Illinois Department of Transportation

IL120 STUDY

IL60 to Almond Road

Working Purpose and Need

Planning and Environmental Linkages Study
IL 120 from IL 60 to Almond Road

Lake County, Illinois

Purpose and Need for the Improvements

1 Project Purpose

The purpose of the PEL study is to improve safety, reduce congestion, and enhance modal interrelationships in the IL 120 corridor.

2 Project Need

U.S. Census data shows the total Lake County population in 2020 as approximately 714,000. Population projections produced by CMAP for the ON TO 2050 Plan adopted in 2018 were adjusted downward for the 2022 ON TO 2050 Plan update to reflect population growth trends from the previous decade and impact of the COVID-19 pandemic on regional employment. The 2022 population projection updates by CMAP indicate that by 2050, the population of Lake County will reach approximately 832,000, an increase of 16 percent. In addition, there are vacant parcels available for development, as illustrated on **Figure 12**, and local land use plans identified areas of potential development in Round Lake and Grayslake. As population, households, and jobs increase in Lake County, there will be increased travel demand in the IL 120 corridor, which is already at or approaching capacity in some areas. **Figure 1** provides information on projected growth in Lake County from 2020 to 2050.

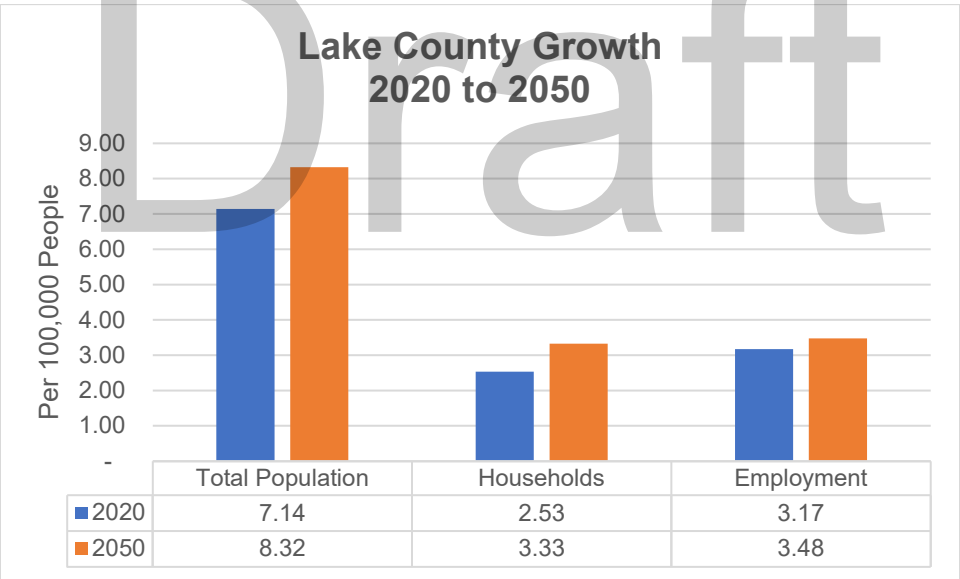

Figure 1. Lake County Growth 2020 to 2050

Transportation system improvement(s) are needed in the IL 120 PEL Study area to address the following issues that exist in the IL 120 corridor:

1. There are areas of safety concerns for all motorized and non-motorized roadway users along IL 120 corridor. There are a total of 15 segments and 10 intersections that were identified by IDOT's Safety Tier Assessment as locations with Critical or High designations, reflecting safety performance and opportunity for improvement.

2. As one of the only direct east-west corridors in Lake County, IL 120 is at or nearing its capacity, resulting in congestion and crashes. Congestion management is needed to address travel delays and improve safety.
3. There are gaps in the pedestrian, bicycle, and transit network that discourage multi-modal transportation and constrain modal interrelationships.

These needs are described in more detail below.

2.1 Improve Safety

Safety for all roadway users is a primary concern within the IL 120 corridor. The IL 120 corridor had 1,263 crashes and one fatality within the five-year period between 2017 and 2021, which represents 11 percent of the crashes in Lake County during the same period of time. Statewide, roads classified as Other Principal Arterial had the highest number of fatalities in crashes during the same period of time, with 390 fatalities[1]. Congestion, traffic queueing, and lack of bicycle and pedestrian facilities can create safety hazards and contribute to crashes, as discussed in this section.

SAFETY TIER ASSESSMENT

IDOT uses quantitative safety data to rate and identify locations with a higher potential for safety improvements that merit further analysis. Using relative ratings, segments and intersections are categorized as Critical, High, Medium, or Low safety tiers based on safety performance and opportunity for improvement. The IDOT 2020 Safety Tier Assessment identified 22 safety tier segments and 41 intersections within the PEL study area. Of the 22 safety tier segments, the IDOT 2020 Safety Tier assessment identified 5 as Critical and 10 as High safety tier segments. Two of the 41 intersections were identified as Critical, 8 as High, 15 as Medium, and 13 as Low. Critical Safety Tier segments and intersections include the following locations:

- Intersections
  - IL 120 at Hainesville Road
  - IL 120 at IL 83
- Segments (approximate locations)
  - Wilson Road to Fairfield Road
  - Deer Point Drive to West Trail
  - Seymour Avenue to Westerfield Place
  - US 45 to Sears Boulevard
  - Battershall Drive to Mill Road

The Critical Safety Tier segments and intersections generally correspond with the crash density map provided in **Figure 2**.

