Table 2** and **Table 3**.
17. Three potential improvement concepts were then presented: three-lane widening with multimodal improvements, improved two lane section with sidewalks, and spot improvements along the corridor.
 - Local Officials and the project team discussed the possibility of constructing sidewalks on one side of the roadway to minimize impacts due to the large number of utilities along the corridor both aerial and buried. It was found the prison would not allow for the construction of a sidewalk in front of it. It was noted that the prison has ownership of all four corners of KY 716 at KY 3293 and a small section of housing on Summit Road.
 - Summit Elementary School was found to have an enrollment of approximately 500 students and between 30 and 40 staff. The school system has no plans to expand Summit Elementary.
 - Local Officials mentioned that courtesy crashes were common from the Speedway on the east end of the study corridor. This scenario occurs when a well-meaning driver leaves a gap in the queue of eastbound traffic on KY 716 to allow a vehicle to turn left from Speedway and possibly even motions for the driver to proceed. Subsequently, the driver from Speedway pulls out and is involved in a collision with another vehicle heading westbound on KY 716 which was obstructed from their view.
 - Local Officials shared a belief of a rise in population due to the construction of a new casino and racetrack being constructed in the area.
18. Stakeholder feedback surveys were distributed to local officials present at the meeting as well as emailed for completion by others. The purpose of the survey was to identify the need for improvements, transportation issues in the study area, and suggestions for improvements. A copy of the survey is attached in Appendix A.

19. The project team then outlined the next steps. Upon receiving all stakeholder feedback surveys Stantec will develop improvement concepts to discuss at Project Team Meeting No. 2.

The meeting ended at approximately 2:00 PM EDT.

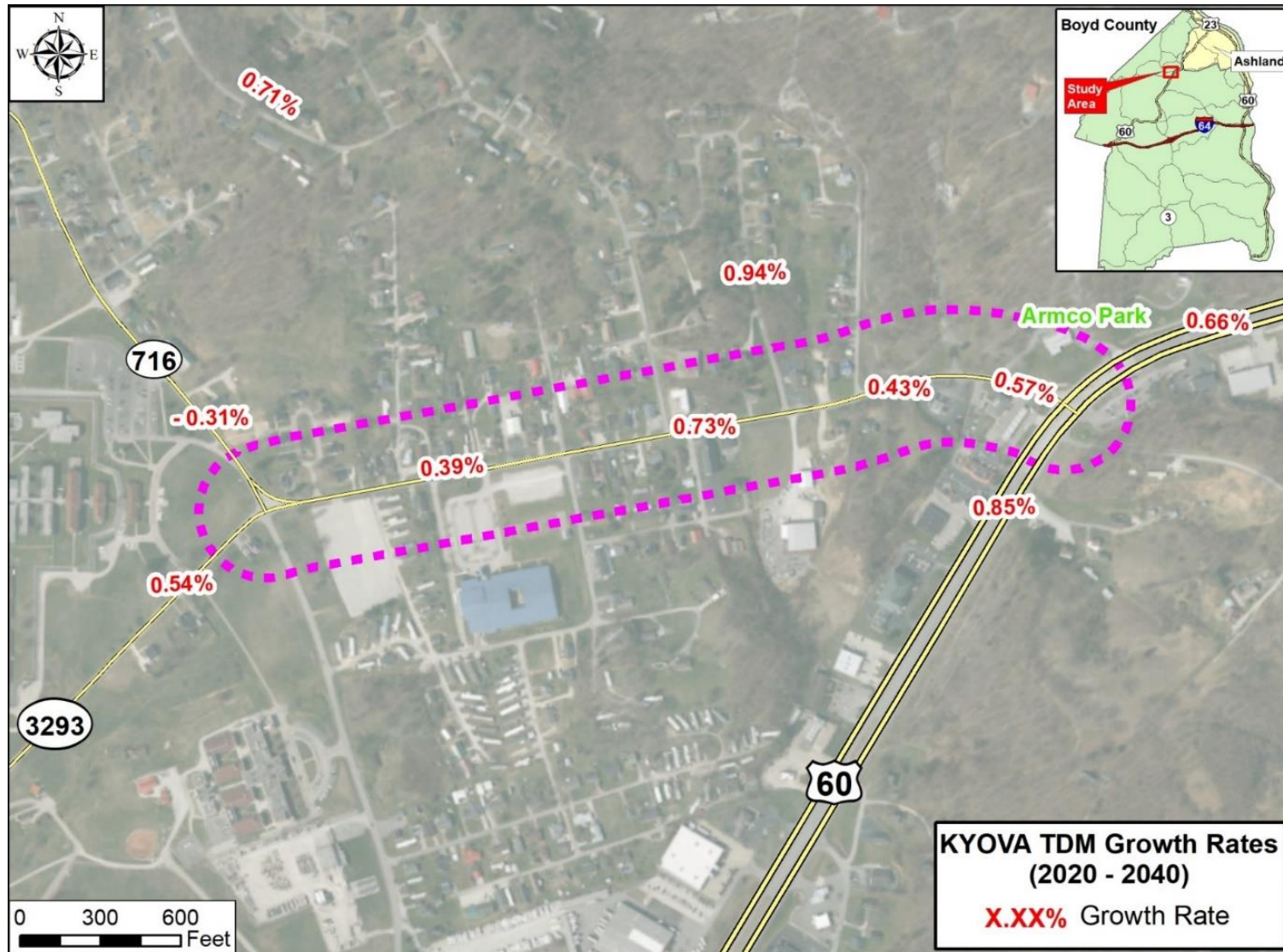


Figure 7: KYOVA Growth Model

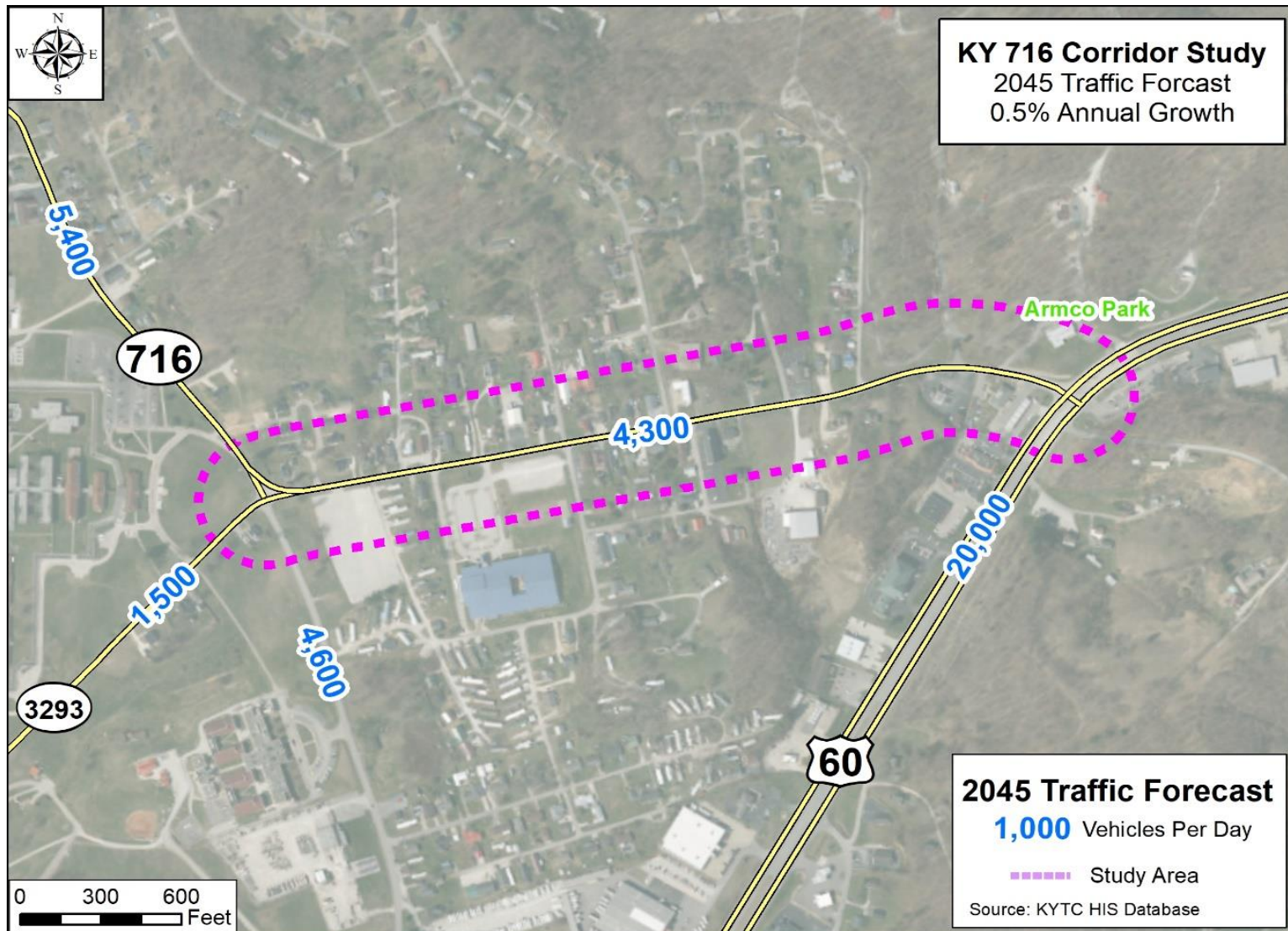


Figure 8: 2045 Daily Traffic Forecast (0.5% Annual Growth)

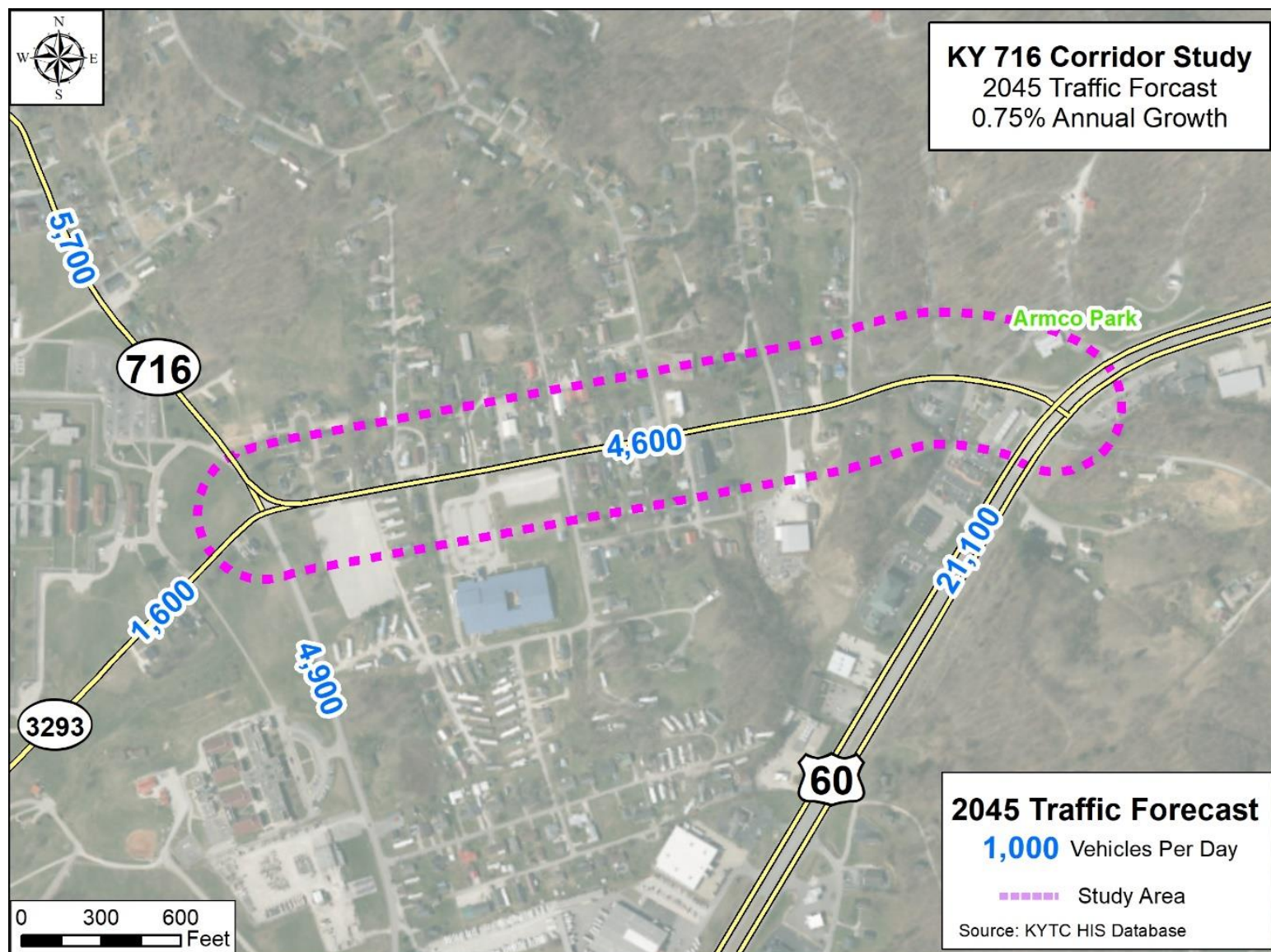


Figure 9: 2045 Daily Traffic Forecasts (0.75% Annual Growth)



Table 2: 2045 HCS Results (0.5% Annual Growth)

Intersection	Approach	AM Peak		PM Peak	
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	NB Elementary School	B	13.2	C	16.0
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KY 716 at KY 3293	EB KY 716	A	9.7	B	10.0
	WB KY 716	A	9.4	B	10.2
	SB Summit Road	A	11.9	B	12.6
	NB Summit Road	B	9.6	B	11.7
	Total	B	10.6	B	11.1

Table 3: 2045 HCS Results (0.75% Annual Growth)

Intersection	Approach	AM Peak		PM Peak	
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	SB Private Drive	A	9.9	A	9.7
	NB Elementary School	B	13.2	C	17.3
	Total	A	2.7	A	4.9
KY 716 at KY 3293	EB KY 716	A	9.8	B	10.1
	WB KY 716	A	9.5	B	10.4
	SB Summit Road	B	12.2	B	13.0
	NB Summit Road	A	9.7	B	12.0
	Total	B	10.8	B	11.9

APPENDIX A – Local Officials Feedback Survey

	COMMONWEALTH OF KENTUCKY KENTUCKY TRANSPORTATION CABINET DISTRICT 9 Local Officials/Stakeholders Meeting No. 1 KY 716 Corridor Study From US 60 (MP 0.00) to Summit Road (MP 0.56) Boyd County Item No. 9-180.00 Thursday, June 29, 2023	
<p>The objective of the study is to identify and evaluate the need for and scope of potential improvement options to improve safety, mobility, and capacity along KY 716 between US 60 and Summit Road (KY 3293) in Boyd County. The Kentucky Transportation Cabinet will use your input to help determine project needs. Please return this survey during the meeting or return it by mail through July 7, 2023.</p>		
Name: _____ Organization: _____ E-mail: _____		
1. How often do you drive the study area portion of KY 716? <input type="checkbox"/> Daily <input type="checkbox"/> 2-3 times per week <input type="checkbox"/> 2-3 times per month <input type="checkbox"/> Rarely		
2. Do you think improvements are needed along KY 716? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure		
3. What do you see as the top three transportation issues in the study area? Rank the options as 1-3 in order of importance where 1 is the highest priority and 3 is the lowest. If there are additional issues that should be included, please list them below.		
	<input type="checkbox"/> Safety <input type="checkbox"/> Lack of Turn Lanes <input type="checkbox"/> Speeding <input type="checkbox"/> School Traffic <input type="checkbox"/> Narrow Shoulders <input type="checkbox"/> Congestion	<input type="checkbox"/> US 60 Intersection <input type="checkbox"/> Summit Road Intersection <input type="checkbox"/> No Sidewalks <input type="checkbox"/> No Bicycle Accommodations <input type="checkbox"/> Other (explain)
4. Do you have any specific suggestions for improvements along KY 716? <input type="checkbox"/> Yes <input type="checkbox"/> No Please share your ideas below.		

