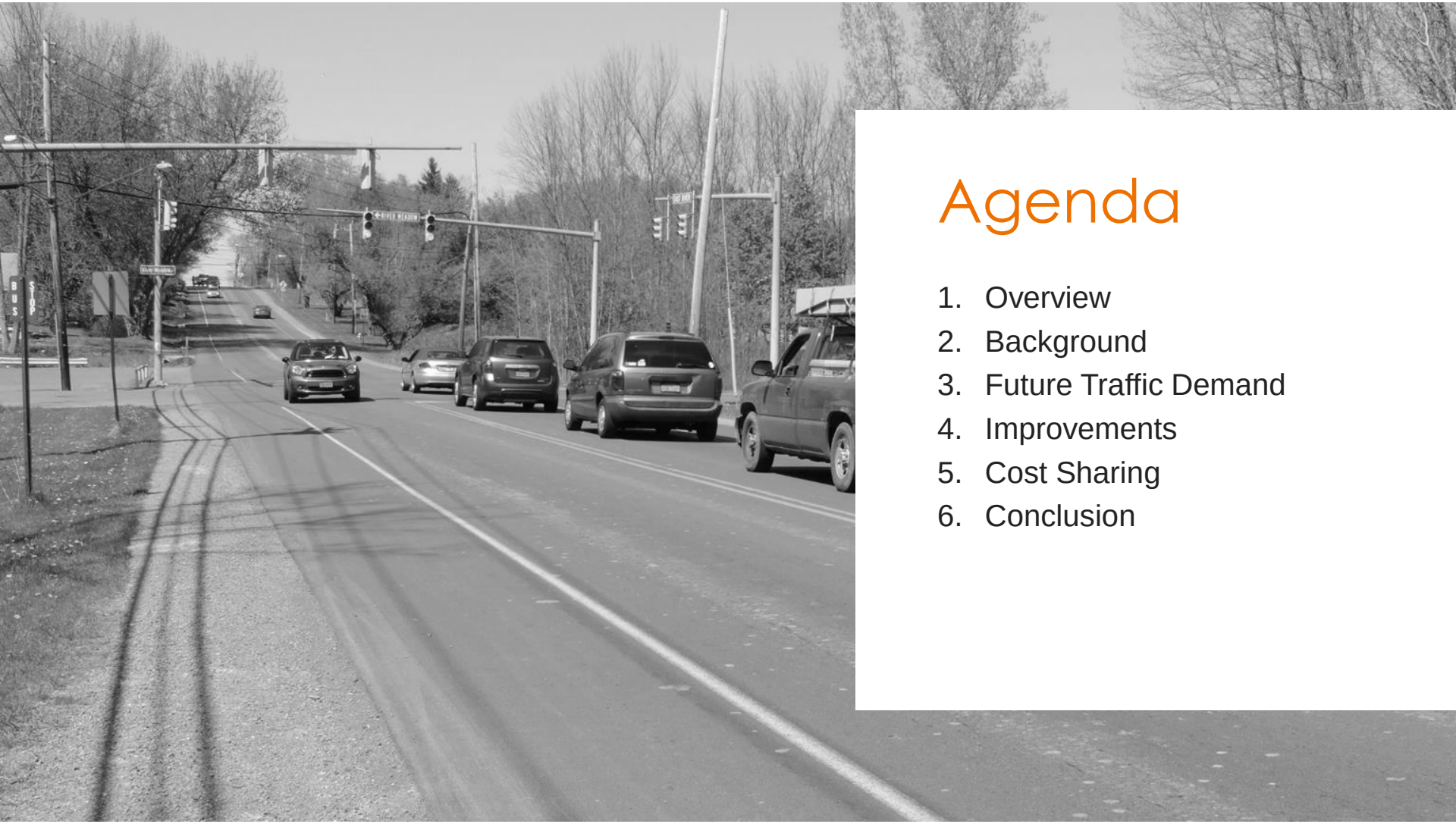
Town of Henrietta and MCDOT
East River Road Traffic Review

Public Information Meeting

May 7th, 2018

Stantec



Agenda

1. Overview
2. Background
3. Future Traffic Demand
4. Improvements
5. Cost Sharing
6. Conclusion

Overview

- East River Road – County Road 84.
- Sponsors: MCDOT, Town Henrietta and RIT
- Why? Corridor Development.
- Limits: Erie Station to Jefferson Road.
- Goal: Define existing and future capacity needs.
- Cost sharing: private/public funding.

East River Road Traffic Review: Overview

The Town of Henrietta, in conjunction with the Monroe County Department of Transportation and RIT, commenced completion of a corridor traffic analysis in order to define current and future traffic conditions. The purpose of this study is to define potential traffic impacts and identify any operational deficiencies over the next 20 years to assist the Town and County in planning for future roadway improvements as growth and surrounding development occur.

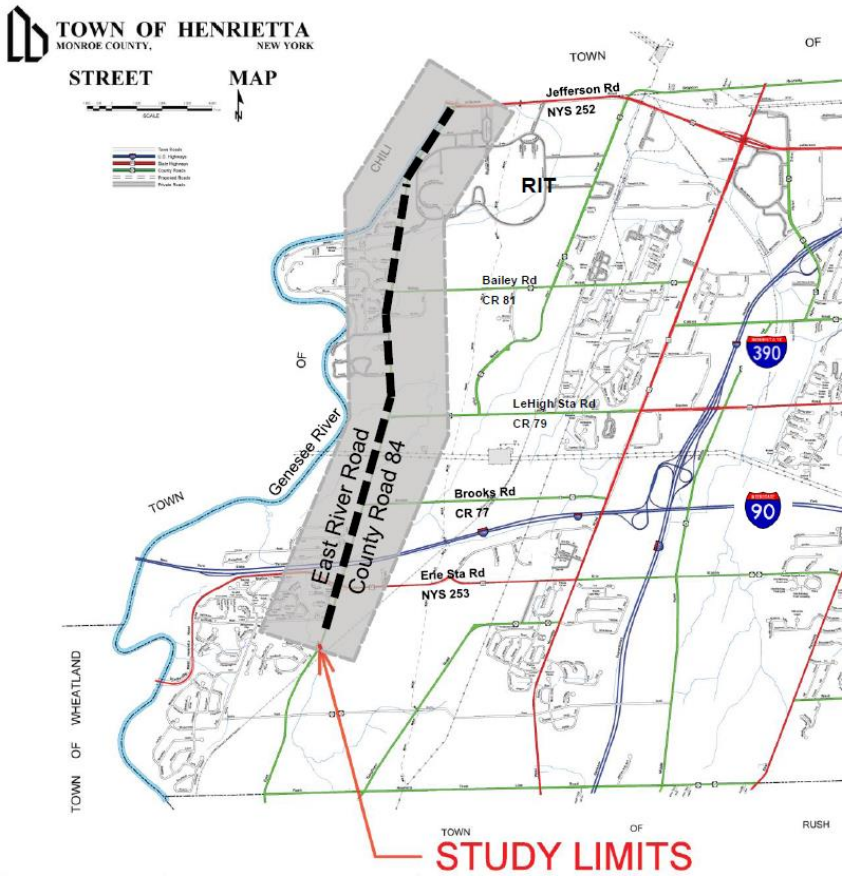
Background

Project Understanding

Study limits: East River Road from Jefferson Road (NYS Route 252) to Erie Station Road (NYS Route 253)

Project Goals:

- 1) Develop future traffic volumes for years 2020, 2025, 2030 and 2035
- 2) Creating infrastructure conceptual alternatives to accommodate future growth, and
- 3) Providing a framework for identifying potential equitable infrastructure funding shares, based on traffic volumes, for the County, Town and private developers.