[1] IDOT Illinois 2017-2021 Crash Data Trends

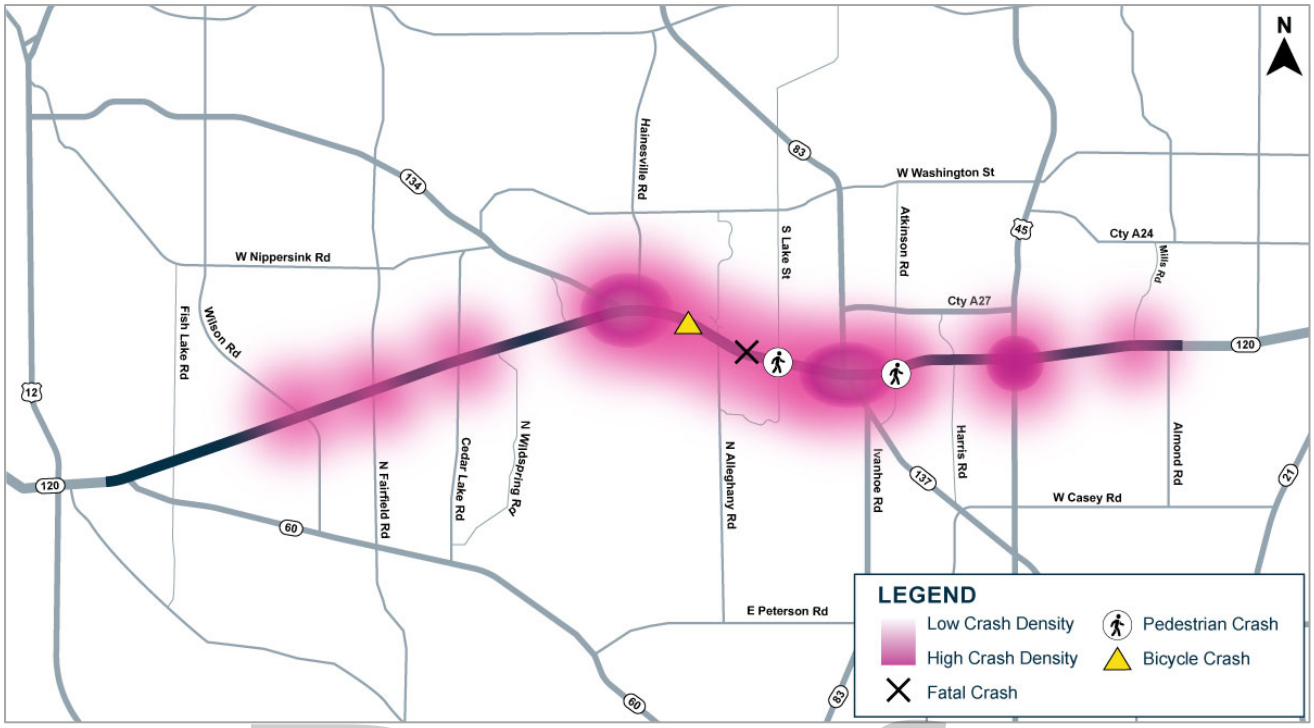

Figure 2. Crash Density Map, 2017-2021

CRASH DATA

Crash data collected by IDOT shows that 1,263 crashes occurred within the IL 120 corridor between years 2017 and 2021[2]. **Table 1** summarizes the overall crash types that were reported in the five-year analysis period from 2017 to 2021. Rear-end collisions accounted for 57.4 percent of the total crashes, indicative of heavy traffic congestion and vehicle queuing. Turning crashes accounted for 20.8 percent, the second largest number of crashes for the IL 120 corridor. Fixed object crashes were the third largest type of crash at 5.2 percent of crashes, followed by sideswipe same direction crashes at 5.1 percent, angle crashes at 4.0 percent, and animal crashes at 2.5 percent. The top six types of crashes account for 95 percent of all crash types along IL 120, as shown in **Figure 3**.

[2] Crash data for 2022 and 2023 will be used to supplement crash data when available in late 2024.

Table 1: Type of Crashes along IL 120 Corridor (2017-2021)

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
Angle	***9***	***13***	***13***	***6***	***10***	***51***	***4.0%***
Animal	***4***	***8***	***10***	***5***	***4***	***31***	***2.5%***
Fixed Object	***20***	***9***	***16***	***7***	***14***	***66***	***5.2%***
Front to Front	0	0	2	2	5	9	0.7%
Front to Rear	***171***	***147***	***150***	***116***	***141***	***725***	***57.4%***
Head On	6	2	0	0	0	8	0.6%
Other Non-Collision	1	2	0	1	1	5	0.4%
Other Object	0	3	3	2	6	14	1.1%
Overturned	0	0	0	2	1	3	0.2%
Parked Motor Vehicle	3	1	1	2	2	9	0.7%
Pedalcyclist	1	0	0	0	0	1	0.1%
Pedestrian	0	1	1	0	0	2	0.2%
Rear to Front	0	0	1	1	0	2	0.2%
Rear to Rear	0	0	0	0	1	1	0.1%
Rear to Side	0	0	0	1	0	1	0.1%
Sideswipe Opposite Direction	1	3	1	1	1	7	0.6%
Sideswipe Same Direction	***10***	***15***	***17***	***14***	***9***	***65***	***5.1%***
Turning	***49***	***57***	***63***	***34***	***60***	***263***	***20.8%***
Total	**275**	**261**	**278**	**194**	**255**	**1,263**	**100%**