Thank you for taking the time to complete this questionnaire.
Your input is critical to the success of this study!

Meeting Minutes

TO:	Catherine Davis KYTC Central Office Project Manager KYTC Central Office 200 Mero Street Frankfort, KY 40622	Michael Read District 9 Project Manager KYTC District Office #9 822 Elizaville Avenue Flemingsburg, KY 41041
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FROM: Dan O'Dea
Project Manager
Stantec Consulting Services Inc.

DATE: December 18, 2023

SUBJECT: KY 716 Corridor Study
Boyd County
KYTC Item No. 9-180.00
Project Team Meeting No. 2

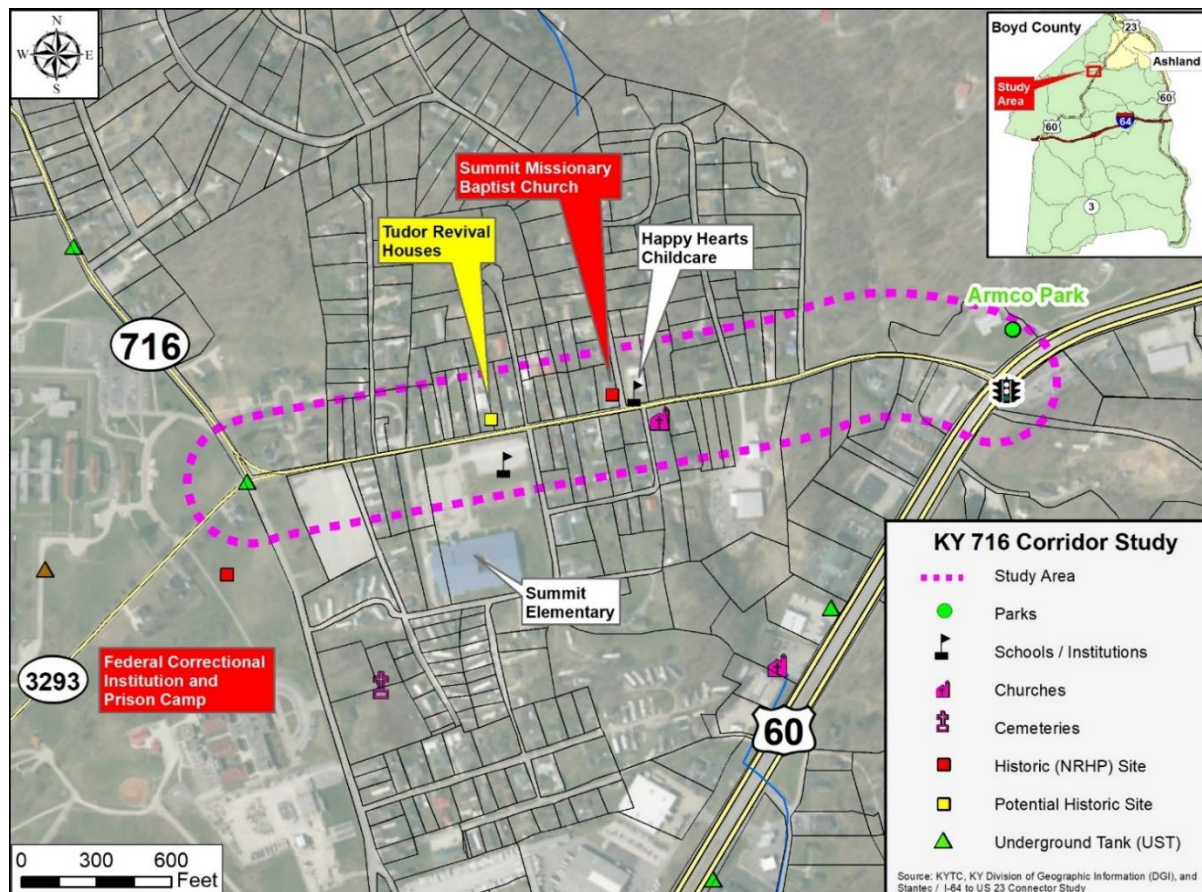
The second Project Team Meeting for the subject project was held at the District 9 Office Building on November 13, 2023, at 2:00 p.m. EST. The following individuals were in attendance:

Jayalakshmi Balaji*	KYTC – Central Office Planning
Catherine Davis	KYTC – Central Office Planning
Steve De Witte*	KYTC – Central Office Planning
Libbie Dockemeyer*	KYTC – Central Office Planning
Darrin Eldridge	KYTC – District 9
Dave Heil	KYTC – Central Office Planning
Austin Mineer	KYTC – District 9
Michael Read	KYTC – District 9
Saleem Salameh*	KYOVA Interstate Planning Commission
Terri Sicking*	KYOVA Interstate Planning Commission
Randy Turner*	KYTC – Central Office Design
Thomas Witt	KYTC – Central Office
Brian Aldridge*	Stantec Consulting Services Inc.
Len Harper	Stantec Consulting Services Inc.
Dan O'Dea	Stantec Consulting Services Inc.
Graham Winchester	Stantec Consulting Services Inc.

*Joined via Microsoft Teams

Dan O'Dea welcomed everyone and led introductions. The purpose of this meeting is to present the results from the local official's survey and to get feedback from the project team on preliminary improvement concepts. Dan O'Dea then delivered a presentation. The following enumerated items were discussed.

1. The study area, shown on **Figure 1**, includes KY 716 from the US 60 intersection at mile point 0.0 to KY 3293 at mile point 0.56.



2. The objective of the KY 716 Corridor Study is to identify and evaluate the need for and scope of potential options to improve safety, mobility, and capacity on KY 716 between US 60 and Summit Road / KY 3293. Future projects for the corridor will have an associated “purpose and need” statement.
3. For the evaluation of safety, the crash history between January 1, 2018, and December 31, 2022, was summarized as shown in **Figure 2**. The summary indicates that crashes are generally concentrated at the termini intersections of KY 716 with US 60 and KY 716 with Summit Road / KY 3293. Excess Expected Crashes (EEC) from the Crash Data Analysis Tool (CDAT) for the corridor were 2.2 crashes per year and the segment level of service safety (LOSS) was a 3 indicating a moderate to high potential for crash

reduction. However, if the segment is analyzed by excluding the last 0.1 mile in advance of intersections of KY 716 with US 60 and KY 716 with Summit Road / KY 3293, then the EEC is only 0.2. Therefore, improvement concepts for safety should be focused on the intersections with US 60 and Summit Road / KY 3293. Crashes on the tangent section in between generally include single vehicle, rear-ends, and few “other” which is mostly backing.

- It was noted that there were no crashes involving pedestrians or bicyclists.

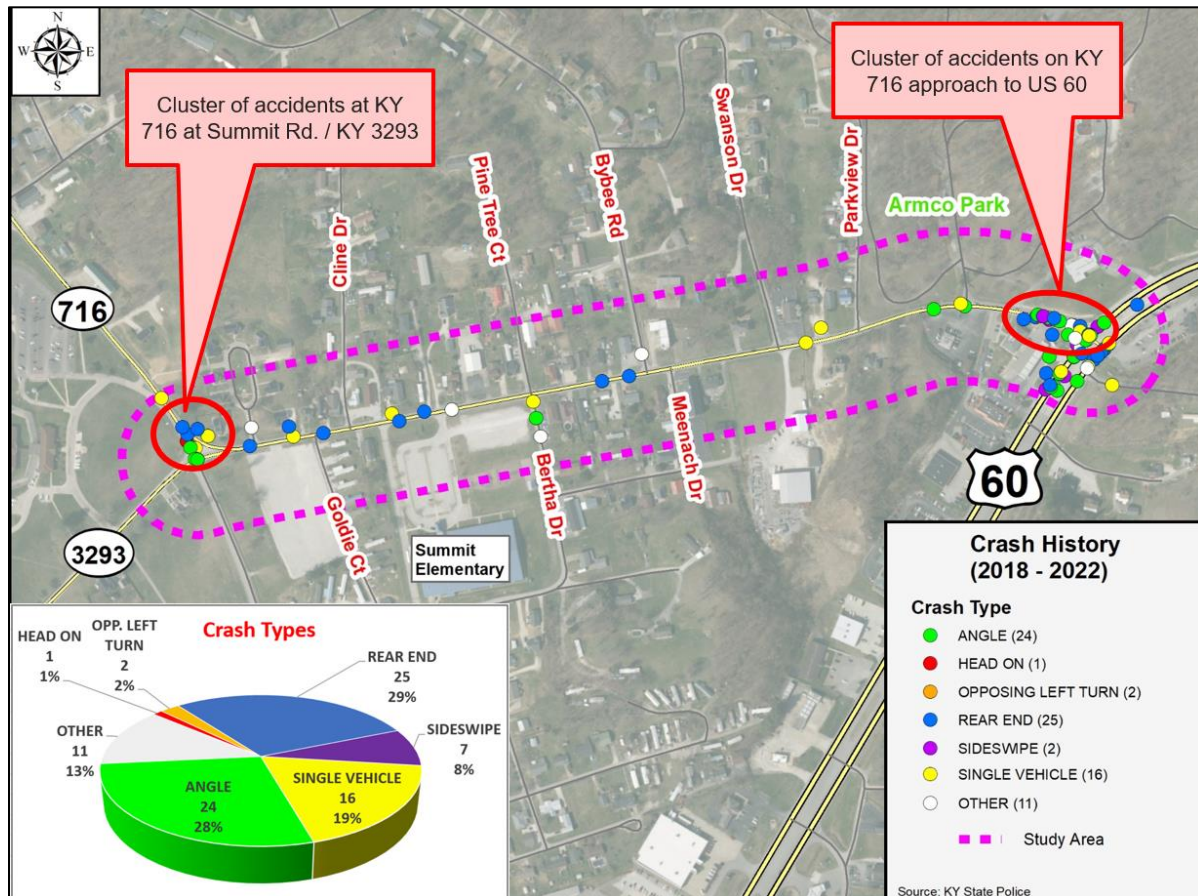


Figure 2: Crash History

- For the evaluation of mobility, “heat maps” from the STRAVA Athletic Tracking App for pedestrians and bicyclists were provided as shown in **Figures 3 and 4**. The heat maps are images which give a snapshot of people that are actively using the app while walking/running and cycling over the last year. The STRAVA heat map for pedestrians indicates that Armco Park is “white hot” meaning a very high level of pedestrian activity. The red color indicates that KY 716 is “warm” meaning some pedestrian activity. Further analysis indicates that, at least for STRAVA, most of the pedestrian activity is concentrated on the north side of KY 716. The STRAVA heat map for bicycle activity indicates that activity is “warm” in the park but “hot” on KY 716. It was noted that

these maps are only capturing individuals using that app and not all pedestrians and cyclists. The average pedestrian, particularly school-aged children, are not likely to be using the STRAVA app.