Existing Corridor

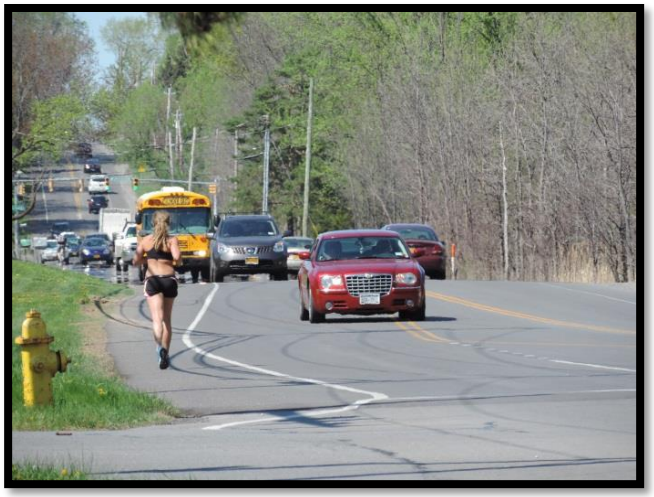
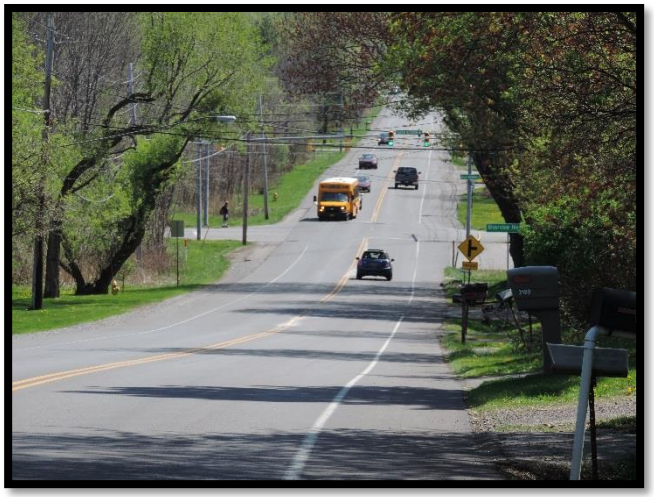
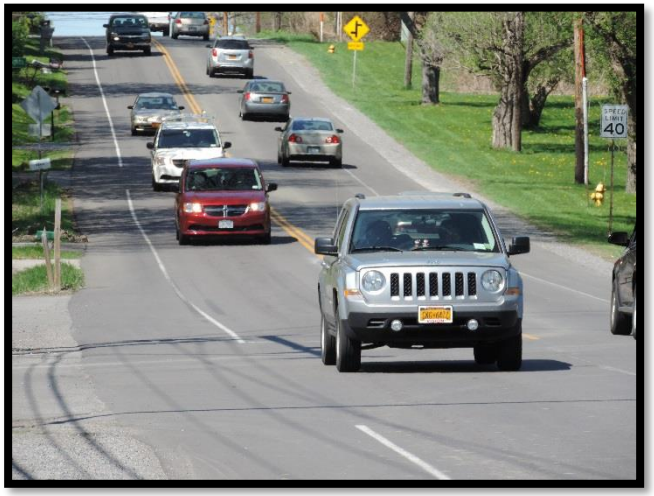


Table 1 – Summary of Mainline Roadway Segments				
Road Segment	Number of thru Lanes	Lane Type	Lane Width	Shoulder Width
South of Erie Station Rd.	2	Travel Lane	11’	3’
Erie Station Rd. to Brooks Rd.	2	Travel Lane	11’	NB varies 1’ to 10’ SB varies 1’ to 3’
Brooks Rd. to Lehigh Station Rd.	2	Travel Lane	11’	6’
Lehigh Station Rd. to Bailey Rd./Chesapeake Landing	[1]2	Travel Lane, Center turn lane	11’	NB varies 5’ to 10’ SB varies 3’ to 8’
Bailey Rd./ Chesapeake Landing to River Meadow/Farnum Ln.	2	Travel Lane	11’	5’
Meadow/Farnum Ln. to Jefferson Rd.	2	Travel Lane	11’	Varies 5’ to 6’
North of Jefferson Rd.	2	Travel Lane	11’	6’