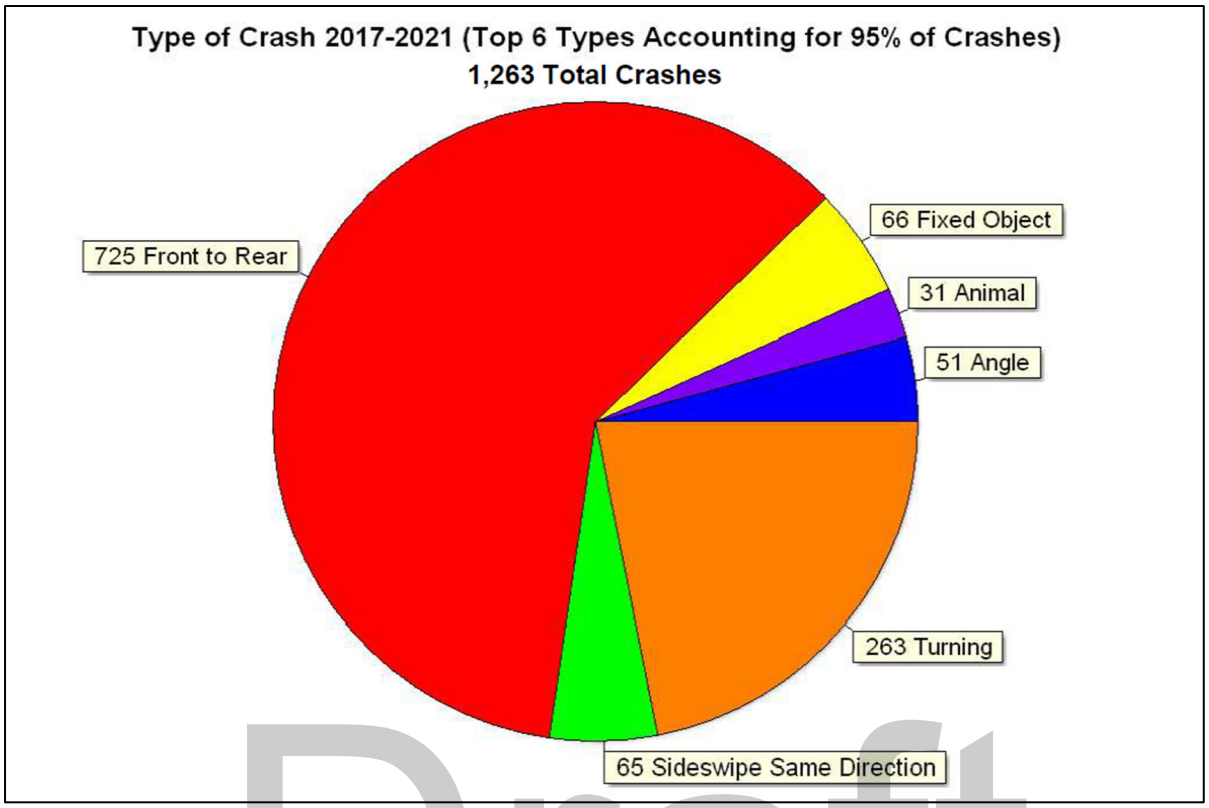

Figure 3. Crash Types 2017-2021 (1,263 Total Crashes)

A review of 2017-2021 crash data shows that in addition to Critical Safety Tier segments and intersections identified above, the intersections of IL 120 at IL 134, IL 120 at Ivanhoe Road, and IL 120 at US 45 have a higher crash density relative to the rest of the corridor. Likewise, the sections of IL 120 between IL 134 and Hainesville Road and Alleghany Road and Lake Street have a higher crash density relative to the rest of the corridor. High crash density locations are detailed in **Table 2**.

Table 2. High Crash Density Locations

	Crashes between 2017 and 2021	Share of Total Crashes	Most Frequent Crash Type
Intersections			
IL 120 at Hainesville Road	103	8.2%	Front to rear (48.5%)
IL 120 at IL 83	107	8.5%	Front to rear (43%)
IL 120 at IL 134	44	3.4%	Front to rear (63.6%)
IL 120 at Ivanhoe Road	24	1.9%	Turning (50%)
IL 120 at US 45	130	10.3%	Front to rear (36.2%)
Sections			
IL 134 to Hainesville Road	14	1.1%	Turning (42.9%)
Alleghany Road to Lake Street	53	4.2%	Front to rear (66.0%)

The primary causes of crashes were failure to reduce speed to avoid crash (475 / 37.6 percent), failing to yield right of way (169 / 13.4 percent), and following too closely (159 / 12.6 percent). The primary causes of these crash types could be a result of insufficient or absent channelized turn lane lengths or lane taper lengths, insufficient roadway capacity, inadequate intersection traffic controls and pavement markings, excessive speeds, or insufficient signal timing. **Table 3** summarizes the primary crash causes that were reported in the five-year analysis period from 2017 to 2021.

Table 3. Primary Crash Causes along IL 120 Corridor (2017-2021)

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
(N/A)	1	2	20	4	7	34	2.7%
Animal	4	9	8	5	5	31	2.5%
Cell Phone	2	2	0	0	2	6	0.5%
Disregarding Other Traffic Signs	0	0	1	0	0	1	0.1%
Disregarding Road Markings	0	2	0	0	0	2	0.2%
Disregarding Stop Sign	1	1	0	1	0	3	0.2%
Disregarding Traffic Signals	5	6	4	4	5	24	1.9%
Distraction – From Inside Vehicle	6	11	10	11	7	45	3.6%
Distraction – From Outside Vehicle	0	3	2	1	5	11	0.9%
Driving on Wrong Side/Wrong Way	1	0	1	1	1	4	0.3%
Driving Skills/Knowledge/Experience	18	11	7	12	14	62	4.9%
Equipment-Vehicle Condition	5	3	2	2	4	16	1.3%
Evasive Action Due to Animal/Object/Non-Motorist	1	0	1	0	0	2	0.2%
Exceeding Authorized Speed Limit	1	1	0	0	0	2	0.2%
Exceeding Safe Speed for Conditions	4	6	0	0	0	10	0.8%
Failing to Reduce Speed to Avoid Crash	***111***	***95***	***95***	***81***	***93***	***475***	***37.6%***
Failing to Yield Right of Way	***38***	***43***	***40***	***20***	***28***	***169***	***13.4%***
Following Too Closely	***35***	***29***	***35***	***25***	***35***	***159***	***12.6%***
Improper Backing	1	2	0	1	1	5	0.4%
Improper Lane Usage	6	8	8	5	7	34	2.7%
Improper Overtaking/Passing	2	4	6	2	1	15	1.2%
Improper Turning/No Signal	10	8	9	5	7	39	3.1%
Operating Vehicle in Reckless Manner	0	1	3	0	6	10	0.8%
Physical Condition of Driver	4	1	7	3	3	18	1.4%
Road Engineering/Surface/Marking Defects	0	0	0	0	1	1	0.1%
Turning Right on Red	1	0	0	0	1	2	0.1%

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
Unable to Determine	4	2	7	5	5	23	1.8%
Under Influence of Alcohol/Drugs	5	4	4	3	8	24	1.9%
Vision Obscured	0	2	2	0	1	5	0.4%
Weather	9	5	6	3	8	31	2.5%
Total	*275*	*261*	*278*	*194*	*255*	*1,263*	*100%*

INJURIES AND FATALITIES

The State of Illinois classifies injury crashes by injury severity, as reported in the individual crash reports. The legal reporting threshold for traffic crashes involving only property damage is $1,500 if all parties are insured, or $500 if any driver does not have insurance. The injury classification from most severe to least severe include K – fatal injury; A – suspected serious injury; B – suspected minor injury; C – possible injury; 0 – no apparent injury.

Out of the 358 injury crashes, 36 crashes (2.9 percent) were Type A and 155 (43.3 percent) were Type B crashes. There was one fatal head on crash in Grayslake, just west of Belle Court between Alleghany Road and Lake Street, shown in **Figure 2**. The cited causes of the head on crash were improper lane usage and physical condition of the driver. There were two pedestrian crashes, one at South Lake Street caused by failure to yield right of way, and one at South Atkinson Road caused by failure to reduce speed and failure to yield right of way. There was one bicycle crash west of West Trail in Grayslake, caused by improper lane usages and driver under the influence of alcohol or drugs. **Table 4** summarizes the crash injury severity that were reported in the five-year analysis period from 2017 to 2021. In addition to the five year analysis period, there were two fatal crashes in 2022, one of which lists the driver's impairment and physical condition as a contributing factor.