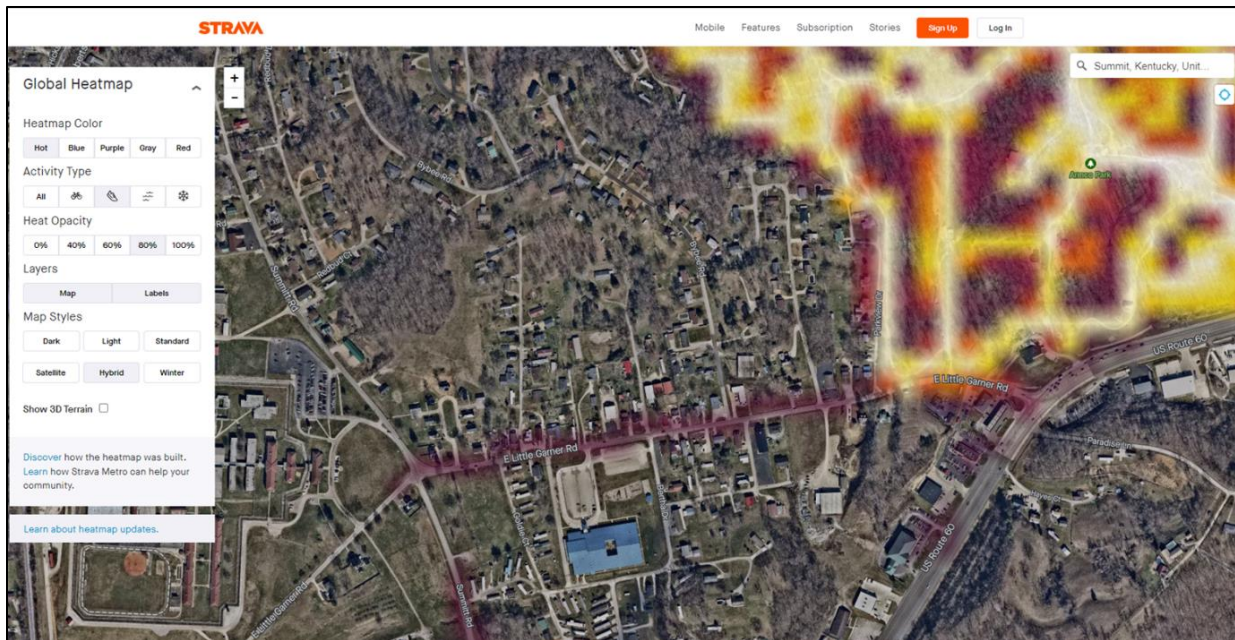


Figure 3: STRAVA Heat Map for Pedestrians

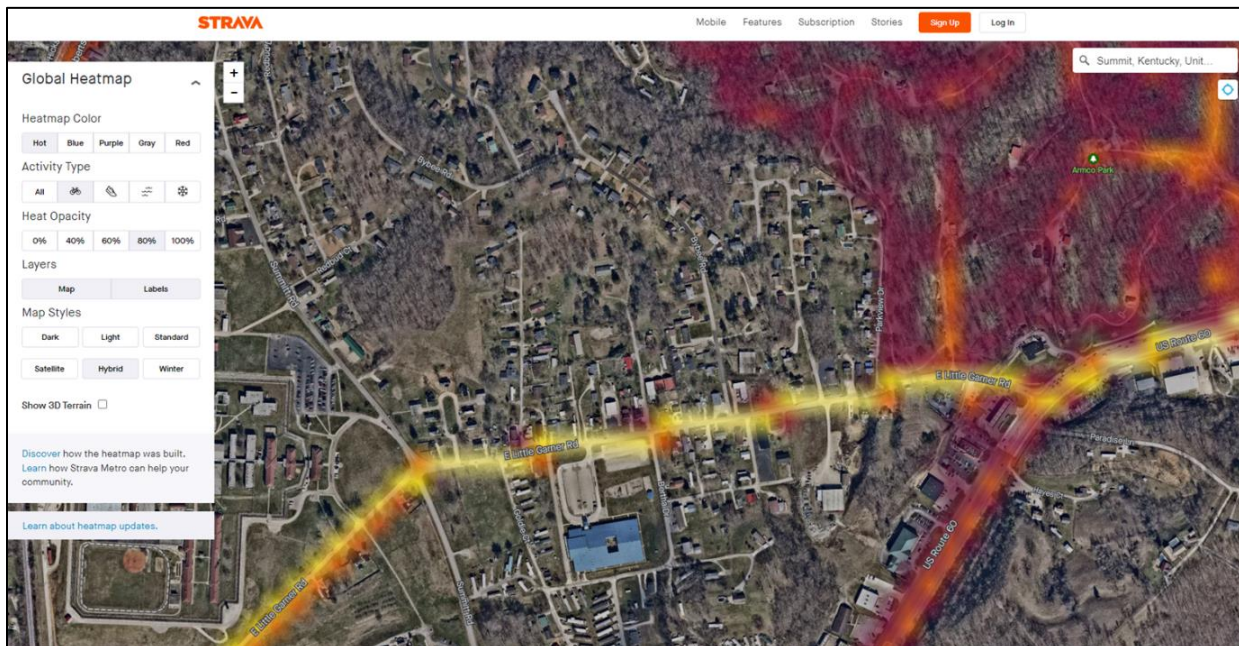


Figure 4: STRAVA Heat Map for Bicyclists

5. For the evaluation of capacity, the existing average daily traffic (ADT) volumes is approximately 3,900 vehicles per day on KY 716. Turning movement counts were collected at the end intersections and at the Summit Elementary School. Peak hour volumes on KY 716 were highest in the afternoon coinciding with school dismissal. The population projections of Boyd County predict a continuing decline to 2050, and historical trends for traffic on KY 716 have been decreasing over the last two decades. Using an optimistic positive annual growth rate of 0.75% based on output from the KYOVA regional travel demand model, the 2045 forecast increases the ADT from 3,900 to 4,600 vehicles per day. Comparing the HCS Analyses for 2023 and 2045 indicate no change is expected in level of services (LOS) for the AM peak as shown in **Figure 5**. There is only minimal change to the LOS expected for the PM peak hour where three LOS As become Bs and one LOS B becomes a C. All movements are expected to operate at LOS C or better. Therefore, capacity on KY 716 is not currently an issue and is not foreseen to be an issue in 2045.

- It was noted that Boyd County School officials advised during the Local Officials Meeting that there are no plans to increase the size and enrollment of Summit Elementary School.

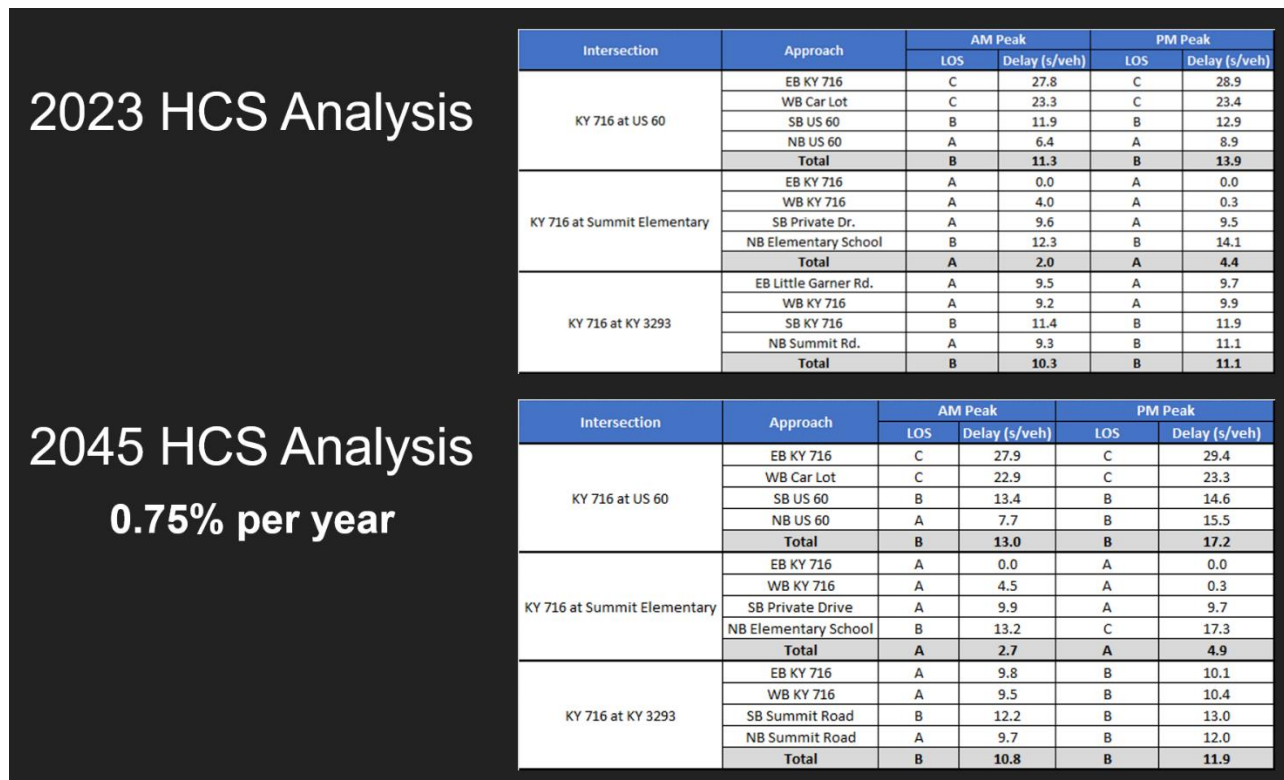


Figure 5: 2023 and 2045 HCS Analysis

6. A four-question survey was presented to local officials and stakeholders at the first Local Officials Meeting. The survey asked participants how often that they drove KY 716 in

the study area. All respondents indicated that they travel the corridor at least two to three times per month with most traveling multiple times per week. The survey asked participants if they thought improvements were needed along KY 716. Six of the respondents indicated that improvements were needed, but one respondent indicated that improvements were not needed.

The survey asked local officials to rank their top three transportation issues along the KY 716 corridor from a list of ten issues as well as an option of “other” in which the respondent could enter their own. The top five issues among the collective responses include: 1) School Traffic, 2) Safety, 3) No Sidewalks, 4) Summit Road Intersection, and 5) US 60 Intersection as shown in **Figure 6**.

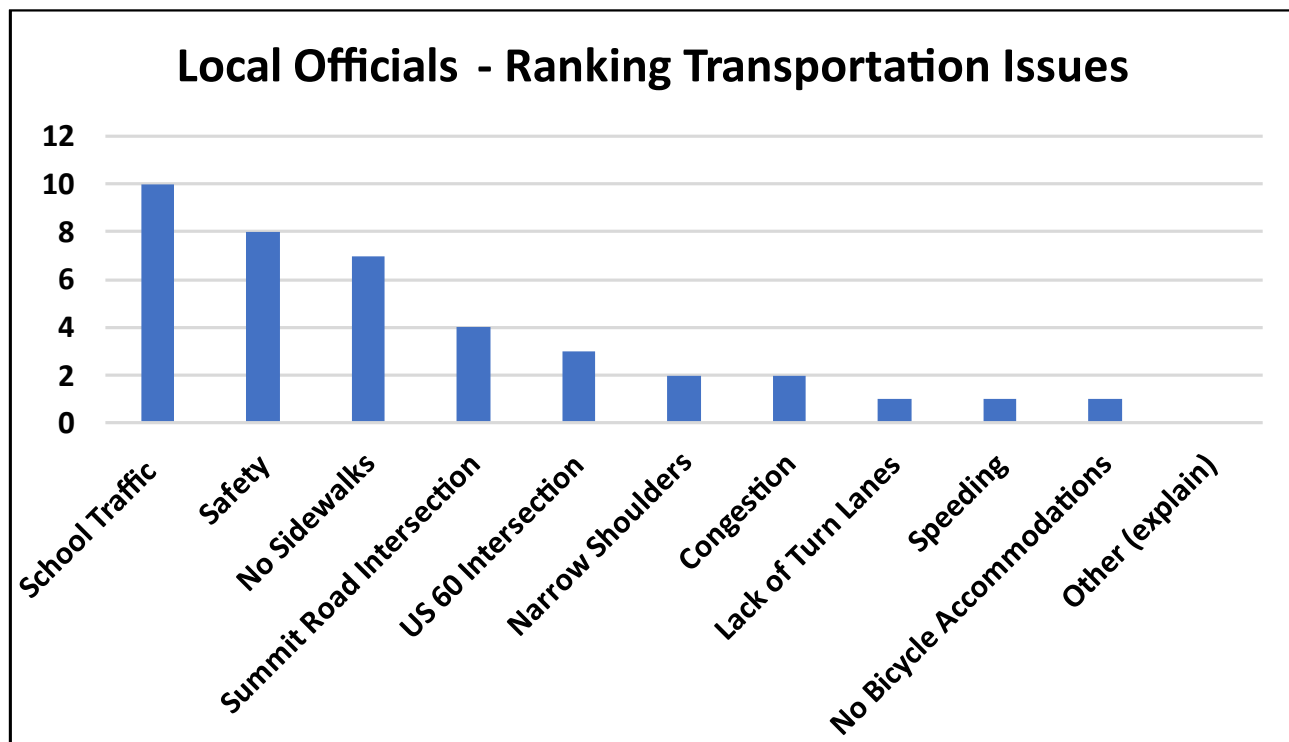


Figure 6: Local Officials Survey Responses “Ranking Transportation Issues”

Finally, the survey asked the local officials if they had any specific suggestions for improvements along KY 716. The responses are summarized in **Figure 7**. The responses can be summarized as 1) improvements to the Summit Road Intersection, 2) add turning lanes for the school, and 3) add sidewalks.

There is an active project to construct a mini roundabout at the KY 716 intersection with KY 3293. This roundabout project will address the safety issues mentioned at the intersection of KY 3293 / Summit Drive with KY 716.

“School Traffic” was the number 1 issue and is, in fact, when the traffic volumes are

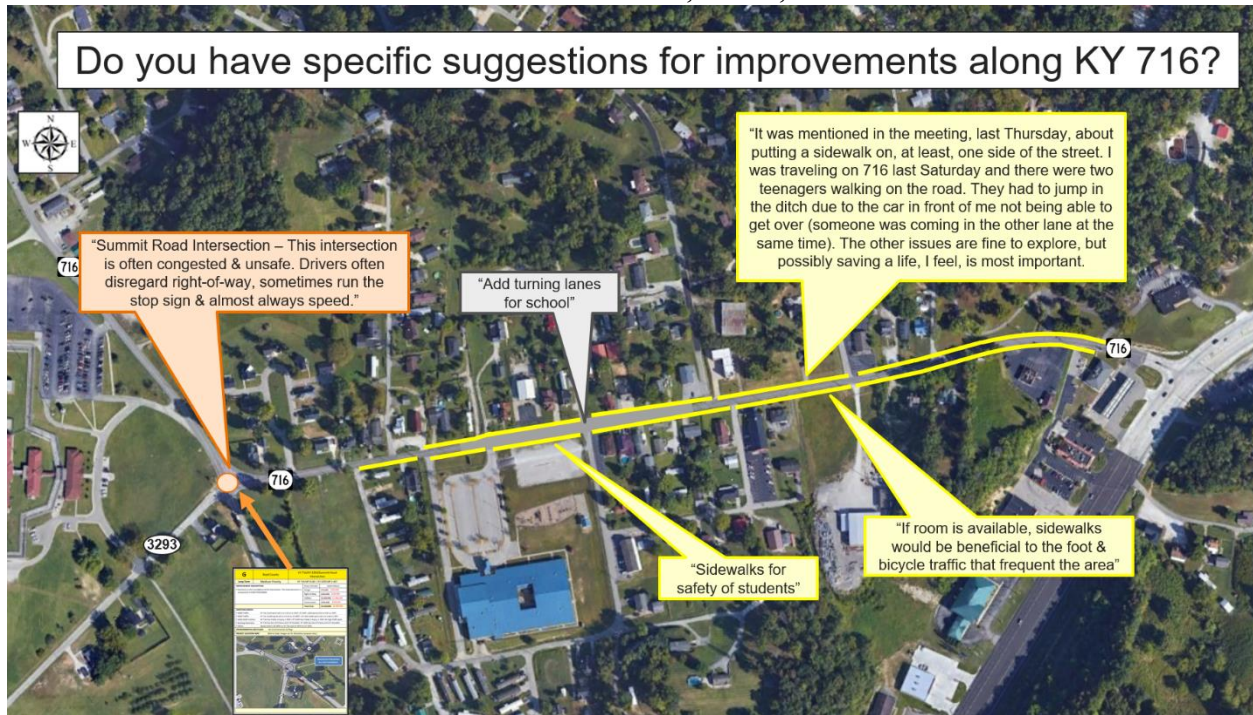


Figure 7: KY 716 Improvement Suggestion from Local Official's Survey

highest. Summit Elementary School officials implement an efficient process during their convening and dismissal hours where they methodically circulate motorists in the morning and exit them through the gravel lot to Bertha Drive. Subsequently, in the afternoon, parents enter the gravel lot from Bertha where they are stored before methodically caravanned in rows to load students before exiting the main entrance. The on-campus gravel lot and well-organized process avoids storing queued vehicles on KY 716. KYTC's Turning Warrants Analysis Spreadsheet was used to input the counts collected for KY 716 and Summit Elementary. Based on the results, neither a left turn lane nor a right turn lane was warranted.

