

APPENDIX B

TRANSPORTATION

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APPENDIX B TRANSPORTATION

Appendix B provides additional information on transportation-related topics along the Indianapolis Line Subdivision, Indianapolis Terminal Subdivision – Louisville Secondary Branch, and Louisville Connection. Transportation topics discussed include grade crossing delay and grade crossing safety.

B.1 GRADE CROSSING DELAY

The methodology used to analyze grade crossing delay is explained below. A total of 176 public at-grade crossings were identified along the Indianapolis Line Subdivision, Indianapolis Terminal Subdivision – Louisville Secondary Branch, and Louisville Connection. These public at-grade crossings are listed in Attachment B-1 along with their current traffic volumes and estimated existing vehicle traffic delays. In addition, the locations of these public at-grade crossings are shown in Attachment B-2.

Passing trains interrupt roadway traffic flow for a period of time that depends on the speed and length of the train. The proposed changes in train traffic volume as a result of the Proposed Transaction would cause increased vehicle delay at the public at-grade crossings where train traffic increases. As part of the Proposed Transaction, the Indianapolis Line Subdivision, Indianapolis Terminal Subdivision – Louisville Secondary Branch, and Louisville Connection are projected to see an increase in the number of trains. The public at-grade crossings along these three rail lines are analyzed under projected 2014 conditions.

Factors in the vehicle delay analysis include the following:

- The number of trains per day before and after the Proposed Transaction
- The estimated time it takes for a train to pass the public at-grade crossing
- Existing and projected roadway traffic volumes

Several values for each public at-grade crossing were calculated and included in the analysis. Existing conditions, the No-Action Alternative, and conditions under the Proposed Transaction were examined for the following parameters:

- Blocked crossing time per train
- Average delay per delayed roadway vehicle
- Vehicle queue length
- Average delay for all vehicles
- Total vehicle traffic delay
- Traffic level of service (LOS)

The following sections describe the methodology used to measure roadway vehicle delay at public at-grade crossings.

B.1.1 Blocked Crossing Time per Train (Dc)

The time required for a train to cross the intersecting roadway was estimated. This time is called the blocked crossing time. This value is used to determine the length of time drivers wait when trains pass through a public at-grade crossing.

Average train speed is a major factor in this calculation. This speed is dependent not only on track conditions and train operating characteristics, but also on intersecting commuter and freight rail traffic.

The following equation, developed by Stanford Research Institute,¹ was used to estimate blocked crossing time for the public at-grade crossings:

$$Dc = \frac{L}{V \times 88} + 0.50$$

where:

- Dc = Time required for the train to pass the public at-grade crossing (minutes). If the crossing has safety gates, it includes time for gate closing and opening. It is also referred to as the total time the crossing indication is activated or the blocked crossing time per train.
- L = Length of the train (feet)
- V = Train speed (miles per hour [mph])
- 88 = Conversion factor from mph to feet per minute
- 0.50 = Time required for gate closing and opening prior to and after the passage of the train (minutes)

B.1.2 Average Delay Per Delayed Vehicle (Da)

The average delay per delayed vehicle is the average amount of time that a driver would be delayed at a public at-grade crossing as a result of a single train crossing. It assumes a uniform arrival of vehicles. Figure B.1-1 illustrates the relationship between arriving and departing vehicles.

¹ Prepared for the Federal Railroad Administration (FRA) and the Federal Highway Administration (FHWA), August 1974, RP-31, Volume 3, Appendix C.

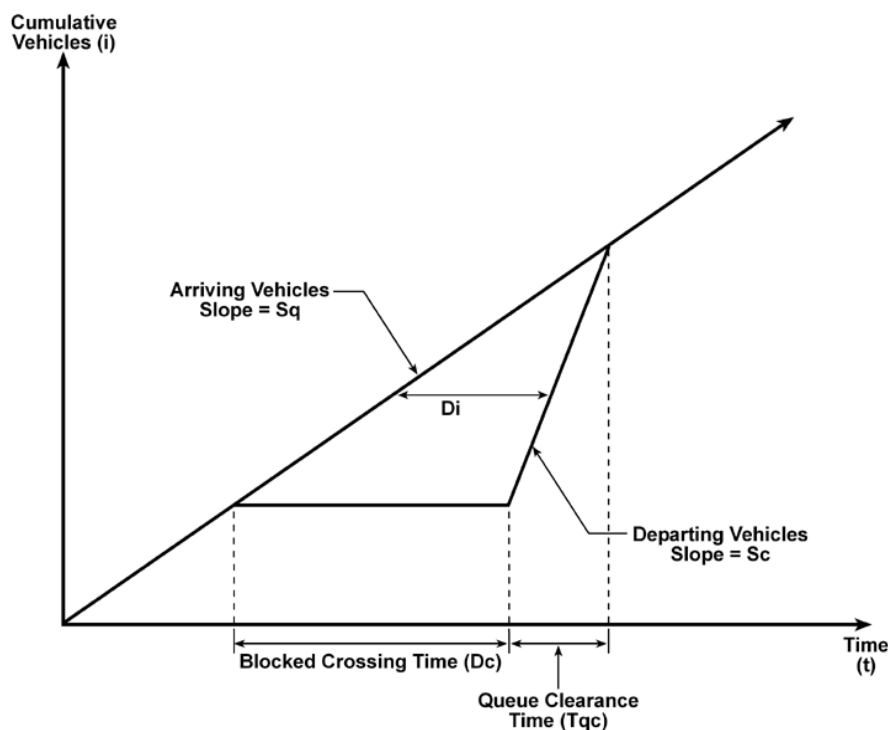


Figure B.1-1. Vehicle Delay Analysis (Single Train Event)

Vehicles arrive at a constant rate of S_q as shown by the constant slope of the arrival curve. When the blocked crossing period begins, vehicles begin to queue. When the blocked crossing period ends, queued vehicles begin to depart at the constant vehicle departure rate of S_c . The departure rate continues until the departure curve intersects the arrival curve, signifying the dissipation of the queue. The arrival and departure curves then coincide until the next train event. From this model:

- The delay for vehicles (i), noted as D_i , is given by the time scale (horizontal) difference between the arrival and departure curves.
- The aggregate delay for all vehicles passing through the crossing is the area between the arrival and departure curves.
- The number of vehicles that incur delay as a result of the train is equal to the number of vehicles that arrive when the crossing is blocked (D_c) and the queue is clearing (T_{qc}).
- The average delay per delayed vehicle (D_a) is equal to the aggregate delay divided by the number of vehicles that are delayed. Assuming uniform arrivals, the equation for the average delay per delayed vehicle can be derived as follows:

$$\begin{aligned}
 D_a &= \frac{\text{Aggregate Delay}}{\text{Delayed Vehicles}} \times 1.3 \\
 &= \frac{0.5 \times S_q \times D_c \times (D_c + T_{qc})}{S_q \times (D_c + T_{qc})} \times 1.3 \\
 &= 0.5 \times D_c \times 1.3
 \end{aligned}$$

where:

- Da = Average delay per delayed vehicle (minutes)
- Sq = Average arrival rate of vehicles (vehicles per minute per lane)
- Dc = Blocked crossing time per train (minutes)
- Tqc = Queue clearance time (minutes)
- 0.5 = Factor used in the calculation of the area of a triangle
- 1.3 = Factor that is widely used in the traffic engineering profession to account for initial deceleration, queue move-up time, and final acceleration of vehicles that are delayed

B.1.3 Vehicle Queue Length (Q)

The vehicle queue is the estimated number of vehicles in line at the end of the blocked crossing time of a single train event. The vehicle queue length was calculated by multiplying the number of blocked vehicles by a constant length of 25 feet. The vehicle queue is equal to the number of vehicles that arrive during the blocked crossing time (Dc). The vehicle queue during the peak hour of roadway traffic was estimated. The peak-hour traffic was assumed to be 10 percent of the average daily traffic (ADT) volume—a typical assumption used by traffic engineers. The vehicle queue at the end of the blocked crossing time was calculated from the following equation:

$$Q = ADT \times 0.1 \times \frac{0.6}{60} \times \frac{Dc}{NL/2}$$

where:

- Q = Vehicle queue (number of vehicles); the queue length is equal to the number of vehicles multiplied by 25 feet.
- ADT = Average daily traffic for public at-grade crossing
- 0.1 = 10 percent factor to convert ADT to peak-hour traffic
- 0.6 = 60 percent factor to convert two-way traffic to peak-direction traffic
- 60 = Factor to convert traffic volume per hour to traffic volume per minute
- Dc = Time required for the train to pass the public at-grade crossing, including time for gate closing and opening, in minutes
- NL = Highway lanes at the public at-grade crossing as reported by the Federal Railroad Administration (FRA) database
- 2 = Factor to convert total number of roadway lanes to number of lanes in peak direction

B.1.4 Average Delay for All Vehicles (D_v)

The average delay per vehicle is the average amount of time that a vehicle is delayed at that intersection.

$$D_v = T_d \times D_a \times 2 / ADT$$

where:

- D_v = Average delay for all vehicles (minutes per vehicle)
- T_d = Vehicles delayed per day
- D_a = Average delay per delayed vehicle (minutes)
- 2 = Factor to account for both directions of traffic
- ADT = Average daily traffic for public at-grade crossing

B.1.5 Average Number of Vehicles Delayed Per Day (T_d)

The average number of vehicles delayed per day equals the number of drivers in a 24-hour period that would be stopped for trains at public at-grade crossings. The average number of vehicles delayed per day per crossing was estimated based on the following equation:

$$T_d = \frac{D_c \times N \times ADT}{1,440}$$

where:

- T_d = Vehicles delayed per day
- D_c = Blocked crossing time per train (in minutes)
- 1,440 = Minutes per day
- N = Trains per day
- ADT = Average daily traffic for public at-grade crossing

B.1.6 Traffic Level of Service

The Surface Transportation Board's Office of Environmental Analysis (OEA) estimated the vehicle delay effects at public at-grade crossings using the LOS concept at signalized intersections, as documented in the 2010 *Highway Capacity Manual* (HCM) (Transportation Research Board [TRB] 2010). Use of the HCM procedures for signalized intersections is acceptable for the following reasons:

- The absence of a similar measure of efficiency for public at-grade crossings
- Similarities between signalized intersection operation and public at-grade crossing operation

The red phase of a traffic signal represents the blocked crossing time at a public at-grade crossing operation. When the blocked crossing period begins, vehicles begin to queue. When the blocked crossing period ends, queued vehicles begin to depart at the constant vehicle departure rate until the queue dissipates.

The LOS for signalized intersections is defined in terms of delay and is expressed as a letter grade ranging from LOS A (free flowing) to F (severely congested). Specifically, the 1997 update to the HCM uses average control delay per vehicle. Control delay includes initial deceleration delay, queue move-up time, and final acceleration delay. Table B.1-1 presents the range of control delay for each LOS.

Table B.1-1. Control Delay for Each Level of Service

LOS	Control Delay per Vehicle (seconds)
A	≤ 10.0
B	> 10.0 to ≤ 20.0
C	> 20.0 to ≤ 35.0
D	> 35.0 to ≤ 55.0
E	> 55.0 to ≤ 80.0
F	> 80.0

Source: TRB, 2010, *Highway Capacity Manual*, 5th ed., TRB 209, Washington D.C.

The average delay per delayed vehicle and average delay for all vehicles are calculated. Then these calculated delays per vehicle are directly compared to the LOS thresholds from the HCM.

The roadway LOS was determined by examining the vehicles per day (vpd) on the roadways that cross the rail lines at public at-grade crossings. The daily capacity per lane was derived using the methodology in the 2010 HCM (TRB 2010). Table B.1-2 presents roadway capacities for different types of roadways based on the area type and classification of the roadway. “Area type” refers to the existing development adjacent to the rail lines, which is an indicator of the type of vehicles using nearby roadways, the expected traffic volumes, and the presence of traffic generators such as industries, offices, shopping centers, or residences, and the density of development.

Table B.1-2. Roadway Capacity by Area Type and Classification

Area Type	Classification	Capacity (vpd/lane)
Urban/Suburban	Arterial ^a	9,800
Urban/Suburban	Collector ^b	6,800

Source: TRB, 2010, *Highway Capacity Manual*, 5th ed., TRB 209, Washington D.C.

Notes:

^a An arterial is a class of street that allows significant traffic movements for travel between major points and provides regional connectivity.

^b A collector is a class of street that collects and distributes traffic from local streets to the arterial road network.

The daily capacity of a roadway is calculated by multiplying the number of lanes on the roadway by the capacity values shown in Table B.1-2 above. For example, if a roadway has 4 lanes and is classified as an urban arterial, the daily capacity is 4 lanes x 9,800 vpd/lane = 39,200 vpd. LOS is determined by calculating the volume to capacity (V/C) ratio, which is the daily volume on the roadway divided by the total capacity. For example, if a roadway accommodates 42,000 vpd and the capacity is 39,200 vpd, then the V/C would be 42,000 vpd/39,200 vpd = 1.07. According to the HCM standards shown in Table B.1-3, below, the example roadway would exhibit LOS F because the V/C ratio is greater than 1.0.

Table B.1-3. Volume to Capacity Ratio Thresholds per Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
0.3	0.45	0.65	0.85	1.0	> 1.0

Source: TRB, 2010, *Highway Capacity Manual*, 5th ed., TRB 209, Washington D.C.

B.1.7 Total Daily Average Vehicle Traffic Delay

OEA calculated the total average vehicle delay for each public at-grade crossing over a 24-hour period and multiplied it by the number of vehicles delayed to estimate the total daily average vehicle traffic delay.

OEA calculated all of the above factors based on existing and proposed values for the number of trains (N), average train speed (V), length of trains (L), and the number of traffic lanes (NL) for each public at-grade crossing. The calculation was based on 2011 ADT volumes for the existing roadway. OEA also determined the existing LOS for each public at-grade crossing. The LOS refers to the efficiency at which a public at-grade crossing operates when a train passes through. Letters from A to F represent the LOS, with LOS A indicating relatively free-flowing traffic and LOS F indicating extreme congestion.

To analyze the existing traffic delays at public at-grade crossings under the No-Action Alternative and compare them to traffic delays projected to occur under the Proposed Transaction, OEA compiled data from the following sources:

- FRA location and inventory databases, which include information about public at-grade crossings, such as ADT data
- CSX Transportation, Inc. (CSXT) and Louisville & Indiana Railroad Company, Inc. (L&I) company databases for train lengths and speeds

OEA used 2011 ADT values to calculate existing traffic delays by using a 1 percent growth factor per year to develop the ADT for 2014.

Along the Indianapolis Line Subdivision, Indianapolis Terminal Subdivision – Louisville Secondary Branch, and Louisville Connection, 99 out of 176 public at-grade crossings met the ADT threshold for analysis or were within 800 feet of an adjacent crossing. Therefore, OEA prepared detailed analyses for those 99 crossings, which are listed in Attachment B-3.

OEA analyzed two alternatives under 2014 conditions: 2014 No-Action Alternative and 2014 Proposed Transaction. OEA assessed the 99 public at-grade crossings by evaluating a single train event, which is defined as each train passing through a public at-grade crossing. Other

variables used in the analysis included the projected number of trains on the Indianapolis Line Subdivision, Indianapolis Terminal Subdivision – Louisville Secondary Branch, and Louisville Connection; average train speed; and average train length. Table B.1-4 presents train length and number of trains per day on each of the three rail lines; train speed is not shown because it varies at each crossing.

Table B.1-4. Train Data for 2014 Alternatives^a

Rail Line	Segment No.	Begin MP	End MP	Length of Trains (ft)	Number of Trains (2014 Proposed Transaction)
Indianapolis Line Subdivision	CSXT-06	283.6	163.5	7,200	34
Indianapolis Terminal Subdivision – Louisville Secondary Branch	CSXT-06a	0.0	4.0	7,200	17
Louisville Connection	CSXT-01a	TR 0.4	0.0	7,200	18

Note:

^a Train speed is not shown because it varies at each crossing. However, train speed was determined from the FRA inventory reports, and the speed at each crossing was equal to 5 mph slower than the maximum timetable speed.

B.2 GRADE CROSSING SAFETY

The methodology for calculating risk of an accident occurring at public at-grade crossings is provided in the formulas below. The results of the calculations are provided in Attachment B-4.

$$a = K \times EI \times DT \times MS \times MT \times HP \times HL$$

$$B = \frac{T_o}{T_o + T} (a) + \frac{T}{T_o + T} (N/T) \text{ where } T_o = 1/(0.05 + a)$$

$$A = 0.8239 \times B \text{ (for crossings protected by passive devices only)}$$

$$A = 0.6935 \times B \text{ (for crossings protected by flashing lights only)}$$

$$A = 0.6714 \times B \text{ (for crossings protected by gates and flashing lights)}$$

where:

a = Initial predicted number of accidents per year

K = Basic accident prediction formula constant

EI	=	Exposure index factor based on the product of the number of roadway vehicles and trains per day
DT	=	Factor for the number of through trains per day during daylight
MS	=	Factor for maximum timetable speed
MT	=	Factor for number of main tracks
HP	=	Factor for paved roadway
HL	=	Factor for number of roadway lanes
B	=	Weighted average of predicted accident rate and actual accident history
T	=	Number of years of recorded accident history
To	=	Weighting factor in U.S. Department of Transportation accident prediction formula
N	=	Number of accidents recorded for a crossing in T years
A	=	Final predicted number of accidents per year

The first formula is the result of a multiple regression analysis of the data from FRA's databases. Because FRA's data cannot describe the precise characteristics of each crossing, such as sight distances, the calculation of predicted accident rates is improved by the addition of actual accident experience at a public at-grade crossing. The results of the first formula serve as an input to the second formula, which averages the initial predicted accident rates for a public at-grade crossing with the actual experience.

The formulas for the final predicted number of accidents apply a constant that adjusts for the level of protection that the warning device at the public at-grade crossing will provide. The values are from the *Highway-Rail Crossing Accident/Incident and Inventory Bulletin* (FRA 1994).

B.3 REFERENCES

- FRA. 1994. *Highway-Rail Crossing Accident/Incident and Inventory Bulletin*. No. 17. Office of Safety. Available online at <http://ntl.bts.gov/DOCS/bull94.html>.
- TRB. 2010. *Highway Capacity Manual*. 5th ed. Transportation Research Board 209. Washington D.C.

EXISTING (2011) VEHICLE DELAYS AT PUBLIC AT-GRADE CROSSINGS

Attachment B-1. Existing (2011) Vehicle Delays at Highway/Rail At-Grade Crossings

Segment	Street	County, State	ADT	L (feet)	V (mph)	Dc (min)	Da (min)	N (# trains)	Td (# veh)	NL (# lanes)	Q (# veh)	Dv (min)	Crossing LOS	Traffic Delay (24 hour) (min)
Indianapolis Terminal Subdivision - Louisville Secondary Branch	NATIONAL AVE	Marion, IN	2,400	7,200	15	5.95	3.87	4	40	2	14	0.128	A	153.65
Indianapolis Terminal Subdivision - Louisville Secondary Branch	SUMNER AVE	Marion, IN	3,200	7,200	15	5.95	3.87	4	53	2	19	0.128	A	204.86
Indianapolis Terminal Subdivision - Louisville Secondary Branch	TROY AVE	Marion, IN	18,500	7,200	15	5.95	3.87	4	306	4	55	0.128	A	1184.35
Indianapolis Terminal Subdivision - Louisville Secondary Branch	SOUTHERN AVE	Marion, IN	6,200	7,200	15	5.95	3.87	4	103	2	37	0.128	A	396.92
Indianapolis Terminal Subdivision - Louisville Secondary Branch	RAYMOND ST	Marion, IN	15,700	7,200	15	5.95	3.87	4	260	4	47	0.128	A	1005.10
Indianapolis Terminal Subdivision - Louisville Secondary Branch	CAVEN ST	Marion, IN	400	7,200	10	8.68	5.64	4	10	2	3	0.272	B	54.44
Indianapolis Terminal Subdivision - Louisville Secondary Branch	TERRACE AVE	Marion, IN	1,400	7,200	10	8.68	5.64	4	34	2	12	0.272	B	190.53
Indianapolis Line Subdivision	NEW YORK ST	Marion, IN	9,100	7,200	20	4.59	2.98	23	667	4	21	0.438	C	1991.21
Indianapolis Line Subdivision	VERMONT ST	Marion, IN	600	7,200	20	4.59	2.98	23	44	2	3	0.438	C	131.29
Indianapolis Line Subdivision	MICHIGAN ST	Marion, IN	18,200	7,200	20	4.59	2.98	23	1335	4	42	0.438	C	3982.42
Indianapolis Line Subdivision	ST CLAIR ST	Marion, IN	2,900	7,200	20	4.59	2.98	23	213	2	13	0.438	C	634.56
Indianapolis Line Subdivision	COLUMBIA AVE	Marion, IN	1,400	7,200	35	2.84	1.84	23	63	2	4	0.167	B	117.04
Indianapolis Line Subdivision	COMMERCE AVE	Marion, IN	6,800	7,200	35	2.84	1.84	23	308	2	19	0.167	B	568.47
Indianapolis Line Subdivision	18TH ST	Marion, IN	1,400	7,200	35	2.84	1.84	23	63	2	4	0.167	B	117.04
Indianapolis Line Subdivision	RURAL ST	Marion, IN	16,600	7,200	35	2.84	1.84	23	752	4	24	0.167	B	1387.74
Indianapolis Line Subdivision	DEARBORN ST	Marion, IN	2,900	7,200	35	2.84	1.84	23	131	2	8	0.167	B	242.44
Indianapolis Line Subdivision	OLNEY ST	Marion, IN	2,900	7,200	35	2.84	1.84	23	131	2	8	0.167	B	242.44
Indianapolis Line Subdivision	SHERMAN DR	Marion, IN	10,900	7,200	35	2.84	1.84	23	494	4	15	0.167	B	911.23
Indianapolis Line Subdivision	34TH ST	Marion, IN	9,600	7,200	35	2.84	1.84	23	435	2	27	0.167	B	802.55
Indianapolis Line Subdivision	ARLINGTON AVE	Marion, IN	13,500	7,200	35	2.84	1.84	23	612	4	19	0.167	B	1128.58
Indianapolis Line Subdivision	46TH ST	Marion, IN	11,100	7,200	35	2.84	1.84	23	503	2	31	0.167	B	927.95
Indianapolis Line Subdivision	FRANKLIN RD	Marion, IN	14,700	7,200	35	2.84	1.84	23	666	4	21	0.167	B	1228.90
Indianapolis Line Subdivision	47 ST OR HUNTER ST	Marion, IN	900	7,200	35	2.84	1.84	23	41	2	3	0.167	B	75.24
Indianapolis Line Subdivision	POST RD	Marion, IN	13,300	7,200	35	2.84	1.84	23	603	4	19	0.167	B	1111.86
Indianapolis Line Subdivision	59TH ST	Marion, IN	3,800	7,200	35	2.84	1.84	23	172	2	11	0.167	B	317.68
Indianapolis Line Subdivision	SUNNYSIDE	Marion, IN	9,900	7,200	35	2.84	1.84	23	449	2	28	0.167	B	827.63
Indianapolis Line Subdivision	OAKLANDON DR	Marion, IN	9,300	7,200	35	2.84	1.84	23	422	2	26	0.167	B	777.47
Indianapolis Line Subdivision	BRANDON ST	Marion, IN	600	7,200	35	2.84	1.84	23	27	2	2	0.167	B	50.16
Indianapolis Line Subdivision	700 W CO LINE RD	Marion, IN	2,400	7,200	35	2.84	1.84	23	109	2	7	0.167	B	200.64
Indianapolis Line Subdivision	750 NORTH	Hancock, IN	1,500	7,200	55	1.99	1.29	23	48	3	2	0.082	A	61.52
Indianapolis Line Subdivision	DEPOT ST	Hancock, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	OIL WELL RD 600W	Hancock, IN	13,200	7,200	55	1.99	1.29	23	419	2	26	0.082	A	541.39
Indianapolis Line Subdivision	CR 500W	Hancock, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	CR #400W	Hancock, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	1000 NORTH	Hancock, IN	3,500	7,200	55	1.99	1.29	23	111	2	7	0.082	A	143.55
Indianapolis Line Subdivision	MERRILL ST	Hancock, IN	1,100	7,200	55	1.99	1.29	23	35	2	2	0.082	A	45.12
Indianapolis Line Subdivision	MAIN ST	Hancock, IN	4,800	7,200	55	1.99	1.29	23	152	4	5	0.082	A	196.87
Indianapolis Line Subdivision	NOEL	Hancock, IN	300	7,200	55	1.99	1.29	23	10	2	1	0.082	A	12.30
Indianapolis Line Subdivision	MADISON ST	Hancock, IN	7,500	7,200	55	1.99	1.29	23	238	2	15	0.082	A	307.61
Indianapolis Line Subdivision	750W-ALFONT RD	Madison, IN	1,200	7,200	55	1.99	1.29	23	38	2	2	0.082	A	49.22
Indianapolis Line Subdivision	ALFONTE ST	Madison, IN	1,000	7,200	55	1.99	1.29	23	32	2	2	0.082	A	41.01
Indianapolis Line Subdivision	MERIDIAN ST	Madison, IN	1,000	7,200	55	1.99	1.29	23	32	2	2	0.082	A	41.01
Indianapolis Line Subdivision	EAST ST	Madison, IN	1,000	7,200	55	1.99	1.29	23	32	2	2	0.082	A	41.01
Indianapolis Line Subdivision	REFORMATORY RD	Madison, IN	2,700	7,200	55	1.99	1.29	23	86	2	5	0.082	A	110.74
Indianapolis Line Subdivision	PENDLETON AVE	Madison, IN	2,200	7,200	55	1.99	1.29	23	70	2	4	0.082	A	90.23
Indianapolis Line Subdivision	BROADWAY ST	Madison, IN	600	7,200	55	1.99	1.29	23	19	2	1	0.082	A	24.61
Indianapolis Line Subdivision	MADISON AVE	Madison, IN	1,000	7,200	55	1.99	1.29	23	32	2	2	0.082	A	41.01
Indianapolis Line Subdivision	PENDLETON ST	Madison, IN	1,900	7,200	55	1.99	1.29	23	60	2	4	0.082	A	77.93
Indianapolis Line Subdivision	GOUL RD	Madison, IN	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	73RD ST	Madison, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	DICKEY ROAD 400SO	Madison, IN	1,400	7,200	55	1.99	1.29	23	44	2	3	0.082	A	57.42
Indianapolis Line Subdivision	53RD ST/SYBRT RD	Madison, IN	6,000	7,200	55	1.99	1.29	23	190	2	12	0.082	A	246.09
Indianapolis Line Subdivision	W 38TH ST	Madison, IN	12,200	7,200	55	1.99	1.29	23	387	3	16	0.082	A	500.38
Indianapolis Line Subdivision	W 22ND ST	Madison, IN	2,300	7,200	25	3.77	2.45	23	139	2	9	0.296	B	339.87
Indianapolis Line Subdivision	LOCUST	Madison, IN	1,100	7,200	25	3.77	2.45	23	66	2	4	0.296	B	162.55

Attachment B-1. Existing (2011) Vehicle Delays at Highway/Rail At-Grade Crossings