Table 4. Crash Injury Severity along IL 120 Corridor (2017-2021)

Type of Crash	2017	2018	2019	2020	2021	Total Crashes	Percentage
Fatal Crashes	0	1	0	0	0	1	0.1%
Type A Injury Crashes	7	13	5	5	6	36	2.9%
Type B Injury Crashes	34	31	40	26	24	155	12.3%
Type C Injury Crashes	41	37	41	22	25	166	13.1%
Total Injury Crashes	***82***	***82***	***86***	***53***	***55***	***358***	**-**
Total Number of Injuries	***121***	***121***	***137***	***86***	***82***	***547***	

2.2 Reduce Congestion

IL120 is at or nearing capacity at some sections and intersections. Based on existing conditions detailed in this section, congestion management strategies are needed to address the existing IL 120 corridor's performance, including safety and travel time resulting from delays.

EXISTING TRAFFIC CONDITIONS

The 2023 average daily traffic (ADT) for the IL 120 corridor ranges from 17,050 ADT near IL 60 to 27,550 ADT near Almond Road, as summarized in **Table 5**[3]. **Figure 4** and **Figure 5** depict the ADT for the west and east segments of the corridor, respectively. Truck traffic accounts for less than 2 percent of ADT.

Table 5. Existing and Projected Average Daily Traffic

Description	Existing ADT	2050 No Build ADT	Percent Increase (%)
West of IL 60	26,350	31,500	7.4
IL 60 to Fish Lake Rd	18,350	19,700	10.9
Fish Lake Rd to Wilson Rd	17,050	18,900	10.0
Wilson Rd to Fairfield Rd	18,000	19,800	9.2
Fairfield Rd to Cedar Lake Rd	19,050	20,800	9.5
Cedar Lake Rd to IL 134	20,000	21,900	11.6
Hainesville Rd to Alleghany Rd	23,300	26,000	14.7
Alleghany Rd to S Lake St	19,350	22,200	5.9
S Lake St to IL 83	20,400	21,600	12.3
IL 83 to Atkinson Rd	19,850	22,300	15.3
Atkinson Rd to US 45	20,650	23,800	6.4
US 45 to Almond Rd	26,600	28,300	10.7
East of Almond Rd	27,550	30,500	7.4

Source: IDOT 2023 and CMAP 2023

[3] Traffic counts taken by IDOT in April and May, 2023. ADT is rounded to the nearest 50.

Figure 4. Existing and Projected Average Daily Traffic, IL 60 to Hainesville Road (West Segment)

Figure 5. Existing and Projected Average Daily Traffic, Hainesville Road to Almond Road (East Segment)

The U.S. Census Bureau's Longitudinal Employer-Household Dynamics Origin-Destination Employment Statistics provides information on the inflow of people who work in the PEL study area but live elsewhere and the outflow of people who live in the PEL Study area but work elsewhere. The 2021 employee inflow for the IL 120 PEL Study area is 5,967 people and the outflow is 6,506 people. Approximately 234 people both live and work within the PEL Study area. Job density within the IL 120 corridor is primarily clustered near Fairfield Road and Wilson Road and near IL 83 and Atkinson Road (OnTheMap 2021). The inflow and outflow counts compared to the ADT indicates travel demand from through trips in the corridor.

There are 13 traffic signals within the corridor and two at-grade railroad crossings. The CN railroad crossing near IL 83 causes an average of 1 minute and 48 seconds of delay per delayed vehicle, which occurs during gate downtime and queue recovery. The Metra railroad crossing near IL 134 causes an average of 40 seconds of delay per delayed vehicle.

IL 120 approaches the roadway capacity for a 2-lane arterial roadway with the existing ADT. The Highway Capacity Manual 7th Edition states the capacity for a two lane highway is 3,200 vehicles per hour for both directions; however, this condition is rarely observed except in short segments because service quality of the facility deteriorates at lower demand flow rates.

EXISTING LEVEL OF SERVICE

Operating conditions are graded in terms of Level of Service (LOS), which assigns a letter from A to F based on the Highway Capacity Manual 7th Edition methodologies, and consider speed, delay, traffic interruptions, safety, driver comfort, and convenience. LOS A is the highest (best traffic flow and least delay), LOS E represents saturated or at capacity conditions, and LOS F is the lowest (oversaturated conditions).

For signalized intersections, LOS is calculated for lane groups, intersection approaches, and the intersection as a whole. The LOS analysis for signalized intersections was based on average total vehicle delay (in seconds of delay per vehicle). Delay can be a result of one or any combination of the following: high volumes entering the intersection, poor signal phasing, a lack of or inadequate number of auxiliary lanes, etc.

For two-way stop-controlled intersections, LOS is calculated for each minor street lane group and major street left-turn movements. Since the major street through movements experience zero delay, a weighted average control delay for the intersection is not a useful metric for intersection performance. For unsignalized intersections, delay can be a result of one of any combination of the following: high volumes entering the intersection, insufficient gap time for a vehicle to cross the non-stop-controlled major street movement, etc.

Intersection design criteria from the BDE Manual, Figure 48-6.A states that intersections should be designated to achieve a minimum LOS C for all movements and the overall intersection. Segment LOS and travel times are shown directionally following the dominant direction of travel along the IL 120 corridor, with eastbound representing the A.M. peak hour and westbound representing the P.M. peak hour.

Traffic analysis performed in November 2023 identified overall LOS and delay for signalized intersections for Existing and 2050 No Build conditions for A.M. and P.M. peak hours, which are summarized in **Table 6**. Eastbound and westbound Existing and 2050 No Build Segment LOS and running speed are summarized in **Table 7** and **Table 8**, respectively.