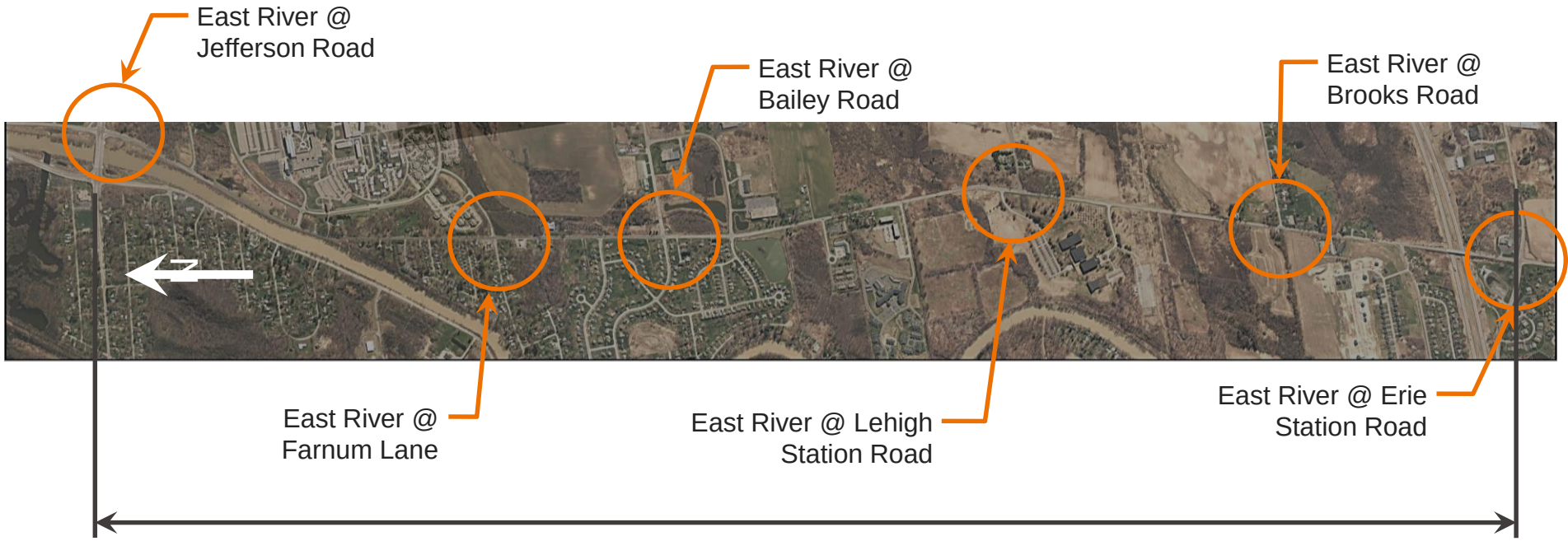




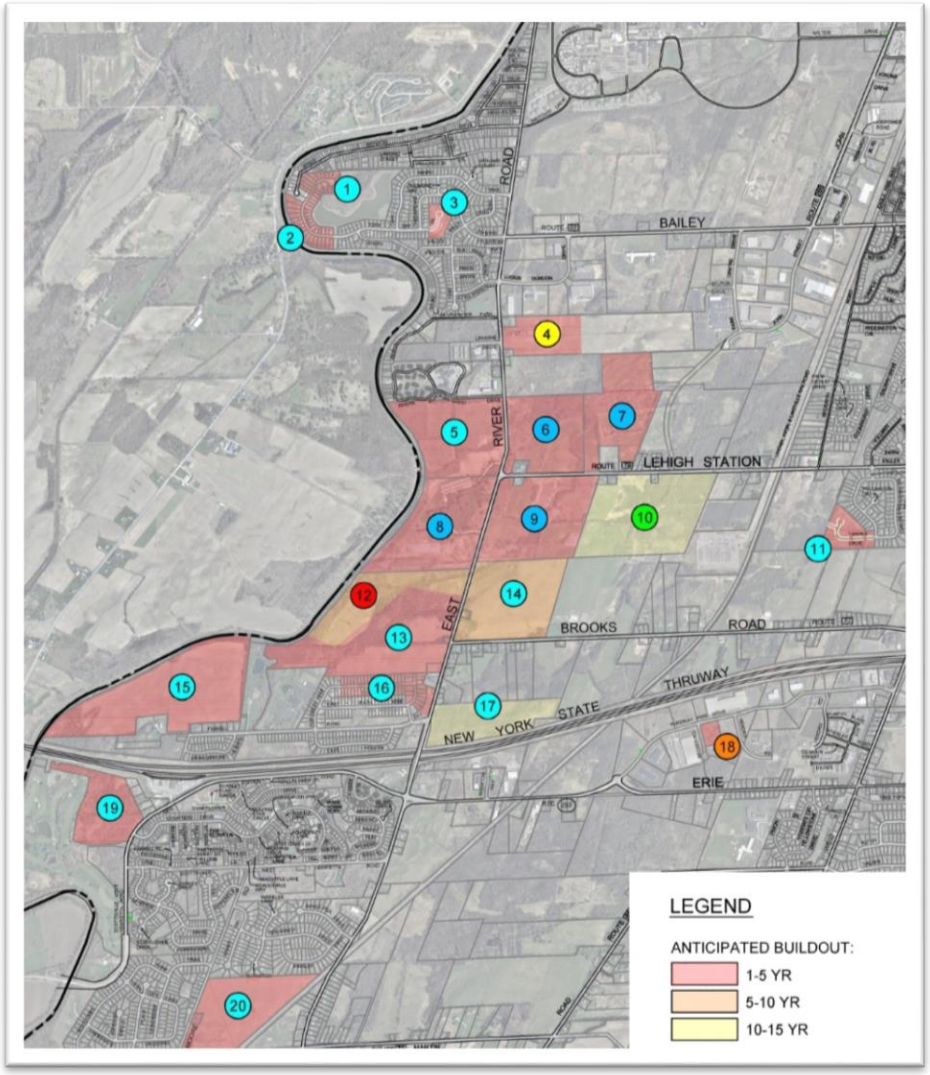
Existing Traffic and Travel

- Average Daily Traffic (ADT): 4,400 vehicles (2009) at the southern study limit and 11,084 vehicles (2012) between Lehigh Station and Bailey.
- Two (2) River crossings: Erie Station and Jefferson Road.
- Proximity to the NYSTA Exit 46, I-390 and West Henrietta Road (NYS Route 15).
- I-390 via LeHigh Station or Scottsville Rd.
- Proximity to RIT and U of R.

Study Intersections



Future Transportation Demand



Anticipated Future Development

- Development of the parcels estimated in 5-year increments over the next 20 years.
- The amount of traffic generated by the development will largely depend on the proposed use.

PROPOSED/ANTICIPATED USE:

- SINGLE FAMILY RESIDENTIAL
- MULTIPLE FAMILY RESIDENTIAL
- STUDENT HOUSING
- INDUSTRIAL
- OFFICE
- ELEMENTARY SCHOOL
- RG&E SUBSTATION

East River Road Traffic Study
Summary of Trip Generation by Development
ITE Trip Generation (9th Edition)

Parcel No.	Name	Development Summary		Morning PH				Evening PH			
		Units	Land Use	Formula	Total	Enter	Exit	Formula	Total	Enter	Exit
Short Term											
1	Section 8 - Preserve Subdivision	26	Residential - Single Family	T=0.7(x)+9.74	28	7	21	Ln(T)=0.90 Ln(x)+0.51	31	20	11
2	Section 9 - Preserve Subdivision	25	Residential - Single Family	T=0.7(x)+9.74	27	7	20	Ln(T)=0.90 Ln(x)+0.51	30	19	11
3	Section 10 - Preserve Subdivision	15	Residential - Single Family	T=0.7(x)+9.74	20	5	15	Ln(T)=0.90 Ln(x)+0.51	19	12	7
4A	Wallman Property	150,000	Industrial (SF)	Ln(T)=0.79 Ln(X)+0.91	130	114	16	T=0.78(x)+30.48	148	18	130
5	Riverwood Student Housing	256	Student Housing Units (685 students)**	average per TIA (0.52)	133	27	106	average per TIA (0.60)	154	103	51
8	Riverwood Tech Campus	360,000	Office and Light Industrial (SF)	Ln(T)=0.79 Ln(X)+0.91	447	393	54	T=0.78(x)+30.48	443	67	376
9	DePaul (Jaynes South, Parcel E)	100	Residential - Sr. Housing	0.18	18	12	6	0.29	29	21	8
		400	Residential - Apartments	Ln(T)=0.82 Ln(x)+0.23	171	36	135	Ln(T)=0.88 Ln(X)+0.16	229	149	80
11	Section 3 - Chelsea Meadows	30	Residential - Single Family	T=0.7(x)+9.74	31	8	23	Ln(T)=0.90 Ln(x)+0.51	36	23	13
13	Graywood Commons Subdivision	200	Residential - Single Family	T=0.7(x)+9.74	150	37	112	Ln(T)=0.90 Ln(x)+0.51	196	123	73
15	Jaynes Riverview, Parcel J	141	Residential - Single Family	T=0.7(x)+9.74	108	27	81	Ln(T)=0.90 Ln(x)+0.51	143	90	53
16	Section 2 - Graywood Meadows (Jaynes Riverview, Parcel M)	20	Residential - Single Family	T=0.7(x)+9.74	24	6	18	Ln(T)=0.90 Ln(x)+0.51	24	15	9
18	Erie Station Business Park - Flex Bldg II	37,851	Office (SF)	Ln(T)=0.80 Ln(x) +1.57	88	77	11	T=1.12(x)+78.45	121	21	100
19	Riverton Parcel 'A' - Phases I-IV	131	Residential - Single Family	T=0.7(x)+9.74	101	25	76	Ln(T)=0.90 Ln(x)+0.51	134	84	50
20	Section 1&2 - Queens Park Subdivision	125	Residential - Single Family	T=0.7(x)+9.74	97	24	73	Ln(T)=0.90 Ln(x)+0.51	125	79	46
					1574	*807*	*767*		*1861*	*843*	*1019*
Mid-Term											
4B	Wallman Property	375	Residential - Apartments	Ln(T)=0.82 Ln(x)+0.23	163	34	129	Ln(T)=0.88 Ln(X)+0.16	216	140	76
6	Jaynes North, Parcel A	100	Residential - Sr. Housing								
		400	Residential - Apartments	Ln(T)=0.82 Ln(x)+0.23	171	36	135	Ln(T)=0.88 Ln(X)+0.16	229	149	80
7	Jaynes Riverview, Parcels B & D	400	Residential - Apartments	Ln(T)=0.82 Ln(x)+0.23	171	36	135	Ln(T)=0.88 Ln(X)+0.16	229	149	80
12	Jaynes Riverview, Industrial Parcel H	--	RG&E Substation	n/a	0	0	0	n/a	0	0	0
14	Jaynes Riverview, Parcel I	115	Residential - Single Family	T=0.7(x)+9.74	90	23	68	Ln(T)=0.90 Ln(x)+0.51	119	75	44
					595	*129*	*467*		*793*	*513*	*280*
Long-Term											
10	Jaynes Riverview, Parcel F	400	Elementary School (Students)	0.45	180	99	81	0.15	60	29	31
17	Jaynes Riverview, Parcel N*	7	Residential - Single Family	T=0.7(x)+9.74	15	4	11	Ln(T)=0.90 Ln(x)+0.51	10	6	4
					195	*103*	*92*		*70*	*36*	*34*
					2364	**1038**	**1326**		**2724**	**1392**	**1333**

* parcel is mostly wetlands

** 2.67 students/unit per PA Grove TIA

Development potential estimated in consultation with the Town; prior TIA studies for some parcels may vary.