- It was noted that KYTC does not consider the Turning Warrants Analysis Spreadsheet as a conclusive method for determining left-turn installations. KYTC did not want to create a new queueing location on KY 716 to store vehicles waiting to pick up students.
- The crash summary identified one angle crash on Bertha Drive at the parking lot entrance to the school but no angle crashes on KY 716 in the vicinity of the school between 2018 and 2022.

7. Three potential improvement concepts were presented during Project Team Meeting No. 1: 1) three-lane widening with multimodal improvements, 2) an improved two-lane section with sidewalks, and 3) spot improvements at intersection with US 60.

The first concept of three-lane widening with multimodal improvements is shown in **Figure 8**. The concept includes maintaining the existing right-of-way and utilities on the north side of KY 716 and widening to the south. A kmz file was presented which indicated the proposed typical section over the aerial map of the corridor. The total cost estimate for Preliminary Concept 1 is \$7,800,000.

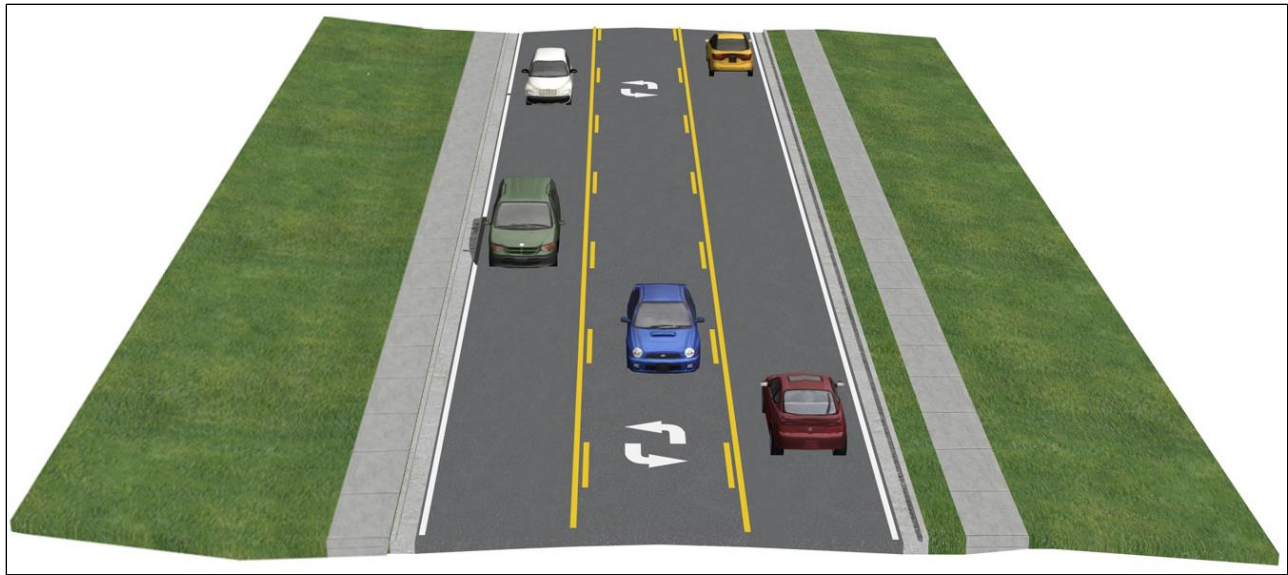


Figure 8: 3-Lane Widening with Curb & Gutter and Sidewalks

Because capacity on KY 716 is not currently an issue and is not foreseen to be an issue in 2045 as well as the right-of-way impacts would have been significant, the project team decided the three-lane widening concept would not be advanced.

8. The second concept of an improved two-lane section with sidewalks was presented with two variations, identified as Concept 2A and Concept 2B. The project team discussed the possibility of constructing sidewalks with curb and gutter on one side (north) of the roadway to minimize impacts due to the large number of utilities along the corridor - both aerial and buried. The utility poles on the north side of KY 716 support transmission / communication lines and are generally located approximately seven to nine feet from the edge of the paved roadway. The utility poles on the south side of KY 716 support electrical service drop / communication lines and are located approximately three feet from the edge of the roadway. The existing KY 716 typical section with utility poles is depicted in **Figure 9**.

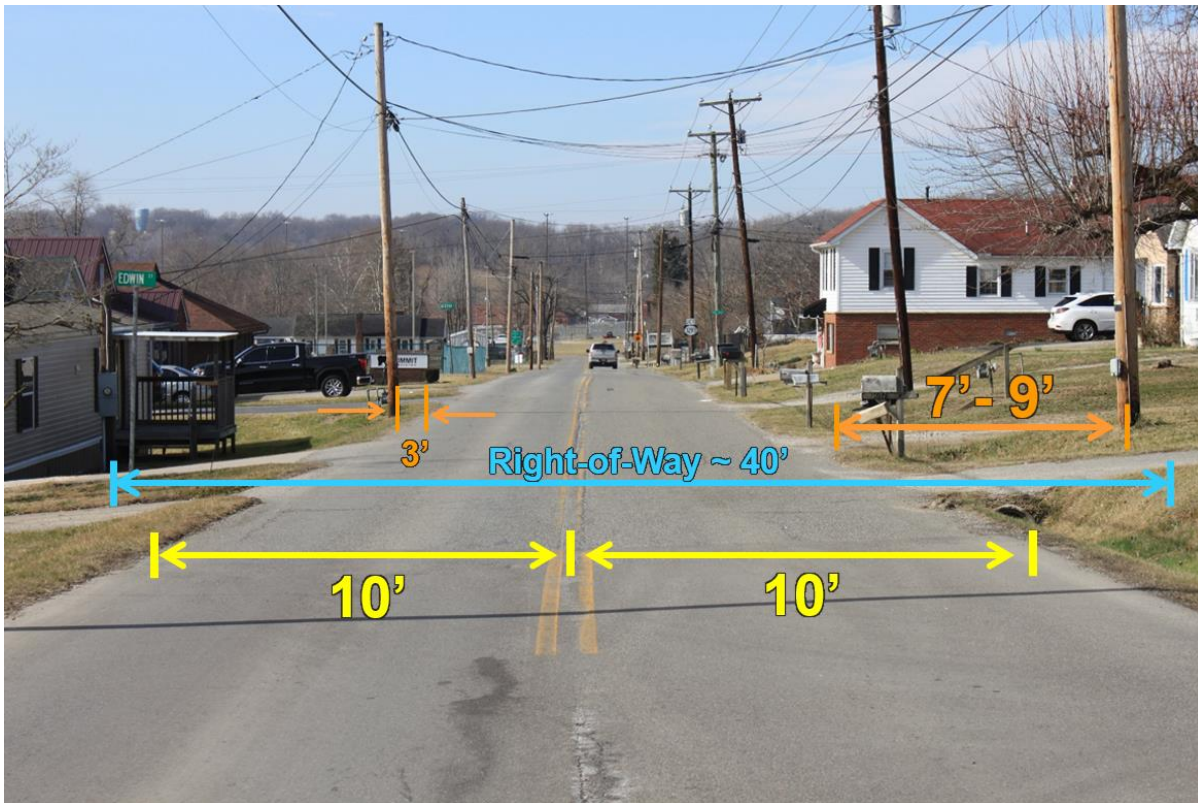


Figure 9: Existing KY 716 Typical Section with Utility Poles

- In lieu of sidewalks, the possibility of visually separated pedestrian lanes and visually separated paved shoulders was investigated first with the intent to minimize utility impacts and construction costs. According to FHWA's *Small Town and Rural Multimodal Networks* guidelines, visually separated pedestrian lanes are only recommended for roads functionally classified as a local road with a speed limit of 30 mph or less. Because KY 716 is functionally classified as a minor arterial with a posted speed limit of 35 mph, visually separated pedestrian lanes are not recommended. Similarly, the FHWA guideline for visually separated paved shoulders recommends a minimum paved width of seven feet for a minor arterial with an ADT of up to 6,000 vpd. It was determined that seven feet of shoulder widening would still require utility relocations and may promote higher speeds, which would reduce safety. Therefore, this concept was not advanced.

The STRAVA heat map for pedestrian activity indicates that pedestrians using the App are walking on the north side of KY 716. For these reasons, Concept 2A was evaluated as a two-lane section with curb and gutter plus sidewalk on the north side of KY 716 only as shown in **Figure 10**. The sidewalk would extend between Federal Way on the west end and the Armco Park entrance on the east end. The cost estimate for Preliminary Concept 2A is \$3,000,000. A small utility strip between the curb and sidewalk is shown to accommodate mailboxes on KY 716. The mailboxes for properties on the south side of KY 716 are also currently located on the north side.

- It was noted that the sidewalks on the west end would terminate at Federal Circle instead of continuing to the Summit Drive / KY 3293 intersection. This decision was made based on the request of the representative from the Federal Correctional Institute Ashland during the Local Officials Meeting that sidewalk not be installed on federal property related to the prison. Similarly, there are no plans to include sidewalks with the KY 716 at Summit Drive / KY 3293 Roundabout project.

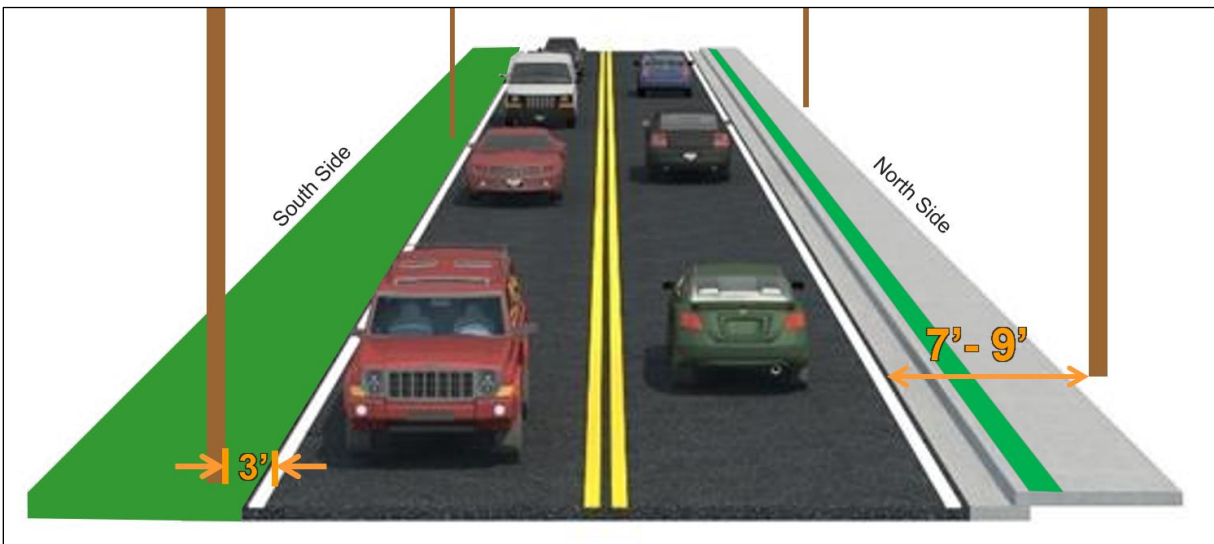


Figure 10: Concept 2A - Two-Lane with Cub and Gutter plus Sidewalk – North Side Only

Concept 2B proposes to install curb and gutter with sidewalks on both sides of KY 716 as shown in **Figure 11**. This option would require the relocation of the utility poles and some above ground gas meters on the south side of KY 716 but would be envisioned to stay within existing right-of-way (although temporary construction easements will likely be required). A utility strip is not shown between the curb and sidewalk on the south side of KY 716 as all mailboxes would remain on the north side.

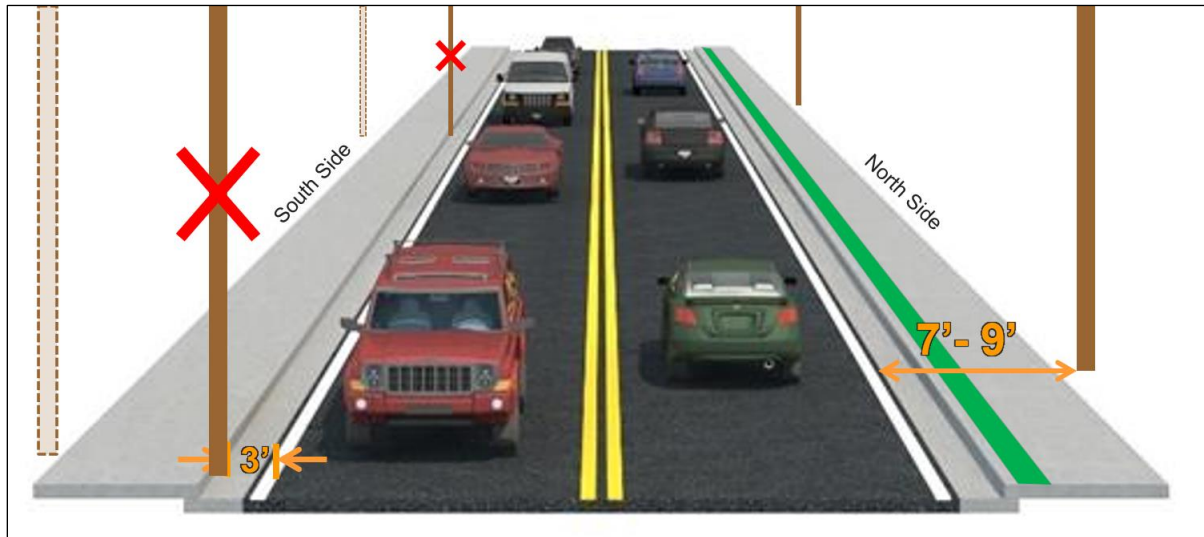


Figure 11: Concept 2B - Two Lane with Curb and Gutter plus Sidewalks - North and South Sides

The cost estimate for Preliminary Concept 2B is \$5,000,000.