Table 6. Existing and 2050 No Build Signalized Intersection Level of Service and Travel Delay

Intersection with IL 120	Existing				2050 No Build			
	A.M. LOS	A.M. Delay (sec)	P.M. LOS	P.M. Delay (sec)	A.M. LOS	A.M. Delay (sec)	P.M. LOS	P.M. Delay (sec)
IL 60	A	7.7	C	20.7	A	10.0	C	23.5
Fish Lake Road	B	13.3	B	15.7	B	14.8	C	22.4
Wilson Road	C	31.0	E	56.0	D	36.2	D	49.9
Fairfield Road	E	63	E	67.3	E	78.9	E	77.7
Cedar Lake Road	C	26.5	C	30.7	C	29.6	D	36.6
IL 134 (Centre Drive)	E	56.8	C	29.0	E	66.7	C	26.2
Hainesville Road	C	33.9	C	31.7	C	33.7	D	49.6
Alleghany Road	B	11.1	C	28.0	B	11.6	C	32.8
Lake Street	C	21.1	C	29.1	C	24.4	D	39.1
IL 83	D	37.3	D	44.3	E	66.0	F	84.3
Atkinson Road	C	23.5	C	27.3	C	23.7	C	29.2
US 45	F	98.1	E	76.9	F	91.1	E	79.1
Mill Road	D	39.8	C	27.4	D	52.5	C	32.6

Table 7. Eastbound Existing and 2050 No Build Segment Level of Service and Running Speed

Segment		Existing				2050 No Build			
Begin	End	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS
West of IL 60	IL 60	29.5	B	24.9	C	28.7	B	18.8	D
IL 60	Fish Lake Road	32.5	B	35.3	A	32.1	B	25.3	C
Fish Lake Road	Wilson Road	38.8	A	32.7	B	34.7	B	30.7	B
Wilson Road	Fairfield Road	20.3	D	20.5	D	18.9	D	24.7	C
Fairfield Road	Cedar Lake Road	35.6	A	32.6	B	34.4	B	31.5	B
Cedar Lake Road	IL 134 (Centre Drive)	31.9	B	37.8	A	29.6	B	36.4	A
IL 134 (Centre Drive)	Hainesville Road	19	D	23.5	C	13.2	E	20.6	D
Hainesville Road	Alleghany Road	34.4	B	29.2	B	33.7	B	30.3	B
Alleghany Road	Lake Street	28.5	B	28.4	B	28.4	B	28.5	B
Lake Street	IL 83	22.8	C	20.5	D	14.8	E	14.1	E
IL 83	Atkinson Road	26.8	C	22	C	23	C	19.5	D
Atkinson Road	US 45	28.1	B	25.8	C	19.4	D	21.1	D
US 45	Mill Road	24.4	C	30.5	B	22.9	C	31.2	B

Table 8. Westbound Existing and 2050 No Build Segment Level of Service and Running Speed

Segment		Existing				2050 No Build			
Begin	End	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS	A.M. Speed (mph)	A.M. LOS	P.M. Speed (mph)	P.M. LOS
East of Almond Road	Mill Road	25	C	20.5	D	23.9	C	20.4	D
Mill Road	US 45	28	C	27.1	C	25.6	C	18.7	D
US 45	Atkinson Road	32	B	28.2	B	30.4	B	27.2	C
Atkinson Road	IL 83	24.1	C	19	D	22.8	C	11.3	F
IL 83	Lake Street	26.1	C	23.3	C	24.2	C	23.8	C
Lake Street	Alleghany Road	34.1	B	26.6	C	33.8	B	26.6	C
Alleghany Road	Hainesville Road	32	B	29.2	B	29.7	B	23.1	C
Hainesville Road	IL 134 (Centre Drive)	10.8	F	17.1	D	9.9	F	16	E
IL 134 (Centre Drive)	Cedar Lake Road	36.3	A	35.9	A	35.8	A	34.5	B
Cedar Lake Road	Fairfield Road	28.8	B	22.6	C	28.5	B	20.8	D
Fairfield Road	Wilson Road	40.9	A	37.4	A	36	A	31.7	B
Wilson Road	Fish Lake Road	39.4	A	36.7	A	39	A	38.1	A
Fish Lake Road	IL 60	37.8	A	34.7	B	36.2	A	33.9	B

The following five intersections and two sections currently operate at or below LOS D in the A.M. peak hour, as illustrated in **Figure 6:**

- Intersections
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at Centre Drive/IL 134, LOS E
  - IL 120 at IL 83, LOS D
  - IL 120 at US 45, LOS F
  - IL 120 at Mill Road, LOS D
- Segments
  - Wilson Road to Fairfield Road, LOS D
  - Centre Drive/IL 134 to Hainesville Road, LOS D

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IL 120 from Route 60 to Almond Road

EXISTING LEVEL OF SERVICE (A.M.)
IL 120 FROM IL ROUTE 60 TO ALMOND ROAD

Figure 6. Existing A.M. Level of Service

The following cross streets with two-way stop control have approaches for one or more movement that operate at or below LOS D in the A.M. peak hour:

- Wildspring Road, LOS E
- Misty Hill Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS D
- Ashford Lane, LOS D
- Kerry Way, LOS D
- Harris Road, LOS E
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS E

Traffic analysis for existing conditions indicates that the following four signalized intersections and three segments currently operate at or below LOS D in the P.M. peak hour, as illustrated in **Figure 7**:

- Intersections
  - IL 120 at Wilson Road, LOS E
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at IL 83, LOS D
  - IL 120 at US 45, LOS E
- Segments
  - Hainesville Road to IL 134, LOS D
  - Atkinson Road to IL 83, LOS D
  - Mill Road to east of Almond Road, LOS D

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IL 120 from Route 60 to Almond Road

EXISTING LEVEL OF SERVICE (P.M.)
IL 120 FROM IL ROUTE 60 TO ALMOND ROAD

Figure 7. Existing P.M. Level of Service

The following cross streets with two-way stop control have approaches for one or more movement that operate at or below LOS D in the P.M. peak hour:

- Wildspring Road, LOS F
- Porter Drive, LOS E
- Misty High Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS E
- Ashford Lane, LOS D
- Kerry Way, LOS F
- Harris Road, LOS F
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS F
- Almond Road, LOS F

FUTURE LEVEL OF SERVICE

Under the 2050 No Build Scenario, the change in ADT in the IL 120 PEL Study area has an average overall growth of 14.5 percent from 2023 to 2050. Additionally, other intersections throughout the IL 120 PEL Study area are expected to experience low to high growth with overall increases ranging from about 3 to 23 percent from 2023 to 2050. ADT is expected to range from 18,400 to 30,500 by 2050.