Area Growth

- Base Volumes (2015): Existing Traffic counts grown by 1.5%
- Base ETC Volumes (2020-2035): Base Volumes (2015) grown by 0.5%/year to account for growth from the South.
- Full Development Volumes: Base ETC Volumes (2020-2035) plus anticipated development volumes.

Capacity Analysis and Proposed Improvements

Capacity Analysis

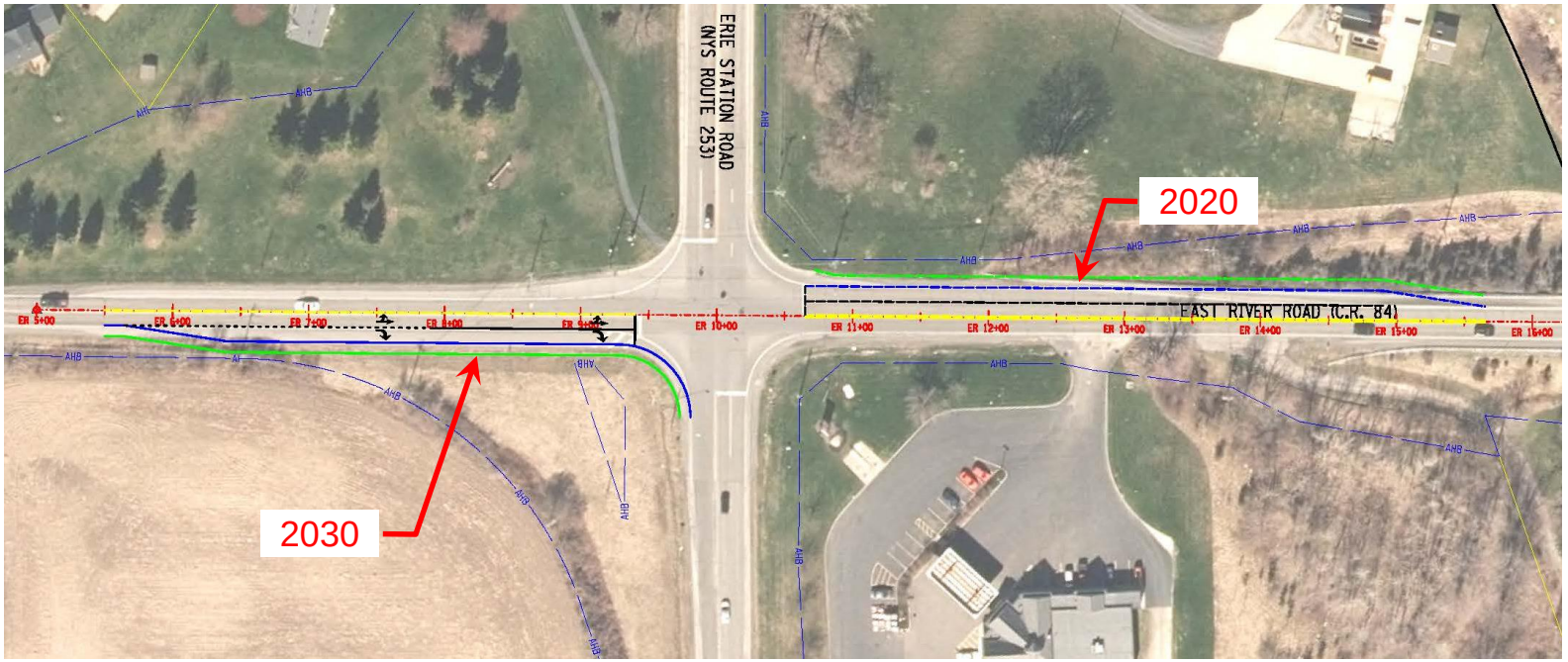
Table 6 – HCM 2010 LOS Criteria		
LOS	**Signalized Intersection** Controlled Delay (sec/veh)	**Unsignalized Intersection** Controlled Delay (sec/veh)
A	≤10 sec	≤10 sec
B	>10 and ≤20 sec	>10 and ≤15 sec
C	>20 and ≤35 sec	>15 and ≤25 sec
D	>35 and ≤55 sec	>25 and ≤35 sec
E	>55 and ≤80 sec	>35 and ≤50 sec
F	>80 sec	>50 sec

- The Highway Capacity Manual (HCM) defines capacity as; "The maximum sustainable flow rate at which vehicles or persons reasonably can be expected to traverse a point or uniform segment of a lane or roadway during a specified time period under given roadway, geometric, traffic, environmental, and control condition."
- Level of service (LOS) is a qualitative measure used to relate the quality of traffic service based on performance measures like speed, density, etc.
- Analysis and recommended improvements were reviewed by MCDOT

Erie Station Road Capacity Review

- 2015: No improvements recommended
- 2020: Extend SB right turn lane due to increased volumes and queues.
- 2025: No improvements recommended
- 2030: Increased NB right turn volumes result in need for dedicated NB right turn lane
- 2035: No improvements recommended

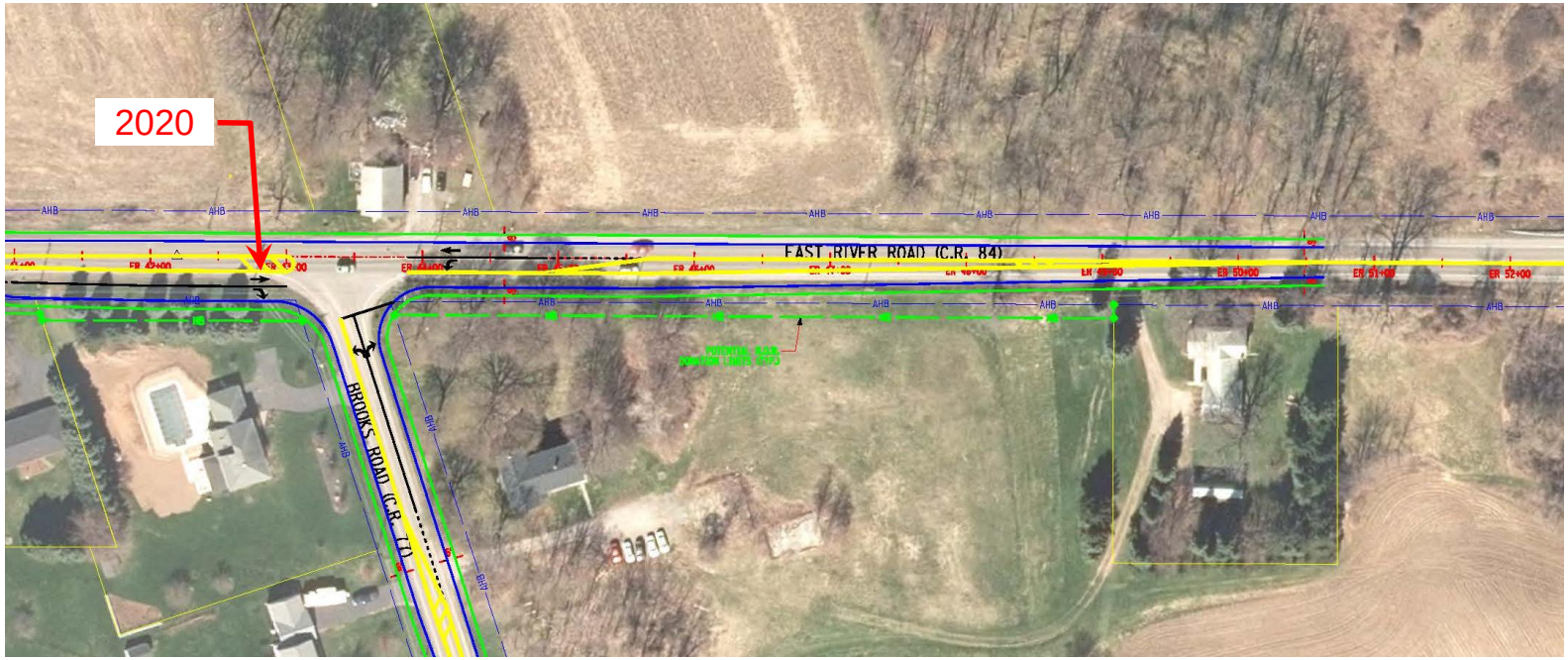
Erie Station Improvements



Brooks Road Capacity Review

- 2015: No improvements recommended
- 2020: New NB and WB right turn lanes, and a SB left turn lane
- 2025/2030/2035: MCDOT to Monitor