9. Three spot improvements were also discussed. The improvement concepts are focused on the intersection of KY 716 with US 60 as crash history indicated a cluster of crashes within the influence area of the intersection. The first spot improvement is to consider prohibiting left turns to/from Speedway from/to westbound KY 716 using a barrier or channelization system as shown in **Figure 12**. The entrance would operate as right-in / right-out only. The distance between the stopbar for the eastbound KY 716 approach at the US 60 traffic signal and the easternmost Speedway entrance is approximately 60 feet. Queued vehicles on eastbound KY 716 frequently extend across the Speedway entrance. The driver of a queued vehicle may leave a gap in traffic to allow left turning motorists to proceed to/from Speedway which can result in a “courtesy” crash (when the left-turning vehicle crosses a lane of traffic and fails to yield the right of way).
 - Stantec advised that another district had good results from Pexco “FG-300 Interstate Grade Curb System” as a cost-effective channelization device. The system withstood traffic impacts and required less maintenance than “Quick Kurb.”



Figure 12: Spot Improvement No. 1

The second spot improvement is to consider restriping the left-turn lane for northbound US 60 as a tapered (diagonal) offset left-turn with a raised median to further designate the left-turn lane as shown in **Figure 13**.

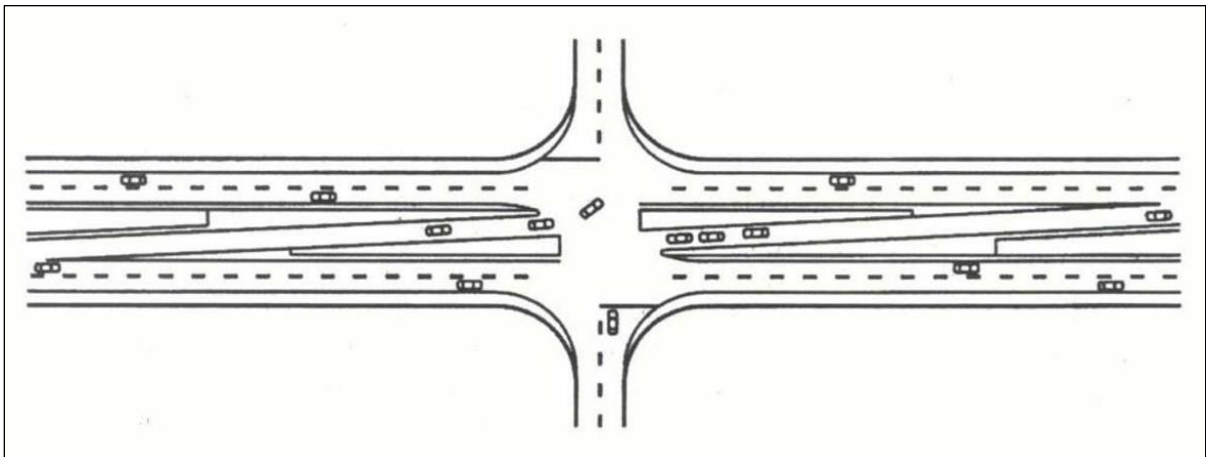


Figure 13: Tapered Offset Left-Turn

The existing concrete paved median is flush with a width over 30 feet wide and the markings for the parallel offset left turn lane are faded making it difficult for motorists to ascertain where to enter the left-turn lane. FHWA's *Handbook for Designing Roadways for the Aging Population* provides guidance for design of offset left-turn lanes. Offset left-turn lanes are used to reduce the risk of crashes due to sight restrictions from opposite left-

turn vehicles. Although the left-turn signal indication from northbound US 60 to westbound KY 716 is protected-only, a tapered offset left-turn lane is suitable for higher speed arterials like US 60 and can be constructed with a raised median to further delineate the lane as shown in **Figure 14**.



Figure 14: Spot Improvement No. 2

The third spot improvement is to work with the Crisp Dairy Treat property owners to eliminate the westernmost entrance and tighten the easternmost entrance as shown in **Figure 15**. The crash summary had identified two angle crashes which were in front of the Crisp Dairy Treat, and the property owners have posted a sign in their parking lot telling existing customers to use only the east driveway. The figure depicts a hypothetical access management strategy to close the west entrance and create a narrower east entrance which lines up better with the entrance to Armco Park across the street. This would allow for more orderly merging of traffic, reduces potential conflict points, and presents fewer challenges to drivers.

10. A Decision Matrix was presented to aid in the selection of which improvement concepts to advance which is shown in **Table 1**. Two-Lane Curb and Gutter with Sidewalk – North Side Only (Concept 2A) and the Spot Improvements were the two columns that best addressed or somewhat addressed the project goals. The project team made the decision to eliminate the three-lane widening with multimodal improvements (Improvement Concept No. 1) from further consideration.



Figure 15: Spot Improvement No. 3

Table 1: Decision Matrix

Issues / Project Goals	Existing (No Build)	Concept 1 (3-Lane Section with TWLTL)	Concept 2A (Sidewalk on Northside Only)	Concept 2B (Sidewalk Both Sides)	Concept 3 (US 60 Spot Improvements)
Estimated Construction Cost	0\$	\$7,745,000	\$3,015,000	\$5,000,000	Low Cost
Improves Safety	✗	●	●	●	✓
Improves Mobility	✗	✓	✓	✓	NA
Improves Capacity	NA	NA	NA	NA	NA
Reduces Right-of-Way Impacts	✓	✗	✓	●	✓
Reduces Utility Impacts	✓	✗	✓	●	✓
<p>Key:</p> <p>✗ Not addressed</p> <p>● Somewhat addressed</p> <p>✓ Addressed</p>					

- KYTC requested an exhibit for Right-of-way and Utility Impacts.

11. Next Steps: Stantec will refine the discussed improvement concepts, verify right-of-way and utility cost estimates from District 9, perform a Benefit/Cost Analysis (based on

crash reduction), and schedule the Local Official Meeting No. 2 and Project Team Meeting No. 3.

The meeting ended at approximately 3:30 p.m. EST.

Meeting Minutes

TO:	Catherine Davis KYTC Central Office Project Manager KYTC Central Office 200 Mero Street Frankfort, KY 40622	Michael Read District 9 Project Manager KYTC District Office #9 822 Elizaville Avenue Flemingsburg, KY 41041
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FROM: Dan O'Dea
Project Manager
Stantec Consulting Services Inc.

DATE: April 11th, 2024

SUBJECT: KY 716 Corridor Study
Boyd County
KYTC Item No. 9-180.00
Local Officials Team Meeting No. 2

The second Local Officials Meeting for the subject project was held at the Boyd County Library Midland Branch on March 7th, 2024, at 10:30 a.m. EST. The following individuals were in attendance:

Eric Chaney	Boyd Co. Judge Executive
Tim England	Boyd Co. EMA
Jimmy Fletcher	FBOP Ashland
Charlie Kitts	FBOP Ashland
Justin Pruitt	Boyd Co. Fiscal Court
Ben Coomes	KYTC – Central Office Design
Catherine Davis	KYTC – Central Office Planning
Stephen De Witte	KYTC – Central Office Planning
Darrin Eldridge	KYTC – District 9
*Dave Heil	KYTC – Central Office Planning
Blake Jones	KYTC – District 9
Brycen May	FIVCO
Karen Mynhier	KYTC – District 9
Doug Pinkerton	FIVCO
Michael Read	KYTC – District 9
*Saleem Salameh	KYOVA Interstate Planning Commission
*Terri Sicking	KYOVA Interstate Planning Commission
*Brent Sweger	KYTC – Central Office Planning
Thomas Witt	KYTC – Central Office Planning
*Brian Aldridge	Stantec Consulting Services Inc.

Len Harper	Stantec Consulting Services Inc.
Dan O'Dea	Stantec Consulting Services Inc.
*Tad Taylor	Stantec Consulting Services Inc.
Graham Winchester	Stantec Consulting Services Inc.

*Joined via Microsoft Teams

Dan O'Dea welcomed everyone and led introductions. The purpose of the meeting was to discuss results from the first local officials survey and to solicit feedback on preliminary improvement concepts for the KY 716 Corridor Study. The study is shown in **Figure 1**. Dan then delivered a presentation. The following enumerated items were discussed.

1. The objective of the KY 716 Corridor Study is to identify and evaluate the need for and scope of potential options to improve safety, mobility, and capacity on KY 716 between US 60 and Summit Road / KY 3293.
2. Between January 1, 2018, and December 31, 2022, reported crashes on KY 716 were generally concentrated at the termini intersections of US 60 and Summit Road / KY 3293. Crashes on the tangent section in between generally include single vehicle, rear-ends, and few "other" which is mostly classified as "backing". Based on results from the crash analysis, safety improvements were focused on the KY 716 intersections with US 60 and Summit Road / KY 3293.
 - There is an active Highway Safety Improvement Program (HSIP) project to construct a mini roundabout at the KY 716 intersection with KY 3293, as shown in **Figure 2**.
3. Heat Maps from the STRAVA Athletic Tracking App were presented for both pedestrian and bicycle usage which indicate the aggregated public activities over the last year. Based on this data, pedestrian activity was concentrated on the north side of KY 716. Streetlight data, analyzed from January 1, 2021, through December 31, 2021, estimated that there were 48 pedestrian and 4 bicycle trips per day on KY 716.
4. The existing average daily traffic (ADT) is approximately 3,900 vehicles per day on KY 716 and has steadily declined over the past 20 years. Turning movement counts were collected at US 60, KY 3293, and Summit Elementary School. Peak hour volumes on KY 716 were highest in the afternoon coinciding with school dismissal.

Based on population estimates and projections from the Kentucky State Data Center, Boyd County's population has declined over the past 20 years and is expected to continue to decline to 2050.

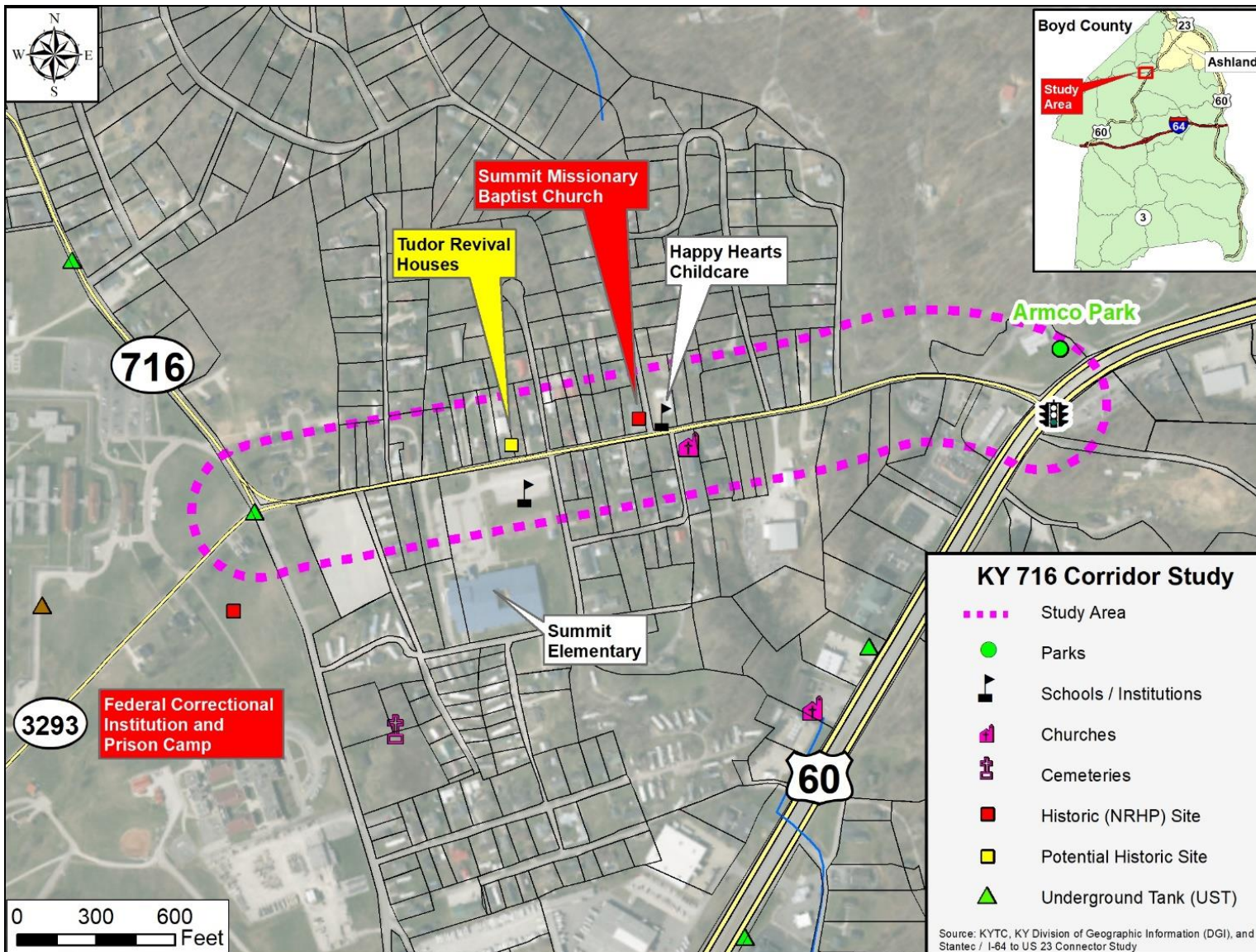


Figure 1: Study Area


G	Boyd County	KY 716/KY 3293/Summitt Road Intersection	
Long-Term	Medium Priority	KY 716 MP 0.565 KY 3293 MP 2.407	
IMPROVEMENT DESCRIPTION: <ul style="list-style-type: none"> Construct a mini roundabout at the intersection. This improvement is a component of CHAF IP20130096. 		Phase Estimate	(2020 Dollars)
		Design:	\$75,000 \$200,000
		Right-of-Way:	\$150,000 \$250,000
		Utilities:	\$1,000,000 \$1,000,000
		Construction:	\$325,000 \$550,000
		Total Cost:	\$1,550,000 \$2,000,000
IDENTIFIED NEEDS: <ul style="list-style-type: none"> 2020 Traffic: KY 716: 5,510 vpd at LOS D or 0.19 v/c; 6-14%T KY 3293: 1,830 vpd at LOS B or 0.09 v/c; 6%T. 2050 Traffic: KY 716: 10,300 vpd at LOS D or 0.36 v/c; 6-14%T KY 3293: 8,000 vpd at LOS D or 0.38 v/c; 6%T. 2016-2018 Crashes: KY 716 has 0 fatal, 0 injury, 5 PDO KY 3293 has 0 fatal, 0 injury, 1 PDO. No high CCRF spots. Existing Geometry: KY 716 has two 10 ft lanes and 3 ft shoulder. KY 3293 has two 9 ft lanes and 3 ft shoulder. Other: Speed Limit is 35 MPH on KY 716 and 55 MPH on KY 3293. 			
ENVIRONMENTAL RED FLAGS: No environmental red flags			
PROJECT LOCATION MAP: (Not to Scale; images are for illustrative purposes only.)			
			