With the No Build Scenario, it is anticipated that six signalized intersections and four segments would operate at or below LOS D in the A.M. peak hour, as listed in **Table 6** and illustrated in **Figure 8**:

- Intersections
  - IL 120 at Wilson Road, LOS D
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at Centre Drive/IL 134, LOS E
  - IL 120 at IL 83, LOS E
  - IL 120 at US 45, LOS F
  - IL 120 at Mill Road, LOS D
- Segments
  - Wilson Road to Fairfield Road, LOS D
  - Centre Drive/IL 134 to Hainesville Road, LOS E
  - Lake Street to IL 83, LOS E
  - Atkinson Road to US 45, LOS D

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IL 120 from Route 60 to Almond Road

NO BUILD 2050 LEVEL OF SERVICE (A.M.)
IL 120 FROM IL ROUTE 60 TO ALMOND ROAD

Figure 8. 2050 No Build A.M. Level of Service

The following cross streets with two-way stop control are projected to have approaches for one or more movement that operate at or below LOS D in the 2050 No Build A.M. peak hour:

- Wildspring Road, LOS F
- Porter Drive, LOS D
- Misty Hill Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS F
- Ashford Lane, LOS F
- Kerry Way, LOS E
- Harris Road, LOS F
- Hospital Entrance, LOS D
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS F
- Almond Road, LOS E

With the No Build Scenario, it is anticipated that seven intersections and five segments would operate at or below LOS D in the P.M. peak hour, as illustrated in **Figure 9**:

- Intersections
  - IL 120 at Wilson Road, LOS D
  - IL 120 at Fairfield Road, LOS E
  - IL 120 at Cedar Lake Road, LOS D
  - IL 120 at Hainesville Road, LOS D
  - IL 120 at Lake Street, LOS D
  - IL 120 at IL 83, LOS F
  - IL 120 at US 45, LOS E
- Segments
  - Cedar Lake Road to Fairfield Road, LOS D
  - Hainesville Road to Centre Drive/IL 134, LOS E
  - Atkinson Road to IL 83, LOS F
  - US 45 to Mill Road, LOS D
  - Mill Road to east of Almond Road, LOS D

Illinois Department of Transportation
ILD STUDY
IL 120 from Route 60 to Almond Road

NO BUILD 2050 LEVEL OF SERVICE (P.M.)
IL 120 FROM IL ROUTE 60 TO ALMOND ROAD

Figure 9. 2050 No Build P.M. Level of Service

The following cross streets with two-way stop control have approaches for one or more movement that operate at or below LOS D in the 2050 No Build P.M. peak hour:

- Wildspring Road, LOS E
- Porter Drive, LOS F
- Misty Hill Lane, LOS F
- Deer Point Road, LOS F
- Ivanhoe Road, LOS E
- Ashford Lane, LOS F
- Kerry Way, LOS F
- Harris Road, LOS F
- Hospital Entrance, LOS D
- Sears Boulevard, LOS F
- John Mogg Road, LOS F
- Battershall Road, LOS F
- Almond Road, LOS F

IL 120 currently operates at LOS D, E, or F at multiple intersections and sections within the corridor. Without improvements to the IL 120 corridor and intersections, the anticipated increase of demand on the corridor will result in longer travel times, more congestion, and an increase in travel delays.

2.3 Enhance Modal Interrelationships

Safe and efficient access for all modes of transportation is important to IDOT and IL 120 PEL Study area municipalities to provide safe and equitable access to jobs, school, food, community resources, and healthcare. Within a quarter-mile of the IL-120 corridor, 21.6 percent of households are low income, 40 percent of the population is Black, Indigenous, and people of color, and 8.7 percent of the population has a disability. **Table 9** provides demographics for a quarter-mile of the IL 120 corridor, municipalities along the corridor, and Lake County.

Table 9. IL 120 Corridor Demographics

	IL 120 Corridor (1/4 mile)	Volo	Round Lake	Hainesville	Grayslake	Lake County
Population	17,391	6,122	18,721	3,543	21,248	713,159
BIPOC (%)	40.0	28.8	47.2	40.3	25.8	41.1
Low Income Households (%)	21.6	9.6	19.4	22.2	9.9	20.0
Population with a disability (%)	8.7	5.6	10.0	5.2	9.9	9.7

Currently, bicycle and pedestrian accommodations along IL 120 are sparse and are primarily in Grayslake. Likewise, transit routes are only available along one section of the corridor. Modal interrelationship improvements are needed to enhance safe multi-modal transportation options.

PEDESTRIAN AND BICYCLE FACILITIES

There are some paths or bike routes planned along the corridor but gaps remain throughout the non-motorized transportation network. Existing and planned facilities are shown in **Figure 10.** Existing facilities along IL 120 include:

- Approximately 540 feet of sidewalk on the north and south sides of IL 120 from Hainesville Road to the east entrance of Walgreens and Prairie View School, respectively.
- Sidewalk on the south side of IL 120 from Belle Court to Seymour Street and from Westerfield Place to Lincoln Avenue.
- Sidewalk on the north side of IL 120 from South Lake Street to Westerfield Place.
- Shared-use path along the south side of IL 120 from Ivanhoe Road east to Ashford Lane. This path has connections to a shared-use path along Atkinson Road that extends north to a residential area and a shared-use path along Ashford Lane that extends south into a residential area.
- Shared-use path segment along the south side of IL 120 from Harris Road east to US 45 stops short of the US 45 intersection.

IDOT's Complete Streets Policy states that bicycle and pedestrian ways are considered in all state road projects and constructed when certain conditions are met. Creating "Complete Streets," which serve all anticipated users, including pedestrians, bicyclists, persons with mobility impairments, and transit riders, is an important goal to help to achieve a modern,

efficient, and sustainable transportation system. Similarly, the development of a regional network of trails, which provide both transportation and recreational opportunities on the local and regional scales is of importance as well. Barriers to pedestrians, bicyclists, and pedestrians with disabilities can discourage mobility, require auto trips, or prevent trips.