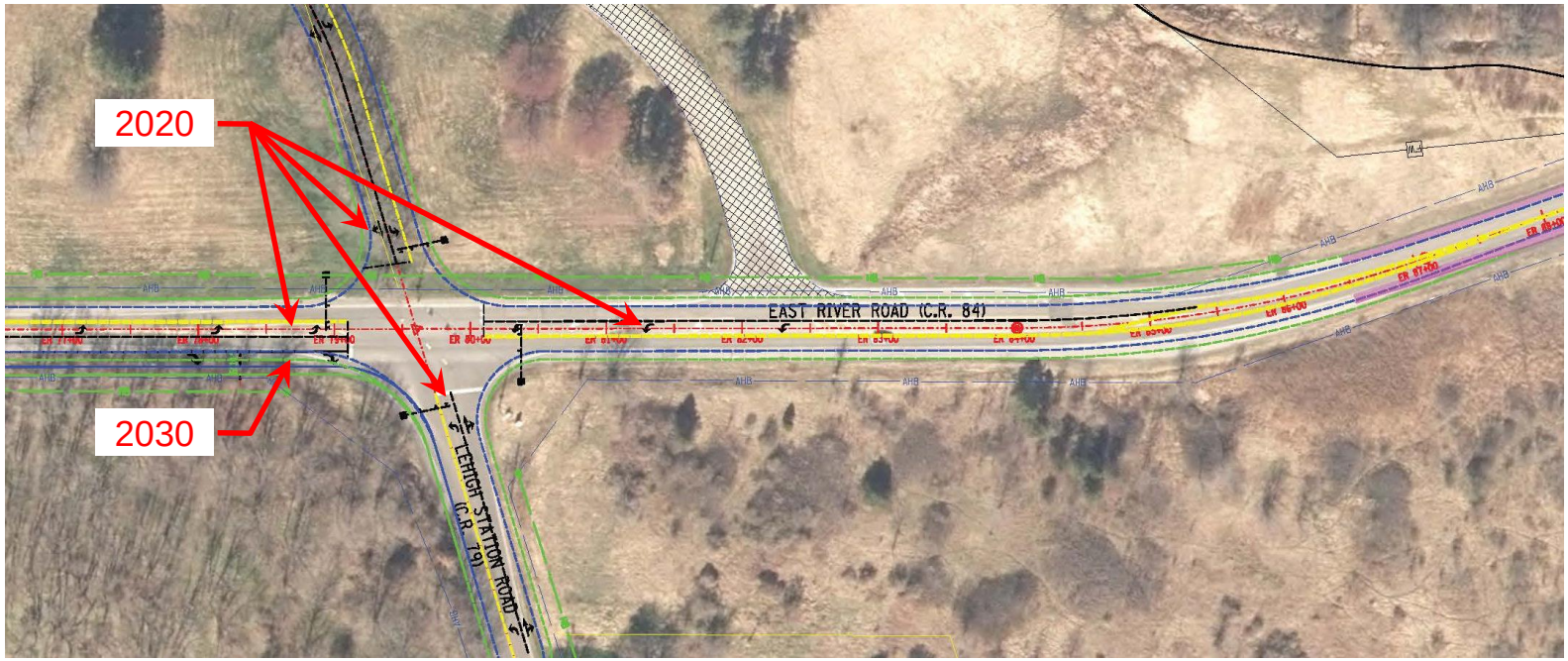
Brooks Road Improvements



Lehigh Station Road Capacity Review

- 2015: No improvements are recommended
- 2020: Developer driven re-alignment of Kodak Riverwood driveway
- 2025: No improvements are recommended
- 2030: Right turn volume exceeds threshold for right turn lane warrant
- 2035: No improvements recommended

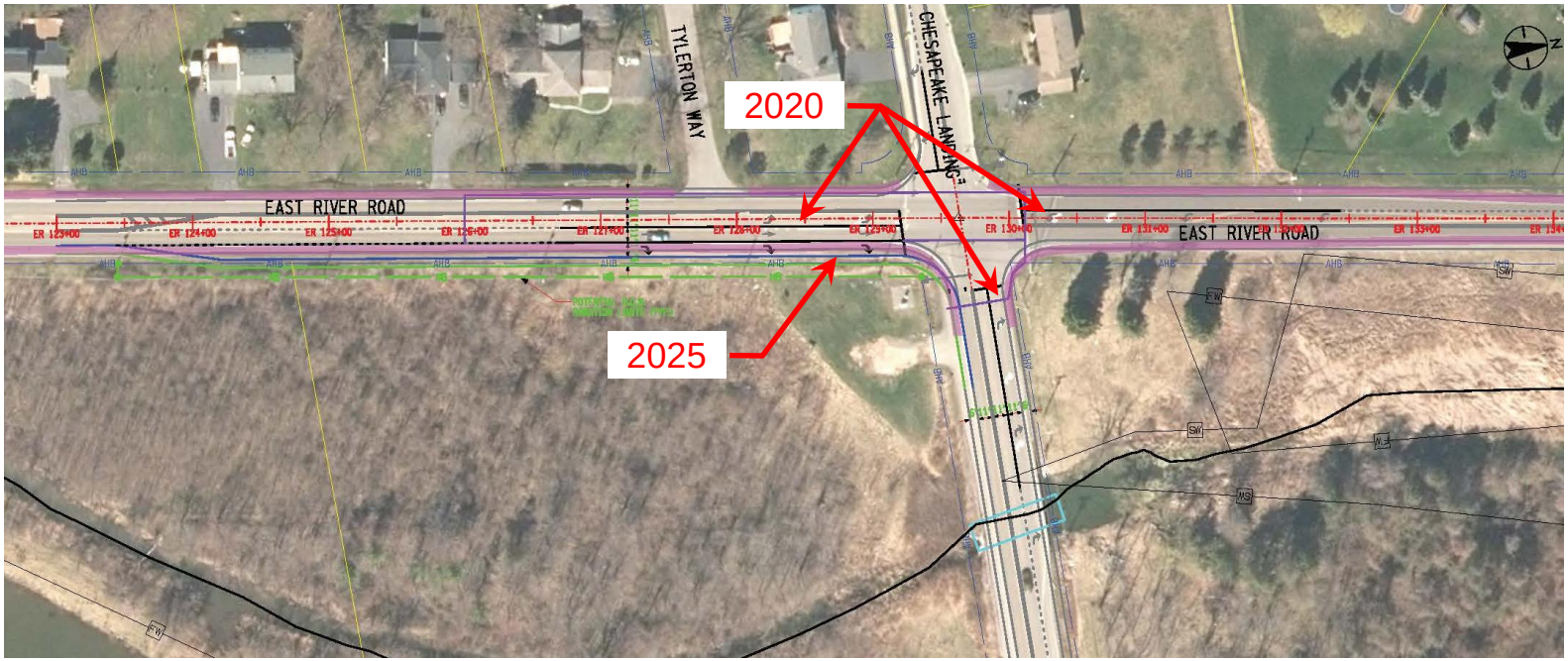
Lehigh Station Road Improvements



Bailey Road Capacity Review

- 2015: No improvements recommended
- 2020: Increased queues extend beyond storage lengths of NB, SB, and WB left turn lanes
- 2025: Increased NB right turn volume warrants new NB right turn lane
- 2030: No improvements recommended
- 2035: No improvements recommended