Segment	Street	County, State	ADT	L (feet)	V (mph)	Dc (min)	Da (min)	N (# trains)	Td (# veh)	NL (# lanes)	Q (# veh)	Dv (min)	Crossing LOS	Traffic Delay (24 hour) (min)
Indianapolis Line Subdivision	CEDAR ST	Madison, IN	300	7,200	25	3.77	2.45	23	18	2	1	0.296	B	44.33
Indianapolis Line Subdivision	MADISON AVE	Madison, IN	14,600	7,200	25	3.77	2.45	23	880	3	37	0.296	B	2157.46
Indianapolis Line Subdivision	FAIRVIEW ST	Madison, IN	1,200	7,200	25	3.77	2.45	23	72	2	5	0.296	B	177.33
Indianapolis Line Subdivision	LINCOLN ST	Madison, IN	1,100	7,200	25	3.77	2.45	23	66	2	4	0.296	B	162.55
Indianapolis Line Subdivision	BROWN ST	Madison, IN	7,500	7,200	25	3.77	2.45	23	452	2	28	0.296	B	1108.28
Indianapolis Line Subdivision	JACKSON ST	Madison, IN	7,000	7,200	25	3.77	2.45	23	422	2	26	0.296	B	1034.40
Indianapolis Line Subdivision	MERIDIAN ST	Madison, IN	3,100	7,200	25	3.77	2.45	23	187	2	12	0.296	B	458.09
Indianapolis Line Subdivision	MAIN ST	Madison, IN	4,800	7,200	25	3.77	2.45	23	289	2	18	0.296	B	709.30
Indianapolis Line Subdivision	CENTRAL AVE	Madison, IN	3,900	7,200	25	3.77	2.45	23	235	3	10	0.296	B	576.31
Indianapolis Line Subdivision	FLETCHER ST	Madison, IN	1,000	7,200	25	3.77	2.45	23	60	2	4	0.296	B	147.77
Indianapolis Line Subdivision	PEARL ST	Madison, IN	600	7,200	25	3.77	2.45	23	36	2	2	0.296	B	88.66
Indianapolis Line Subdivision	WALNUT ST	Madison, IN	600	7,200	25	3.77	2.45	23	36	2	2	0.296	B	88.66
Indianapolis Line Subdivision	NOBLE ST	Madison, IN	1,000	7,200	25	3.77	2.45	23	60	2	4	0.296	B	147.77
Indianapolis Line Subdivision	JEFFERSON ST	Madison, IN	1,000	7,200	25	3.77	2.45	23	60	2	4	0.296	B	147.77
Indianapolis Line Subdivision	COLUMBUS AVE	Madison, IN	10,200	7,200	25	3.77	2.45	23	615	3	26	0.296	B	1507.27
Indianapolis Line Subdivision	PITT ST	Madison, IN	500	7,200	25	3.77	2.45	23	30	2	2	0.296	B	73.89
Indianapolis Line Subdivision	22ND ST	Madison, IN	5,800	7,200	25	3.77	2.45	23	350	2	22	0.296	B	857.07
Indianapolis Line Subdivision	SCATTERFIELD RD	Madison, IN	20,300	7,200	25	3.77	2.45	23	1223	4	38	0.296	B	2999.75
Indianapolis Line Subdivision	ULM RD	Madison, IN	300	7,200	25	3.77	2.45	23	18	2	1	0.296	B	44.33
Indianapolis Line Subdivision	CHURCH ST	Madison, IN	400	7,200	25	3.77	2.45	23	24	2	2	0.296	B	59.11
Indianapolis Line Subdivision	RANGELINE RD	Madison, IN	7,600	7,200	55	1.99	1.29	23	241	2	15	0.082	A	311.71
Indianapolis Line Subdivision	CR 100S	Madison, IN	4,200	7,200	55	1.99	1.29	23	133	2	8	0.082	A	172.26
Indianapolis Line Subdivision	300E-MIDDLETOWN RD	Madison, IN	600	7,200	55	1.99	1.29	23	19	2	1	0.082	A	24.61
Indianapolis Line Subdivision	WATER ST	Madison, IN	2,900	7,200	55	1.99	1.29	23	92	2	6	0.082	A	118.94
Indianapolis Line Subdivision	CR #500E	Madison, IN	5,900	7,200	55	1.99	1.29	23	187	3	8	0.082	A	241.99
Indianapolis Line Subdivision	WALNUT ST	Delaware, IN	5,100	7,200	55	1.99	1.29	23	162	2	10	0.082	A	209.17
Indianapolis Line Subdivision	TENNESSEE ST	Delaware, IN	300	7,200	55	1.99	1.29	23	10	2	1	0.082	A	12.30
Indianapolis Line Subdivision	400 SOUTH	Delaware, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	300 SOUTH	Delaware, IN	300	7,200	55	1.99	1.29	23	10	2	1	0.082	A	12.30
Indianapolis Line Subdivision	700 W	Delaware, IN	800	7,200	55	1.99	1.29	23	25	2	2	0.082	A	32.81
Indianapolis Line Subdivision	YORK AVE-600W	Delaware, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	BROADWAY	Delaware, IN	3,200	7,200	55	1.99	1.29	23	102	2	6	0.082	A	131.25
Indianapolis Line Subdivision	ANDREWS RD	Delaware, IN	1,400	7,200	55	1.99	1.29	23	44	2	3	0.082	A	57.42
Indianapolis Line Subdivision	CR #400W	Delaware, IN	2,800	7,200	55	1.99	1.29	23	89	2	6	0.082	A	114.84
Indianapolis Line Subdivision	CR #300W	Delaware, IN	700	7,200	25	3.77	2.45	23	42	2	3	0.296	B	103.44
Indianapolis Line Subdivision	CR 250 WEST	Delaware, IN	1,200	7,200	25	3.77	2.45	23	72	2	5	0.296	B	177.33
Indianapolis Line Subdivision	BATAVIA AVE	Delaware, IN	13,200	7,200	25	3.77	2.45	23	795	5	20	0.296	B	1950.58
Indianapolis Line Subdivision	PERKINS	Delaware, IN	2,900	7,200	25	3.77	2.45	23	175	2	11	0.296	B	428.54
Indianapolis Line Subdivision	ELLIOTT ST	Delaware, IN	2,500	7,200	25	3.77	2.45	23	151	2	9	0.296	B	369.43
Indianapolis Line Subdivision	COUNCIL ST	Delaware, IN	1,300	7,200	25	3.77	2.45	23	78	2	5	0.296	B	192.10
Indianapolis Line Subdivision	LIBERTY	Delaware, IN	7,400	7,200	25	3.77	2.45	23	446	2	28	0.296	B	1093.51
Indianapolis Line Subdivision	WALNUT ST	Delaware, IN	9,500	7,200	10	8.68	5.64	23	1317	4	41	1.565	F	7434.02
Indianapolis Line Subdivision	JEFFERSON ST	Delaware, IN	800	7,200	10	8.68	5.64	23	111	2	7	1.565	F	626.02
Indianapolis Line Subdivision	ELM ST	Delaware, IN	600	7,200	10	8.68	5.64	23	83	2	5	1.565	F	469.52
Indianapolis Line Subdivision	MONROE ST	Delaware, IN	900	7,200	10	8.68	5.64	23	125	2	8	1.565	F	704.28
Indianapolis Line Subdivision	S PERSHING DRIVE	Delaware, IN	400	7,200	25	3.77	2.45	23	24	2	2	0.296	B	59.11
Indianapolis Line Subdivision	S HACKLEY STREET	Delaware, IN	5,200	7,200	25	3.77	2.45	23	313	2	20	0.296	B	768.41
Indianapolis Line Subdivision	S OHIO AVENUE	Delaware, IN	5,700	7,200	25	3.77	2.45	23	343	2	22	0.296	B	842.30
Indianapolis Line Subdivision	LINCOLN ST	Delaware, IN	3,100	7,200	25	3.77	2.45	23	187	2	12	0.296	B	458.09
Indianapolis Line Subdivision	BUTTERFIELD RD	Delaware, IN	1,100	7,200	25	3.77	2.45	23	66	2	4	0.296	B	162.55
Indianapolis Line Subdivision	COUNTRY CLUB RD	Delaware, IN	2,600	7,200	55	1.99	1.29	23	83	2	5	0.082	A	106.64
Indianapolis Line Subdivision	400 EAST	Delaware, IN	1,200	7,200	55	1.99	1.29	23	38	2	2	0.082	A	49.22
Indianapolis Line Subdivision	CO 550 E	Delaware, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	PITTINGER	Delaware, IN	500	7,200	55	1.99	1.29	23	16	2	1	0.082	A	20.51
Indianapolis Line Subdivision	ALBANY ST	Delaware, IN	2,100	7,200	55	1.99	1.29	23	67	2	4	0.082	A	86.13

Attachment B-1. Existing (2011) Vehicle Delays at Highway/Rail At-Grade Crossings

Segment	Street	County, State	ADT	L (feet)	V (mph)	Dc (min)	Da (min)	N (# trains)	Td (# veh)	NL (# lanes)	Q (# veh)	Dv (min)	Crossing LOS	Traffic Delay (24 hour) (min)
Indianapolis Line Subdivision	700 EAST	Delaware, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	800 EAST	Delaware, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	FRANKLIN ST	Randolph, IN	1,600	7,200	55	1.99	1.29	23	51	2	3	0.082	A	65.62
Indianapolis Line Subdivision	MAIN ST	Randolph, IN	2,500	7,200	55	1.99	1.29	23	79	2	5	0.082	A	102.54
Indianapolis Line Subdivision	FULTON	Randolph, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	1100W	Randolph, IN	500	7,200	55	1.99	1.29	23	16	2	1	0.082	A	20.51
Indianapolis Line Subdivision	1000 WEST	Randolph, IN	1,100	7,200	55	1.99	1.29	23	35	2	2	0.082	A	45.12
Indianapolis Line Subdivision	900W	Randolph, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	MULBERRY ST	Randolph, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	MAIN	Randolph, IN	7,900	7,200	55	1.99	1.29	23	251	2	16	0.082	A	324.02
Indianapolis Line Subdivision	PLUM ST	Randolph, IN	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	675W	Randolph, IN	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	375 WEST	Randolph, IN	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	200 WEST	Randolph, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	JACKSON ST	Randolph, IN	300	7,200	55	1.99	1.29	23	10	2	1	0.082	A	12.30
Indianapolis Line Subdivision	WEST ST	Randolph, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	MERIDIAN	Randolph, IN	500	7,200	55	1.99	1.29	23	16	2	1	0.082	A	20.51
Indianapolis Line Subdivision	MAIN ST	Randolph, IN	5,000	7,200	55	1.99	1.29	23	159	2	10	0.082	A	205.07
Indianapolis Line Subdivision	EAST ST	Randolph, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	CR 100E	Randolph, IN	2,600	7,200	55	1.99	1.29	23	83	2	5	0.082	A	106.64
Indianapolis Line Subdivision	200 EAST	Randolph, IN	100	7,200	55	1.99	1.29	23	3	2	0	0.082	A	4.10
Indianapolis Line Subdivision	300 EAST	Randolph, IN	500	7,200	55	1.99	1.29	23	16	2	1	0.082	A	20.51
Indianapolis Line Subdivision	CR #350E	Randolph, IN	100	7,200	55	1.99	1.29	23	3	1	0	0.082	A	4.10
Indianapolis Line Subdivision	400 EAST	Randolph, IN	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	MAIN ST 500 EAST	Randolph, IN	300	7,200	55	1.99	1.29	23	10	2	1	0.082	A	12.30
Indianapolis Line Subdivision	600 EAST	Randolph, IN	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	700 EAST	Randolph, IN	300	7,200	55	1.99	1.29	23	10	2	1	0.082	A	12.30
Indianapolis Line Subdivision	WALNUT ST	Randolph, IN	900	7,200	55	1.99	1.29	23	29	2	2	0.082	A	36.91
Indianapolis Line Subdivision	HOWARD ST	Randolph, IN	900	7,200	55	1.99	1.29	23	29	2	2	0.082	A	36.91
Indianapolis Line Subdivision	COLUMBIA ST	Randolph, IN	4,000	7,200	55	1.99	1.29	23	127	2	8	0.082	A	164.06
Indianapolis Line Subdivision	ST LINE ST	Randolph, IN	3,700	7,200	55	1.99	1.29	23	117	2	7	0.082	A	151.75
Indianapolis Line Subdivision	S SYCAMORE ST	Darke, OH	1,500	7,200	55	1.99	1.29	23	48	2	3	0.082	A	61.52
Indianapolis Line Subdivision	DIVISION ST	Darke, OH	1,100	7,200	55	1.99	1.29	23	35	2	2	0.082	A	45.12
Indianapolis Line Subdivision	DEARFIELD ST	Darke, OH	2,800	7,200	55	1.99	1.29	23	89	2	6	0.082	A	114.84
Indianapolis Line Subdivision	HILLGROVE-FTRECOV	Darke, OH	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	STAUDT	Darke, OH	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	YOUNG RD	Darke, OH	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	COLETOWN-LIGHTSVILLE	Darke, OH	500	7,200	55	1.99	1.29	23	16	2	1	0.082	A	20.51
Indianapolis Line Subdivision	SR49	Darke, OH	1,500	7,200	55	1.99	1.29	23	48	2	3	0.082	A	61.52
Indianapolis Line Subdivision	BETLING RD	Darke, OH	100	7,200	55	1.99	1.29	23	3	2	0	0.082	A	4.10
Indianapolis Line Subdivision	JACKSON ST	Darke, OH	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	S MAIN ST	Darke, OH	4,900	7,200	55	1.99	1.29	23	156	2	10	0.082	A	200.97
Indianapolis Line Subdivision	BEAM RD	Darke, OH	300	7,200	55	1.99	1.29	23	10	2	1	0.082	A	12.30
Indianapolis Line Subdivision	YOUNKER RD	Darke, OH	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	SHAFFER	Darke, OH	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	WOLF RD	Darke, OH	100	7,200	55	1.99	1.29	23	3	2	0	0.082	A	4.10
Indianapolis Line Subdivision	CONOVER RD	Darke, OH	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	NORTHWEST ST	Darke, OH	4,400	7,200	55	1.99	1.29	23	140	2	9	0.082	A	180.46
Indianapolis Line Subdivision	NORTH CENTER	Darke, OH	3,700	7,200	55	1.99	1.29	23	117	2	7	0.082	A	151.75
Indianapolis Line Subdivision	SECOND ST	Darke, OH	600	7,200	55	1.99	1.29	23	19	2	1	0.082	A	24.61
Indianapolis Line Subdivision	STEFFIN ST	Darke, OH	600	7,200	55	1.99	1.29	23	19	2	1	0.082	A	24.61
Indianapolis Line Subdivision	NORTH OLIVE ST	Darke, OH	100	7,200	55	1.99	1.29	23	3	2	0	0.082	A	4.10
Indianapolis Line Subdivision	E MAIN ST	Darke, OH	2,800	7,200	55	1.99	1.29	23	89	2	6	0.082	A	114.84
Indianapolis Line Subdivision	HB HOLE RD	Darke, OH	200	7,200	55	1.99	1.29	23	6	2	0	0.082	A	8.20
Indianapolis Line Subdivision	DARKE SHELBY COUNTY	Shelby, OH	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41

Attachment B-1. Existing (2011) Vehicle Delays at Highway/Rail At-Grade Crossings														
Segment	Street	County, State	ADT	L (feet)	V (mph)	Dc (min)	Da (min)	N (# trains)	Td (# veh)	NL (# lanes)	Q (# veh)	Dv (min)	Crossing LOS	Traffic Delay (24 hour) (min)
Indianapolis Line Subdivision	RUSSIA VERSAILLES	Shelby, OH	1,900	7,200	55	1.99	1.29	23	60	2	4	0.082	A	77.93
Indianapolis Line Subdivision	MILLER RD	Shelby, OH	1,600	7,200	55	1.99	1.29	23	51	2	3	0.082	A	65.62
Indianapolis Line Subdivision	RUSSIA RD	Shelby, OH	700	7,200	55	1.99	1.29	23	22	2	1	0.082	A	28.71
Indianapolis Line Subdivision	RANGELINE RD	Shelby, OH	900	7,200	55	1.99	1.29	23	29	2	2	0.082	A	36.91
Indianapolis Line Subdivision	PAMPEL RD	Shelby, OH	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	STOKER RD	Shelby, OH	100	7,200	55	1.99	1.29	23	3	2	0	0.082	A	4.10
Indianapolis Line Subdivision	LINDSEY RD	Shelby, OH	400	7,200	55	1.99	1.29	23	13	2	1	0.082	A	16.41
Indianapolis Line Subdivision	WRIGHT RD	Shelby, OH	100	7,200	55	1.99	1.29	23	3	2	0	0.082	A	4.10
Indianapolis Line Subdivision	VANDEMARK RD	Shelby, OH	5,500	7,200	55	1.99	1.29	23	175	4	5	0.082	A	225.58
Louisville Connection	KENTUCKY ST	Jefferson, KY	4,000	7,200	10	8.68	5.64	6	145	2	35	0.408	C	816.55
Louisville Connection	SHIPP ST	Jefferson, KY	2,800	7,200	10	8.68	5.64	6	101	2	24	0.408	C	571.59

Sources:

FRA 2014a, Crossing Inventory Reports, <http://safetydata.fra.dot.gov/OfficeofSafety/publicsite/crossing/crossing.aspx>;

Notes:

L = length of trains (feet)

V = existing average train speed (miles per hour [mph])

Dc = blocked crossing time per train (minutes)

Da = average delay per delayed vehicle (minutes)

N = existing number of trains

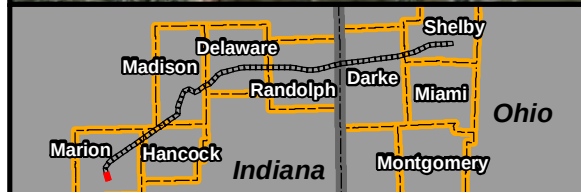
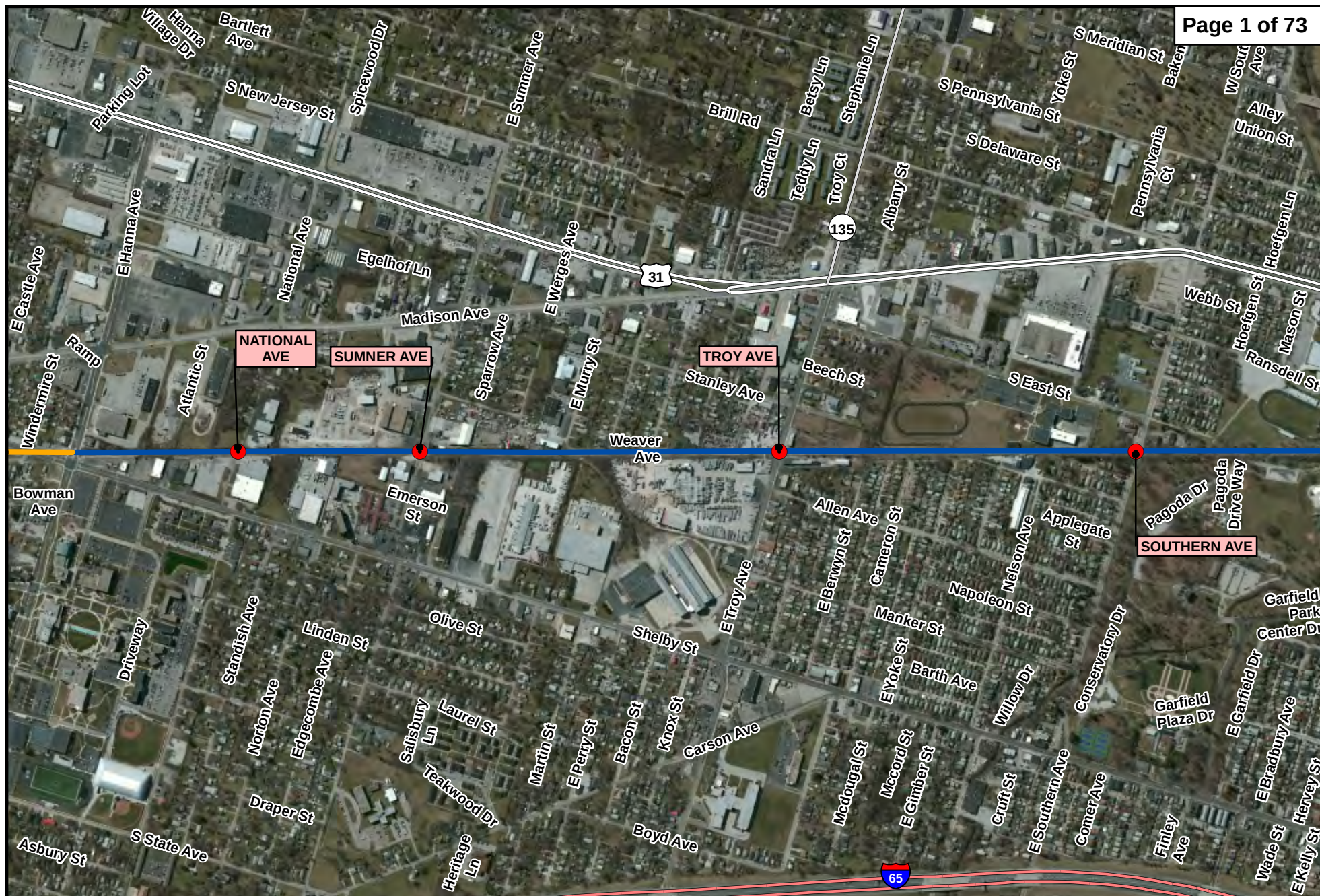
Td = total delayed vehicles per day (vpd)

NL = number traffic lanes

Q = vehicle queue length (number of vehicles)

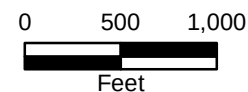
Dv = average delay for all vehicles (minutes)

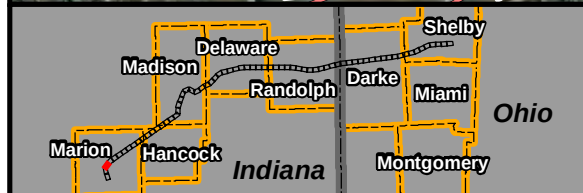
FIGURES SHOWING PUBLIC AT-GRADE CROSSINGS



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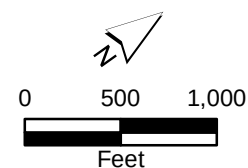
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- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

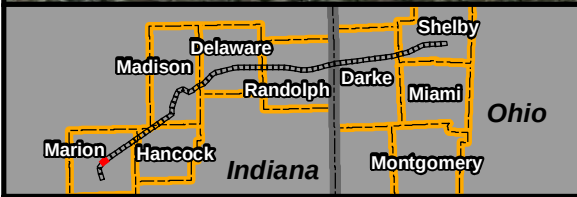




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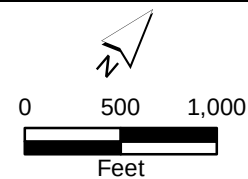
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- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision
- Indianapolis Terminal Subdivision - Louisville Secondary Branch

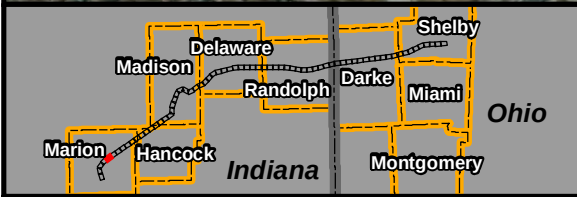




-  Public At-Grade Crossings
 State Boundary
 County Boundary

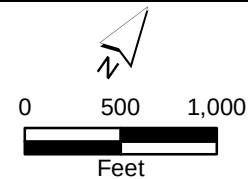
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■ Indianapolis Line Subdivision ■ Louisville Connection
■ L&I Line ■ Toledo Subdivision
■ Indianapolis Terminal Subdivision - Louisville Secondary Branch

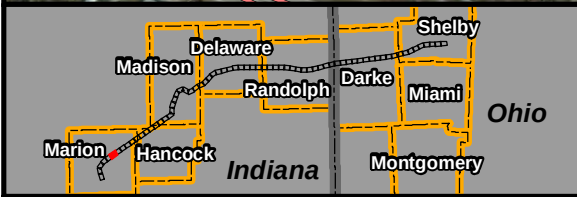




 Public At-Grade Crossings
 State Boundary
 County Boundary

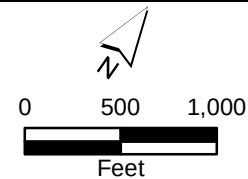
- Cincinnati Terminal Subdivision ■ LCL Subdivision
■ Indianapolis Line Subdivision ■ Louisville Connection
■ L&I Line ■ Toledo Subdivision
■ Indianapolis Terminal Subdivision - Louisville Secondary Branch

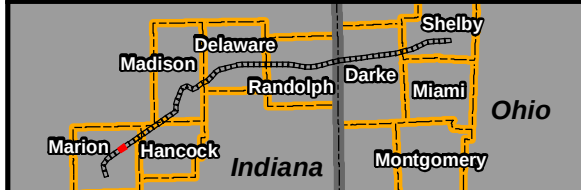




 Public At-Grade Crossings
 State Boundary
 County Boundary

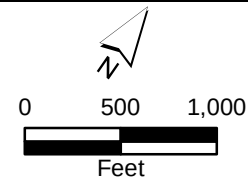
-  Public At-Grade Crossings
  Cincinnati Terminal Subdivision
  LCL Subdivision
-  State Boundary
  Indianapolis Line Subdivision
  Louisville Connection
-  County Boundary
  L&I Line
  Toledo Subdivision
-  Indianapolis Terminal Subdivision - Louisville Secondary Branch

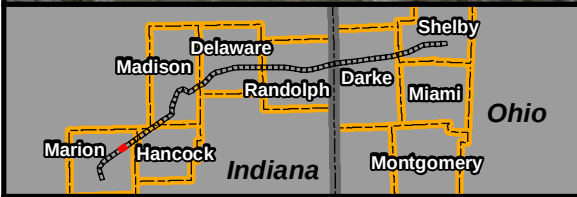




 Public At-Grade Crossings
 State Boundary
 County Boundary

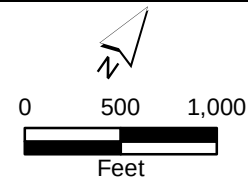
- Cincinnati Terminal Subdivision ■ LCL Subdivision
■ Indianapolis Line Subdivision ■ Louisville Connection
■ L&I Line ■ Toledo Subdivision
■ Indianapolis Terminal Subdivision - Louisville Secondary Branch

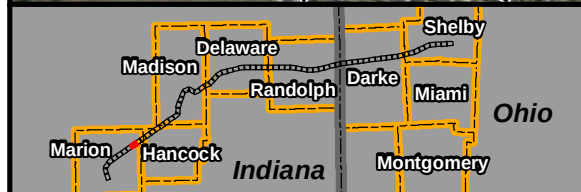
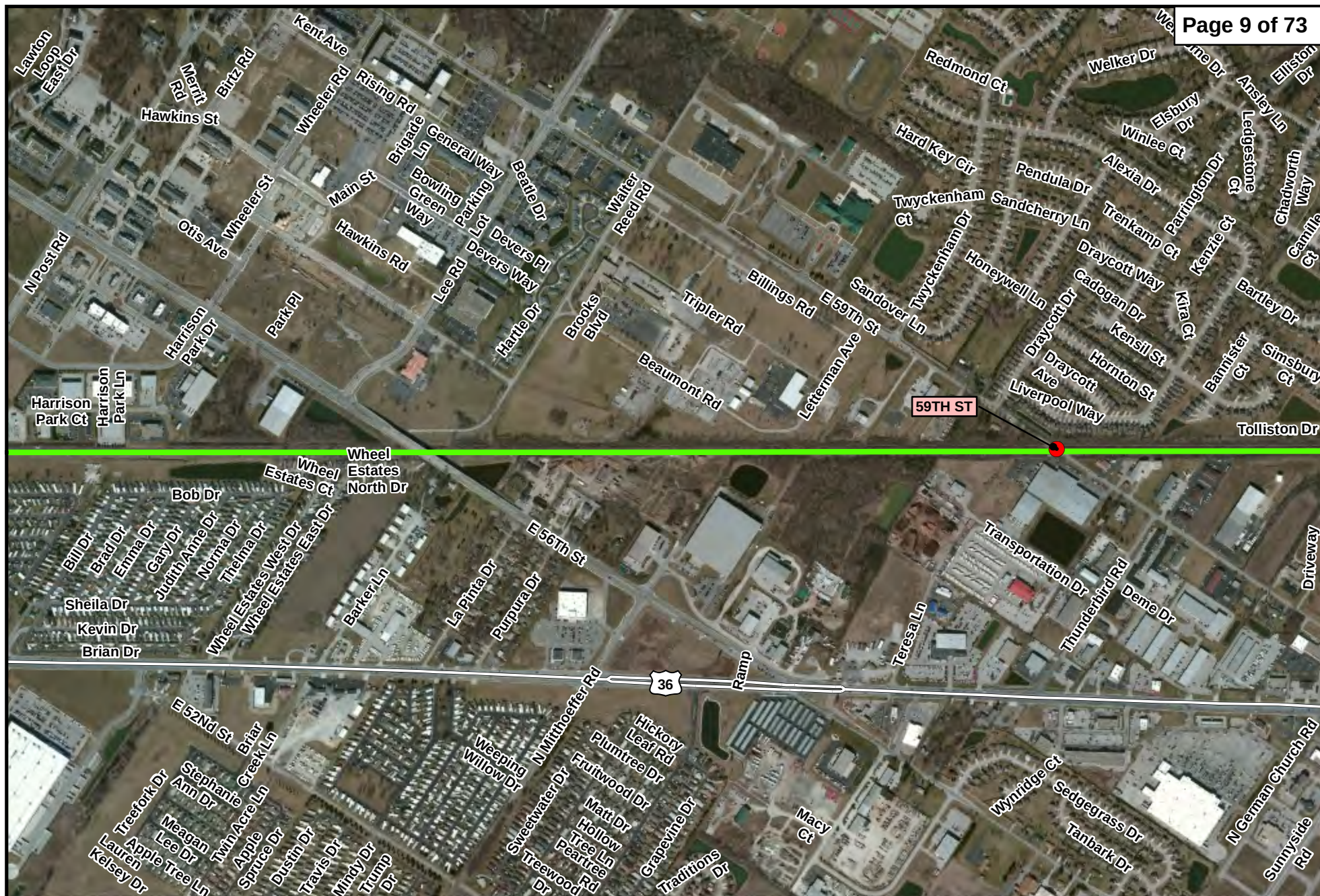