Figure 2: KY 716 & Summit Road / KY 3293 (Little Garner Road) Improvement Concept

Annual growth rates from the KYOVA regional travel demand model range between 0.39 and 0.73 percent between 2020 and 2040, indicating that traffic on KY 716 is expected to slightly increase even though the adjacent population is declining.

Based on these data sources, an annual growth rate of 0.75 percent was used to forecast traffic. Using this growth rate, daily traffic on KY 716 is expected to increase to 4,600 VPD in 2045. Results from the 2023 and 2045 Highway Capacity Software (HCS) analyses, all movements are expected to operate at LOS C or better. Therefore, capacity on KY 716 is not currently an issue and is not foreseen to be an issue in 2045.

5. At the previous Local Officials / Stakeholder meeting, attendees were asked to fill out a survey to provide input on transportation issues and potential improvements. Respondents were asked to rank their top three transportation issues along the study corridor. The top five issues among the collective responses included: 1) School Traffic, 2) Safety, 3) No Sidewalks, 4) Summit Road Intersection, and 5) US 60 Intersection. Respondents were asked for specific suggestions for improvements along KY 716. Three respondents said sidewalks were needed along the corridor for bikes and pedestrians. One respondent suggested the addition of turn lanes in front of Summit Elementary School. The comments from the local officials / stakeholders were primarily related to improving safety and mobility but not capacity.
 - KYTC's Turning Warrants Analysis Spreadsheet was used to input the counts collected for KY 716 and Summit Elementary. Based on the results, a left turn lane was not warranted.
6. Three potential improvement concepts were then presented: three-lane widening with a center two-way left turn lane (TWLTL), an improved two-lane section with sidewalks, and spot improvements along the corridor.

Concept 1

This concept of three-lane widening with curb and gutter plus sidewalks on both sides of the roadway includes maintaining the existing right-of-way and utilities on the north side of KY 716 and widening to the south. The total cost estimate for Preliminary Concept 1 is \$8,300,000 (Design = \$500,000, Utilities = \$2,800,000, Right-of-way = \$1,400,000, and Construction = \$3,600,000). The project's cost is primarily driven by right-of-way and utility relocations. Based on traffic forecasts and HCS analysis, this concept would not improve the capacity of the roadway as KY 716 would operate almost exactly the same after construction.

Comment: Concept 1 would require funding for all phases. This will increase the amount of time it would take to implement this project.

Concept 2

The second concept of an improved two-lane section with sidewalks was presented with two variations, identified as Concept 2A and Concept 2B. This concept uses curb and gutter to improve mobility and promote lower speeds.

- In lieu of sidewalks, strategies of a Visually Separated Pedestrian Lane and Visually Separated Paved Shoulders were considered. However, based on FHWA and KYTC guidelines, these treatments were not conducive for the KY 716 corridor. Additionally, widening the pavement could potentially promote higher speeds.
- Representatives from the Federal Correctional Institute Ashland opposed the installation of sidewalks on federal property due to the increased risk of contraband created by ease of access. Sidewalks are not included with the KY 716 at Summit Drive / KY 3293 Roundabout project.
- Question: Is the speed of the corridor a factor?
Answer: Speed data for the roadway can be collected, the project goal is to not widen the roadway and encourage increased speed.
- Comment: No pedestrians have been observed walking to or from Summit Elementary during the morning and afternoon.

Concept 2A

The STRAVA heat map for pedestrian activity indicates that pedestrians using the App are walking on the north side of KY 716. The utility poles on the north side of KY 716 support transmission / communication lines and are generally located approximately seven to nine feet from the edge of the paved roadway. For these reasons, Concept 2A proposes a two-lane section with curb and gutter plus sidewalk on the north side of KY 716 only. The total cost estimate for Preliminary Concept 2A is \$2,500,000 (Design = \$200,000, Utilities = \$600,000, Right-of-way = \$100,000, and Construction = \$1,600,000).

- Due to the proximity of Summit Elementary, there may be federal funding available such as Safe Routes to School.
- Comment: Mailboxes for homes located on the south side of the KY 716 roadway are on the northern side of the roadway.
- Question: How would mailboxes be impacted by sidewalks?

Answer: The solution will fall to the design phase. While the locations of some mailboxes may be consolidated to one area to decrease crossing points, further collaboration with the United States Postal Service is likely needed.

Concept 2B

Concept 2B proposes two lanes with curb and gutter and sidewalks on both sides of the road. This improvement concept assumes relocation of electric, gas, water, sewer, and communication utilities. The total cost estimate for Preliminary Concept 2B is \$4,700,000 (Design = \$400,000, Utilities = \$1,200,000, Right-of-way = \$200,000, and Construction = \$2,900,000).

Spot Improvements

Three spot improvements were also discussed. The improvement concepts are focused on the intersection of KY 716 with US 60 due to the crash history, which indicated a cluster of crashes within the influence area of the intersection. The first spot improvement is to consider prohibiting left turns to/from Speedway from/to westbound KY 716 using a barrier or channelization system. The entrance would operate as right-in / right-out only.

- Comment: Employees of the federal prison west of the study area do not support closing the left turn out of Speedway.

The second spot improvement is to consider restriping the median with diagonal offset left-turns with raised medians to further designate the left turn lane.

The third spot improvement concept is located at the Crisp Dairy Treat on the eastern side of the KY 716 study corridor. The improvement concept includes consolidating entrances by closing the westmost entrance and tightening the easternmost entrance.

7. An evaluation matrix was developed to compare improvement concepts, as shown in **Table 1**. These concepts were developed to improve mobility and safety by improving pedestrian accommodations, promoting lower speeds, and reducing crashes. Construction cost estimates were developed for each improvement concept. Additionally, the evaluation matrix shows which proposed improvement concepts will achieve project goals.

Table 1: Evaluation Matrix

Issues / Project Goals	Existing (No Build)	Concept 1 (3-Lane Section with TWLTL and Sidewalks on Both Sides)	Concept 2A (Sidewalk on Northside Only)	Concept 2B (Sidewalks on Both Sides)	Concept 3 (Spot Improvements)
Estimated Total Cost	\$0	\$8,300,000	\$2,500,000	\$4,700,000	Low Cost
Improves Safety	✖	✓	✓	✓	✓
Improves Mobility	✖	✓	✓	✓	NA
Improves Capacity	NA	NA	NA	NA	NA
Reduces Right-of-Way Impacts	✓	✖ ¹	✓	● ²	✓
Reduces Utility Impacts	✓	✖ ³	● ⁴	✖ ³	✓
<p>Note 1: Potential 4 home relocations Note 2: ROW easements likely / ROW acquisition possible Note 3: Assumes electric, gas, water, sewer & communication relocations Note 4: Assumes water & sewer relocations</p> <p>Key: ✖ Not addressed ● Somewhat addressed ✓ Addressed</p>					

8. Surveys were distributed to the local officials present at the meeting as shown in **Figure 3**. The purpose of the survey was to gather feedback on the proposed improvement concepts. Respondents were asked to complete the survey before leaving the meeting.

TEAM KENTUCKY
TRANSPORTATION CABINET

KY 716 Corridor Study
KYTC Item No. 9-180
Boyd County
Local Officials Meeting No. 2 on March 7, 2024

The Kentucky Transportation Cabinet (KYTC) is seeking your input on a transportation study along the KY 716 Corridor between US 60 and Summit Rd. / KY 3293 (Little Garner Rd.) in Summit, Kentucky.

The objective of the KY 716 Corridor Study is to identify and evaluate the need for and scope of potential options to improve safety, mobility, and capacity between US 60 and Summit Rd. / KY 3293 (Little Garner Rd.). Please review the Evaluation Matrix before completing this survey.

Name: _____
Organization: _____
Email: _____

1. Do you live / work in the study area? (Please Circle One)
a. Live b. Work c. Live & Work d. Neither

2. How often do you travel through the study area? (Please Circle One)
a. Often/Daily b. Weekly c. Monthly d. Rarely/Never

Table 1: Evaluation Matrix

Issues / Project Goals	Existing (No Build)	Concept 1 (3-Lane Section with TWLTL and Sidewalks on Both Sides)	Concept 2A (Sidewalk on Northside Only)	Concept 2B (Sidewalks on Both Sides)	Concept 3 (Spot Improvements)
Estimated Total Cost	\$0	\$8,300,000	\$2,300,000	\$4,300,000	Low Cost
Improves Safety	✗	✓	✓	✓	✓
Improves Mobility	✗	✓	✓	✓	✓
Improves Capacity	NA	NA	NA	NA	NA
Reduces Right-of-Way Impacts	✓	✗ ¹	✓	✗ ²	✓
Reduces Utility Impacts	✓	✗ ³	✓ ⁴	✗ ³	✓

Note 1: Potential 4 home relocations
Note 2: ROW easements likely / ROW acquisition possible
Note 3: Assumes electric, gas, water, sewer & communication relocations
Note 4: Assumes water & sewer relocations

Red X: Not addressed
Green checkmark: Addressed

3. Based on the Evaluation Matrix above, do you think corridor-wide improvements are needed in the study area?
___ Yes ___ No

If Yes, choose your preferred corridor-wide improvement concept below. (Check One)

☐ Concept 1: Three-Lane Widening with Center Two-Way Left Turn Lane and Sidewalks
☐ Concept 2A: Construct a Sidewalk on the Northside of KY 716
☐ Concept 2B: Construct Sidewalks on Both Sides of KY 716

4. Which of the following Spot Improvements do you support? (Check all that apply)

☐ Prohibit left-turn movement to / from Speedway onto KY 716
☐ Restripe left-turn lane on northbound US 60 to westbound KY 716
☐ Consolidate entrances at Crisp Dairy Treat

5. Are there other additional improvements that you would like the Project Team to consider?

6. Are there any improvement concepts that you would like the Project Team to remove from consideration?

7. Are there any other comments, questions, or concerns that you would like to share with the Project Team?

Figure 3: Local Officials Survey

Nine respondents completed the seven-question survey. Seven of the nine respondents either live, work, or both live & work in the study area as shown in **Figure 4**.

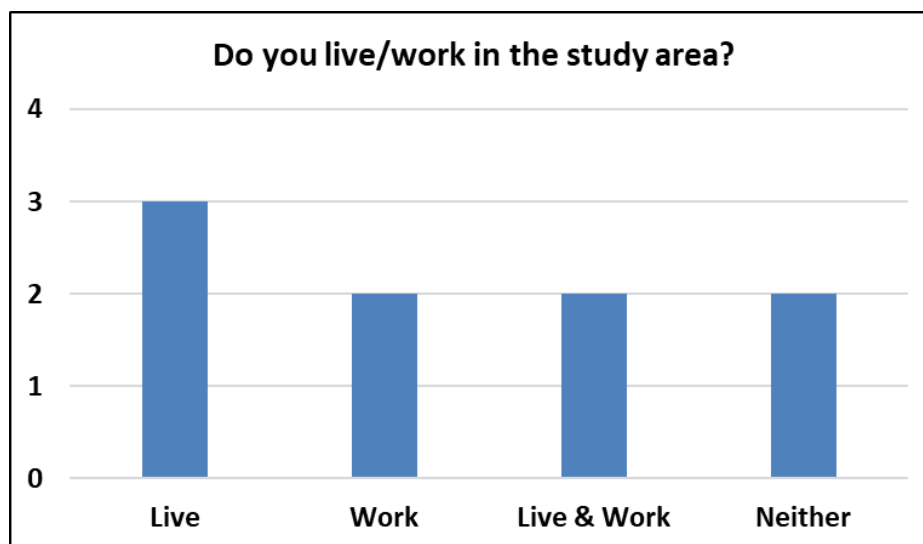


Figure 4: Stakeholder Feedback Survey – Response to Question #1

Eight of the nine respondents travel through the study area at least monthly with six respondents traveling even more frequently as shown in **Figure 5**.

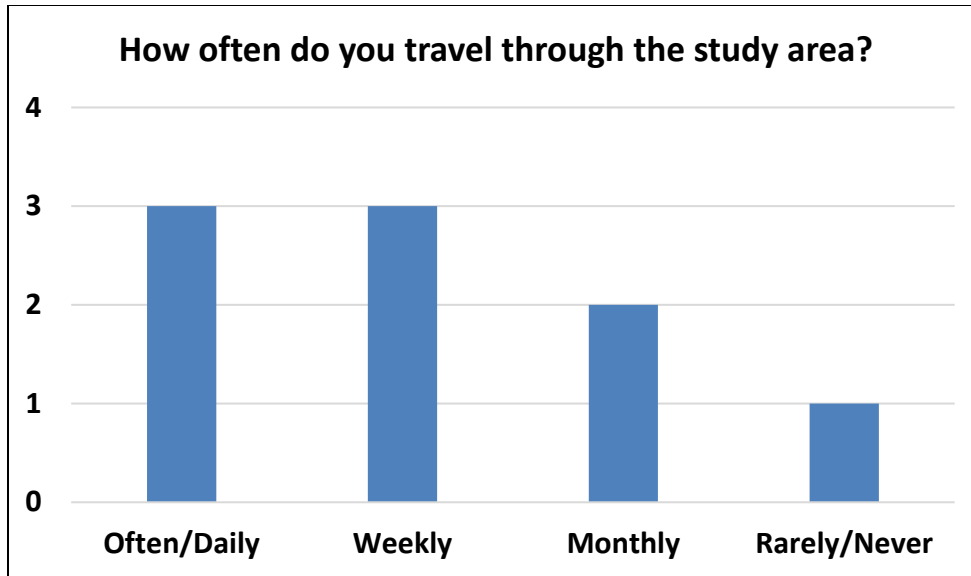


Figure 5: Stakeholder Feedback Survey – Response to Question #2

Eight of the nine respondents think that corridor-wide improvements are needed in the study area, as shown in **Figure 6**.