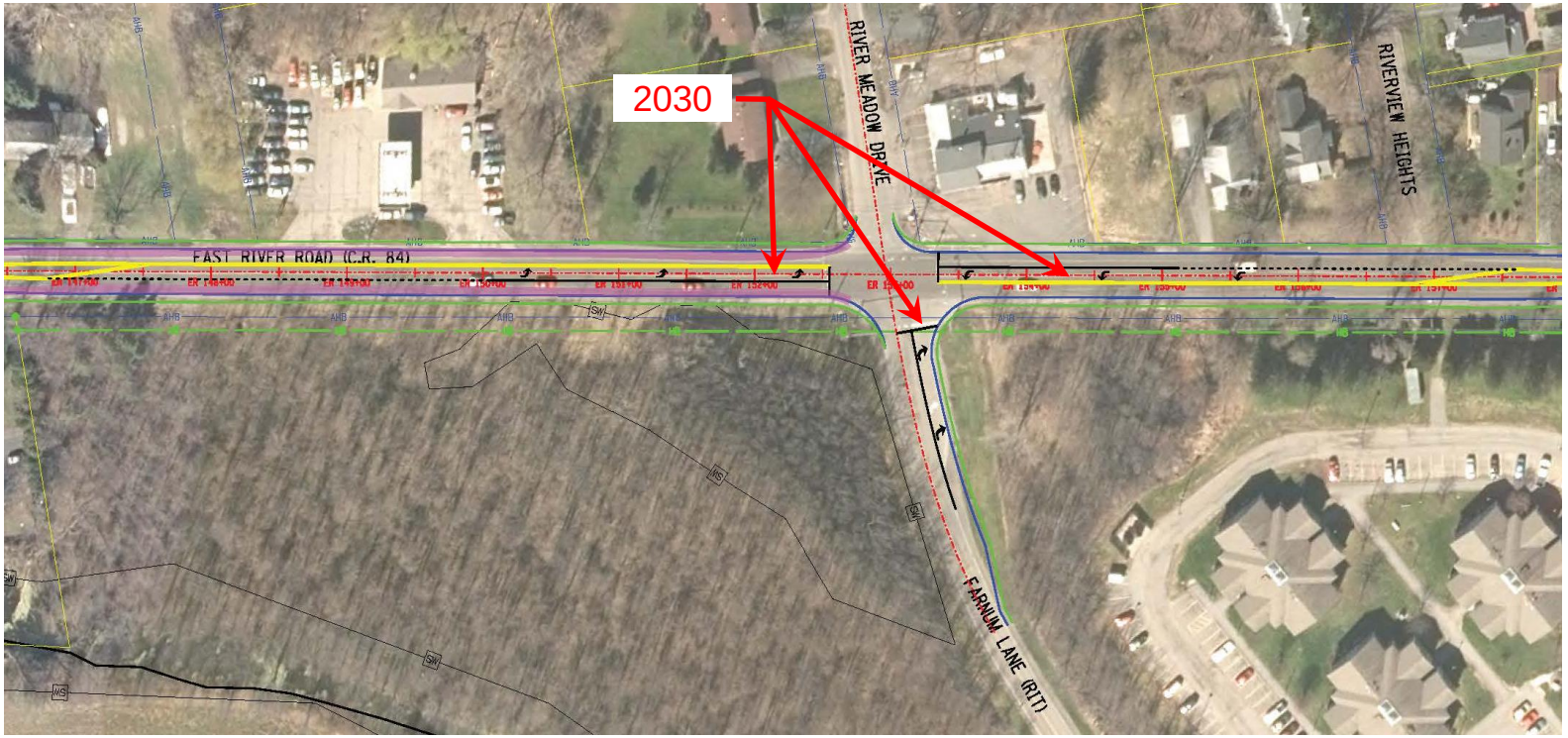
Bailey Road Improvements



River Meadow/Farnum Lane Capacity Deficiencies

- 2015: No improvements recommended
- 2020: No improvements recommended
- 2025: No improvements recommended
- 2030: New NB and SB left turn lanes and increased length of WB right turn lane
- 2035: No improvements recommended

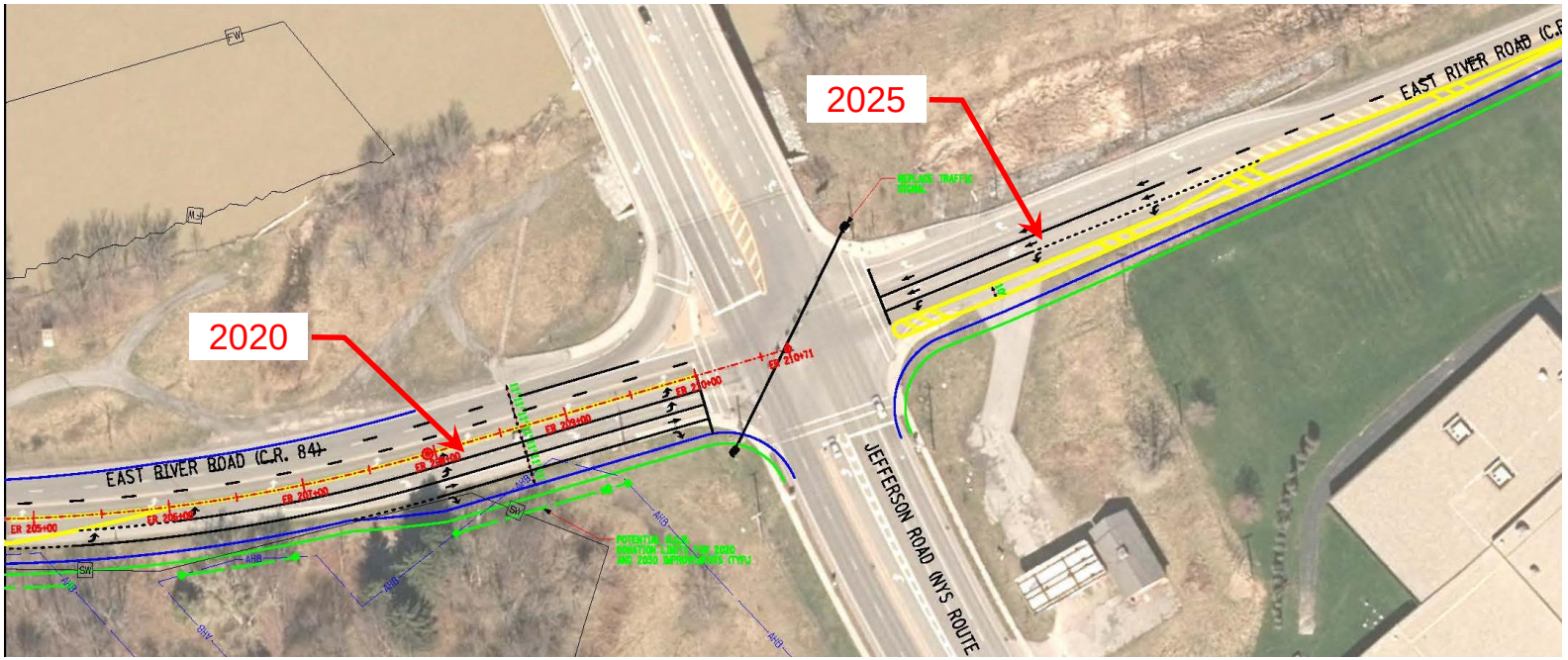
River Meadow/Farnum Lane Improvements



Jefferson Road Capacity Deficiencies

- 2015: NB Left Turn Lane Queue Concerns
- 2020: Queues extend beyond left turn lane storage. New 2nd NB left turn lane warranted
- 2025: New 2nd SB thru lane
- 2030: No improvements recommended
- 2035: No improvements recommended