 Public At-Grade Crossings
 State Boundary
 County Boundary

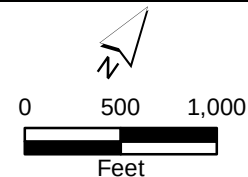
- Cincinnati Terminal Subdivision ■ LCL Subdivision
■ Indianapolis Line Subdivision ■ Louisville Connection
■ L&I Line ■ Toledo Subdivision
■ Indianapolis Terminal Subdivision - Louisville Secondary Branch

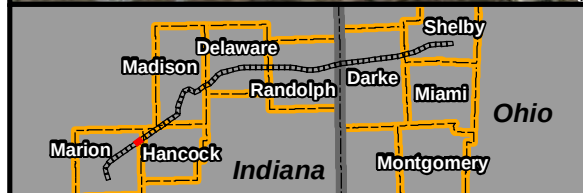
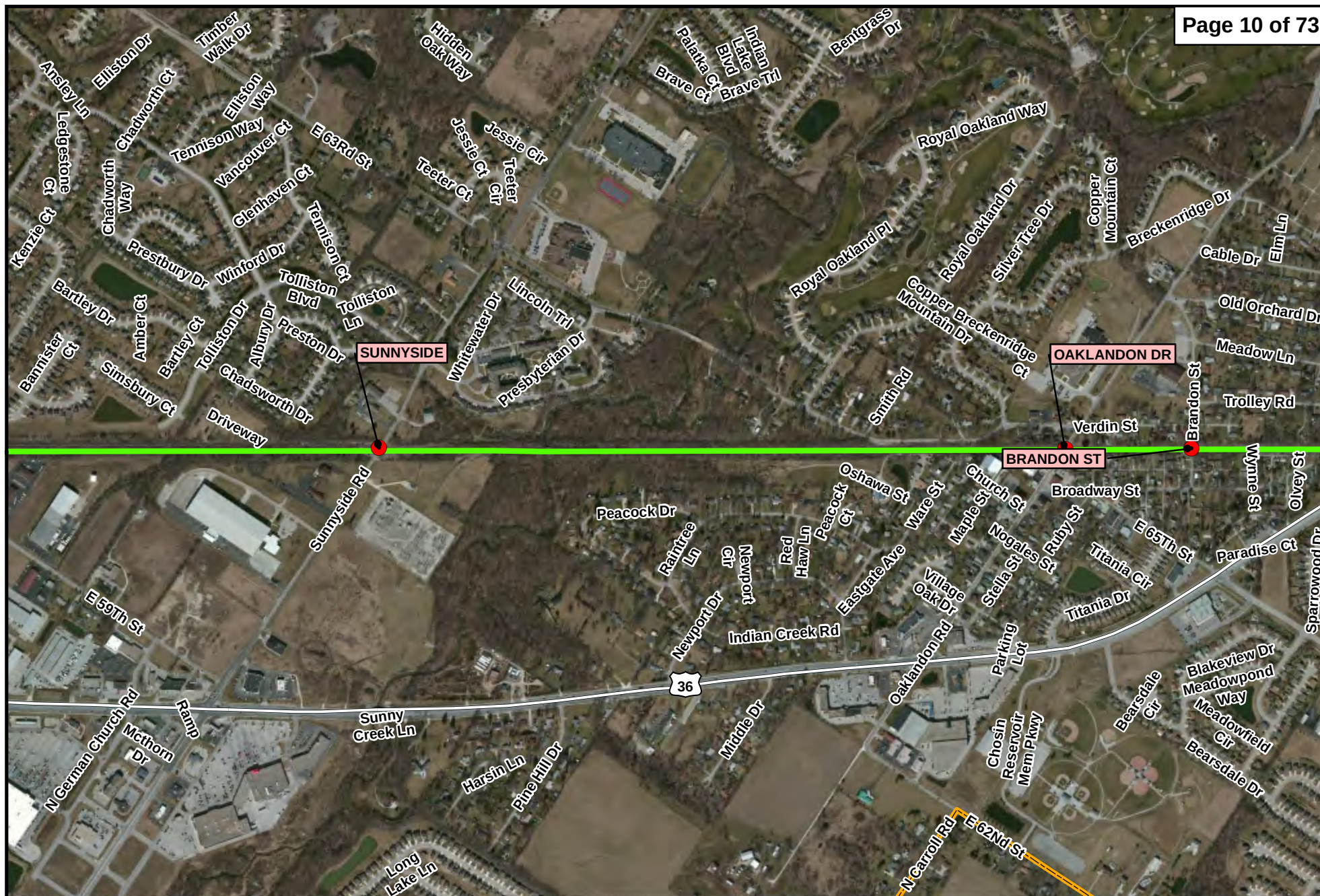




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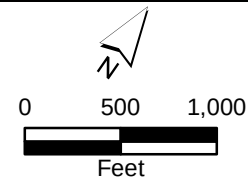
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

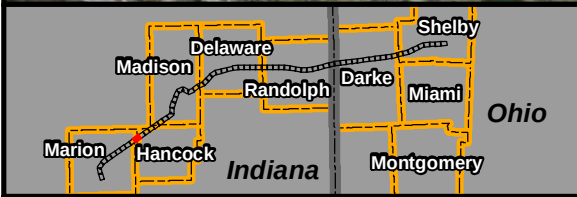




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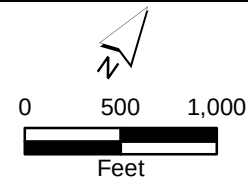
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision





 Public At-Grade Crossings
 State Boundary
 County Boundary

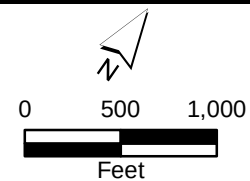
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■ Indianapolis Line Subdivision ■ Louisville Connection
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■ Indianapolis Terminal Subdivision - Louisville Secondary Branch

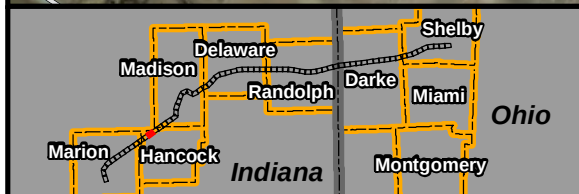




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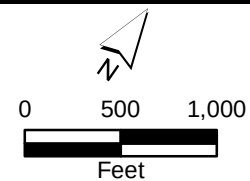
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

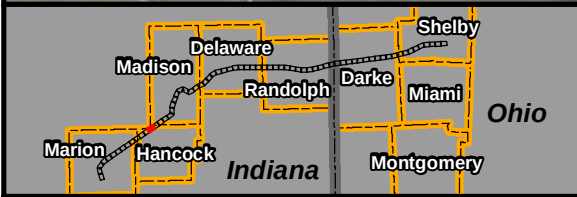




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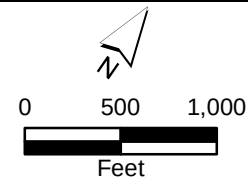
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|  Public At-Grade Crossings |  Cincinnati Terminal Subdivision |  LCL Subdivision |
|  State Boundary |  Indianapolis Line Subdivision |  Louisville Connection |
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| |  Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

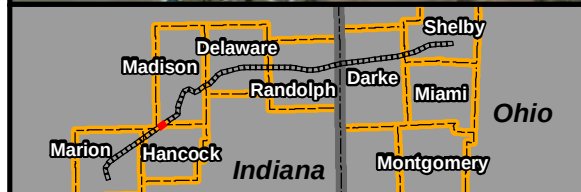




 Public At-Grade Crossings
 State Boundary
 County Boundary

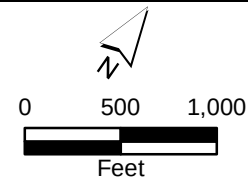
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■ Indianapolis Line Subdivision ■ Louisville Connection
■ L&I Line ■ Toledo Subdivision
■ Indianapolis Terminal Subdivision - Louisville Secondary Branch

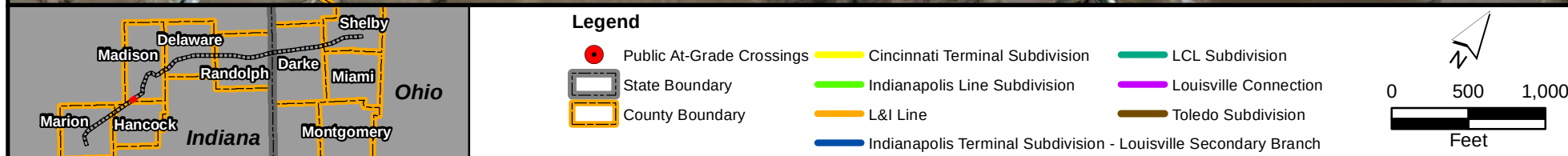




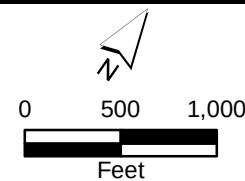
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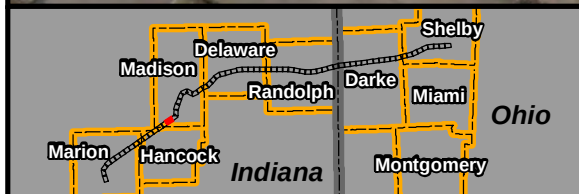
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





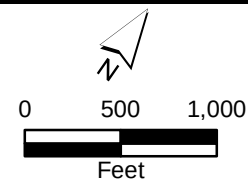
-  Public At-Grade Crossings
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  LCL Subdivision
-  State Boundary
  Indianapolis Line Subdivision
  Louisville Connection
-  County Boundary
  L&I Line
  Toledo Subdivision
-  Indianapolis Terminal Subdivision - Louisville Secondary Branch

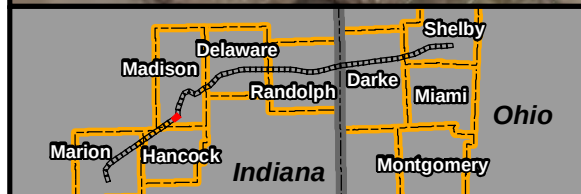




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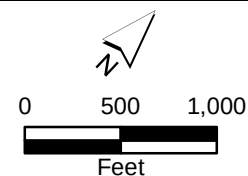
- Public At-Grade Crossings
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- County Boundary
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- Indianapolis Line Subdivision
- L&I Line
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- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

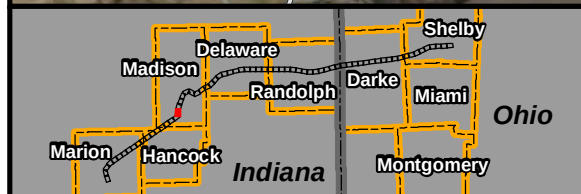
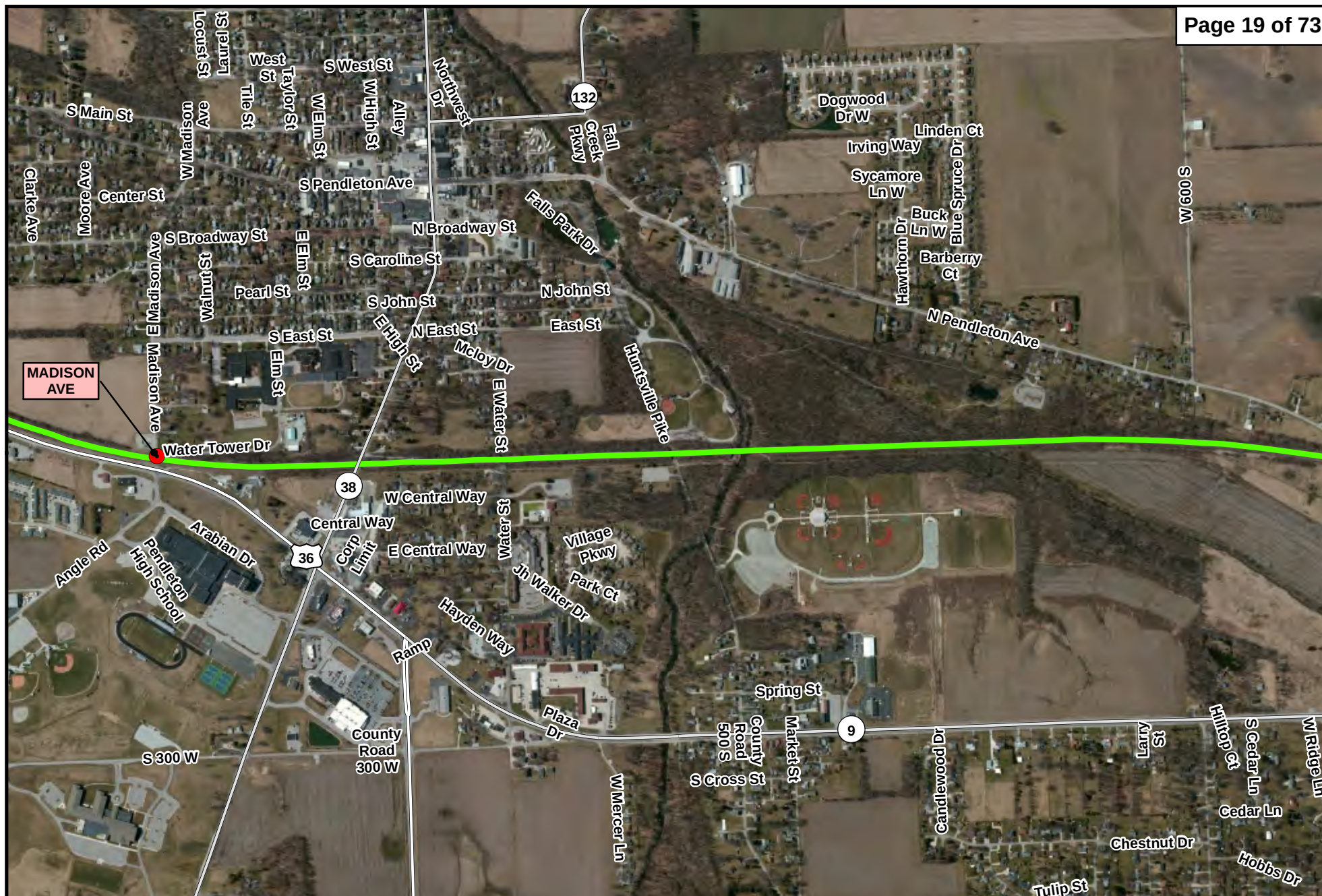




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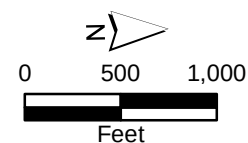
- Public At-Grade Crossings
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- County Boundary
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- Indianapolis Line Subdivision
- L&I Line
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- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

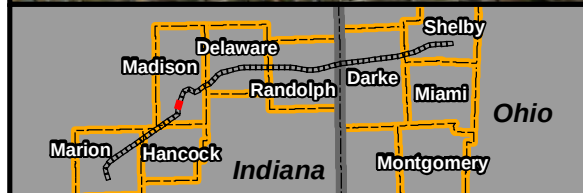




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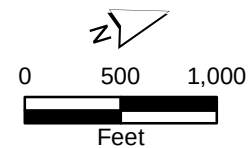
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
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| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

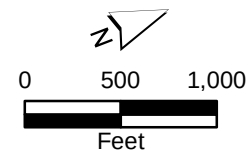
- Public At-Grade Crossings
- State Boundary
- County Boundary
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- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision





Legend

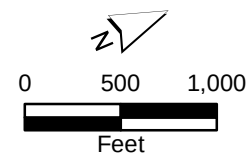
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- Toledo Subdivision

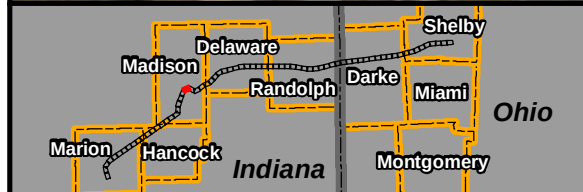




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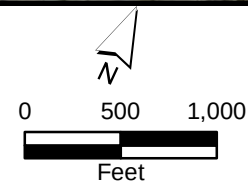
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- County Boundary
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- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

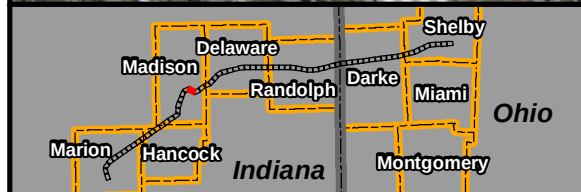
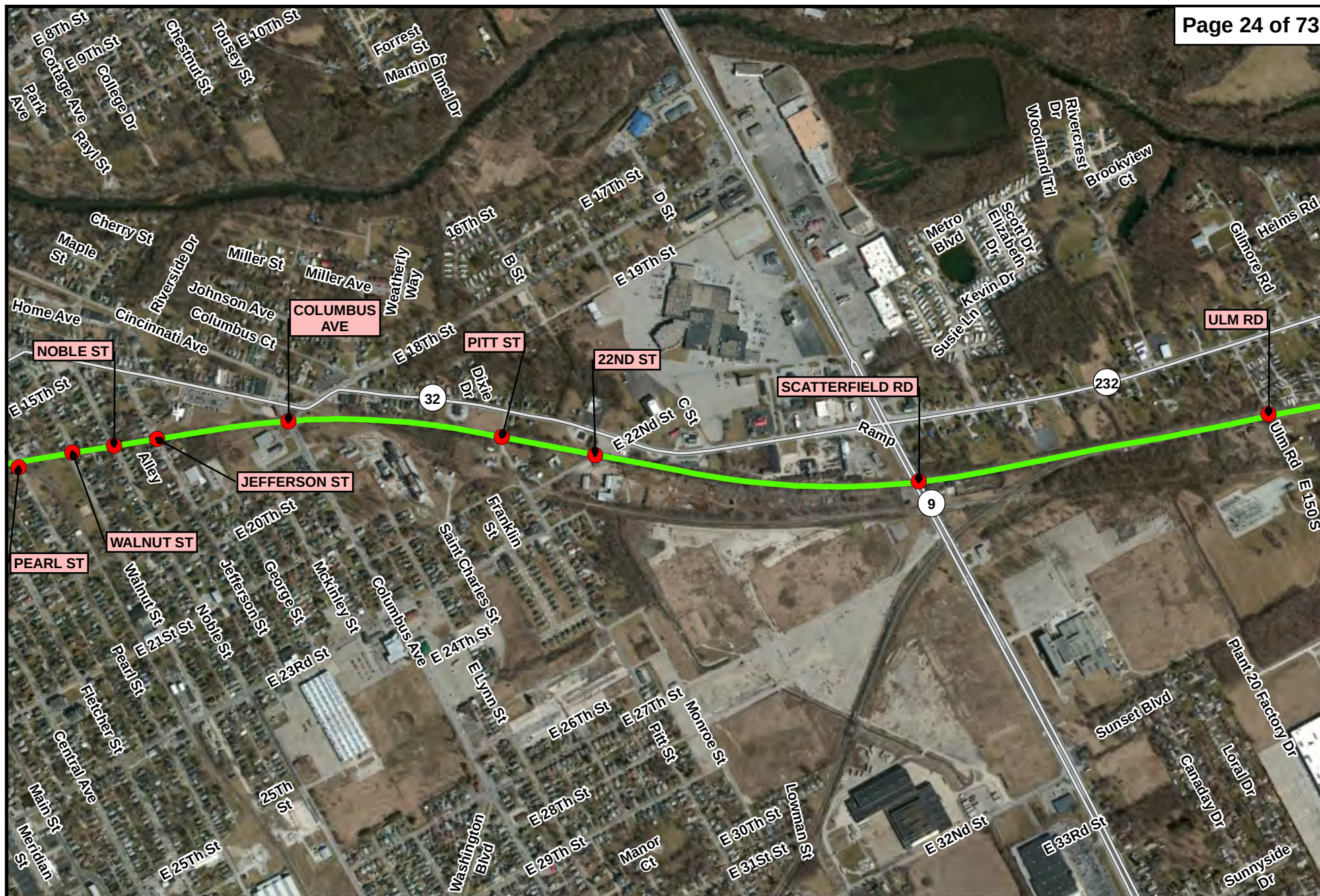




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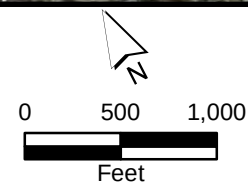
- Public At-Grade Crossings
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- County Boundary
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- Louisville Connection
- Toledo Subdivision

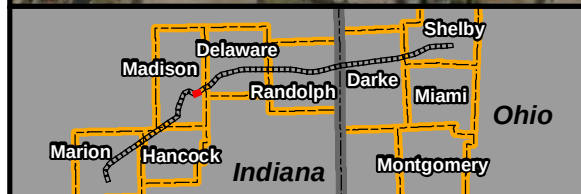




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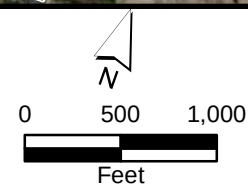
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- County Boundary
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- L&I Line
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- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

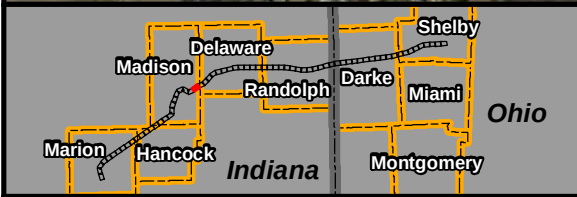




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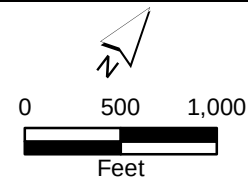
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|---------------------------|---|-----------------------|
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| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

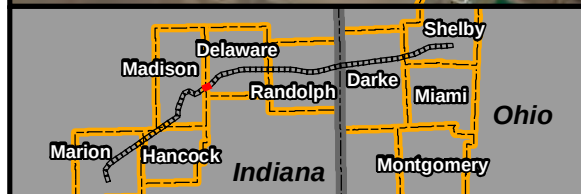




 Public At-Grade Crossings
 State Boundary
 County Boundary

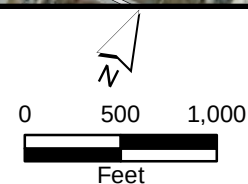
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■ Indianapolis Line Subdivision ■ Louisville Connection
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■ Indianapolis Terminal Subdivision - Louisville Secondary Branch

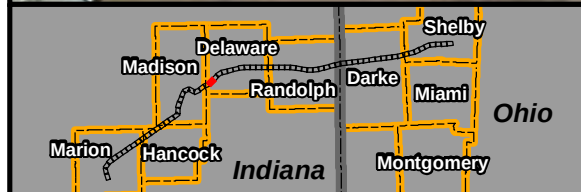
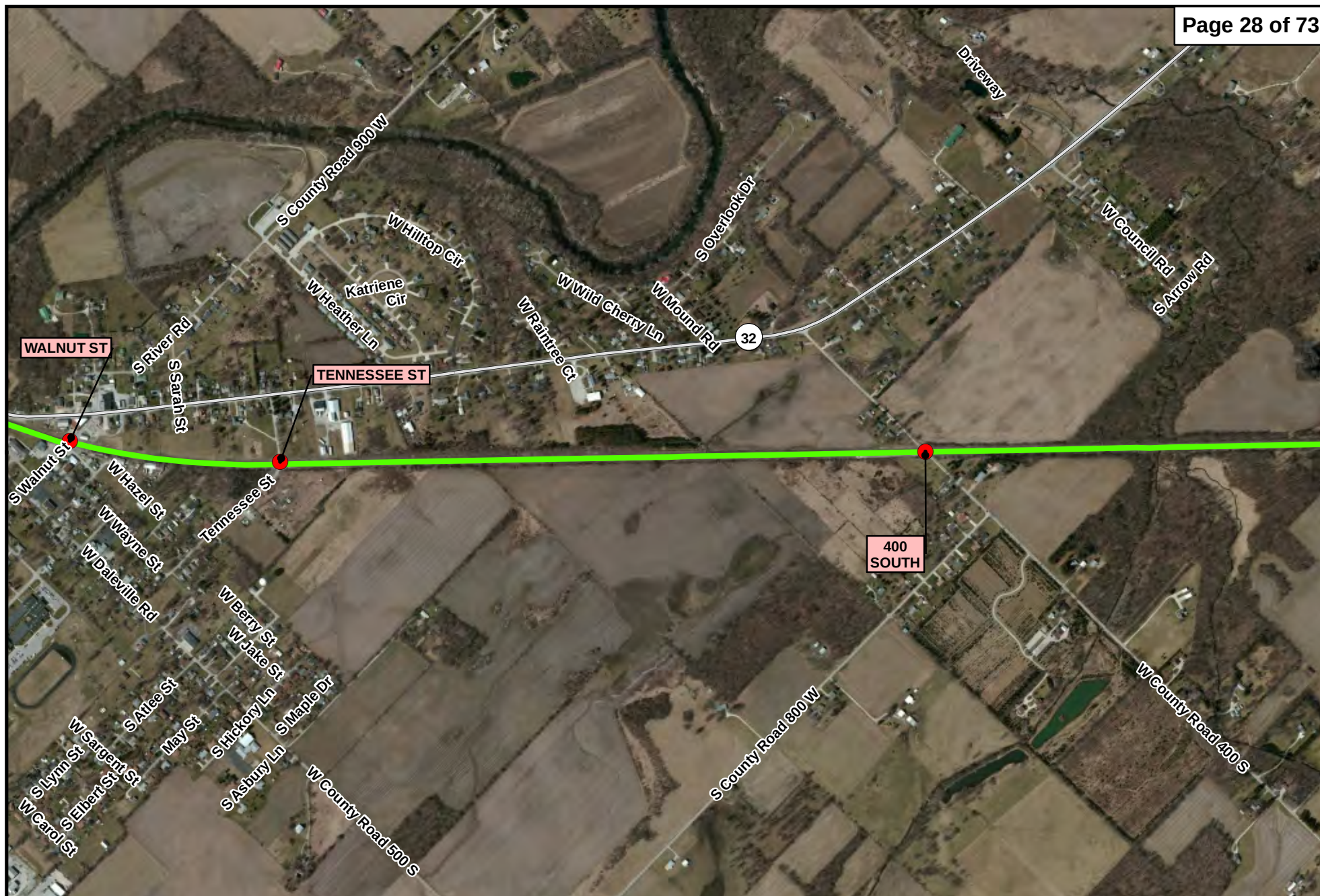