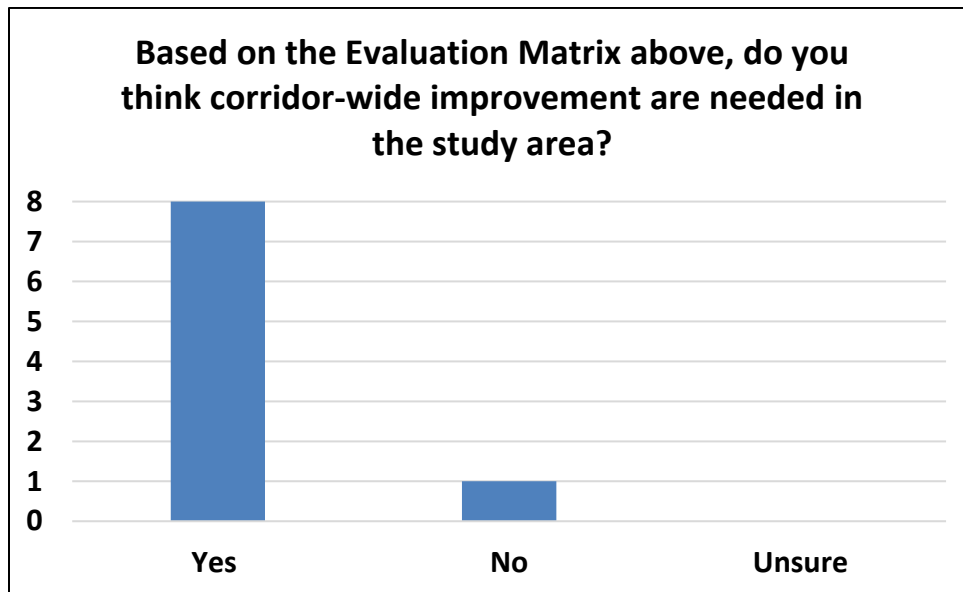


Figure 6: Stakeholder Feedback Survey – Response to Question #3

Of the eight respondents that chose “yes” to the question above, all eight chose the corridor-wide Improvement Concept 2A (Curb & Gutter with a Sidewalk on the North Side Only) as the preferred concept as shown in **Figure 7**.

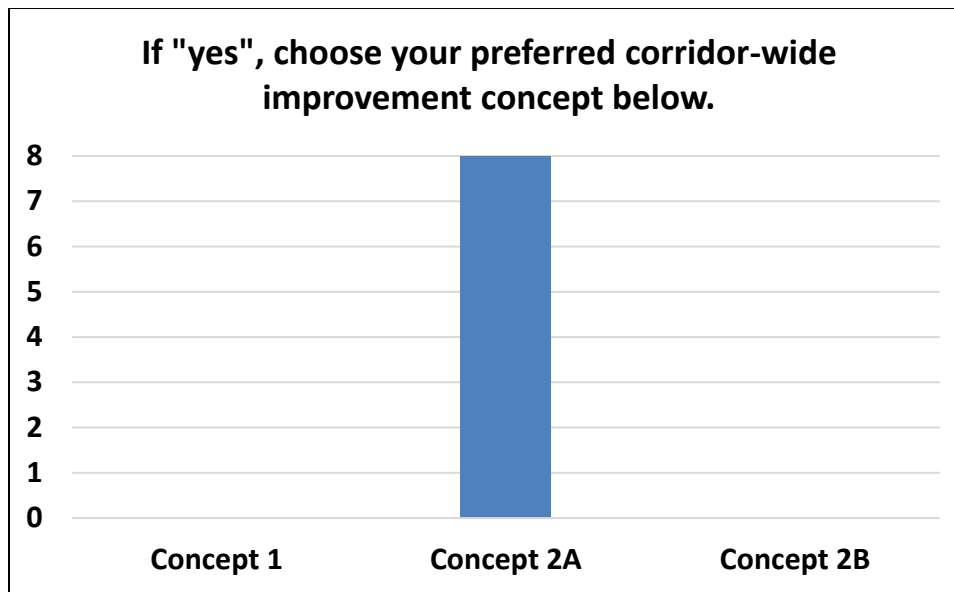


Figure 7: Stakeholder Feedback Survey - Response to Follow-up Question #3

Respondents were asked which of the three Spot Improvements, if any, that they support. Although the survey specified that respondents should “check all that apply”, only two of the nine respondents selected more than one, which could indicate that there was some confusion. There was support for all three Spot Improvements, with restriping the left-turn on northbound US 60 to westbound KY 716 as the most popular, as shown in Figure 8.

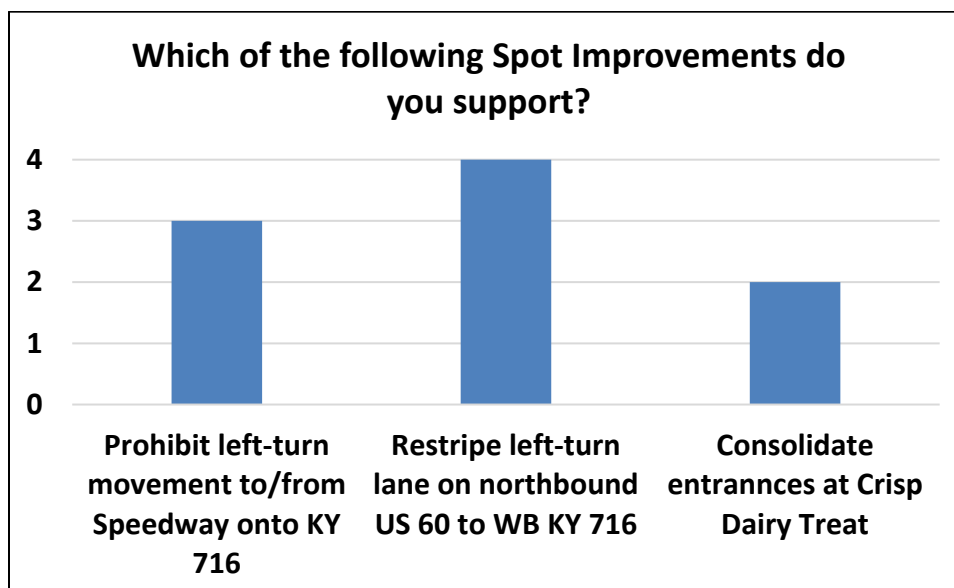


Figure 8: Stakeholder Feedback Survey - Response to Question #4

The survey asked if there were other improvements that they would like the Project Team to consider. Three respondents indicated a need for street and sidewalk lighting

and one respondent suggested consolidating the entrances for Speedway, McDonalds, and Crisp Dairy Treat together.

The survey also asked if there were any improvements that the respondent would like the Project Team to remove from consideration. Three respondents noted that Concept 1 (Three-Lane TWLTL with Curb & Gutter with Sidewalks) should be removed. One respondent noted that Spot Improvement 1 (Prohibit left turns to/from Speedway from/to KY 716) should be removed due to number of staff from Federal Correctional Institution (FCI) Ashland who frequent Speedway.

9. The project team then outlined the next steps. Stantec will discuss the survey results which will be presented during Project Team Meeting No. 3. The Project Team will prioritize the improvement concepts, and Stantec will prepare a draft report summarizing the findings of the study.

The meeting ended at approximately 11:30 AM EST.

Meeting Minutes

TO:	Catherine Davis KYTC Central Office Project Manager KYTC Central Office 200 Mero Street Frankfort, KY 40622	Michael Read District 9 Project Manager KYTC District Office #9 822 Elizaville Avenue Flemingsburg, KY 41041
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FROM: Dan O'Dea
Project Manager
Stantec Consulting Services Inc.

DATE: April 1st, 2024

SUBJECT: KY 716 Corridor Study
Boyd County
KYTC Item No. 9-180.00
Project Team Meeting No. 3

The third Project Team Meeting for the subject project was held at the Boyd County Library Midland Branch on March 7th, 2024, at 1:30 p.m. EST. The following individuals were in attendance:

Ben Coomes	KYTC – Central Office Design
Catherine Davis	KYTC – Central Office Planning
Stephen De Witte	KYTC – Central Office Planning
Darrin Eldridge	KYTC – District 9
Blake Jones	KYTC – District 9
Brycen May	FIVCO
Karen Mynhier	KYTC – District 9
Doug Pinkerton	FIVCO
Michael Read	KYTC – District 9
Saleem Salameh	KYTC – Central Office Planning
Terri Sicking	KYOVA Interstate Planning Commission
Thomas Witt	KYTC – Central Office Planning
*Brian Aldridge	Stantec Consulting Services Inc.
Len Harper	Stantec Consulting Services Inc.
Dan O'Dea	Stantec Consulting Services Inc.
*Tad Taylor	Stantec Consulting Services Inc.
Graham Winchester	Stantec Consulting Services Inc.

*Joined via Microsoft Teams

Dan O'Dea welcomed everyone and led introductions. The purpose of the meeting was to discuss results from the second local officials survey and determine prioritization for improvement concepts for the KY 716 Corridor Study. Dan then delivered a presentation. The following enumerated items were discussed.

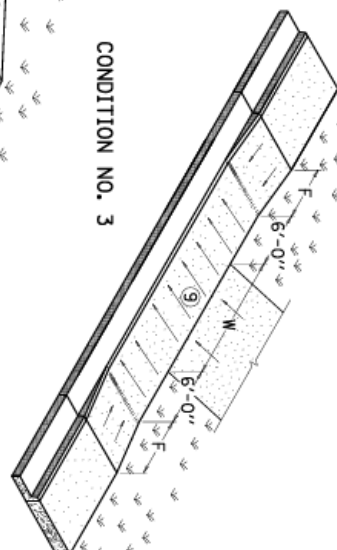
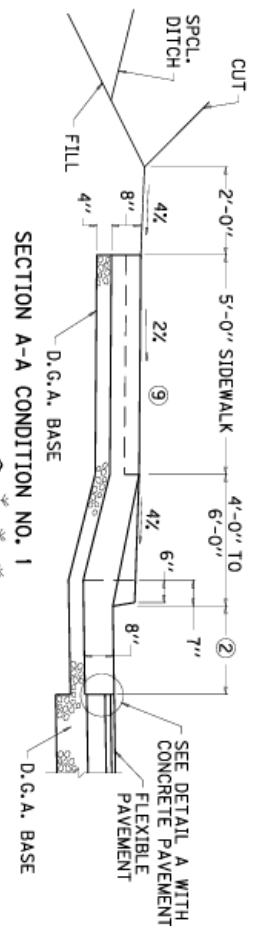
1. The objective of the KY 716 Corridor Study is to identify and evaluate the need for and scope of potential options to improve safety, mobility, and capacity on KY 716 between US 60 and Summit Road / KY 3293. The study area includes KY 716 from the US 60 intersection at mile point 0.0 to KY 3293 at mile point 0.56.
2. Stantec had previously developed a preliminary layout and construction cost estimate for sidewalks based on Condition No. 3 of KYTC Standard Drawing for Concrete Entrance Pavement and Sidewalk, as shown in **Figure 1**, as a way to reduce both right-of-way and utility impacts. KYTC indicated their preference for Condition No. 1 of the same standard drawing which incorporates a small utility strip between the curb and sidewalk. Condition No. 1 can accommodate roadside mailboxes and maintains a consistent grade (running slope parallel to the direction of travel) across entrances for the sidewalks.

KYTC requested Stantec to develop a preliminary layout and construction cost estimate for Condition No. 1 with a 4-foot minimum utility strip. District 9 will develop right-of-way and utility cost estimates for this option. Condition No. 1 and Condition No. 3 provide KYTC with alternatives for consideration in the design phase.

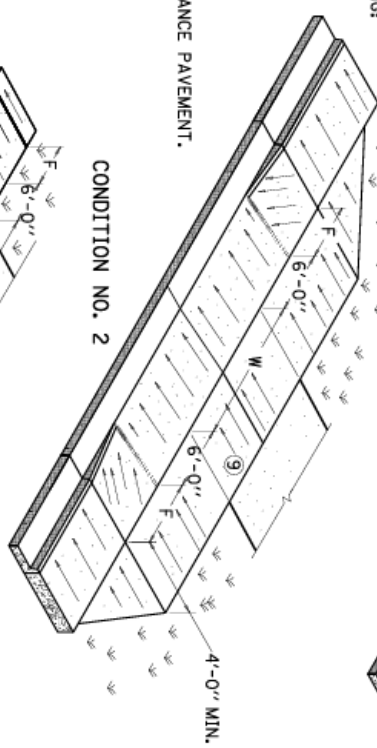
3. A field survey of mailboxes was conducted for the north side of KY 716 to determine the number of mailboxes and the number of locations of mailboxes, as some mailboxes were co-located or mounted on a common base. There were 26 mailboxes at 16 different locations. Five locations also had a separate newspaper box which could be combined with a mailbox for those properties.

The United States Postal Services (USPS) has a specific guideline standard that must be followed for both manufacturers of approved mailboxes and the installation of such mailboxes for curbside use. The latest standard, USPS-STD-7C, provides design dimensions for a traditional mailbox as shown in **Figure 2**. Other mailbox designs classified as contemporary that do not conform to shape of traditional design but meet limited capacity requirements while not exceeding the maximum dimensions are shown in **Figure 3**. The standard also specifies that curbside mailboxes should be set 6" to 8" back from the front face of the curb or the edge of the road and 41" to 45" from the ground or street surface and up to the inside floor of the mailbox as shown in **Figure 4**.