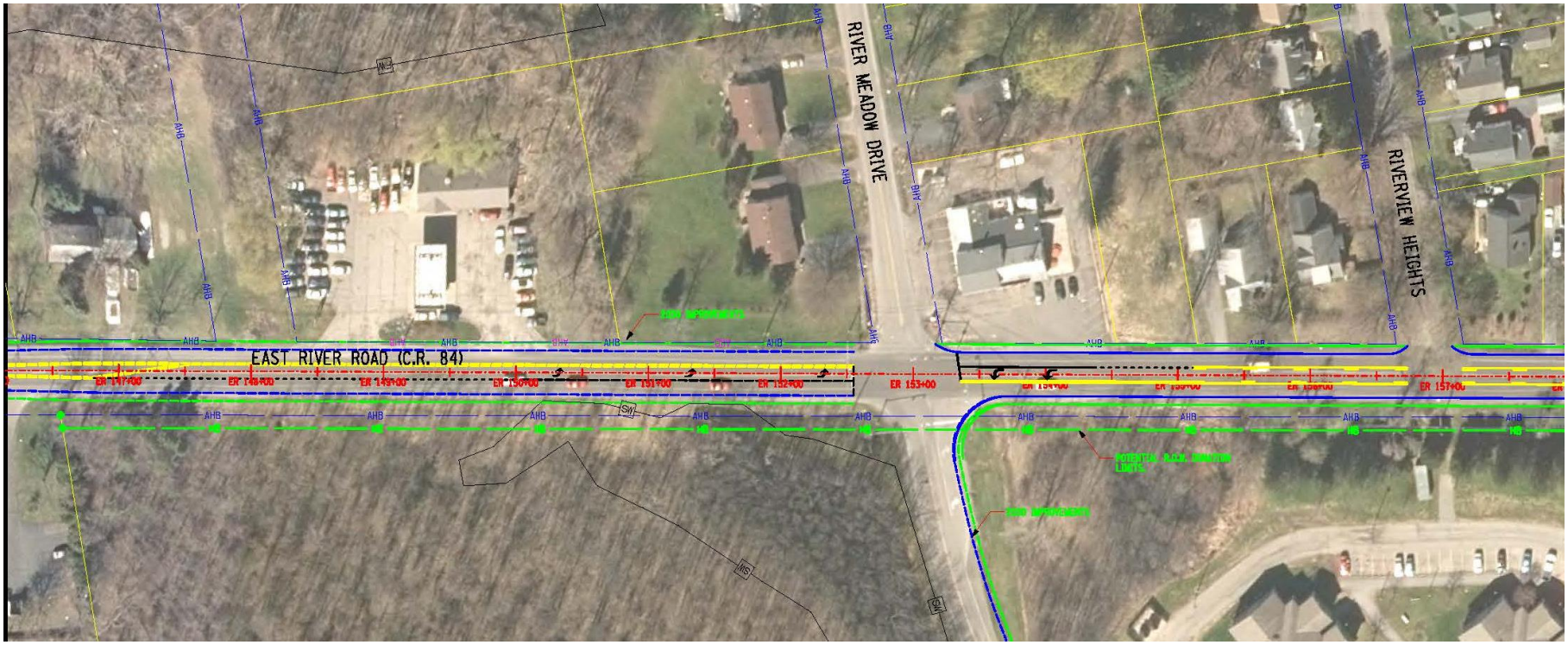
Jefferson Road Improvements



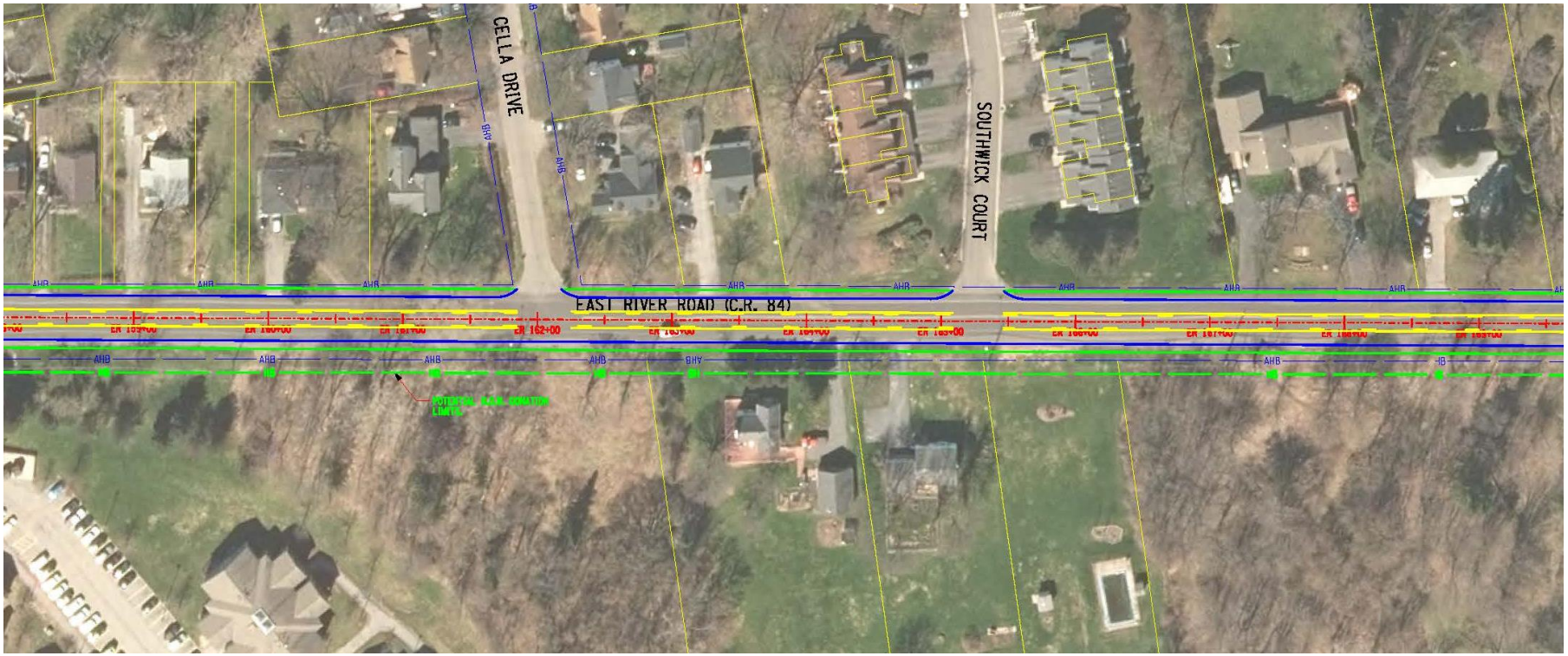
Linear Capacity Review

- A three (3) lane section is proposed between River Meadow/Farnum Lane and Minnett (RIT).
- 2-Way volumes are in anticipated to be in excess of 1500 vehicles in the peak hour.
- Driveway density and Two-Way Left Turn Lane.
- County funded improvement.