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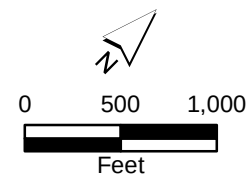
- Public At-Grade Crossings
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- County Boundary
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- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

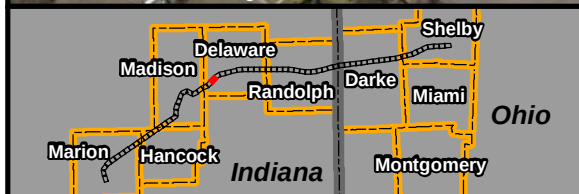




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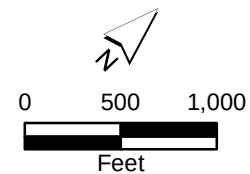
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
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| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

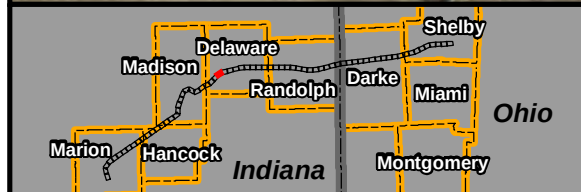
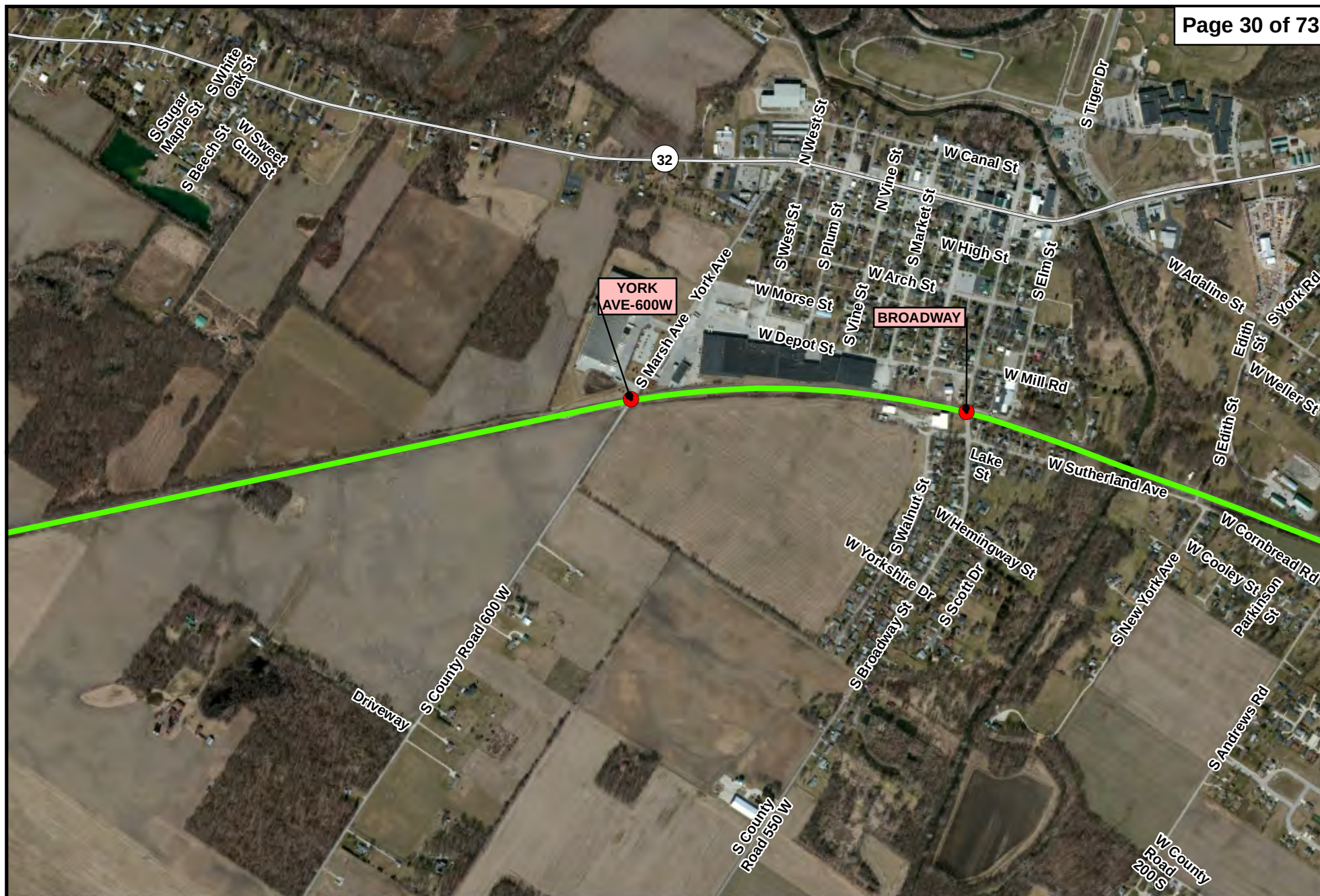




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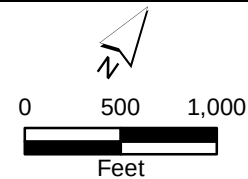
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

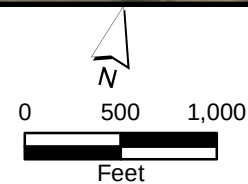
-  Public At-Grade Crossings
  Cincinnati Terminal Subdivision
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  L&I Line
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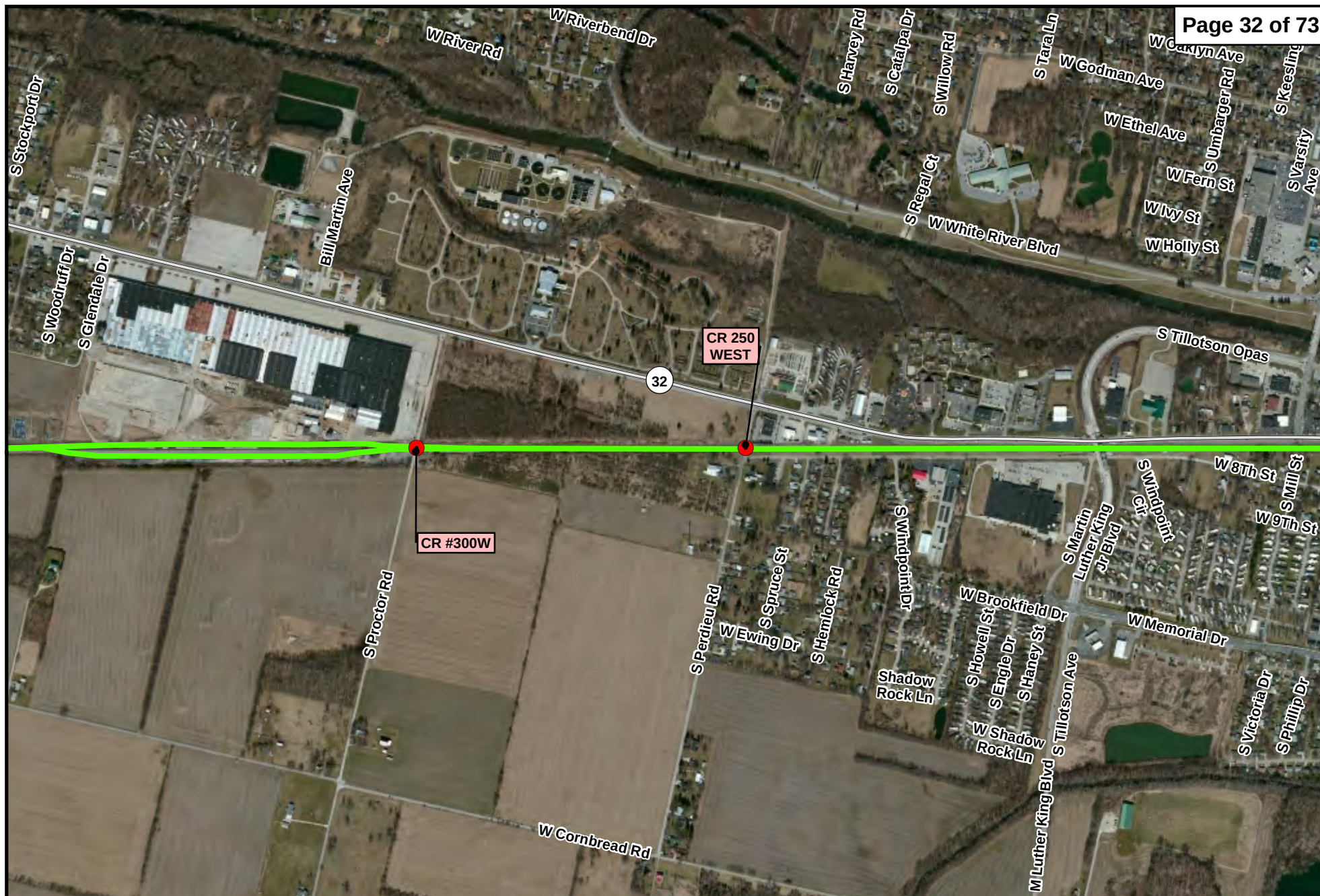




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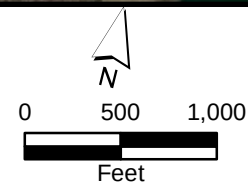
- Public At-Grade Crossings
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- County Boundary
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- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
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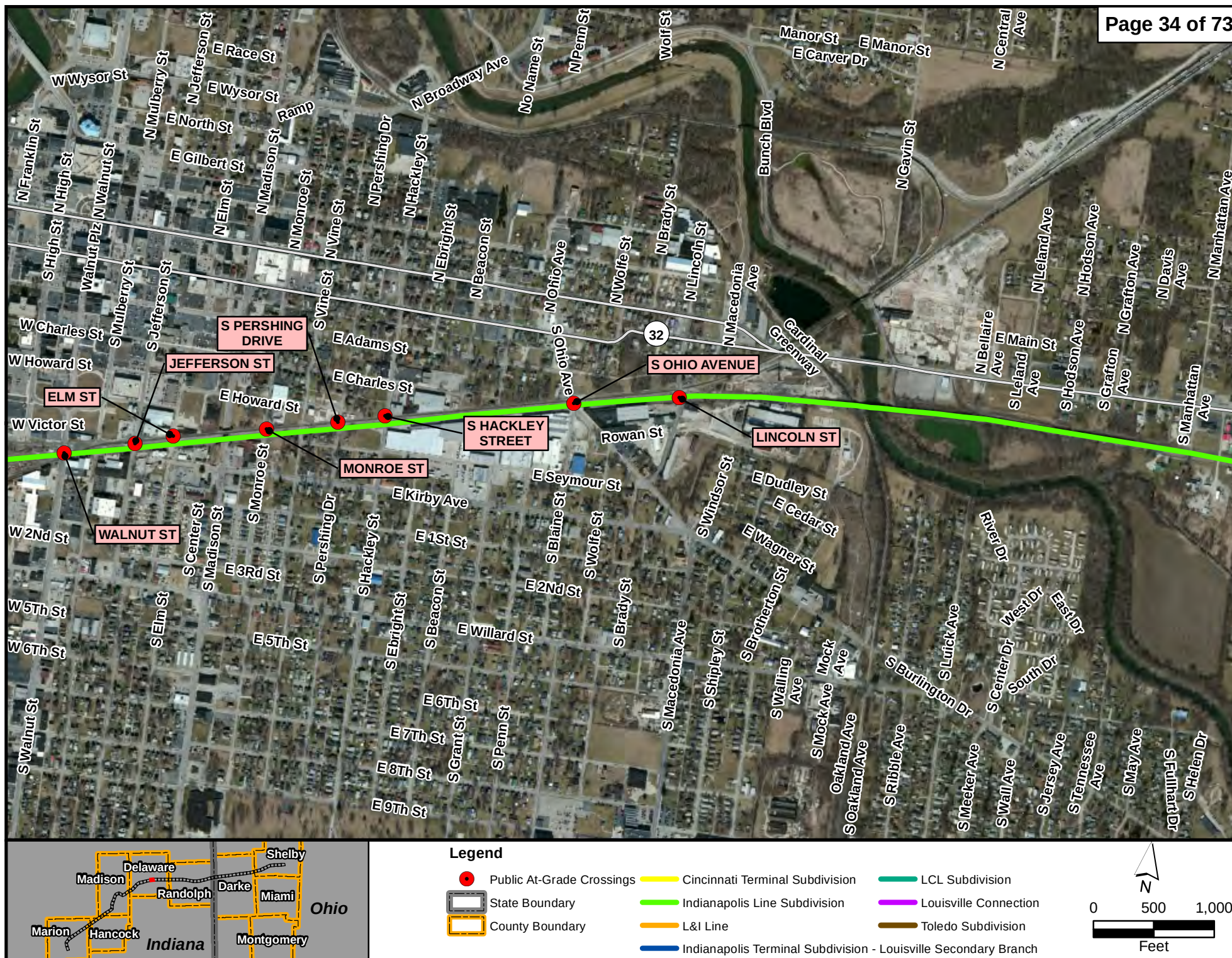


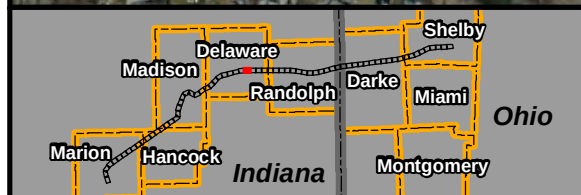
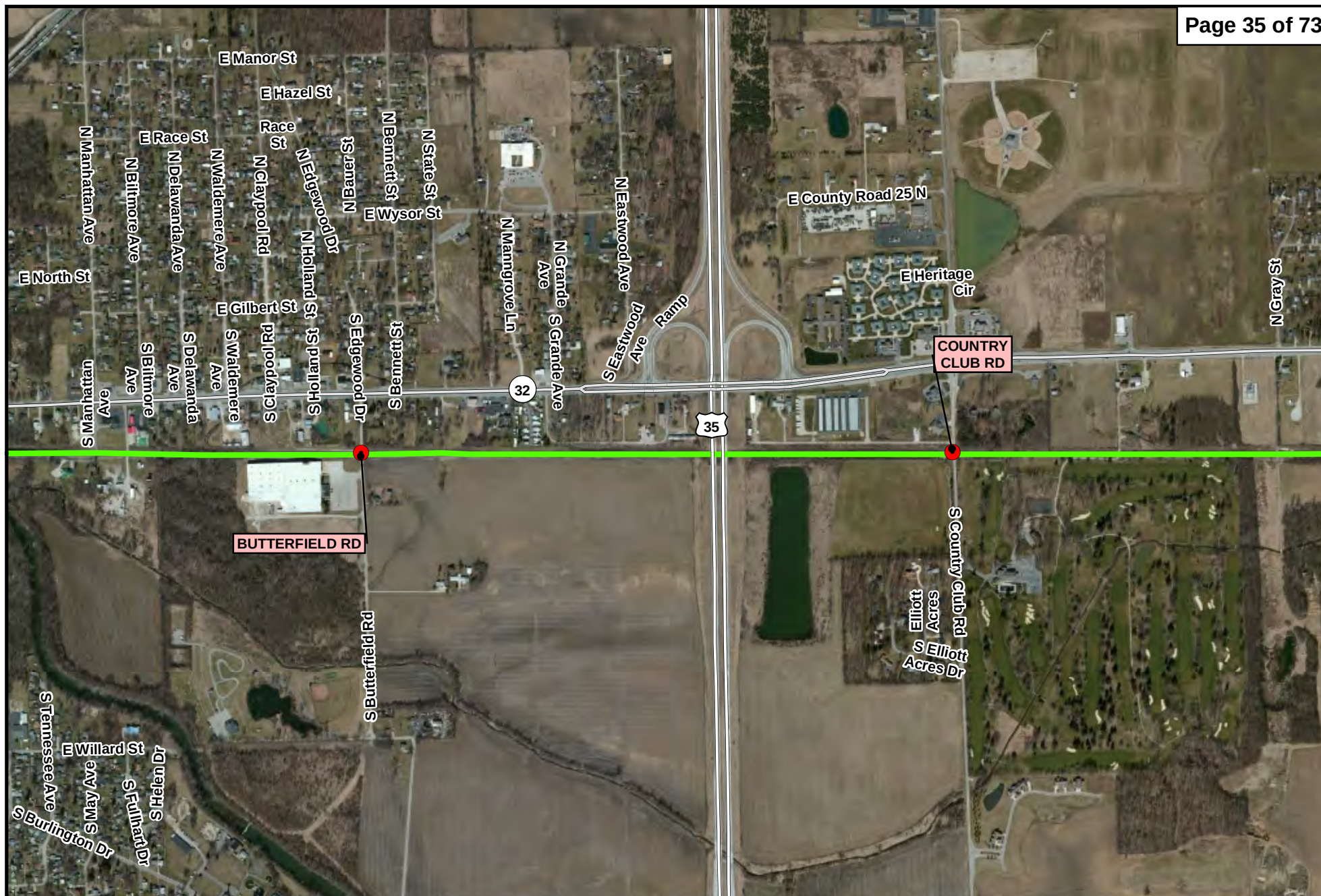
Legend

- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
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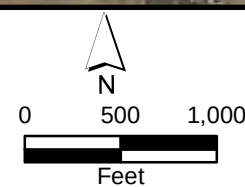


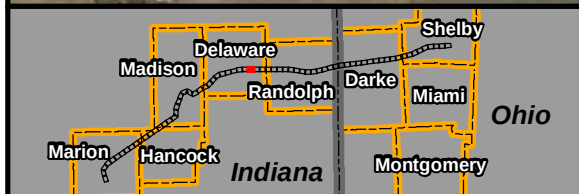
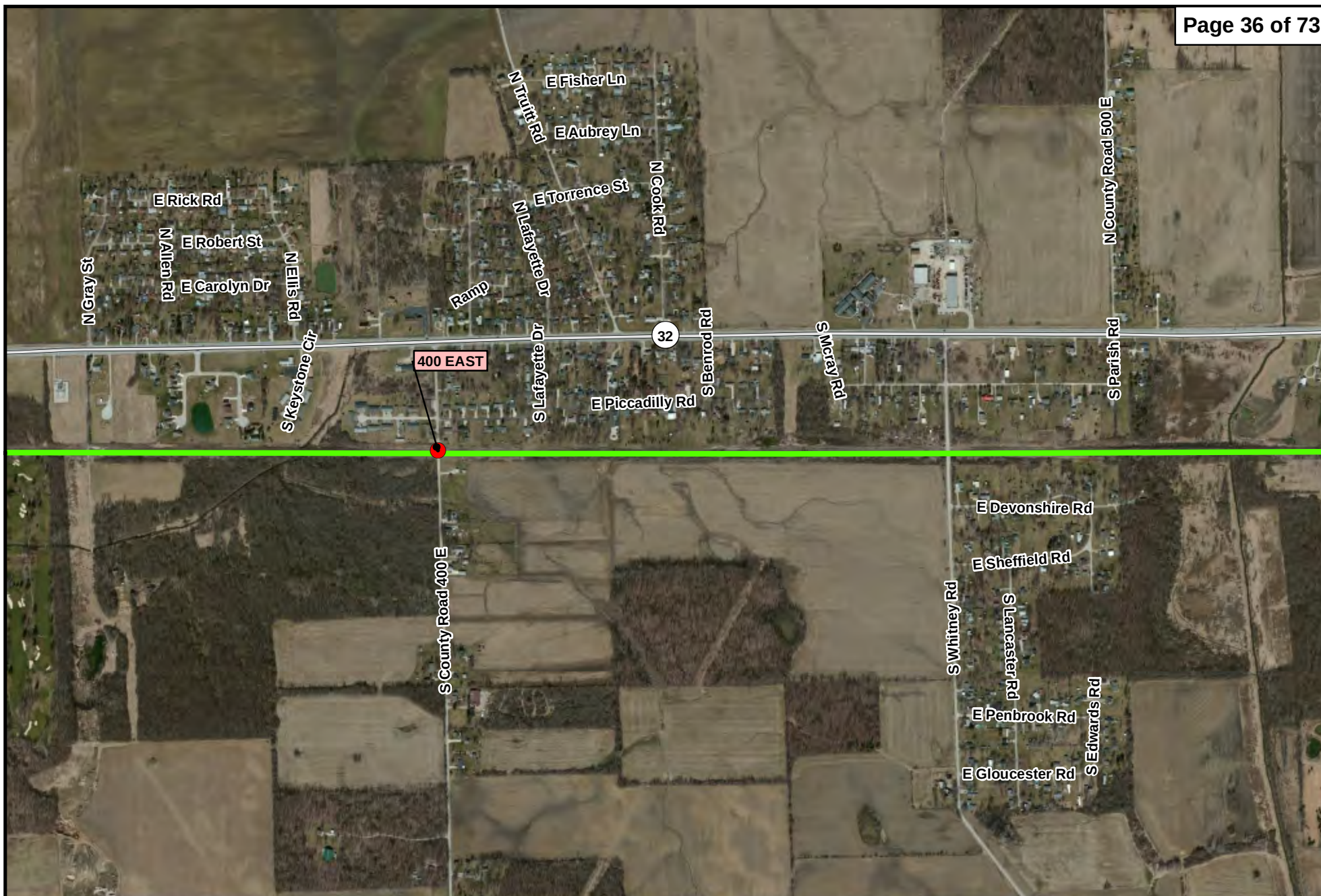




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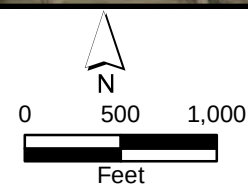
- Public At-Grade Crossings
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Legend

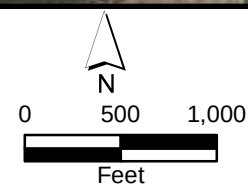
- Public At-Grade Crossings
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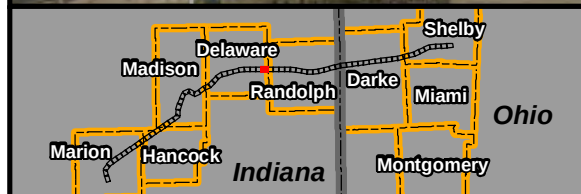
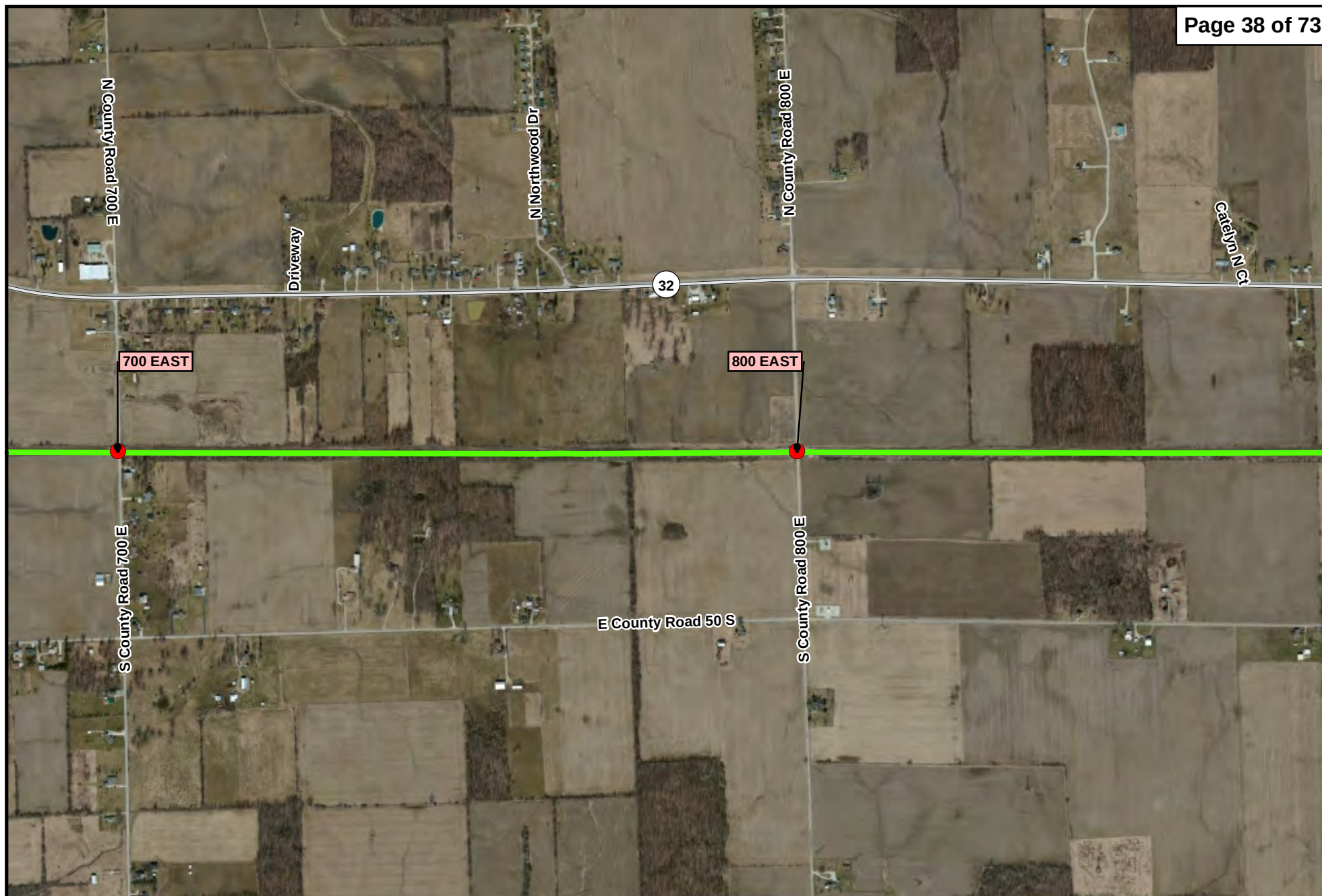