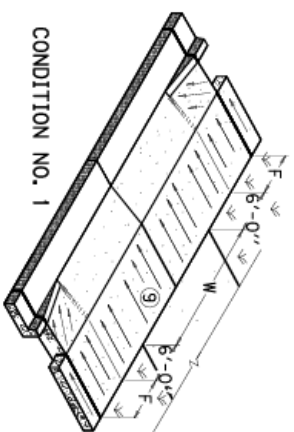
Diagram illustrating a joint seal cross-section. The joint width is 1". The joint filler is shown on the left side of the joint. The joint sealer is shown on the right side of the joint. The concrete pavement thickness is indicated as CONC. PAVMT. THK. The joint radius is labeled as 1/8" R.



CONDITION NO. 3



CONDITION NO. 2



CONDITION NO. 1

- FOR WIDTH "W" AND "F":
RESIDENTIAL - MINIMUM W = 12'-0", MAXIMUM W = 24'-0"; MINIMUM F = 2'-6", MAXIMUM F = 10'-0"
COMMERCIAL - MINIMUM W = 24'-0", MAXIMUM W = 36'-0"; F = 10'-0"
WHEN MORE THAN TWO LANES ARE REQUIRED, 36'-0" WIDTH MAY BE INCREASED TO RELIEVE INTERFERENCE BETWEEN ENTERING AND EXITING TRAFFIC. AT THE ENGINEER'S DISCRETION RADIAL RETURNS MAY BE USED ON ENTRANCES, SOME APPLICABLE CASES ARE THE FOLLOWING:
a. ON ENTRANCES EXPECTED TO CARRY HIGH VOLUMES OF TRAFFIC.
b. WHEN ENTRANCE WIDTH IS GREATER THAN 36'.
c. WHEN THE HIGHWAY HAS A POSTED OR OPERATING SPEED OVER 40 MPH.
d. ON A RURAL SECTION WHERE A FLUSH SHOULDER EXISTS.
e. WHERE AN EXCLUSIVE RIGHT TURN LANE IS USED.
2. 1'-0" OR 2'-0" WITH CONCRETE PAVEMENT, 2'-0" WITH FLEXIBLE PAVEMENT
3. WHEN "L" DIMENSION IS GREATER THAN 15'-0" A SAWED AND SEALED JOINT, 1/2" DEEP AND 1/4" WIDE SHALL BE PLACED AT THE CENTER OF THE "L" DIMENSION. WIDE ENTRANCES REQUIRE ADDITIONAL JOINTS. SPACING SHALL NOT EXCEED 15'-0" O.C.
4. CLASS "A" CONCRETE OR JOINTED PLAIN CONCRETE PAVEMENT SHALL BE USED IN THE ENTRANCE PAVEMENT
5. THE ENTRANCE PAVEMENT SHALL RECEIVE A BROOM FINISH AND SHALL BE CURED THE SAME AS THE MAINLINE PAVEMENT AND/OR SIDEWALK.
6. THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR "CEM CONC ENT PAVEMENT-8 IN" SHALL INCLUDE CLASS "A" CONCRETE AND ALL INCIDENTALS NECESSARY TO COMPLETE THE WORK. D.G.A. AND DETECTABLE WARNINGS ARE SEPARATE BID ITEMS.
7. USE CONDITION NO. 2 OR NO. 3 WHEN LITTLE OR NO UTILITY STRIP IS PROVIDED, AND INCORPORATE FEATURES OF OTHER DESIGNS SHOWN WHERE NOT IN CONFLICT.
8. PROVIDED THAT ADA GUIDELINES SHOWN IN NOTES 9 AND 10 ARE FOLLOWED, THE ENGINEER MAY MODIFY THE DESIGN TO BETTER FIT EXISTING CONDITIONS.
9. 2% CROSS SLOPE MAXIMUM ON SIDEWALK. IF CONDITIONS WARRANT, SIDEWALK MAY BE SLOPED 2% AWAY FROM ROADWAY.
10. SIDEWALKS SHOULD BE DESIGNED WITH A MAX. GRADE OF 5%, WHERE A SIDEWALK RUNS ALONG A STEEP ROADWAY, THE SIDEWALK GRADE MAY EXCEED 5% IF IT FOLLOWS THE GRADE OF THE ROADWAY, WHERE THE GRADE EXCEEDS 5%, A LEVEL LANDING SHALL BE REQUIRED EVERY 200'.
11. COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES REQUIRE ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS.
- BID ITEMS AND UNIT TO BID
CEM CONC ENT PAVEMENT-8 IN
DGA BASE
DETECTABLE WARNINGS
- SOYD
TON
SOFT
- CONDITION

SAVD
TON
SAFT

USE WITH CUR. STD. DWG.
RGX-040

KENTUCKY
DEPARTMENT OF HIGHWAYS
CONCRETE
ENTRANCE PAVEMENT
AND SIDEWALK

STANDARD DRAWING NO. RPM-150-08

SUBMITTED *Edward J. Black* 12-01-15
[Signature] DATE

APPROVED *John A. Black* 12-01-15
[Signature] DATE

STATE HIGHWAY DEPARTMENT

Figure 1: KYTC Standard Drawing for Concrete Entrance Pavement and Sidewalk

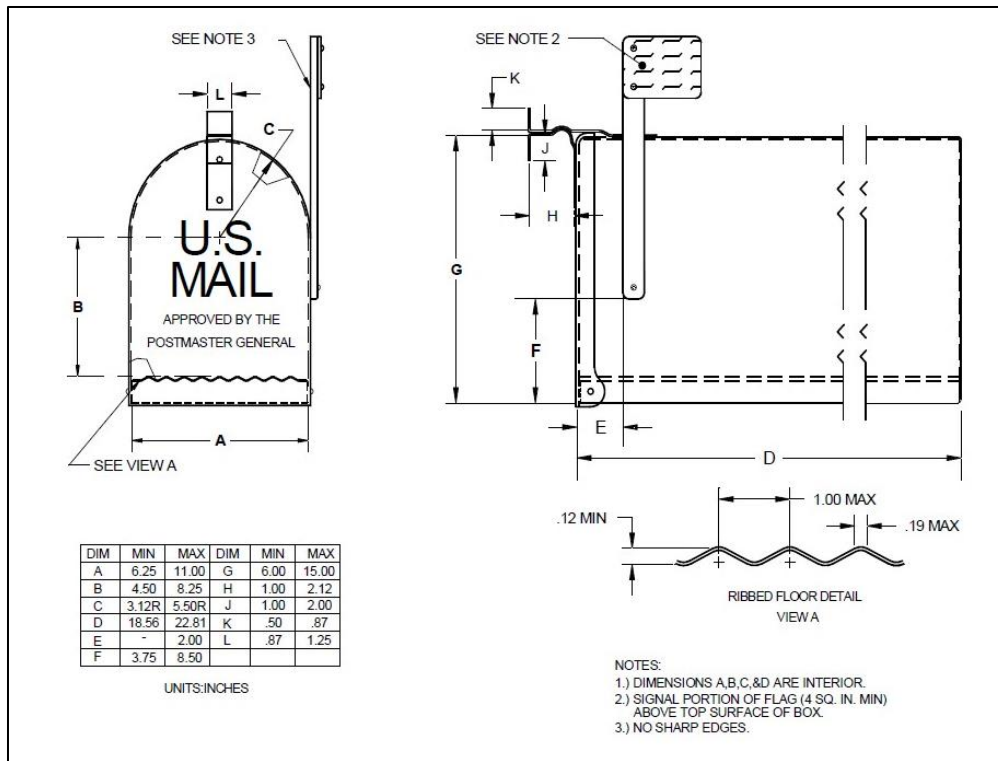


Figure 2: USPS Design Dimensions for Traditional Curbside Mailbox

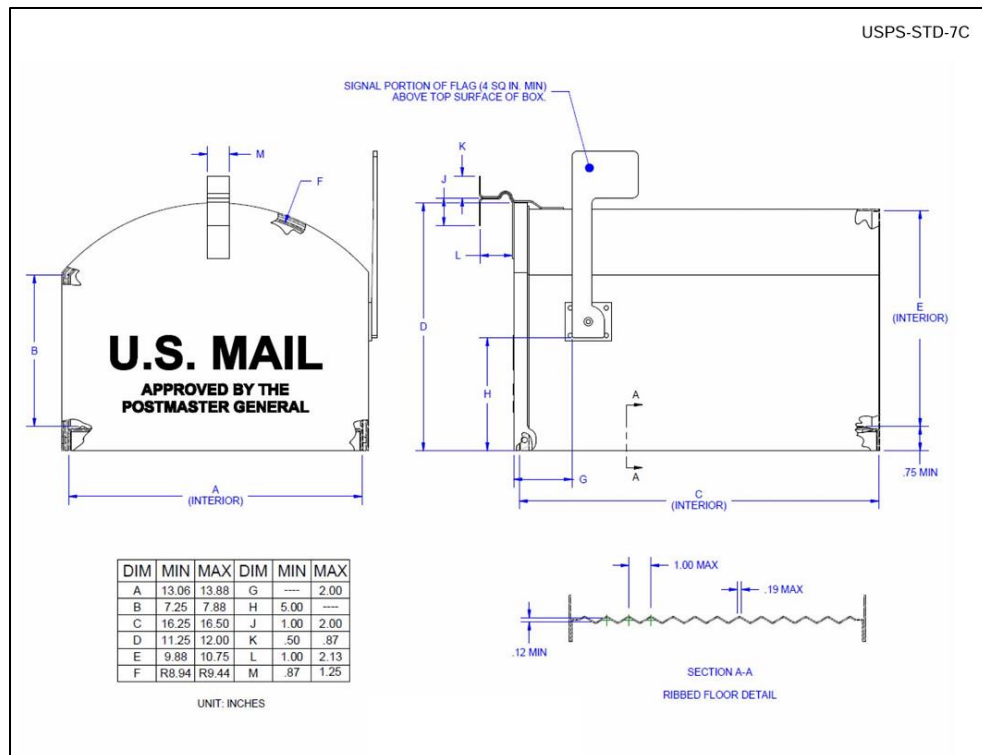


Figure 3: USPS Design Dimensions for Contemporary Curbside Mailbox

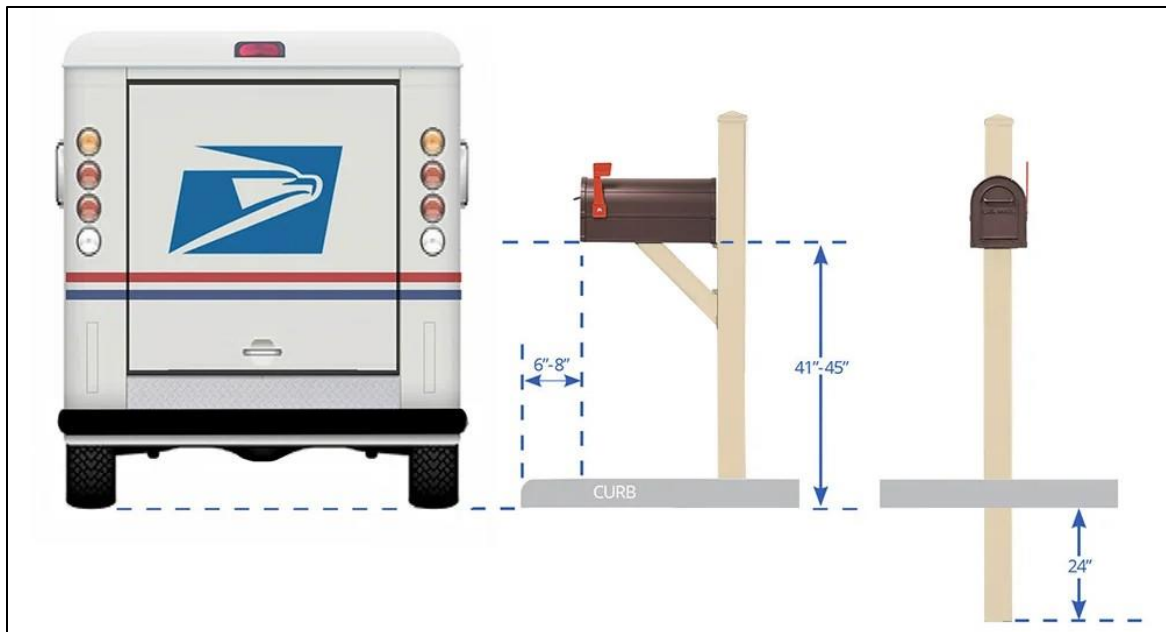


Figure 4: USPS Guidelines for Installation of Curbside Mailbox

4. KYTC requested Stantec review and quantify the available sight distance for eastbound KY 716 from each of the two Crisp Dairy Treat approaches. As-built roadway plans are not available showing the vertical alignment on KY 716. So, following the Project Team Meeting, a field review was conducted and the time (seconds) between when a vehicle on eastbound KY 716 was visible to a motorist crossing the Crisp Dairy Treat entrances was measured. From the westernmost approach from Crisp Dairy Treat, the time between when a vehicle was visible until it was at the entrance was 2 seconds. Based on an approach speed of 35 miles per hour (51.3 feet/sec), there is a sight distance of 103 feet. From the easternmost approach, the time between when a vehicle was visible until it was at the approach was 5 seconds which equates to sight distance of 257 feet.

Stopping Sight Distance is the distance required for a vehicle traveling at or near the design speed to stop safely. The design Stopping Sight Distance for 35 mph is 250 feet (*AASHTO A Policy on Geometric Design of Highways and Streets*) meaning that the easternmost approach provides adequate sight distance (>250 feet) for an approaching eastbound vehicle on KY 716, but the westernmost approach does not. This would support Spot Improvement Concept 3 of closing the westernmost approach to Crisp Dairy Treat and compressing the width of easternmost approach. Furthermore, during the field visit, a sign identified in the parking lot of Crisp Dairy Treat facing customers at the westernmost approach states “Danger Please Use Other Exit” with an arrow pointing toward the easternmost approach (see **Figure 5**). This indicates that closure of the westernmost approach would be supported by the property owner.



Figure 5: Sign Facing Westernmost Approach From Crisp Dairy Treat Parking Lot

5. The project team then outlined the next steps. Stantec will refine improvement concepts based on project team feedback and begin writing a draft report summarizing the findings of the study.

The meeting ended at approximately 2:30 PM EST.