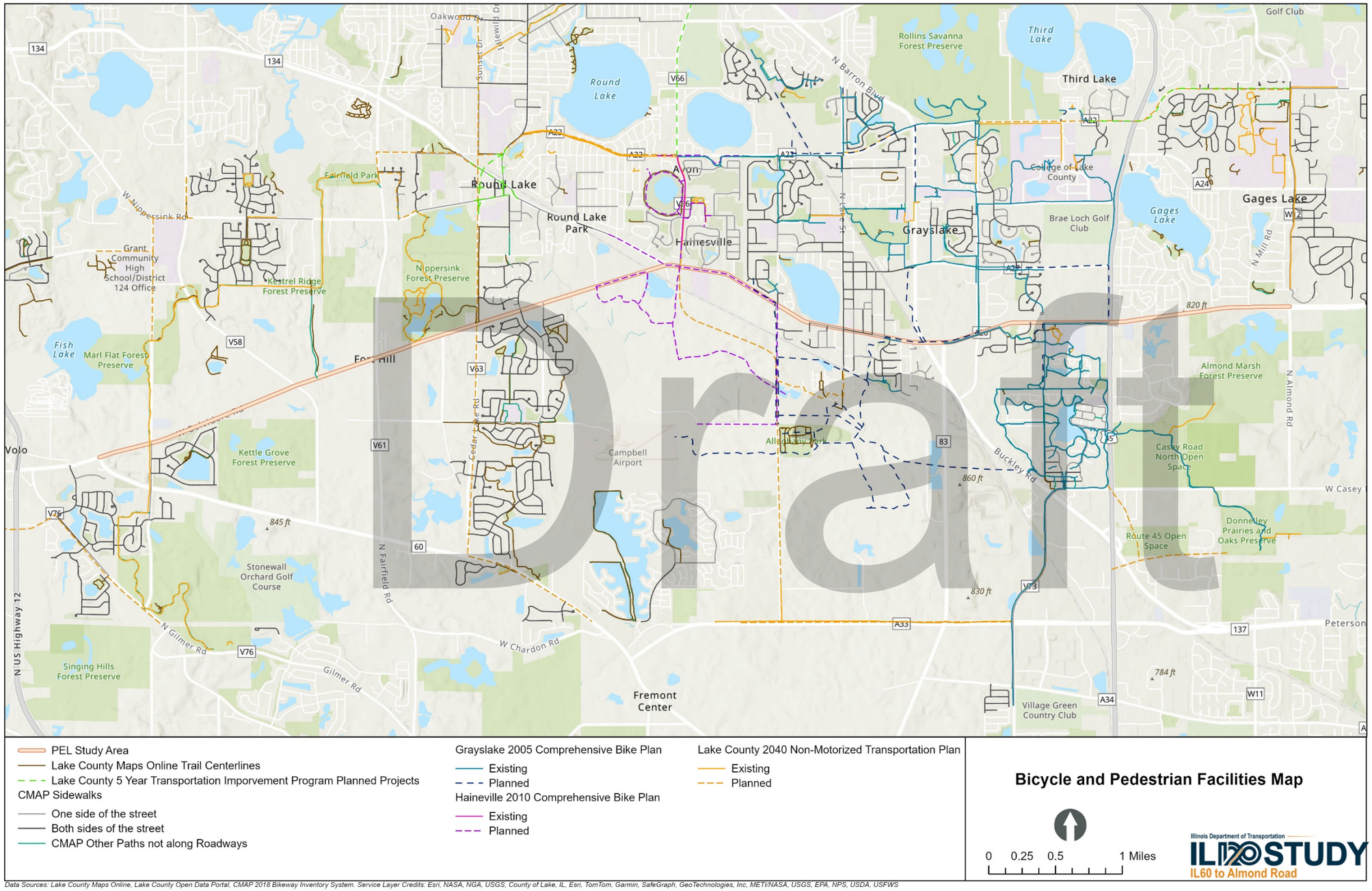
TRANSIT

Pace Bus Route 570 runs from Fox Lake Station in Fox Lake to the College of Lake County in Grayslake and offers once an hour weekday service from approximately 6 A.M. to 9 P.M. Service is limited on Saturdays and there is no Sunday or holiday service. The route runs along a short section of IL 120 from Lake Street in Grayslake to IL 134. Passengers can board or alight the bus at any intersection along the route where the driver deems it is safe to do so; however, passengers are encouraged to wait for the bus at bus stop signs, shown on **Figure 11**. The majority of these bus stop signs are located on the shoulder of IL 120, with sidewalks available only near Hainesville Road and near Lake Street.

Metra's Milwaukee District North and North Central Service lines cross the IL 120 corridor, as shown on **Figure 11**. The Grayslake Lake Street Metra Station on the Milwaukee District North Line is located approximately 1,500 feet south of IL 120 along Lake Street. Sidewalks are available along Lake Street to provide pedestrian access between the station and IL 120, where the nearest Pace bus stop is located. Current Metra schedules indicate there are 39 trains serving this station, with approximate 30 to 45 minute headways during peak hours.

The following stations are located more than one mile from IL 120 and do not have bicycle or pedestrian connections.

- Metra's Round Lake Station is located on the Milwaukee District North Line located approximately 1.4 miles north of IL 120 along IL 134. This station is served by Pace Bus Route 570 (Fixed Route) and Pace Bus Route 590 (On Demand – Round Lake Area). There are 30 weekday trains serving this station, with approximate 20 to 30 minute headways during peak hours.
- Prairie Crossing/Libertyville Station on the Milwaukee District North Line is located approximately 1.3 miles south of IL 120, with access off IL 137. There are no Pace bus connections at this station. There are 39 weekday trains serving this station, with approximate 20 to 30 minute headways during peak hours.
- Prairie Crossing/Libertyville North Central Service Station is located approximately 1.4 miles south of IL I20, with access off IL 137. There are no Pace bus connections at this station. There are 14 weekday trains serving this station, with approximate 20 to 25 minute headways during peak hours.



Data Sources: Lake County Maps Online, Lake County Open Data Portal, CMAP 2018 Bikeway Inventory System. Service Layer Credits: Esri, NASA, NGA, USGS, County of Lake, IL, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Figure 10. Existing and Planned Bicycle and Pedestrian Facilities