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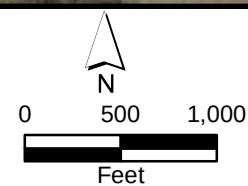
- Public At-Grade Crossings
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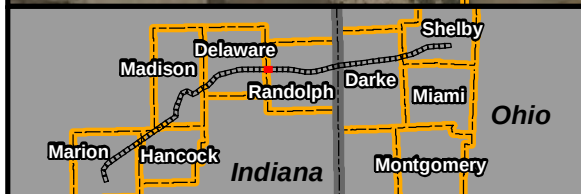
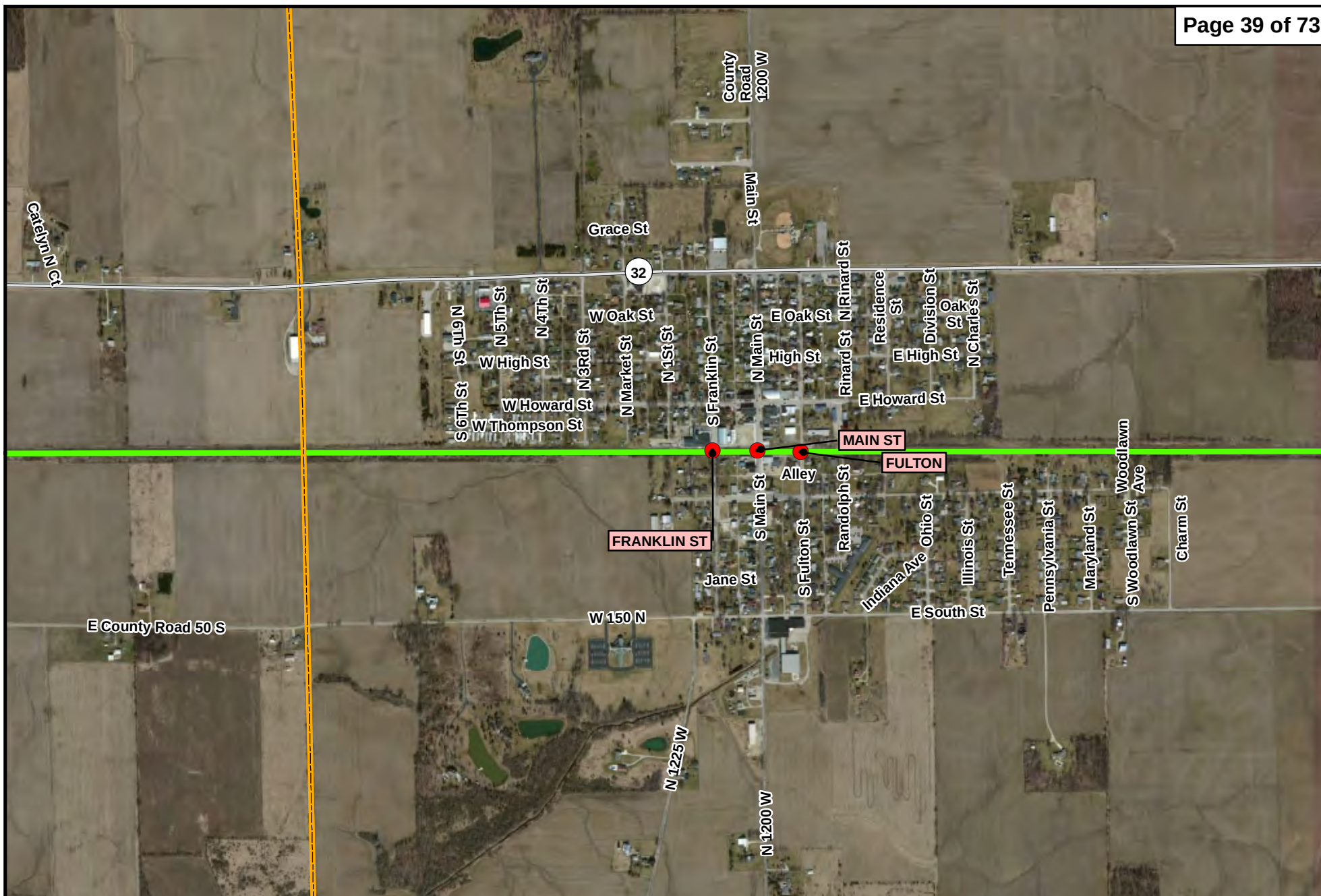




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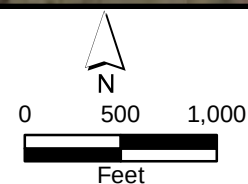
-  Public At-Grade Crossings
-  State Boundary
-  County Boundary
-  Cincinnati Terminal Subdivision
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-  Indianapolis Terminal Subdivision - Louisville Secondary Branch
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-  Louisville Connection
-  Toledo Subdivision

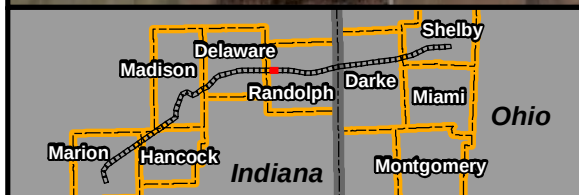
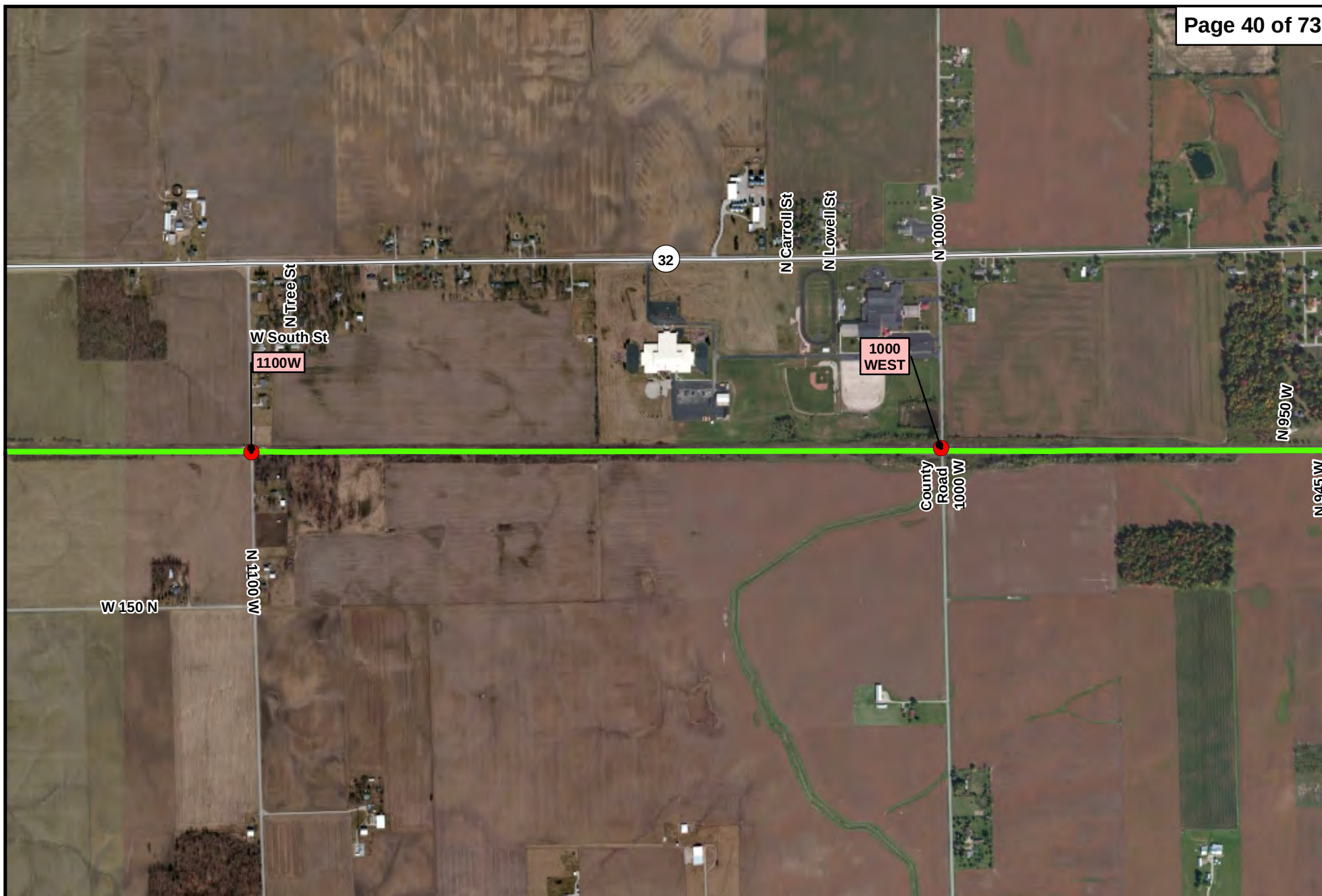




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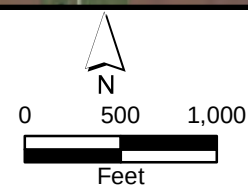
- Public At-Grade Crossings
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- Indianapolis Terminal Subdivision - Louisville Secondary Branch
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Legend

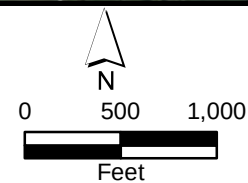
- | | | |
|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





 Public At-Grade Crossings
 State Boundary
 County Boundary

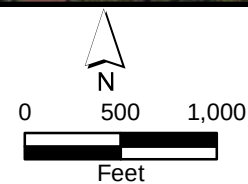
- Cincinnati Terminal Subdivision ■ LCL Subdivision
■ Indianapolis Line Subdivision ■ Louisville Connection
■ L&I Line ■ Toledo Subdivision
■ Indianapolis Terminal Subdivision - Louisville Secondary Branch





Legend

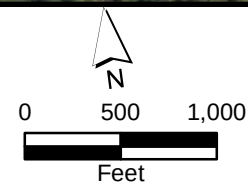
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|---|---|---|
|  Public At-Grade Crossings |  Cincinnati Terminal Subdivision |  LCL Subdivision |
|  State Boundary |  Indianapolis Line Subdivision |  Louisville Connection |
|  County Boundary |  L&I Line |  Toledo Subdivision |
| |  Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

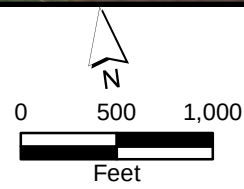
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

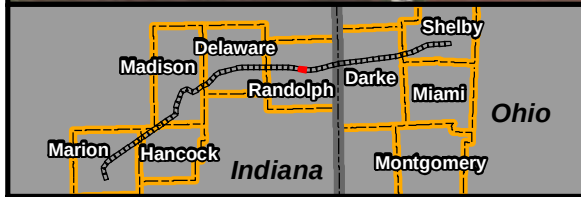




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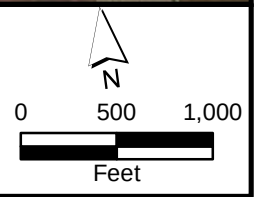
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

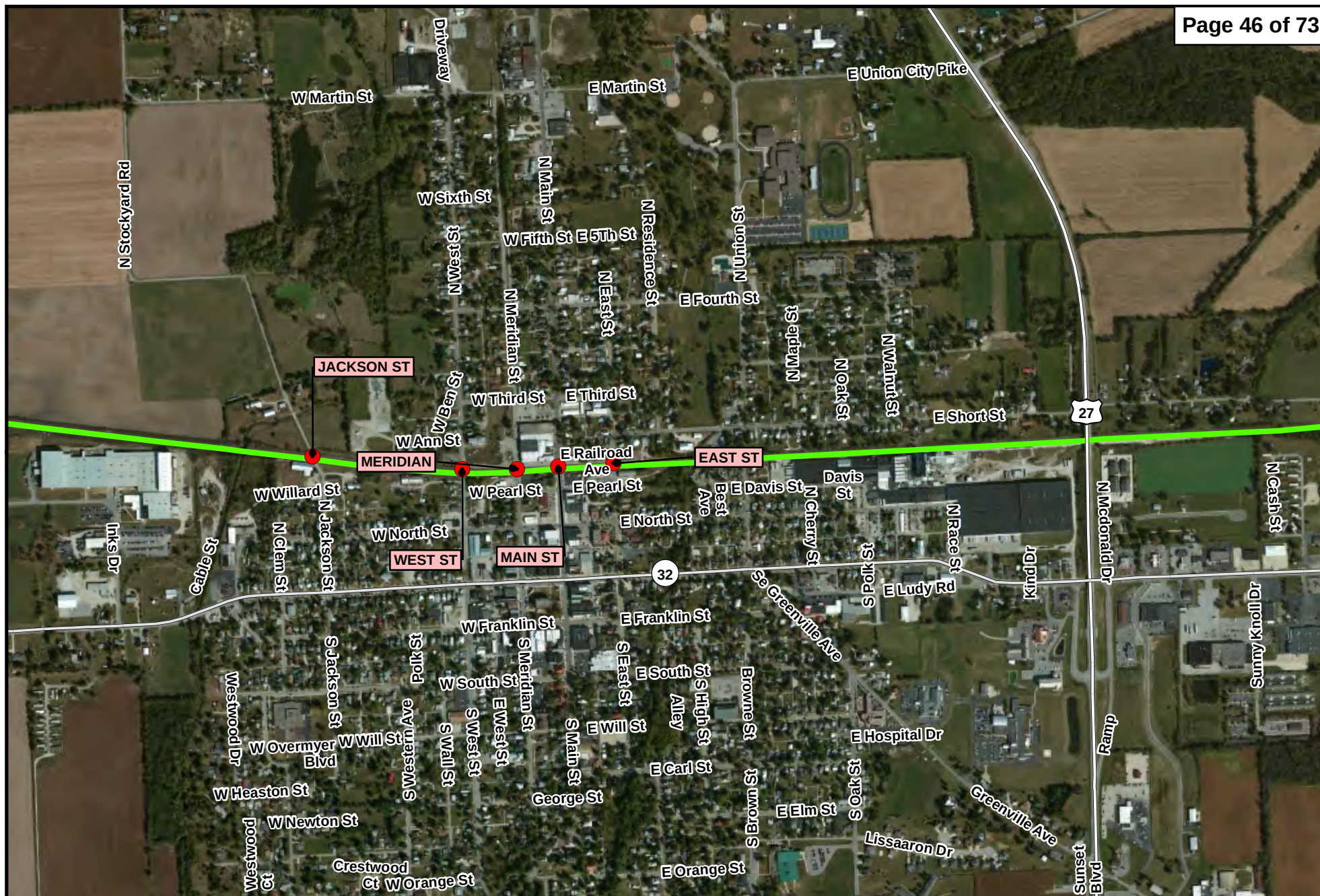




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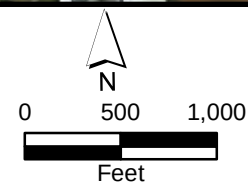
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

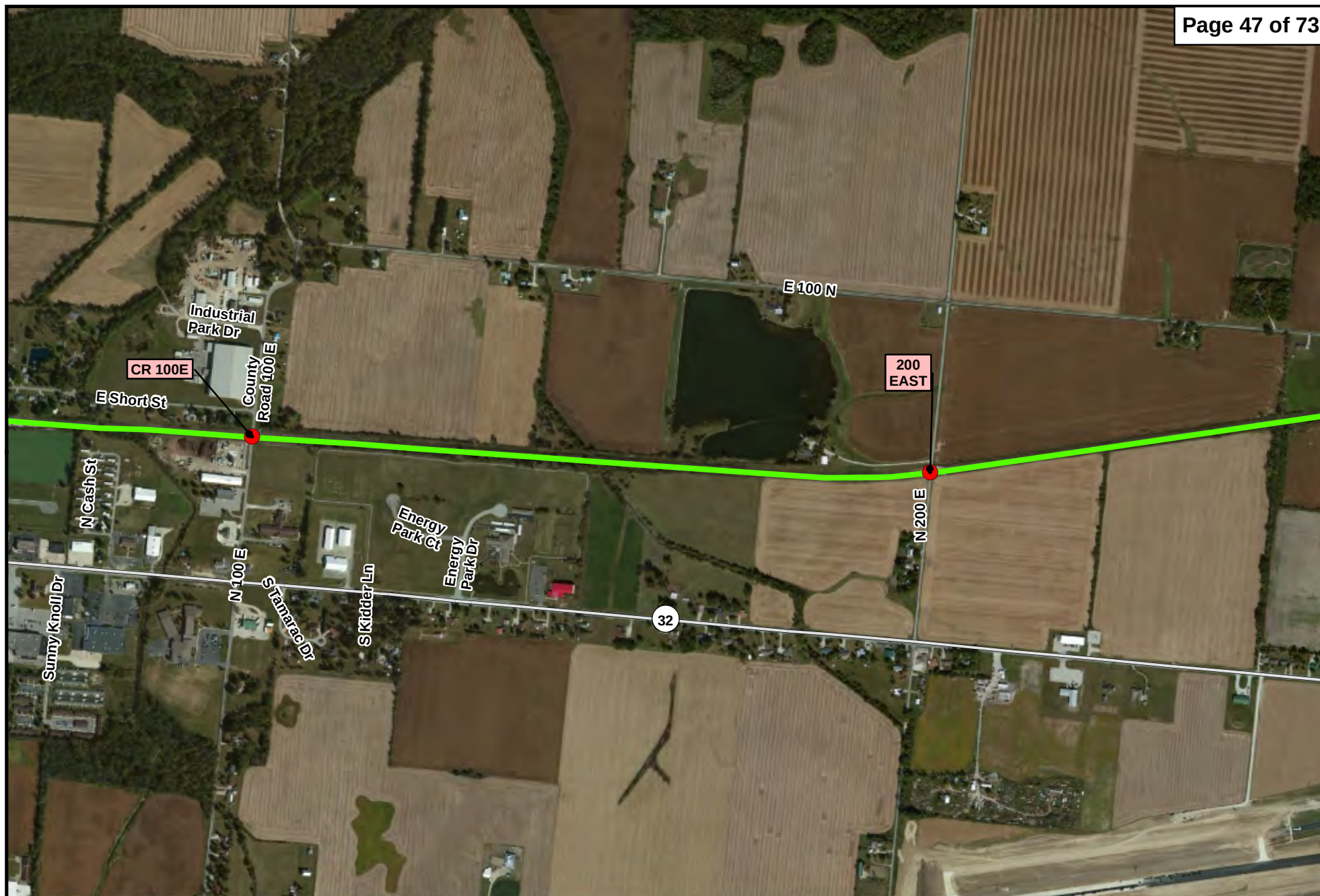




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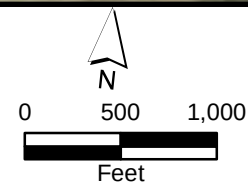
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision





Legend

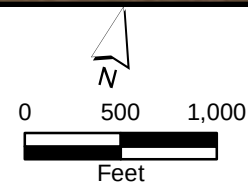
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

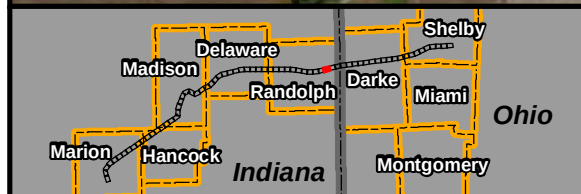




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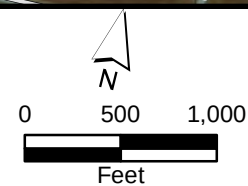
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

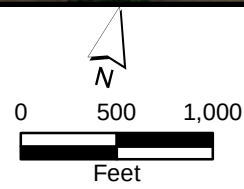
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

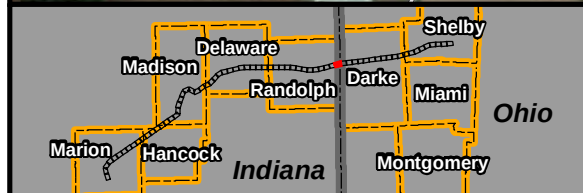
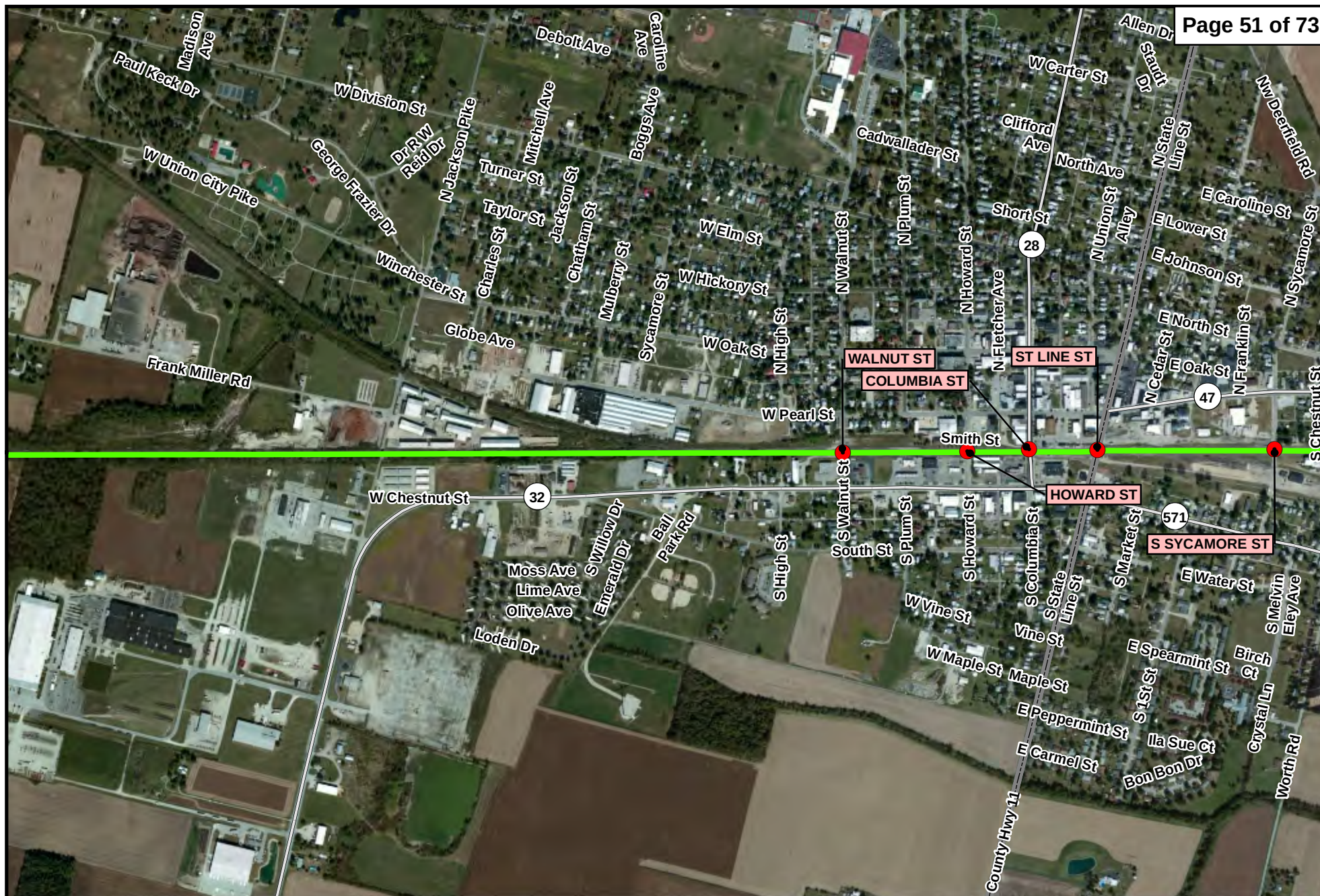




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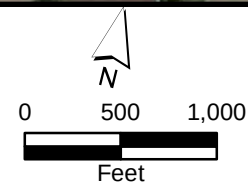
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

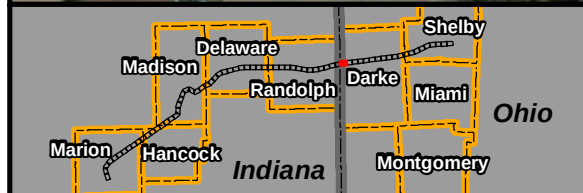
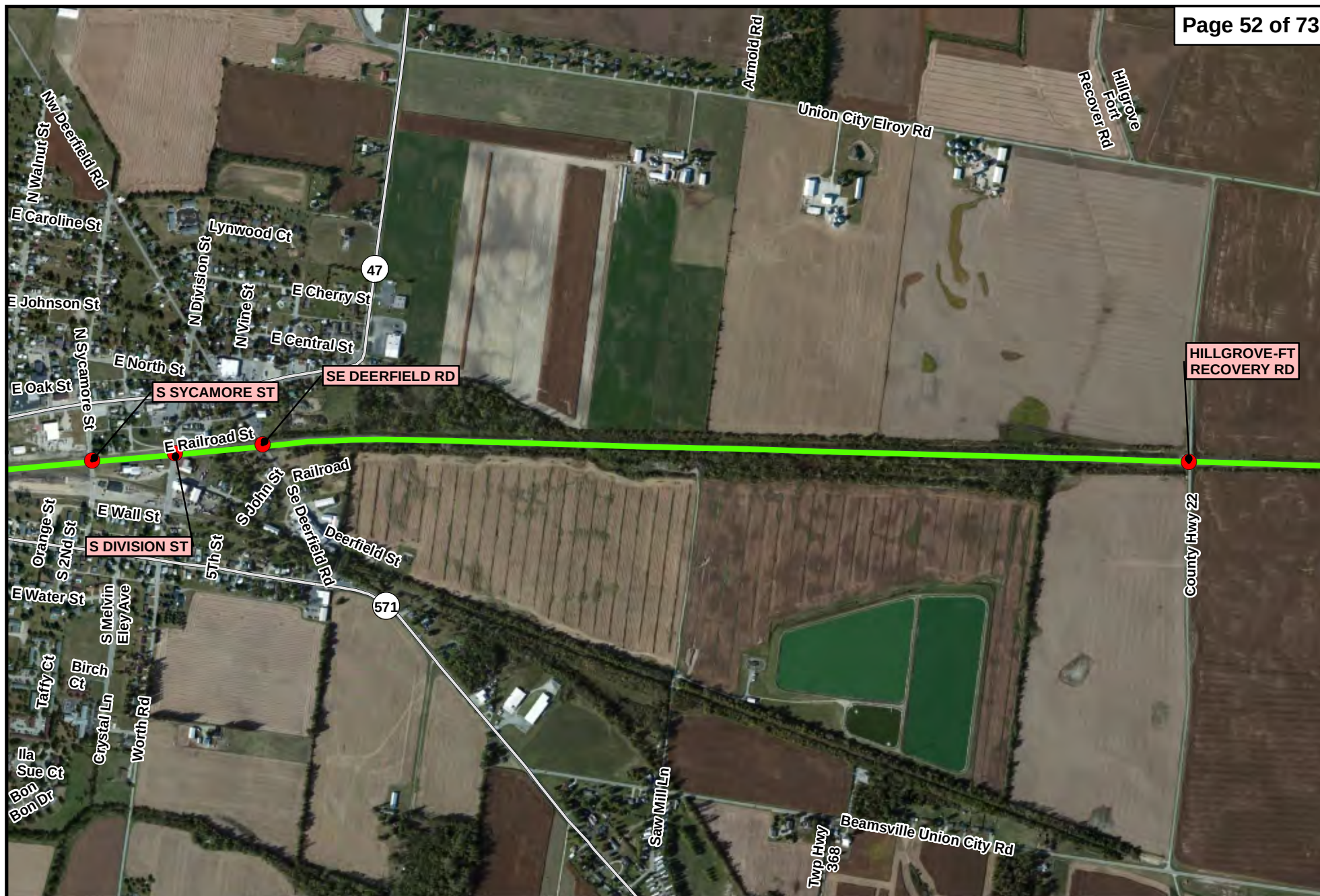




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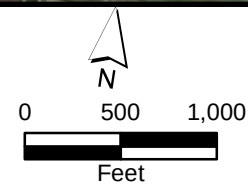
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

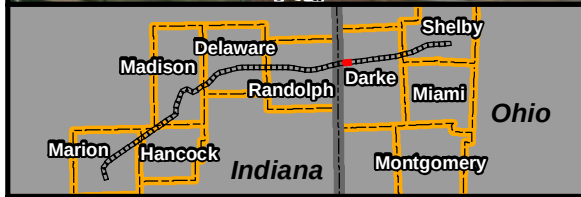




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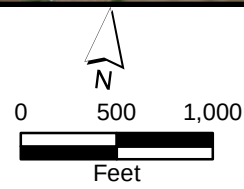
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

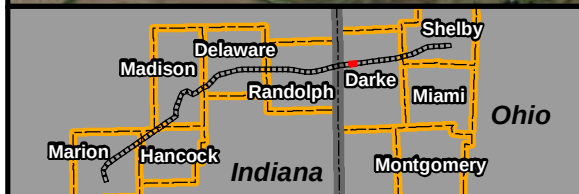




Legend

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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