Linear Capacity



Linear Capacity



Linear Capacity

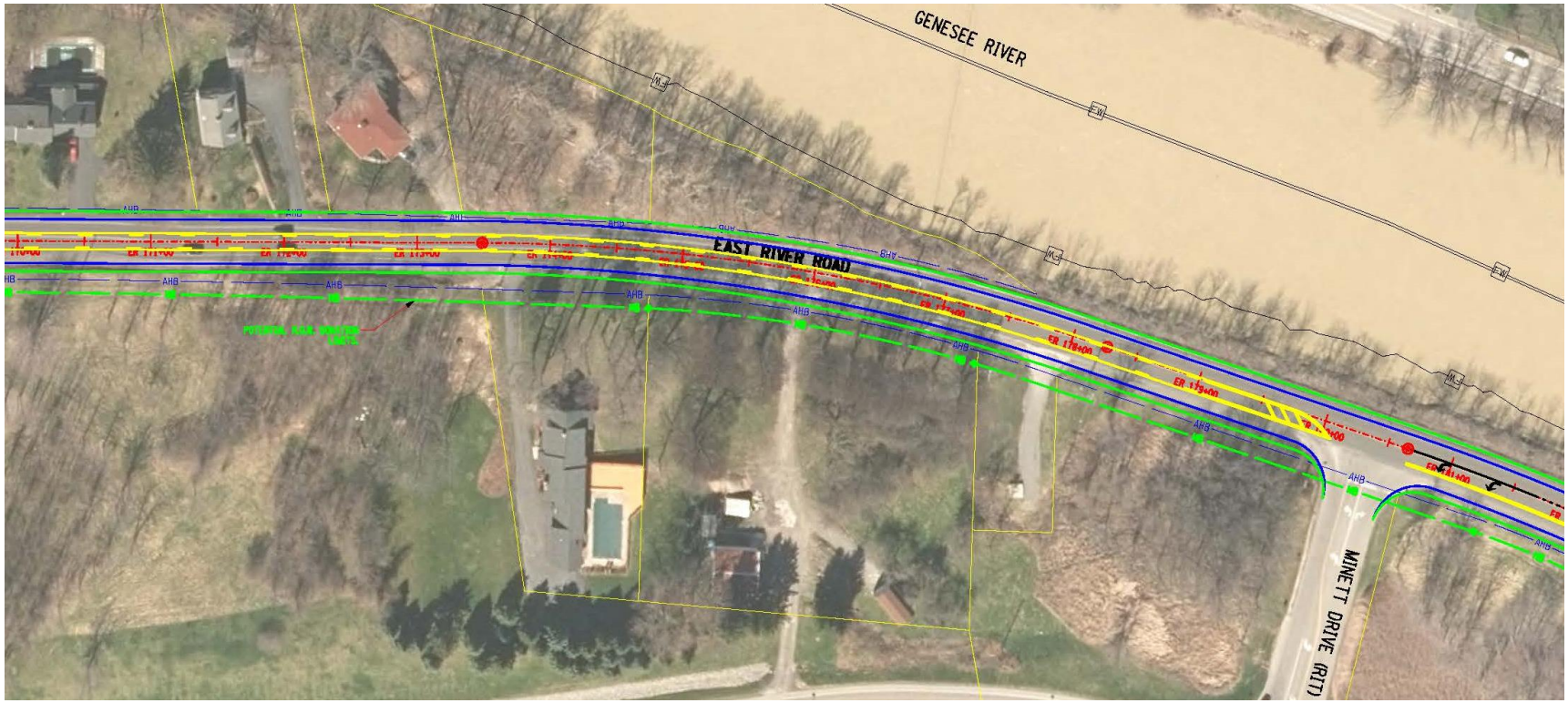


Table 7 – Summary of Intersection and Corridor Capacity Improvements					
Intersection	**Recommended Capacity Improvements**				
East River Road - CR 84 at:	**2015 (Existing)**	**2020 (Full Build)**	**2025 (Full Build)**	**2030 (Full Build)**	**2035 (Full Build)**
Erie Station Road - NYS 253 (NYSDOT Intersection)	None	➢ Extend SB RT Lane by 225' from 200' to 425'	No Additional	➢ New 300' NB RT Lane	No additional
Brooks Road - CR 77 (MCDOT Intersection)	None	➢ New 100' SB LT Lane ➢ New 100' NB RT Lane ➢ New 150' WB LT Lane	The unsignalized capacity analysis predicts potentially long delays for the WB left turn movement. However unsignalized analyses are known to exaggerate such delays therefore it is recommended that this unsignalized intersection is monitored for a possible traffic signal as traffic conditions change.		
Lehigh Station Road - CR 79 (MCDOT Intersection)	None	➢ New 450' NB LT Lane. ➢ Re-stripe SB LT Lane ➢ Re-stripe SB RT Lane ➢ 200' WB LT Lane. ➢ 200' EB LT Lane (New driveway). ➢ Remove Riverwood Drive (Development). ➢ Replace Traffic Signal	No additional	➢ New 450' NB RT Lane	No additional
Bailey Road - CR 81/Chesapeake Landing (MCDOT Intersection)	None	➢ Extend NB Left Turn Lane via re-striping T-W-L-T-L ➢ Extend SB LT Lane by 355' from 120' to 475' ➢ Extend WB RT Lane by 110' from 190' to 300'	➢ New 500' NB Right Turn Lane.	No additional	No additional
River Meadow/Farnum Lane (RIT) (MCDOT Intersection)	None	None	None	➢ New 500' NB LT Lane ➢ New 350' SB LT Lane ➢ Extend WB RT by 100' from 70' to 170'	No additional
Jefferson Road - NYS 252 (NYSDOT Intersection)	None	➢ New 2nd NB LT or Thru Lane	➢ New 2nd SB Thru Lane.	No additional	No additional
Corridor Improvements	**Recommended Corridor Improvements**				
Farnum Lane to Minett Drive	None	None	Two-Way-Left-Turn-Lane	None	None
Sidewalks	Future Sidewalks are a long term improvement goal due to environmental and R.O.W. constraints				

Improvement Funding Legend

Developer Cost Sharing Funded Improvements
Kodak Riverwood Development Improvements
MCDOT Improvements

Cost Share

East River Road Summary of Costs				
Segment	Length	Scope	Construction Costs (Design, Construction, & RPR}	Construction Costs (Design, Construction, & RPR}
			[1]County	Private
East River Road (Bailey Road to NYS Thruway) County CIP 2019-2024	2.1 miles	Binder & Top 1.26 mi, Full Reconstruction 0.84 mi, Drainage 2.1 mi, Guide Rail Replacement, Traffic Signal Upgrades	$5,800,000	$0
East River Road (Farnum Lane to Minnett Drive) County CIP 2019-2024	0.52 miles	Add Two-Way-Left-Turn-Lane (Box Out and Widen Road by 11' & 0.52 mi Overlay)	$1,175,000	$0
East River Road @ Brooks Road	0.10 mites	Add 100' SB LT Lane, 100' NB RT Lane, 150' WB LT Lane (11' Lane Width)	$0	$ 635,000.00
East River @ Lehigh Station Road		Add 450' NB Right Turn Lane	$0	$ 114,300.00
East River Road @ Bailey Road	0.11 miles	Add 355' SB LT Lane Extension, 110' WB RT Lane Extension (11' Lane Width & 0.11 mi Overlay)	$0	$ 647,700.00
East River Road @ River Meadow/Farnum Lane (NOT INCLUDED IN 19-24 CIP)	0.38 miles	Add 500' NB LT Lane, 350' SB LT Lane, 100' WB RT Lane Extension (11' Lane Width & 0.38 mi Overlay)	$0	$ 762,000.00
Jefferson Road - NYS 252		New 2nd NB LT or Thru Lane, New 2nd SB Thru Lane.	$ -	$ 2,667,000.00
Erie Station Road - NYS 253		Extend SB RT Lane by 225' from 200' to 425', New 300' NB RT lane	$ -	$ 416,000.00
		Total =	$6,975,000	$5,242,000

[1] Costs provided by County

Conclusion

Next Steps

- Finalize cost sharing.
- Develop a Transportation Development District.
- MCDOT East River Road Capital Improvement Project (2019-2024 CIP). Thruway to Minnett (RIT).
- Erie Station and Jefferson Road intersections – NYSDOT Highway Work Permit.