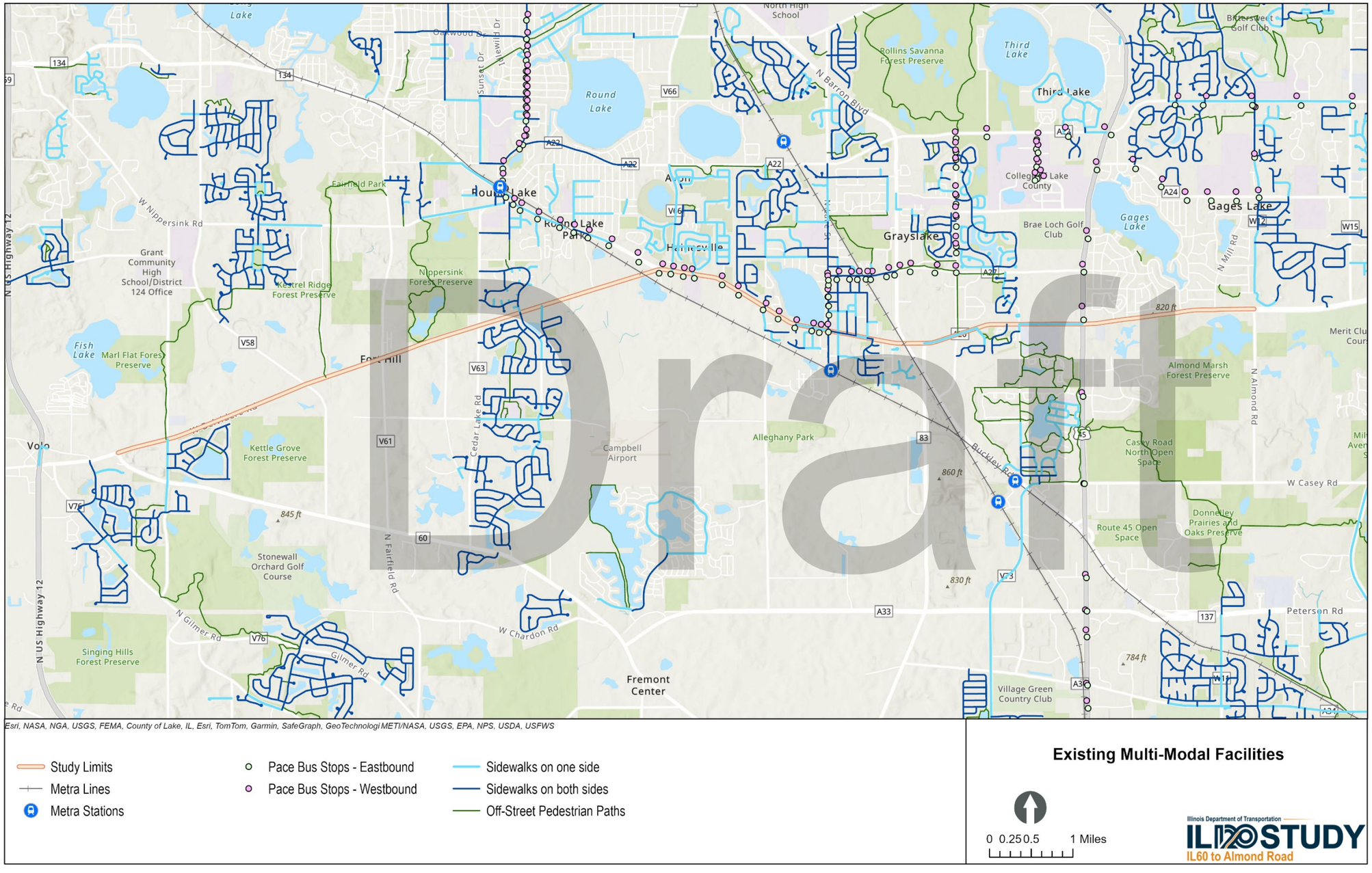


Figure 11. Existing Transit Stops and Pedestrian and Bicycle Facilities

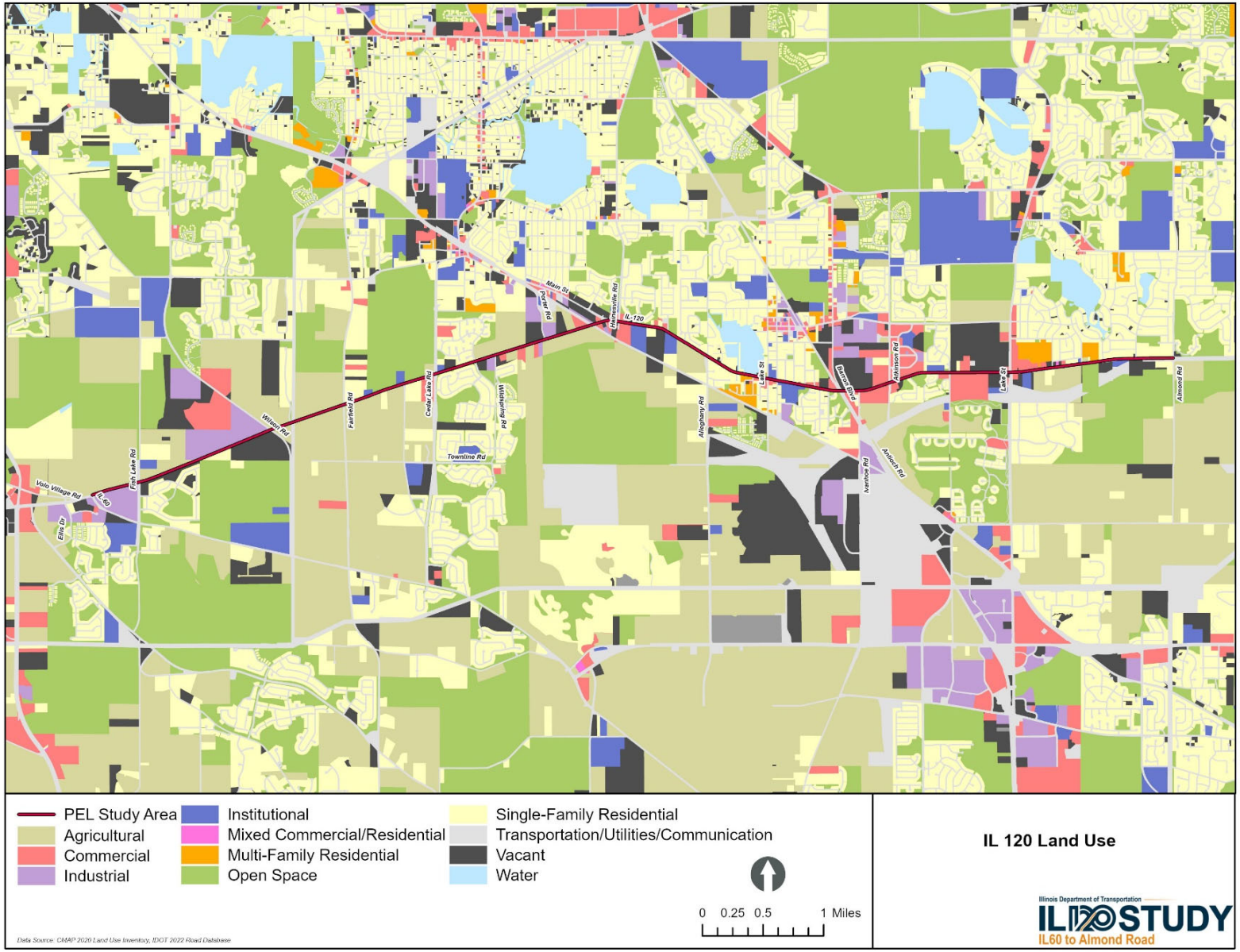


Figure 12: IL 120 Land Use