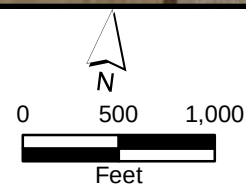
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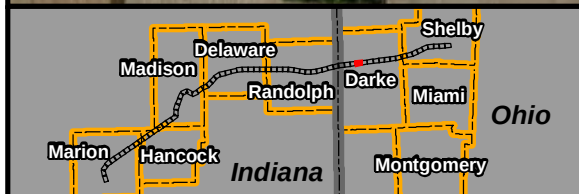
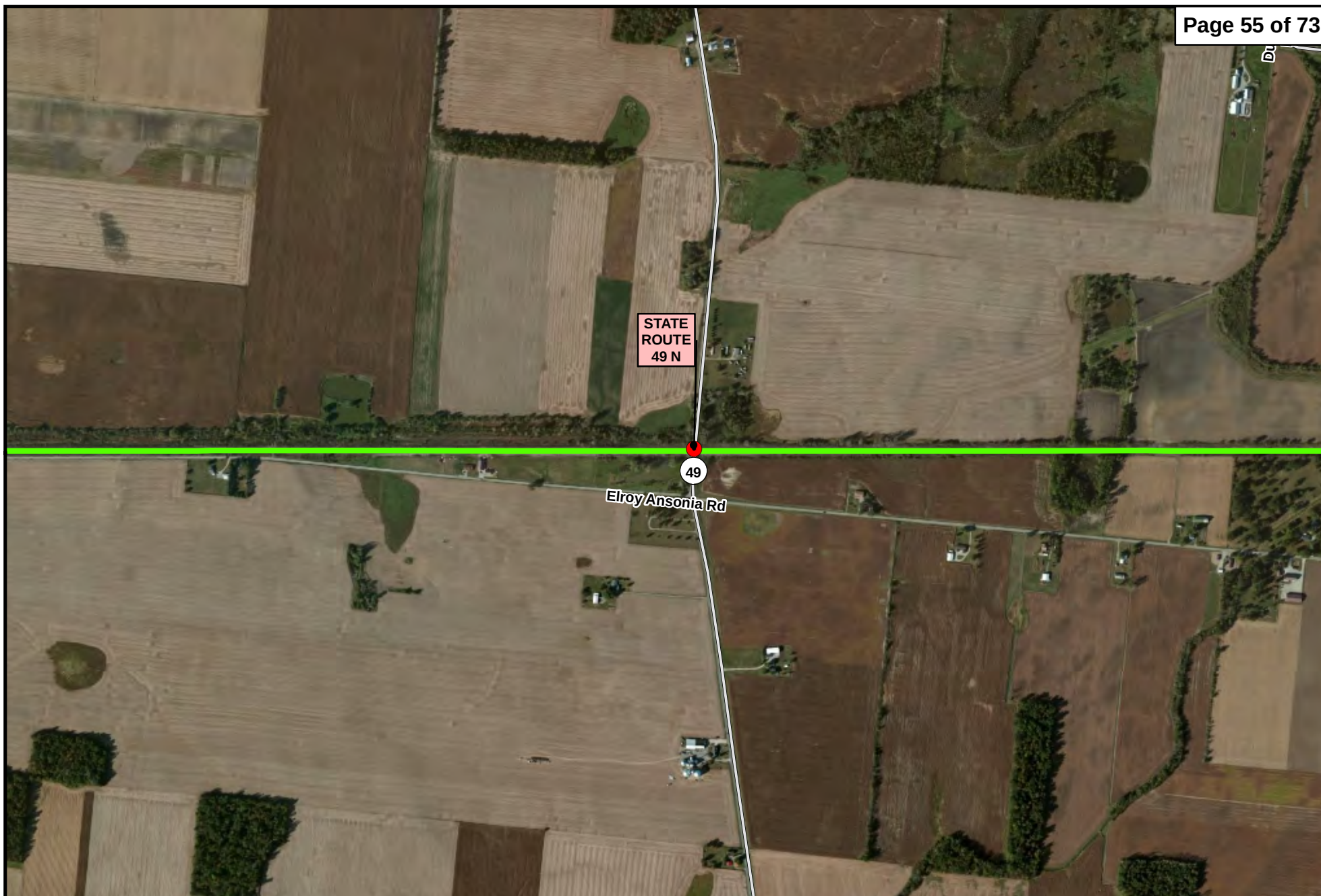


Public At-Grade Crossings
State Boundary
County Boundary

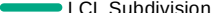
Cincinnati Terminal Subdivision
Indianapolis Line Subdivision
L&I Line
Indianapolis Terminal Subdivision - Louisville Secondary Branch

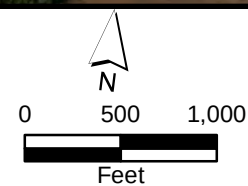
LCL Subdivision
Louisville Connection
Toledo Subdivision

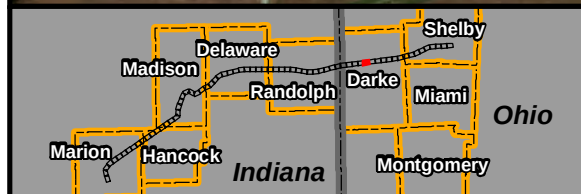




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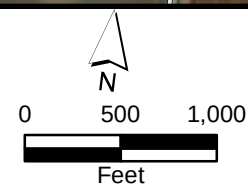
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|  Public At-Grade Crossings |  Cincinnati Terminal Subdivision |  LCL Subdivision |
|  State Boundary |  Indianapolis Line Subdivision |  Louisville Connection |
|  County Boundary |  L&I Line |  Toledo Subdivision |
| |  Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

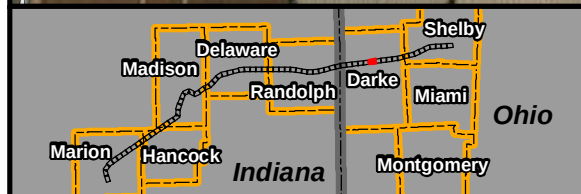




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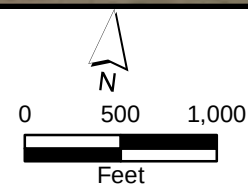
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|---------------------------|---|-----------------------|
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| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

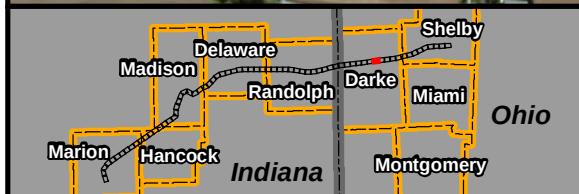




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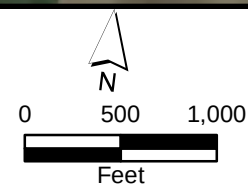
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

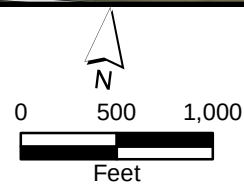
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|---------------------------|---|-----------------------|
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| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

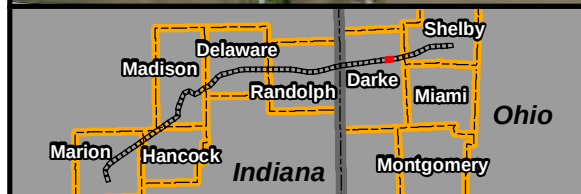




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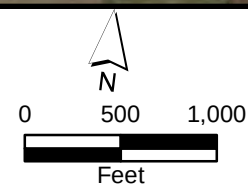
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|---|---|---|
|  Public At-Grade Crossings |  Cincinnati Terminal Subdivision |  LCL Subdivision |
|  State Boundary |  Indianapolis Line Subdivision |  Louisville Connection |
|  County Boundary |  L&I Line |  Toledo Subdivision |
| |  Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

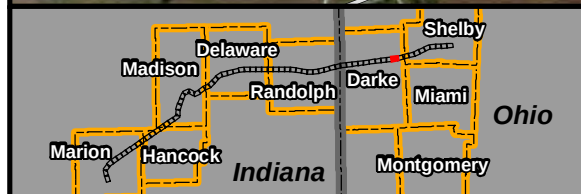




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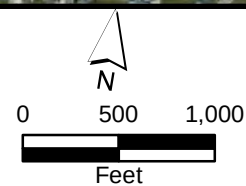
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

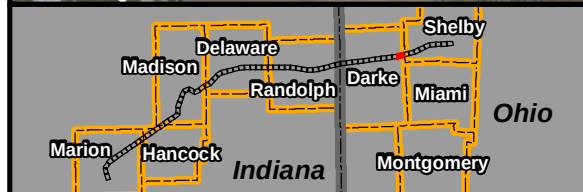
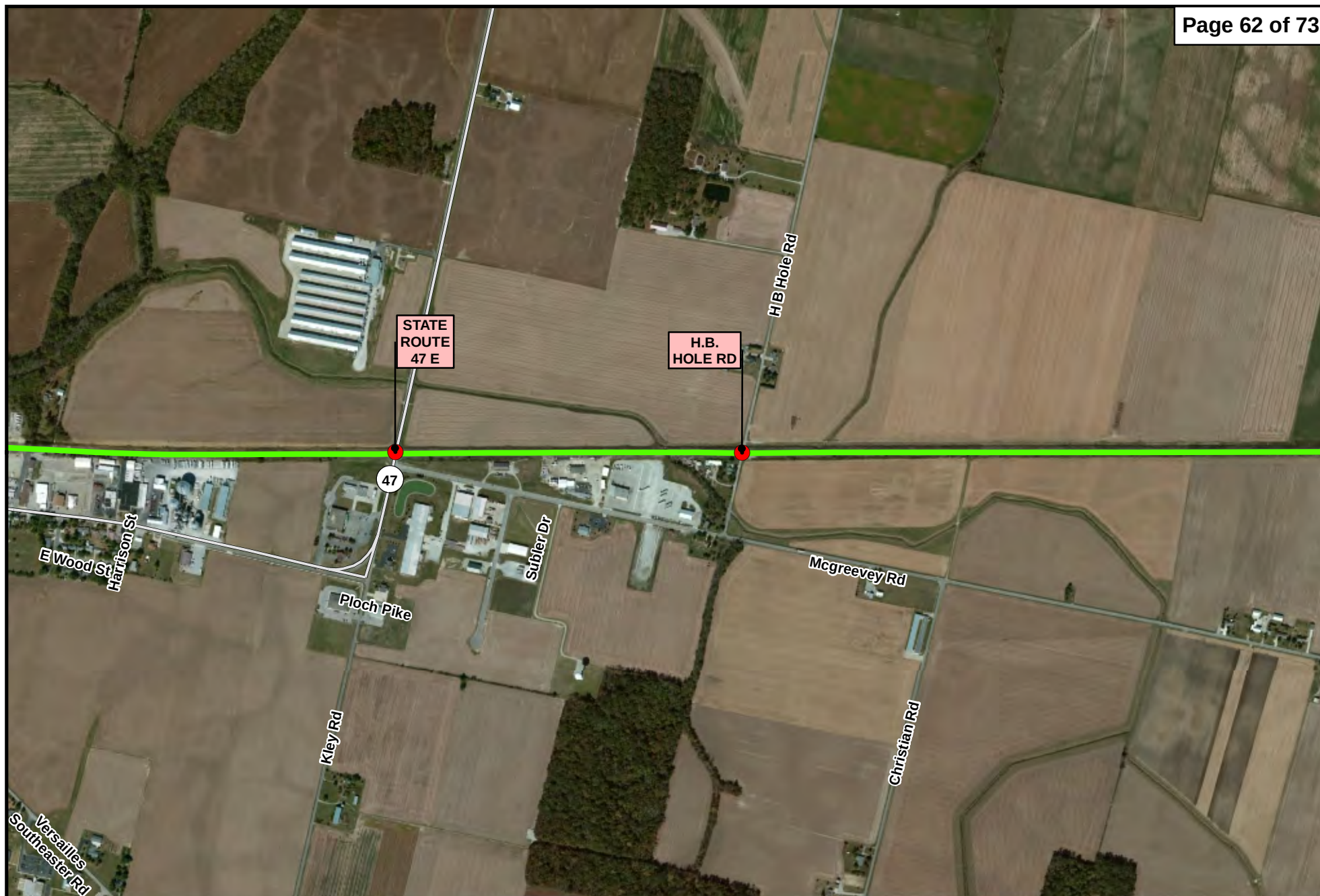




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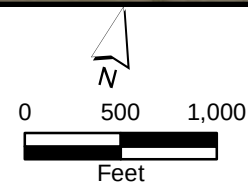
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision

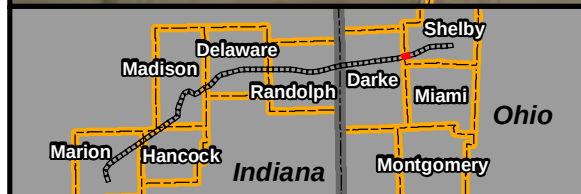
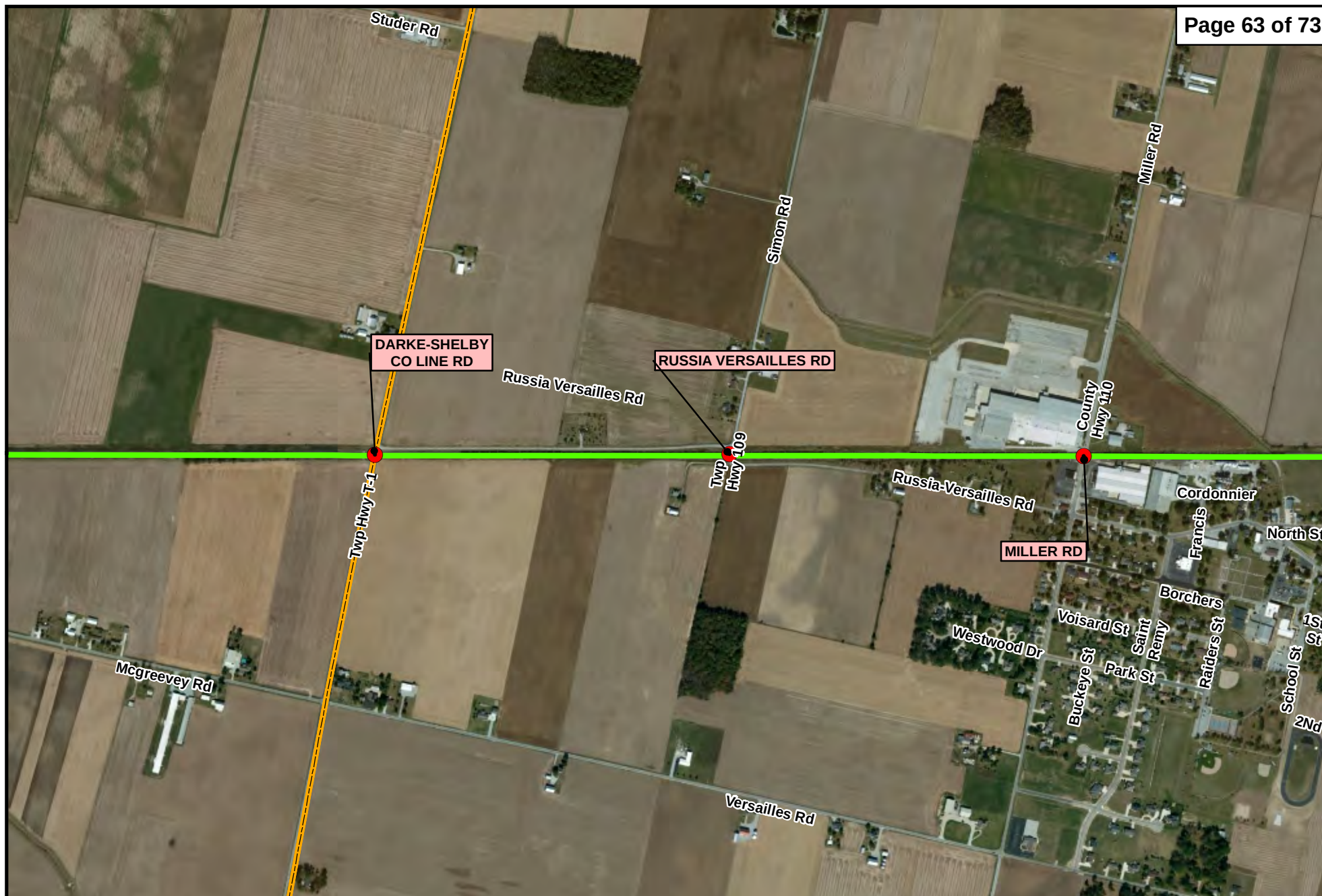




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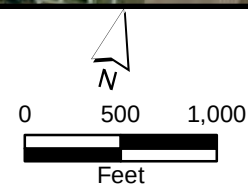
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

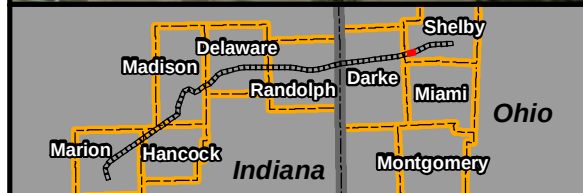
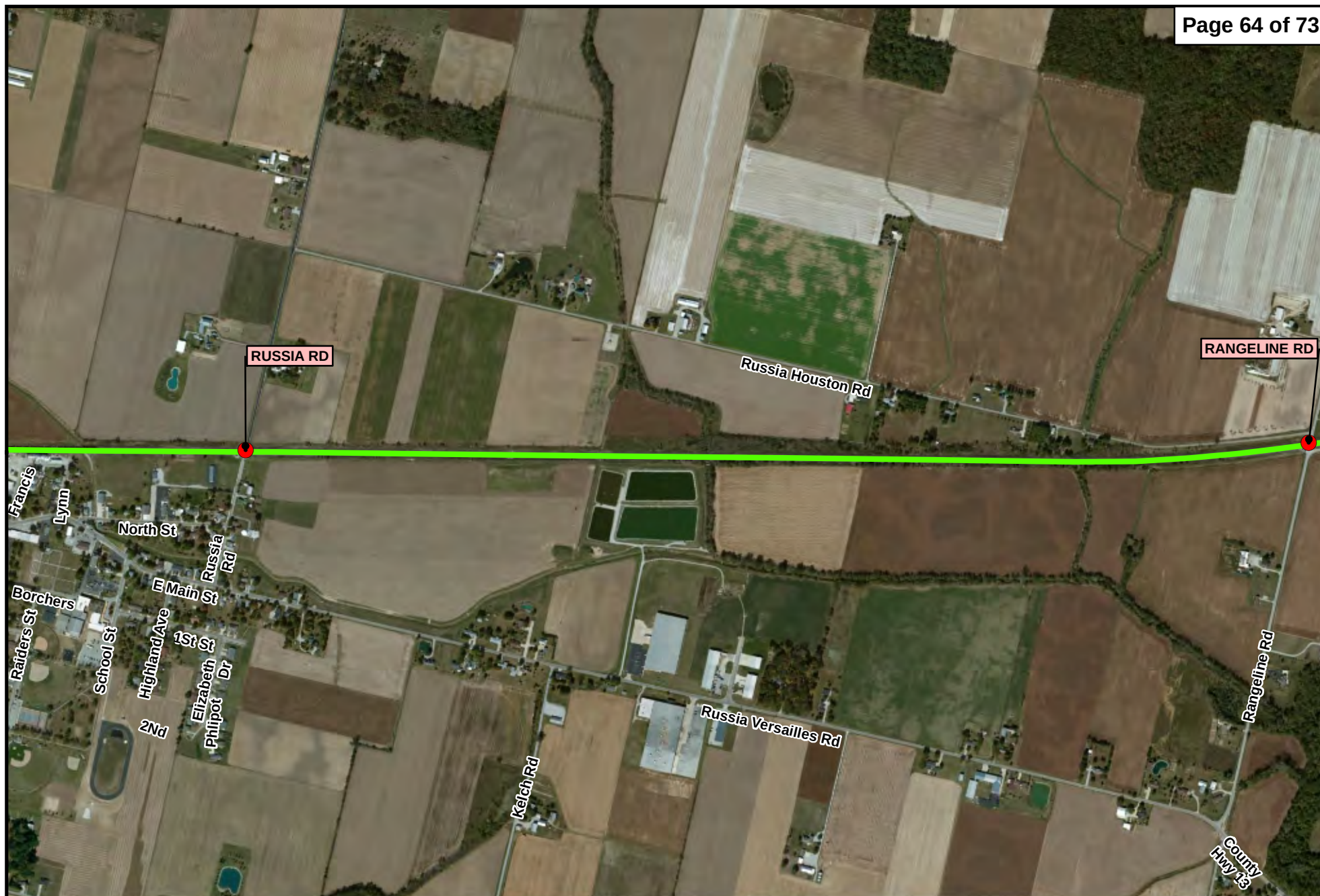




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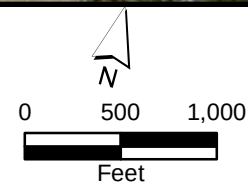
- | | | |
|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision





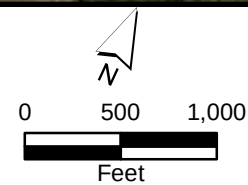
Legend



Public At-Grade Crossings
State Boundary
County Boundary

Cincinnati Terminal Subdivision
Indianapolis Line Subdivision
L&I Line
Indianapolis Terminal Subdivision - Louisville Secondary Branch

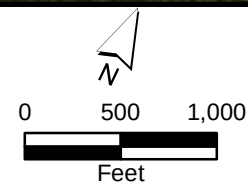
LCL Subdivision
Louisville Connection
Toledo Subdivision

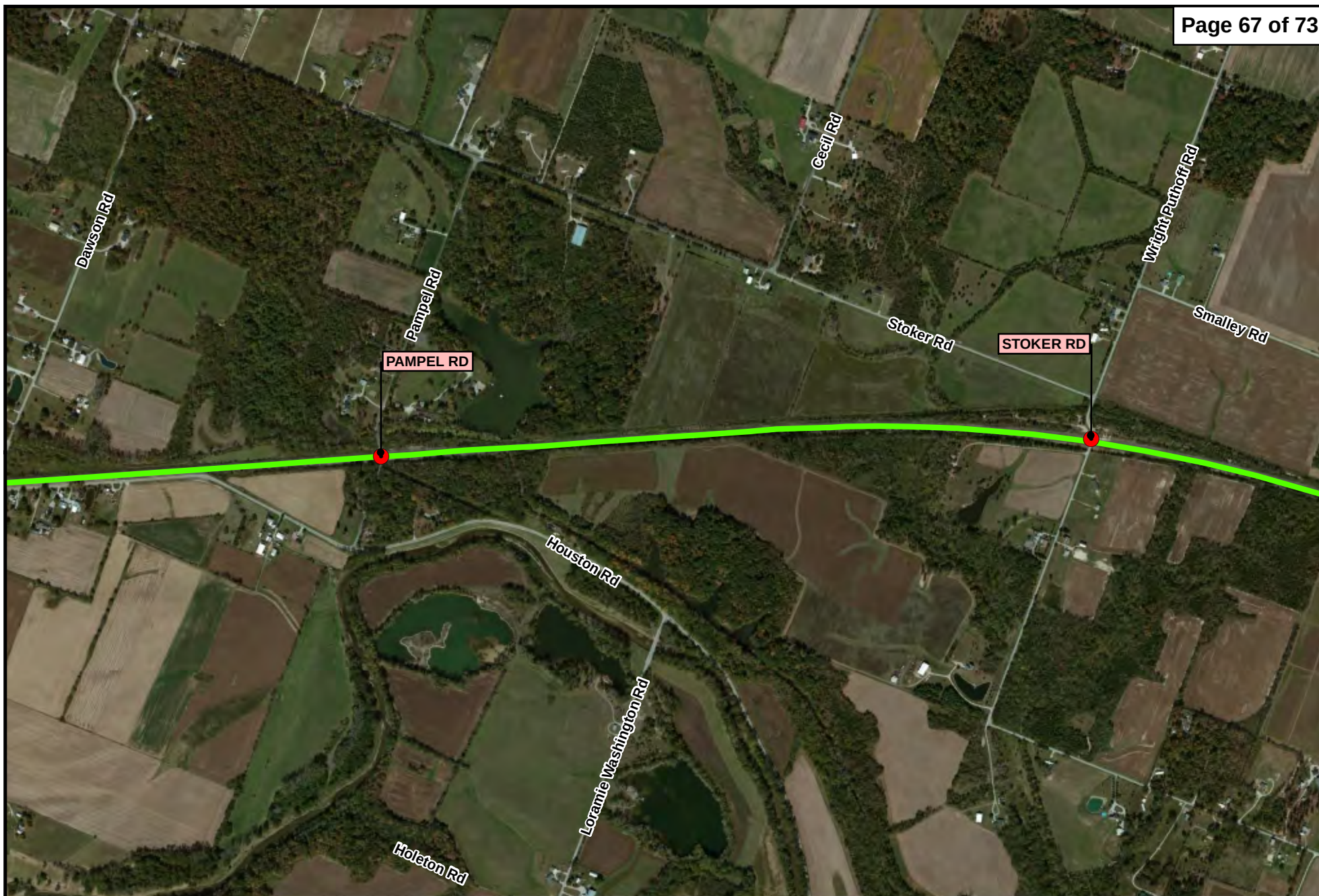




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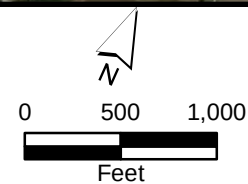
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

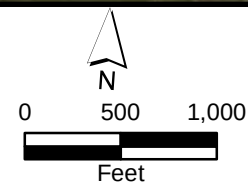
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| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





Legend

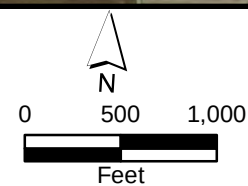
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|---|---|---|
|  Public At-Grade Crossings |  Cincinnati Terminal Subdivision |  LCL Subdivision |
|  State Boundary |  Indianapolis Line Subdivision |  Louisville Connection |
|  County Boundary |  L&I Line |  Toledo Subdivision |
| |  Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

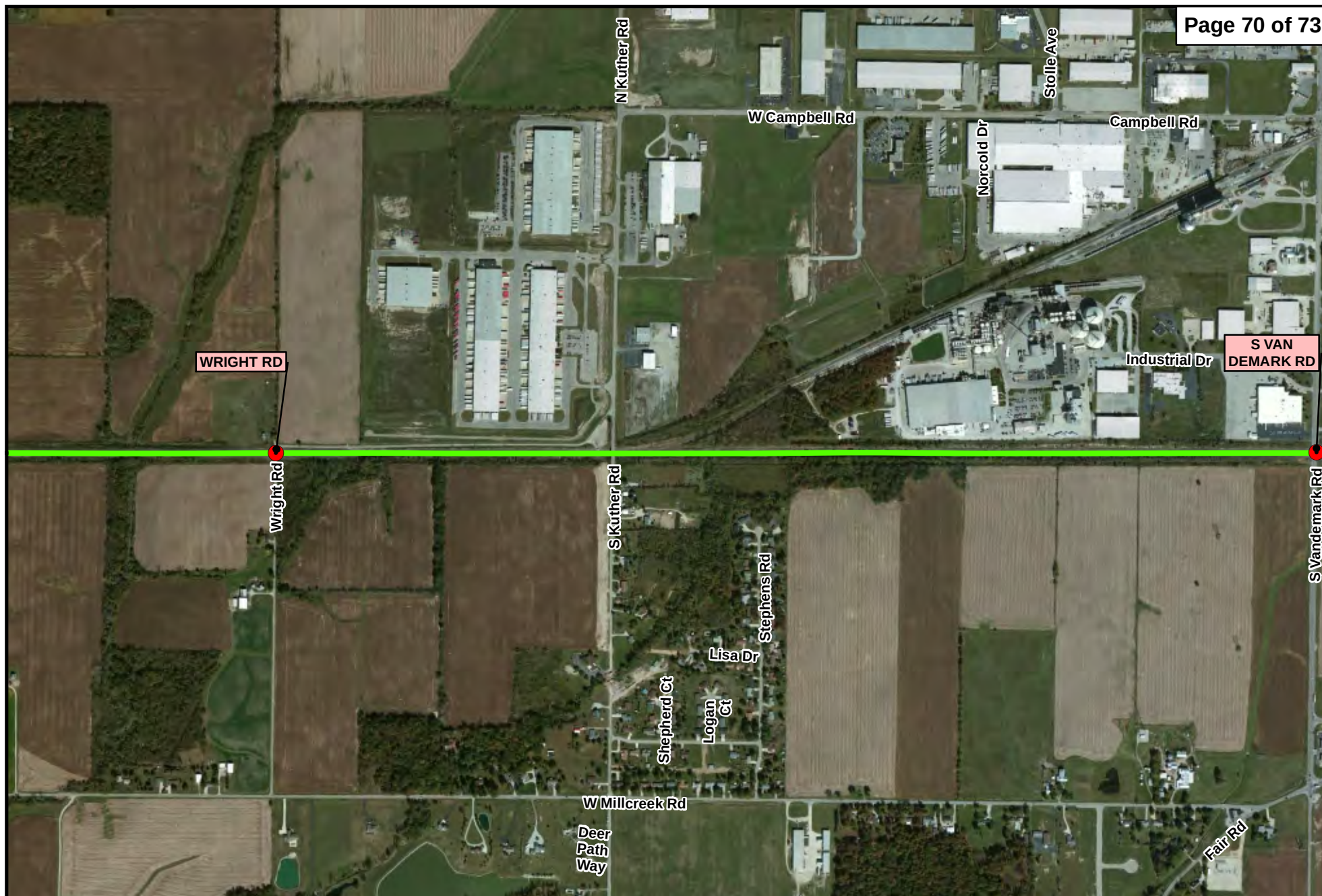




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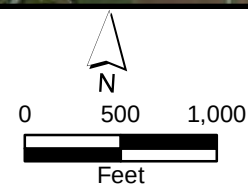
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

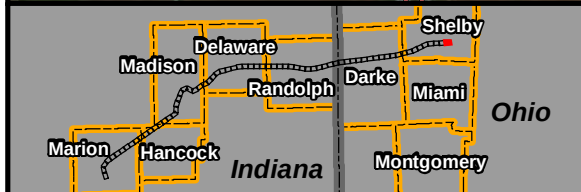
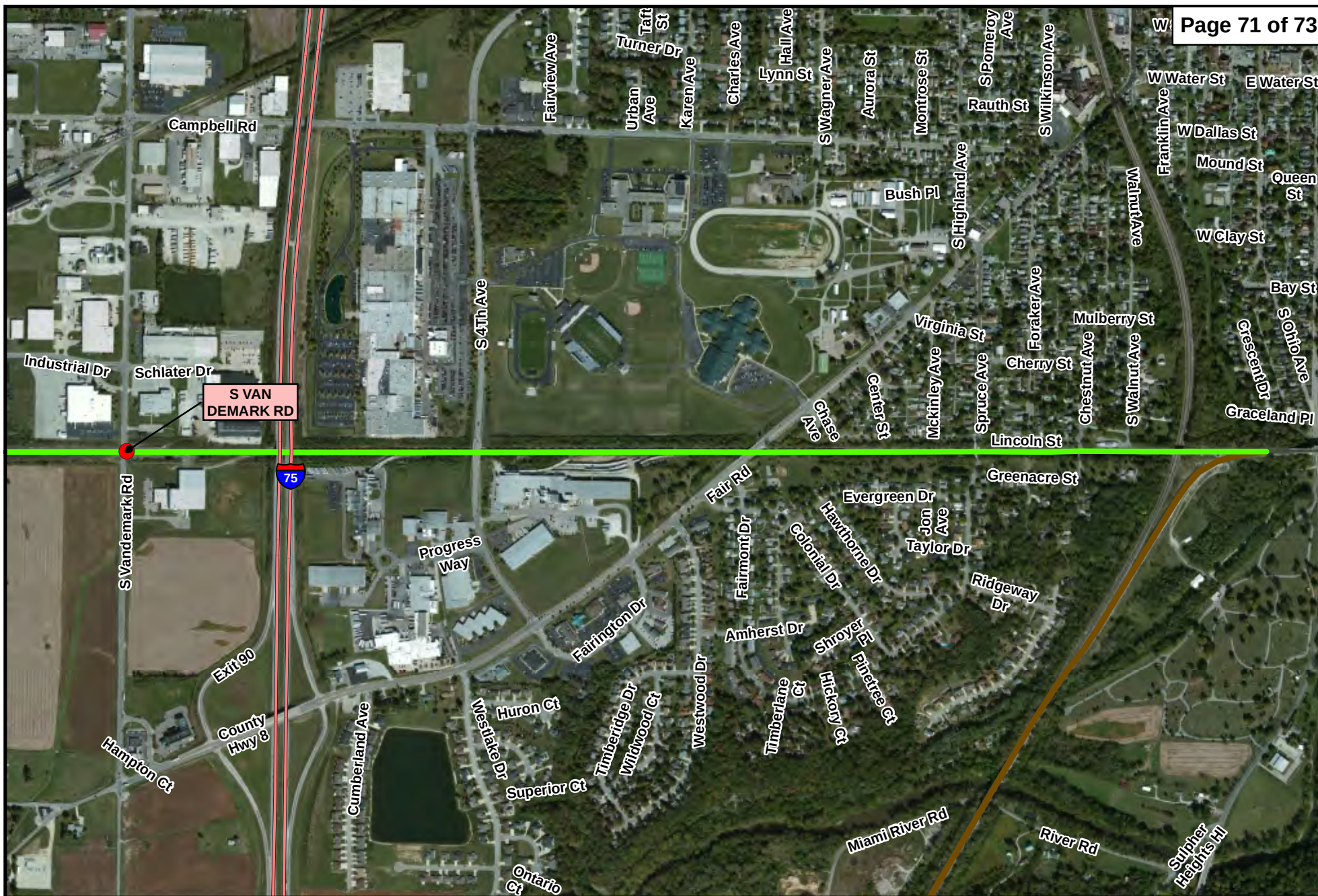




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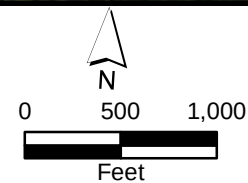
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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |

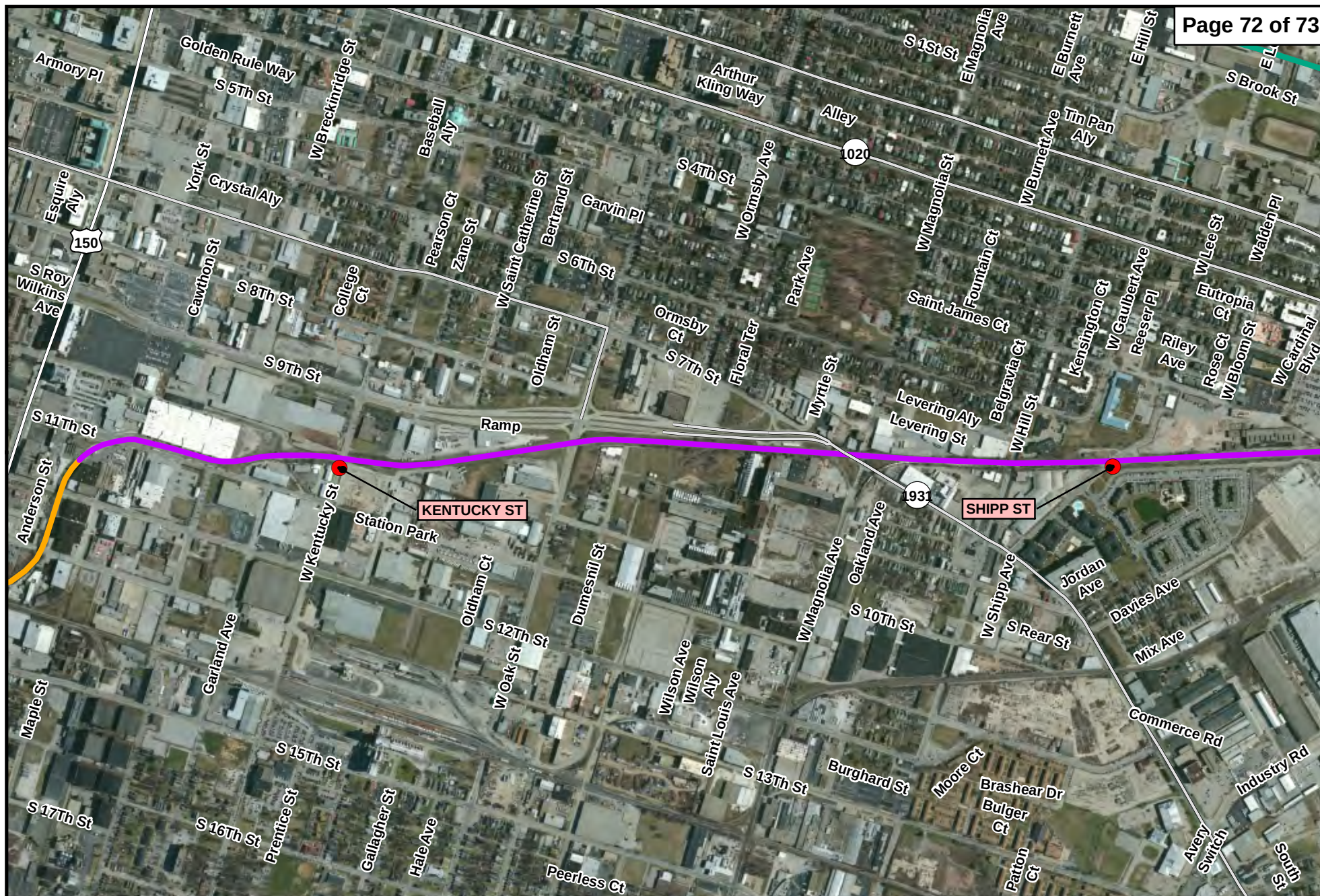




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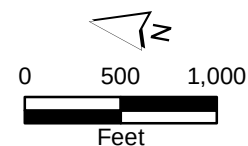
- Public At-Grade Crossings
- State Boundary
- County Boundary
- Cincinnati Terminal Subdivision
- Indianapolis Line Subdivision
- L&I Line
- Indianapolis Terminal Subdivision - Louisville Secondary Branch
- LCL Subdivision
- Louisville Connection
- Toledo Subdivision





Legend

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|---------------------------|---|-----------------------|
| Public At-Grade Crossings | Cincinnati Terminal Subdivision | LCL Subdivision |
| State Boundary | Indianapolis Line Subdivision | Louisville Connection |
| County Boundary | L&I Line | Toledo Subdivision |
| | Indianapolis Terminal Subdivision - Louisville Secondary Branch | |





 Public At-Grade Crossings
 Cincinnati Terminal Subdivision
 LCL Subdivision

 State Boundary
 Indianapolis Line Subdivision
 Louisville Connection

 County Boundary
 L&I Line
 Toledo Subdivision

 Indianapolis Terminal Subdivision - Louisville Secondary Branch

0 500 1,000
 Feet

**PROPOSED TRANSACTION/NO-ACTION ALTERNATIVE AVERAGE DELAY AND
LEVEL OF SERVICE – YEAR 2014**

Attachment B-3. Proposed Transaction/No-Action Alternative Average Delay and LOS - Year 2014													
Segment Name	At-Grade Crossing Location	County, State	2014 ADT	Trains per Day		2014 Crossing Level of Service		Queue Length (Feet)		Average Delay for all Vehicles (min per vehicle)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Indianapolis Terminal Subdivision - Louisville Secondary Branch	SUMNER AVE	Marion, IN	3,300	4	17	A	C	476	491	0.13	0.54	211.26	897.86
Indianapolis Terminal Subdivision - Louisville Secondary Branch	TROY AVE	Marion, IN	19,100	4	17	A	C	1377	1422	0.13	0.54	1,222.76	5,196.73
Indianapolis Terminal Subdivision - Louisville Secondary Branch	SOUTHERN AVE	Marion, IN	6,400	4	17	A	C	923	953	0.13	0.54	409.72	1,741.31
Indianapolis Terminal Subdivision - Louisville Secondary Branch	RAYMOND ST	Marion, IN	16,100	4	17	A	C	1169	1198	0.13	0.54	1,030.70	4,380.49
Indianapolis Line Subdivision	NEW YORK ST	Marion, IN	9,400	23	34	C	D	522	539	0.44	0.65	2,056.86	3,040.57
Indianapolis Line Subdivision	VERMONT ST	Marion, IN	600	23	34	C	D	69	69	0.44	0.65	131.29	194.08
Indianapolis Line Subdivision	MICHIGAN ST	Marion, IN	18,700	23	34	C	D	1044	1073	0.44	0.65	4,091.83	6,048.79
Indianapolis Line Subdivision	ST CLAIR ST	Marion, IN	3,000	23	34	C	D	333	344	0.44	0.65	656.44	970.39
Indianapolis Line Subdivision	COMMERCE AVE	Marion, IN	7,000	23	34	B	B	482	497	0.17	0.25	585.19	865.07
Indianapolis Line Subdivision	RURAL ST	Marion, IN	17,100	23	34	B	B	589	607	0.17	0.25	1,429.54	2,113.23
Indianapolis Line Subdivision	DEARBORN ST	Marion, IN	2,900	23	34	B	B	206	206	0.17	0.25	242.44	358.38
Indianapolis Line Subdivision	OLNEY ST	Marion, IN	3,000	23	34	B	B	206	213	0.17	0.25	250.80	370.74
Indianapolis Line Subdivision	SHERMAN DR	Marion, IN	11,200	23	34	B	B	387	397	0.17	0.25	936.31	1,384.11
Indianapolis Line Subdivision	34TH ST	Marion, IN	9,900	23	34	B	B	681	702	0.17	0.25	827.63	1,223.45
Indianapolis Line Subdivision	ARLINGTON AVE	Marion, IN	13,900	23	34	B	B	479	493	0.17	0.25	1,162.02	1,717.77
Indianapolis Line Subdivision	46TH ST	Marion, IN	11,500	23	34	B	B	787	816	0.17	0.25	961.39	1,421.18
Indianapolis Line Subdivision	FRANKLIN RD	Marion, IN	15,100	23	34	B	B	521	536	0.17	0.25	1,262.34	1,866.07
Indianapolis Line Subdivision	47 ST OR HUNTER ST	Marion, IN	900	23	34	B	B	64	64	0.17	0.25	75.24	111.22
Indianapolis Line Subdivision	POST RD	Marion, IN	13,700	23	34	B	B	472	486	0.17	0.25	1,145.30	1,693.06
Indianapolis Line Subdivision	59TH ST	Marion, IN	3,900	23	34	B	B	270	277	0.17	0.25	326.04	481.97
Indianapolis Line Subdivision	SUNNYSIDE	Marion, IN	10,200	23	34	B	B	702	724	0.17	0.25	852.71	1,260.52
Indianapolis Line Subdivision	OAKLANDON DR	Marion, IN	9,500	23	34	B	B	660	674	0.17	0.25	794.19	1,174.02
Indianapolis Line Subdivision	OIL WELL RD 600W	Hancock, IN	13,600	23	34	A	A	656	676	0.08	0.12	557.80	824.57
Indianapolis Line Subdivision	1000 NORTH	Hancock, IN	3,600	23	34	A	A	174	179	0.08	0.12	147.65	218.27
Indianapolis Line Subdivision	MERRILL ST	Hancock, IN	1,200	23	34	A	A	55	60	0.08	0.12	49.22	72.76
Indianapolis Line Subdivision	MAIN ST	Hancock, IN	4,900	23	34	A	A	119	122	0.08	0.12	200.97	297.09
Indianapolis Line Subdivision	NOEL	Hancock, IN	300	23	34	A	A	15	15	0.08	0.12	12.30	18.19
Indianapolis Line Subdivision	MADISON ST	Hancock, IN	7,700	23	34	A	A	373	383	0.08	0.12	315.81	466.85
Indianapolis Line Subdivision	ALFONTE ST	Madison, IN	1,000	23	34	A	A	50	50	0.08	0.12	41.01	60.63
Indianapolis Line Subdivision	MERIDIAN ST	Madison, IN	1,100	23	34	A	A	50	55	0.08	0.12	45.12	66.69
Indianapolis Line Subdivision	REFORMATORY RD	Madison, IN	2,700	23	34	A	A	134	134	0.08	0.12	110.74	163.70
Indianapolis Line Subdivision	PENDLETON ST	Madison, IN	1,900	23	34	A	A	94	94	0.08	0.12	77.93	115.20
Indianapolis Line Subdivision	GOUL RD	Madison, IN	200	23	34	A	A	10	10	0.08	0.12	8.20	12.13
Indianapolis Line Subdivision	53RD ST/SYBRT RD	Madison, IN	6,200	23	34	A	A	298	308	0.08	0.12	254.29	375.91
Indianapolis Line Subdivision	W 38TH ST	Madison, IN	12,600	23	34	A	A	404	417	0.08	0.12	516.78	763.94
Indianapolis Line Subdivision	LOCUST	Madison, IN	1,200	23	34	B	C	104	113	0.30	0.44	177.33	262.13
Indianapolis Line Subdivision	CEDAR ST	Madison, IN	300	23	34	B	C	28	28	0.30	0.44	44.33	65.53
Indianapolis Line Subdivision	MADISON AVE	Madison, IN	15,100	23	34	B	C	918	949	0.30	0.44	2,231.34	3,298.51
Indianapolis Line Subdivision	LINCOLN ST	Madison, IN	1,100	23	34	B	C	104	104	0.30	0.44	162.55	240.29
Indianapolis Line Subdivision	BROWN ST	Madison, IN	7,700	23	34	B	C	707	726	0.30	0.44	1,137.84	1,682.02
Indianapolis Line Subdivision	JACKSON ST	Madison, IN	7,200	23	34	B	C	660	679	0.30	0.44	1,063.95	1,572.80
Indianapolis Line Subdivision	MERIDIAN ST	Madison, IN	3,200	23	34	B	C	292	302	0.30	0.44	472.87	699.02
Indianapolis Line Subdivision	MAIN ST	Madison, IN	4,900	23	34	B	C	453	462	0.30	0.44	724.08	1,070.38
Indianapolis Line Subdivision	CENTRAL AVE	Madison, IN	4,000	23	34	B	C	245	252	0.30	0.44	591.08	873.78
Indianapolis Line Subdivision	FLETCHER ST	Madison, IN	1,000	23	34	B	C	94	94	0.30	0.44	147.77	218.44
Indianapolis Line Subdivision	PEARL ST	Madison, IN	600	23	34	B	C	57	57	0.30	0.44	88.66	131.07
Indianapolis Line Subdivision	WALNUT ST	Madison, IN	600	23	34	B	C	57	57	0.30	0.44	88.66	131.07
Indianapolis Line Subdivision	NOBLE ST	Madison, IN	1,000	23	34	B	C	94	94	0.30	0.44	147.77	218.44
Indianapolis Line Subdivision	JEFFERSON ST	Madison, IN	1,000	23	34	B	C	94	94	0.30	0.44	147.77	218.44
Indianapolis Line Subdivision	COLUMBUS AVE	Madison, IN	10,500	23	34	B	C	641	660	0.30	0.44	1,551.60	2,293.66
Indianapolis Line Subdivision	PITT ST	Madison, IN	500	23	34	B	C	47	47	0.30	0.44	73.89	109.22
Indianapolis Line Subdivision	22ND ST	Madison, IN	6,000	23	34	B	C	547	566	0.30	0.44	886.63	1,310.67
Indianapolis Line Subdivision	SCATTERFIELD RD	Madison, IN	20,900	23	34	B	C	957	986	0.30	0.44	3,088.42	4,565.48
Indianapolis Line Subdivision	RANGELINE RD	Madison, IN	7,800	23	34	A	A	378	388	0.08	0.12	319.91	472.92
Indianapolis Line Subdivision	CR 100S	Madison, IN	4,300	23	34	A	A	209	214	0.08	0.12	176.36	260.71
Indianapolis Line Subdivision	WATER ST	Madison, IN	3,000	23	34	A	A	144	149	0.08	0.12	123.04	181.89

Attachment B-3. Proposed Transaction/No-Action Alternative Average Delay and LOS - Year 2014													
Segment Name	At-Grade Crossing Location	County, State	2014 ADT	Trains per Day		2014 Crossing Level of Service		Queue Length (Feet)		Average Delay for all Vehicles (min per vehicle)		Total Vehicle Traffic Delay (24-Hr) (Minutes)	
				No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action	No-Action	Proposed Action
Indianapolis Line Subdivision	CR #500E	Madison, IN	6,100	23	34	A	A	195	202	0.08	0.12	250.19	369.84
Indianapolis Line Subdivision	WALNUT ST	Delaware, IN	5,200	23	34	A	A	253	258	0.08	0.12	213.28	315.28
Indianapolis Line Subdivision	BROADWAY	Delaware, IN	3,300	23	34	A	A	159	164	0.08	0.12	135.35	200.08
Indianapolis Line Subdivision	CR #400W	Delaware, IN	2,900	23	34	A	A	139	144	0.08	0.12	118.94	175.83
Indianapolis Line Subdivision	BATAVIA AVE	Delaware, IN	13,600	23	34	B	C	498	513	0.30	0.44	2,009.69	2,970.84
Indianapolis Line Subdivision	PERKINS	Delaware, IN	3,000	23	34	B	C	274	283	0.30	0.44	443.31	655.33
Indianapolis Line Subdivision	COUNCIL ST	Delaware, IN	1,300	23	34	B	C	123	123	0.30	0.44	192.10	283.98
Indianapolis Line Subdivision	LIBERTY	Delaware, IN	7,600	23	34	B	C	698	717	0.30	0.44	1,123.06	1,660.18
Indianapolis Line Subdivision	WALNUT ST	Delaware, IN	9,800	23	34	F	F	1031	1064	1.57	2.31	7,668.78	11,336.45
Indianapolis Line Subdivision	JEFFERSON ST	Delaware, IN	800	23	34	F	F	174	174	1.57	2.31	626.02	925.42
Indianapolis Line Subdivision	ELM ST	Delaware, IN	600	23	34	F	F	130	130	1.57	2.31	469.52	694.07
Indianapolis Line Subdivision	MONROE ST	Delaware, IN	900	23	34	F	F	195	195	1.57	2.31	704.28	1,041.10
Indianapolis Line Subdivision	S PERSHING DRIVE	Delaware, IN	400	23	34	B	C	38	38	0.30	0.44	59.11	87.38
Indianapolis Line Subdivision	S HACKLEY STREET	Delaware, IN	5,300	23	34	B	C	490	500	0.30	0.44	783.19	1,157.75
Indianapolis Line Subdivision	S OHIO AVENUE	Delaware, IN	5,800	23	34	B	C	538	547	0.30	0.44	857.07	1,266.98
Indianapolis Line Subdivision	LINCOLN ST	Delaware, IN	3,200	23	34	B	C	292	302	0.30	0.44	472.87	699.02
Indianapolis Line Subdivision	COUNTRY CLUB RD	Delaware, IN	2,700	23	34	A	A	129	134	0.08	0.12	110.74	163.70
Indianapolis Line Subdivision	FRANKLIN ST	Randolph, IN	1,700	23	34	A	A	80	84	0.08	0.12	69.72	103.07
Indianapolis Line Subdivision	MAIN ST	Randolph, IN	2,500	23	34	A	A	124	124	0.08	0.12	102.54	151.58
Indianapolis Line Subdivision	FULTON	Randolph, IN	700	23	34	A	A	35	35	0.08	0.12	28.71	42.44
Indianapolis Line Subdivision	MAIN	Randolph, IN	8,100	23	34	A	A	393	402	0.08	0.12	332.22	491.10
Indianapolis Line Subdivision	PLUM ST	Randolph, IN	700	23	34	A	A	35	35	0.08	0.12	28.71	42.44
Indianapolis Line Subdivision	JACKSON ST	Randolph, IN	300	23	34	A	A	15	15	0.08	0.12	12.30	18.19
Indianapolis Line Subdivision	WEST ST	Randolph, IN	400	23	34	A	A	20	20	0.08	0.12	16.41	24.25
Indianapolis Line Subdivision	MERIDIAN	Randolph, IN	500	23	34	A	A	25	25	0.08	0.12	20.51	30.32
Indianapolis Line Subdivision	MAIN ST	Randolph, IN	5,200	23	34	A	A	248	258	0.08	0.12	213.28	315.28
Indianapolis Line Subdivision	EAST ST	Randolph, IN	400	23	34	A	A	20	20	0.08	0.12	16.41	24.25
Indianapolis Line Subdivision	CR 100E	Randolph, IN	2,700	23	34	A	A	129	134	0.08	0.12	110.74	163.70
Indianapolis Line Subdivision	HOWARD ST	Randolph, IN	900	23	34	A	A	45	45	0.08	0.12	36.91	54.57
Indianapolis Line Subdivision	COLUMBIA ST	Randolph, IN	4,100	23	34	A	A	199	204	0.08	0.12	168.16	248.58
Indianapolis Line Subdivision	ST LINE ST	Randolph, IN	3,800	23	34	A	A	184	189	0.08	0.12	155.86	230.39
Indianapolis Line Subdivision	S SYCAMORE ST	Darke, OH	1,500	23	34	A	A	75	75	0.08	0.12	61.52	90.95
Indianapolis Line Subdivision	DIVISION ST	Darke, OH	1,200	23	34	A	A	55	60	0.08	0.12	49.22	72.76
Indianapolis Line Subdivision	DEARFIELD ST	Darke, OH	2,900	23	34	A	A	139	144	0.08	0.12	118.94	175.83
Indianapolis Line Subdivision	S MAIN ST	Darke, OH	5,100	23	34	A	A	243	253	0.08	0.12	209.17	309.21
Indianapolis Line Subdivision	NORTHWEST ST	Darke, OH	4,600	23	34	A	A	219	229	0.08	0.12	188.67	278.90
Indianapolis Line Subdivision	NORTH CENTER	Darke, OH	3,800	23	34	A	A	184	189	0.08	0.12	155.86	230.39
Indianapolis Line Subdivision	SECOND ST	Darke, OH	600	23	34	A	A	30	30	0.08	0.12	24.61	36.38
Indianapolis Line Subdivision	STEFFIN ST	Darke, OH	600	23	34	A	A	30	30	0.08	0.12	24.61	36.38
Indianapolis Line Subdivision	E MAIN ST	Darke, OH	2,900	23	34	A	A	139	144	0.08	0.12	118.94	175.83
Indianapolis Line Subdivision	VANDEMARK RD	Shelby, OH	5,700	23	34	A	A	137	142	0.08	0.12	233.78	345.59
Louisville Connection	KENTUCKY ST	Jefferson, KY	4,100	6	18	C	E	868	890	0.41	1.22	836.97	2,510.90
Louisville Connection	SHIPP ST	Jefferson, KY	2,900	6	18	C	E	608	629	0.41	1.22	592.00	1,776.00

PREDICTED ACCIDENTS AT PUBLIC AT-GRADE CROSSINGS

Attachment B-4. Predicted Accidents at Public At-Grade Crossings												
USDOT/ FRA Crossing No.	Segment No.	Street	County, State	MP	Existing (Year 2011) ADT	Existing Trains per Day	Proposed Trains per Day	Max Timetable Speed	Accidents (Years 2006 through 2010)	Predicted Accidents per Year (Existing)	Predicted Accidents per Year (Proposed)	Change in Predicted Accidents per Year
535613H	Indianapolis Terminal Subdivision - Louisville Secondary Branch	NATIONAL AVE	MARION, IN	3.52	2,400	4	17	20	0	0.0365	0.0517	0.0152
535614P	Indianapolis Terminal Subdivision - Louisville Secondary Branch	SUMNER AVE	MARION, IN	3.25	3,100	4	17	20	0	0.0205	0.0275	0.0069
535616D	Indianapolis Terminal Subdivision - Louisville Secondary Branch	TROY AVE	MARION, IN	3.01	18,500	4	17	20	0	0.0320	0.0388	0.0068
535618S	Indianapolis Terminal Subdivision - Louisville Secondary Branch	SOUTHERN AVE	MARION, IN	2.48	6,200	4	17	20	0	0.0233	0.0304	0.0071
535620T	Indianapolis Terminal Subdivision - Louisville Secondary Branch	RAYMOND ST	MARION, IN	1.96	15,600	4	17	20	0	0.0268	0.0361	0.0093
535621A	Indianapolis Terminal Subdivision - Louisville Secondary Branch	CAVEN ST	MARION, IN	1.51	300	4	17	10	0	0.0125	0.0180	0.0055
535624V	Indianapolis Terminal Subdivision - Louisville Secondary Branch	TERRACE AVE	MARION, IN	1.17	1,400	4	17	10	0	0.0175	0.0241	0.0065
539230U	Indianapolis Line Subdivision	NEW YORK ST	MARION, IN	282.7	9,100	23	34	25	0	0.0410	0.0438	0.0028
539232H	Indianapolis Line Subdivision	VERMONT ST	MARION, IN	282.59	500	23	34	25	0	0.0152	0.0168	0.0016
539233P	Indianapolis Line Subdivision	MICHIGAN ST	MARION, IN	282.5	18,200	23	34	25	1	0.0891	0.0941	0.0050
539235D	Indianapolis Line Subdivision	ST CLAIR ST	MARION, IN	282.2	2,900	23	34	25	0	0.0288	0.0313	0.0025
539237S	Indianapolis Line Subdivision	COLUMBIA AVE	MARION, IN	281.66	1,400	23	34	40	0	0.0245	0.0268	0.0023
539239F	Indianapolis Line Subdivision	COMMERCE AVE	MARION, IN	281.32	6,800	23	34	40	0	0.0343	0.0370	0.0027
539240A	Indianapolis Line Subdivision	18TH ST	MARION, IN	281.05	1,400	23	34	40	0	0.0245	0.0268	0.0023
539242N	Indianapolis Line Subdivision	RURAL ST	MARION, IN	280.47	16,500	23	34	40	0	0.0452	0.0480	0.0028
539243V	Indianapolis Line Subdivision	DEARBORN ST	MARION, IN	280.17	2,800	23	34	40	0	0.0286	0.0311	0.0025
539245J	Indianapolis Line Subdivision	OLNEY ST	MARION, IN	279.87	2,800	23	34	40	1	0.0700	0.0744	0.0044
539247X	Indianapolis Line Subdivision	SHERMAN DR	MARION, IN	279.55	10,900	23	34	40	1	0.0945	0.0996	0.0050
539251M	Indianapolis Line Subdivision	34TH ST	MARION, IN	277.48	9,600	23	34	40	3	0.1801	0.1894	0.0093
539252U	Indianapolis Line Subdivision	ARLINGTON AVE	MARION, IN	277.11	13,400	23	34	40	0	0.0437	0.0465	0.0028
539256W	Indianapolis Line Subdivision	46TH ST	MARION, IN	274.8	11,100	23	34	40	1	0.0750	0.0796	0.0046
539257D	Indianapolis Line Subdivision	FRANKLIN RD	MARION, IN	274.7	14,600	23	34	40	2	0.1522	0.1595	0.0073
539258K	Indianapolis Line Subdivision	47 ST OR HUNTER ST	MARION, IN	274.62	800	23	34	40	2	0.0929	0.0983	0.0054
539259S	Indianapolis Line Subdivision	POST RD	MARION, IN	273.65	13,200	23	34	40	0	0.0436	0.0464	0.0028
539263G	Indianapolis Line Subdivision	59TH ST	MARION, IN	271.99	3,700	23	34	40	0	0.0304	0.0329	0.0025
539264N	Indianapolis Line Subdivision	SUNNYSIDE	MARION, IN	271.24	9,800	23	34	40	1	0.0848	0.0897	0.0049
539265V	Indianapolis Line Subdivision	OAKLANDON DR	MARION, IN	270.23	9,200	23	34	40	0	0.0364	0.0391	0.0027
539266C	Indianapolis Line Subdivision	BRANDON ST	MARION, IN	270.05	500	23	34	40	0	0.0192	0.0211	0.0019
539268R	Indianapolis Line Subdivision	700 W CO LINE RD	MARION, IN	269.02	2,400	23	34	40	1	0.0683	0.0726	0.0043
538998L	Indianapolis Line Subdivision	750 NORTH	HANCOCK, IN	268.48	1,500	23	34	60	0	0.0269	0.0292	0.0024
538997E	Indianapolis Line Subdivision	DEPOT ST	HANCOCK, IN	268.11	400	23	34	60	0	0.0182	0.0200	0.0018
538996X	Indianapolis Line Subdivision	OIL WELL RD 600W	HANCOCK, IN	267.75	13,200	23	34	60	0	0.0389	0.0417	0.0028

Attachment B-4. Predicted Accidents at Public At-Grade Crossings												
USDOT/ FRA Crossing No.	Segment No.	Street	County, State	MP	Existing (Year 2011) ADT	Existing Trains per Day	Proposed Trains per Day	Max Timetable Speed	Accidents (Years 2006 through 2010)	Predicted Accidents per Year (Existing)	Predicted Accidents per Year (Proposed)	Change in Predicted Accidents per Year
538995R	Indianapolis Line Subdivision	CR 500W	HANCOCK, IN	266.3	600	23	34	60	0	0.0201	0.0221	0.0020
538992V	Indianapolis Line Subdivision	CR #400W	HANCOCK, IN	265.37	400	23	34	60	2	0.0842	0.0890	0.0048
538990G	Indianapolis Line Subdivision	1000 NORTH	HANCOCK, IN	263.75	3,500	23	34	60	0	0.0300	0.0325	0.0025
538989M	Indianapolis Line Subdivision	MERRILL ST	HANCOCK, IN	263.4	1,100	23	34	60	0	0.0232	0.0254	0.0022
538987Y	Indianapolis Line Subdivision	MAIN ST	HANCOCK, IN	263.3	4,800	23	34	60	0	0.0365	0.0392	0.0027
538986S	Indianapolis Line Subdivision	NOEL	HANCOCK, IN	263.2	300	23	34	60	0	0.0169	0.0186	0.0017
538985K	Indianapolis Line Subdivision	MADISON ST	HANCOCK, IN	262.94	7,400	23	34	60	0	0.0349	0.0376	0.0027
538983W	Indianapolis Line Subdivision	750W-ALFONT RD	MADISON, IN	261.15	1,200	23	34	60	0	0.0189	0.0208	0.0019
538981H	Indianapolis Line Subdivision	ALFONTE ST	MADISON, IN	260.57	900	23	34	60	0	0.0221	0.0243	0.0021
538980B	Indianapolis Line Subdivision	MERIDIAN ST	MADISON, IN	260.47	1,000	23	34	60	0	0.0227	0.0248	0.0021
538978A	Indianapolis Line Subdivision	EAST ST	MADISON, IN	259.98	900	23	34	60	0	0.0176	0.0194	0.0018
538976L	Indianapolis Line Subdivision	REFORMATORY RD	MADISON, IN	257.37	2,600	23	34	60	0	0.0282	0.0306	0.0024
538974X	Indianapolis Line Subdivision	PENDLETON AVE	MADISON, IN	257.11	2,100	23	34	60	0	0.0269	0.0293	0.0024
538972J	Indianapolis Line Subdivision	BROADWAY ST	MADISON, IN	256.49	600	23	34	60	0	0.0201	0.0221	0.0020
538971C	Indianapolis Line Subdivision	MADISON AVE	MADISON, IN	255.92	1,000	23	34	60	0	0.0227	0.0248	0.0021
538967M	Indianapolis Line Subdivision	PENDLETON ST	MADISON, IN	254.07	1,800	23	34	60	0	0.0260	0.0283	0.0023
538966F	Indianapolis Line Subdivision	GOUL RD	MADISON, IN	253.93	200	23	34	60	0	0.0152	0.0168	0.0016
538964S	Indianapolis Line Subdivision	73RD ST	MADISON, IN	252.81	300	23	34	60	0	0.0169	0.0186	0.0017
538963K	Indianapolis Line Subdivision	DICKEY ROAD 400SO	MADISON, IN	252.35	1,300	23	34	60	0	0.0193	0.0212	0.0019
538962D	Indianapolis Line Subdivision	53RD ST/SYBRT RD	MADISON, IN	251.25	5,900	23	34	60	0	0.0334	0.0360	0.0026
538961W	Indianapolis Line Subdivision	W 38TH ST	MADISON, IN	250.17	12,100	23	34	60	0	0.0406	0.0434	0.0028
538958N	Indianapolis Line Subdivision	W 22ND ST	MADISON, IN	248.85	2,300	23	34	30	0	0.0222	0.0243	0.0021
538957G	Indianapolis Line Subdivision	LOCUST	MADISON, IN	248.39	1,100	23	34	30	1	0.0558	0.0593	0.0034
538956A	Indianapolis Line Subdivision	CEDAR ST	MADISON, IN	248.32	300	23	34	30	0	0.0193	0.0211	0.0018
538955T	Indianapolis Line Subdivision	MADISON AVE	MADISON, IN	248.25	14,600	23	34	30	1	0.0823	0.0871	0.0048
538954L	Indianapolis Line Subdivision	FAIRVIEW ST	MADISON, IN	247.99	1,200	23	34	30	0	0.0249	0.0268	0.0019
538953E	Indianapolis Line Subdivision	LINCOLN ST	MADISON, IN	247.77	1,000	23	34	30	0	0.0257	0.0276	0.0019
538952X	Indianapolis Line Subdivision	BROWN ST	MADISON, IN	247.73	7,500	23	34	30	0	0.0343	0.0362	0.0019
538951R	Indianapolis Line Subdivision	JACKSON ST	MADISON, IN	247.62	6,900	23	34	30	0	0.0284	0.0309	0.0024
538950J	Indianapolis Line Subdivision	MERIDIAN ST	MADISON, IN	247.55	3,100	23	34	30	0	0.0290	0.0309	0.0019
538949P	Indianapolis Line Subdivision	MAIN ST	MADISON, IN	247.5	4,700	23	34	30	0	0.0261	0.0285	0.0023
538948H	Indianapolis Line Subdivision	CENTRAL AVE	MADISON, IN	247.42	3,900	23	34	30	0	0.0329	0.0355	0.0026
538947B	Indianapolis Line Subdivision	FLETCHER ST	MADISON, IN	247.32	900	23	34	30	0	0.0221	0.0243	0.0021
538946U	Indianapolis Line Subdivision	PEARL ST	MADISON, IN	247.27	500	23	34	30	0	0.0192	0.0211	0.0019
538945M	Indianapolis Line Subdivision	WALNUT ST	MADISON, IN	247.17	600	23	34	30	0	0.0220	0.0239	0.0019
538944F	Indianapolis Line Subdivision	NOBLE ST	MADISON, IN	247.14	900	23	34	30	1	0.0543	0.0578	0.0034
538943Y	Indianapolis Line Subdivision	JEFFERSON ST	MADISON, IN	247.05	900	23	34	30	0	0.0237	0.0256	0.0019
538942S	Indianapolis Line Subdivision	COLUMBUS AVE	MADISON, IN	246.87	10,200	23	34	30	0	0.0330	0.0357	0.0026
538941K	Indianapolis Line Subdivision	PITT ST	MADISON, IN	246.56	500	23	34	30	0	0.0213	0.0231	0.0018

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538940D	Indianapolis Line Subdivision	22ND ST	MADISON, IN	246.41	5,800	23	34	30	0	0.0317	0.0336	0.0019
538939J	Indianapolis Line Subdivision	SCATTERFIELD RD	MADISON, IN	245.96	20,300	23	34	30	2	0.1410	0.1482	0.0072
538938C	Indianapolis Line Subdivision	ULM RD	MADISON, IN	245.42	200	23	34	30	0	0.0424	0.0466	0.0042
538923M	Indianapolis Line Subdivision	CHURCH ST	MADISON, IN	245.26	400	23	34	30	0	0.0478	0.0519	0.0042
538922F	Indianapolis Line Subdivision	RANGELINE RD	MADISON, IN	244.89	7,600	23	34	60	1	0.0816	0.0865	0.0048
538921Y	Indianapolis Line Subdivision	CR 100S	MADISON, IN	244.14	4,100	23	34	60	0	0.0253	0.0276	0.0023
538920S	Indianapolis Line Subdivision	300E-MIDDLETOWN RD	MADISON, IN	243.72	600	23	34	60	0	0.0201	0.0221	0.0020
538919X	Indianapolis Line Subdivision	WATER ST	MADISON, IN	242.4	2,900	23	34	60	0	0.0288	0.0313	0.0025
538918R	Indianapolis Line Subdivision	CR #500E	MADISON, IN	241.24	5,900	23	34	60	0	0.0356	0.0383	0.0027
538915V	Indianapolis Line Subdivision	WALNUT ST	DELAWARE, IN	240.15	5,000	23	34	60	0	0.0323	0.0349	0.0026
538914N	Indianapolis Line Subdivision	TENNESSEE ST	DELAWARE, IN	239.82	300	23	34	60	0	0.0132	0.0147	0.0014
538913G	Indianapolis Line Subdivision	400 SOUTH	DELAWARE, IN	238.87	700	23	34	60	0	0.0209	0.0229	0.0020
538911T	Indianapolis Line Subdivision	300 SOUTH	DELAWARE, IN	237.44	200	23	34	60	0	0.0152	0.0168	0.0016
538910L	Indianapolis Line Subdivision	700 W	DELAWARE, IN	237.27	700	23	34	60	0	0.0209	0.0229	0.0020
538909S	Indianapolis Line Subdivision	YORK AVE-600W	DELAWARE, IN	235.86	700	23	34	60	0	0.0209	0.0229	0.0020
538908K	Indianapolis Line Subdivision	BROADWAY	DELAWARE, IN	235.37	3,200	23	34	60	0	0.0295	0.0319	0.0025
538906W	Indianapolis Line Subdivision	ANDREWS RD	DELAWARE, IN	234.77	1,400	23	34	60	0	0.0245	0.0268	0.0023
538905P	Indianapolis Line Subdivision	CR #400W	DELAWARE, IN	233.72	2,700	23	34	60	1	0.0696	0.0740	0.0044
538904H	Indianapolis Line Subdivision	CR #300W	DELAWARE, IN	232.69	700	23	34	30	0	0.0209	0.0229	0.0020
538903B	Indianapolis Line Subdivision	CR 250 WEST	DELAWARE, IN	232.21	1,100	23	34	30	3	0.1343	0.1417	0.0074
538902U	Indianapolis Line Subdivision	BATAVIA AVE	DELAWARE, IN	230.97	13,200	23	34	30	0	0.0460	0.0488	0.0028
538901M	Indianapolis Line Subdivision	PERKINS	DELAWARE, IN	230.56	2,800	23	34	30	0	0.0286	0.0311	0.0025
474549R	Indianapolis Line Subdivision	ELLIOTT ST	DELAWARE, IN	230.37	2,400	23	34	30	0	0.0647	0.0682	0.0035
538900F	Indianapolis Line Subdivision	COUNCIL ST	DELAWARE, IN	229.94	1,200	23	34	30	1	0.0565	0.0600	0.0035
538899N	Indianapolis Line Subdivision	LIBERTY	DELAWARE, IN	229.82	7,300	23	34	30	0	0.0288	0.0312	0.0025
538898G	Indianapolis Line Subdivision	WALNUT ST	DELAWARE, IN	229.64	9,400	23	34	10	0	0.0545	0.0572	0.0027
477174R	Indianapolis Line Subdivision	JEFFERSON ST	DELAWARE, IN	229.47	800	23	34	30	0	0.0215	0.0236	0.0021
477173J	Indianapolis Line Subdivision	ELM ST	DELAWARE, IN	229.46	500	23	34	30	0	0.0192	0.0211	0.0019
477171V	Indianapolis Line Subdivision	MONROE ST	DELAWARE, IN	229.31	800	23	34	30	0	0.0215	0.0236	0.0021
477169U	Indianapolis Line Subdivision	S PERSHING DRIVE	DELAWARE, IN	229.16	300	23	34	30	0	0.0169	0.0186	0.0017
477168M	Indianapolis Line Subdivision	S HACKLEY STREET	DELAWARE, IN	229.06	5,100	23	34	30	0	0.0388	0.0416	0.0028
477167F	Indianapolis Line Subdivision	S OHIO AVENUE	DELAWARE, IN	228.84	5,600	23	34	30	1	0.0331	0.0350	0.0019
538896T	Indianapolis Line Subdivision	LINCOLN ST	DELAWARE, IN	228.67	3,000	23	34	30	0	0.0320	0.0339	0.0019
538892R	Indianapolis Line Subdivision	BUTTERFIELD RD	DELAWARE, IN	227.47	1,100	23	34	30	0	0.0232	0.0254	0.0022
538890C	Indianapolis Line Subdivision	COUNTRY CLUB RD	DELAWARE, IN	226.61	2,600	23	34	60	0	0.0282	0.0306	0.0024
538877N	Indianapolis Line Subdivision	400 EAST	DELAWARE, IN	225.62	1,100	23	34	60	0	0.0232	0.0254	0.0022
538875A	Indianapolis Line Subdivision	CO 550 E	DELAWARE, IN	224.12	700	23	34	60	0	0.0209	0.0229	0.0020
538874T	Indianapolis Line Subdivision	PITTENGER	DELAWARE, IN	223.62	400	23	34	60	0	0.0182	0.0200	0.0018
538872E	Indianapolis Line Subdivision	ALBANY ST	DELAWARE, IN	223.37	2,100	23	34	60	0	0.0269	0.0293	0.0024

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538871X	Indianapolis Line Subdivision	700 EAST	DELAWARE, IN	222.62	600	23	34	60	0	0.0201	0.0221	0.0020
538870R	Indianapolis Line Subdivision	800 EAST	DELAWARE, IN	221.62	300	23	34	60	0	0.0169	0.0186	0.0017
538868P	Indianapolis Line Subdivision	FRANKLIN ST	RANDOLPH, IN	220.02	1,600	23	34	60	0	0.0253	0.0276	0.0023
538867H	Indianapolis Line Subdivision	MAIN ST	RANDOLPH, IN	219.95	2,400	23	34	60	0	0.0277	0.0301	0.0024
538866B	Indianapolis Line Subdivision	FULTON	RANDOLPH, IN	219.91	700	23	34	60	0	0.0209	0.0229	0.0020
538865U	Indianapolis Line Subdivision	1100W	RANDOLPH, IN	218.95	400	23	34	60	0	0.0182	0.0200	0.0018
538863F	Indianapolis Line Subdivision	1000 WEST	RANDOLPH, IN	217.95	1,100	23	34	60	0	0.0232	0.0254	0.0022
538862Y	Indianapolis Line Subdivision	900W	RANDOLPH, IN	216.94	300	23	34	60	1	0.0489	0.0520	0.0031
538860K	Indianapolis Line Subdivision	MULBERRY ST	RANDOLPH, IN	216.09	600	23	34	60	0	0.0220	0.0239	0.0019
538859R	Indianapolis Line Subdivision	MAIN	RANDOLPH, IN	215.92	7,800	23	34	60	1	0.0819	0.0868	0.0048
538858J	Indianapolis Line Subdivision	PLUM ST	RANDOLPH, IN	215.82	600	23	34	60	0	0.0220	0.0239	0.0019
538857C	Indianapolis Line Subdivision	675W	RANDOLPH, IN	214.79	100	23	34	60	0	0.0127	0.0141	0.0014
538854G	Indianapolis Line Subdivision	375 WEST	RANDOLPH, IN	211.75	100	23	34	60	0	0.0127	0.0141	0.0014
538852T	Indianapolis Line Subdivision	200 WEST	RANDOLPH, IN	209.97	300	23	34	60	0	0.0169	0.0186	0.0017
538850E	Indianapolis Line Subdivision	JACKSON ST	RANDOLPH, IN	208.46	300	23	34	60	0	0.0169	0.0186	0.0017
538848D	Indianapolis Line Subdivision	WEST ST	RANDOLPH, IN	208.32	300	23	34	60	0	0.0132	0.0147	0.0014
538847W	Indianapolis Line Subdivision	MERIDIAN	RANDOLPH, IN	208.17	400	23	34	60	0	0.0182	0.0200	0.0018
538846P	Indianapolis Line Subdivision	MAIN ST	RANDOLPH, IN	208.1	5,000	23	34	60	0	0.0323	0.0349	0.0026
538845H	Indianapolis Line Subdivision	EAST ST	RANDOLPH, IN	208.04	300	23	34	60	0	0.0169	0.0186	0.0017
538842M	Indianapolis Line Subdivision	CR 100E	RANDOLPH, IN	206.82	2,600	23	34	60	0	0.0282	0.0306	0.0024
538841F	Indianapolis Line Subdivision	200 EAST	RANDOLPH, IN	205.82	100	23	34	60	0	0.0127	0.0141	0.0014
538838X	Indianapolis Line Subdivision	300 EAST	RANDOLPH, IN	204.79	400	23	34	60	0	0.0182	0.0200	0.0018
538837R	Indianapolis Line Subdivision	CR #350E	RANDOLPH, IN	204.24	20	23	34	60	0	0.0307	0.0345	0.0038
538836J	Indianapolis Line Subdivision	400 EAST	RANDOLPH, IN	203.76	100	23	34	60	0	0.0127	0.0141	0.0014
538835C	Indianapolis Line Subdivision	MAIN ST 500 EAST	RANDOLPH, IN	202.74	200	23	34	60	0	0.0192	0.0209	0.0018
538834V	Indianapolis Line Subdivision	600 EAST	RANDOLPH, IN	201.7	400	23	34	60	0	0.0182	0.0200	0.0018
538831A	Indianapolis Line Subdivision	700 EAST	RANDOLPH, IN	200.56	200	23	34	60	0	0.0152	0.0168	0.0016
538829Y	Indianapolis Line Subdivision	WALNUT ST	RANDOLPH, IN	199.02	800	23	34	60	0	0.0267	0.0291	0.0024
538828S	Indianapolis Line Subdivision	HOWARD ST	RANDOLPH, IN	198.84	800	23	34	60	0	0.0215	0.0236	0.0021
538827K	Indianapolis Line Subdivision	COLUMBIA ST	RANDOLPH, IN	198.73	4,000	23	34	60	0	0.0309	0.0334	0.0025
538826D	Indianapolis Line Subdivision	ST LINE ST	RANDOLPH, IN	198.65	3,600	23	34	60	0	0.0302	0.0327	0.0025
538823H	Indianapolis Line Subdivision	S SYCAMORE ST	DARKE, OH	198.39	1,400	23	34	60	0	0.0197	0.0216	0.0020
538822B	Indianapolis Line Subdivision	DIVISION ST	DARKE, OH	198.27	1,100	23	34	60	0	0.0185	0.0204	0.0019
538821U	Indianapolis Line Subdivision	DEARFIELD ST	DARKE, OH	198.14	2,700	23	34	60	1	0.0599	0.0638	0.0039
538820M	Indianapolis Line Subdivision	HILLGROVE-FTRECOV	DARKE, OH	196.76	200	23	34	60	0	0.0152	0.0168	0.0016
538816X	Indianapolis Line Subdivision	STAUDT	DARKE, OH	195.49	100	23	34	60	0	0.0127	0.0141	0.0014
538815R	Indianapolis Line Subdivision	YOUNG RD	DARKE, OH	194.5	100	23	34	60	0	0.0424	0.0466	0.0042
538814J	Indianapolis Line Subdivision	COLETOWN-LIGHTSVILLE	DARKE, OH	193.47	400	23	34	60	0	0.0182	0.0200	0.0018
538810G	Indianapolis Line Subdivision	SR49	DARKE, OH	192.3	1,400	23	34	60	0	0.0245	0.0268	0.0023

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538808F	Indianapolis Line Subdivision	DETLING RD	DARKE, OH	191.22	100	23	34	60	0	0.0127	0.0141	0.0014
538806S	Indianapolis Line Subdivision	JACKSON ST	DARKE, OH	189.97	200	23	34	60	0	0.0152	0.0168	0.0016
538805K	Indianapolis Line Subdivision	S MAIN ST	DARKE, OH	189.67	4,900	23	34	60	0	0.0322	0.0348	0.0026
538804D	Indianapolis Line Subdivision	BEAM RD	DARKE, OH	188.49	300	23	34	60	0	0.0169	0.0186	0.0017
538800B	Indianapolis Line Subdivision	YOUNKER RD	DARKE, OH	185.15	100	23	34	60	0	0.0424	0.0466	0.0042
538799J	Indianapolis Line Subdivision	SHAFFER	DARKE, OH	184.59	100	23	34	60	0	0.0291	0.0328	0.0037
538798C	Indianapolis Line Subdivision	WOLF RD	DARKE, OH	183.72	100	23	34	60	0	0.0424	0.0466	0.0042
538797V	Indianapolis Line Subdivision	CONOVER RD	DARKE, OH	183.07	400	23	34	60	0	0.0182	0.0200	0.0018
538795G	Indianapolis Line Subdivision	NORTHWEST ST	DARKE, OH	181.62	4,400	23	34	60	0	0.0315	0.0340	0.0026
538794A	Indianapolis Line Subdivision	NORTH CENTER	DARKE, OH	181.55	3,600	23	34	60	0	0.0302	0.0327	0.0025
538793T	Indianapolis Line Subdivision	SECOND ST	DARKE, OH	181.51	600	23	34	60	0	0.0201	0.0221	0.0020
538792L	Indianapolis Line Subdivision	STEFFIN ST	DARKE, OH	181.42	600	23	34	60	1	0.0513	0.0547	0.0033
538789D	Indianapolis Line Subdivision	NORTH OLIVE ST	DARKE, OH	181.15	5	23	34	60	0	0.0111	0.0131	0.0019
538786H	Indianapolis Line Subdivision	E MAIN ST	DARKE, OH	180.4	2,800	23	34	60	1	0.0700	0.0744	0.0044
538785B	Indianapolis Line Subdivision	HB HOLE RD	DARKE, OH	179.97	100	23	34	60	0	0.0424	0.0466	0.0042
538784U	Indianapolis Line Subdivision	DARKE SHELBY COUNTY	SHELBY, OH	178.8	400	23	34	60	0	0.0182	0.0200	0.0018
538783M	Indianapolis Line Subdivision	RUSSIA VERSAILLES	SHELBY, OH	178.27	1,800	23	34	60	0	0.0260	0.0283	0.0023
538782F	Indianapolis Line Subdivision	MILLER RD	SHELBY, OH	177.77	1,600	23	34	60	0	0.0253	0.0276	0.0023
538781Y	Indianapolis Line Subdivision	RUSSIA RD	SHELBY, OH	177.25	600	23	34	60	0	0.0201	0.0221	0.0020
538778R	Indianapolis Line Subdivision	RANGELINE RD	SHELBY, OH	175.7	800	23	34	60	2	0.0929	0.0983	0.0054
538771T	Indianapolis Line Subdivision	PAMPEL RD	SHELBY, OH	171.87	300	23	34	60	0	0.0169	0.0186	0.0017
538770L	Indianapolis Line Subdivision	STOKER RD	SHELBY, OH	170.82	100	23	34	60	0	0.0424	0.0466	0.0042
538767D	Indianapolis Line Subdivision	LINDSEY RD	SHELBY, OH	167.31	400	23	34	60	0	0.0182	0.0200	0.0018
538766W	Indianapolis Line Subdivision	WRIGHT RD	SHELBY, OH	166.81	30	23	34	60	0	0.0335	0.0375	0.0040
538763B	Indianapolis Line Subdivision	VANDEMARK RD	SHELBY, OH	165.16	5,500	23	34	60	0	0.0374	0.0402	0.0027
535248R	Louisville Connection	KENTUCKY ST	JEFFERSON, KY	110.12	3,900	6	18	10	1	0.0951	0.1160	0.0209
344345W	Louisville Connection	SHIPP ST	JEFFERSON, KY	1.51	2,700	6	18	10	0	0.0130	0.0173	0.0043