

CAREY ROAD INDUSTRY PARK

EXISTING TRAFFIC ANALYSIS AND BUILD-OUT ASSESSMENT

MAY 2022



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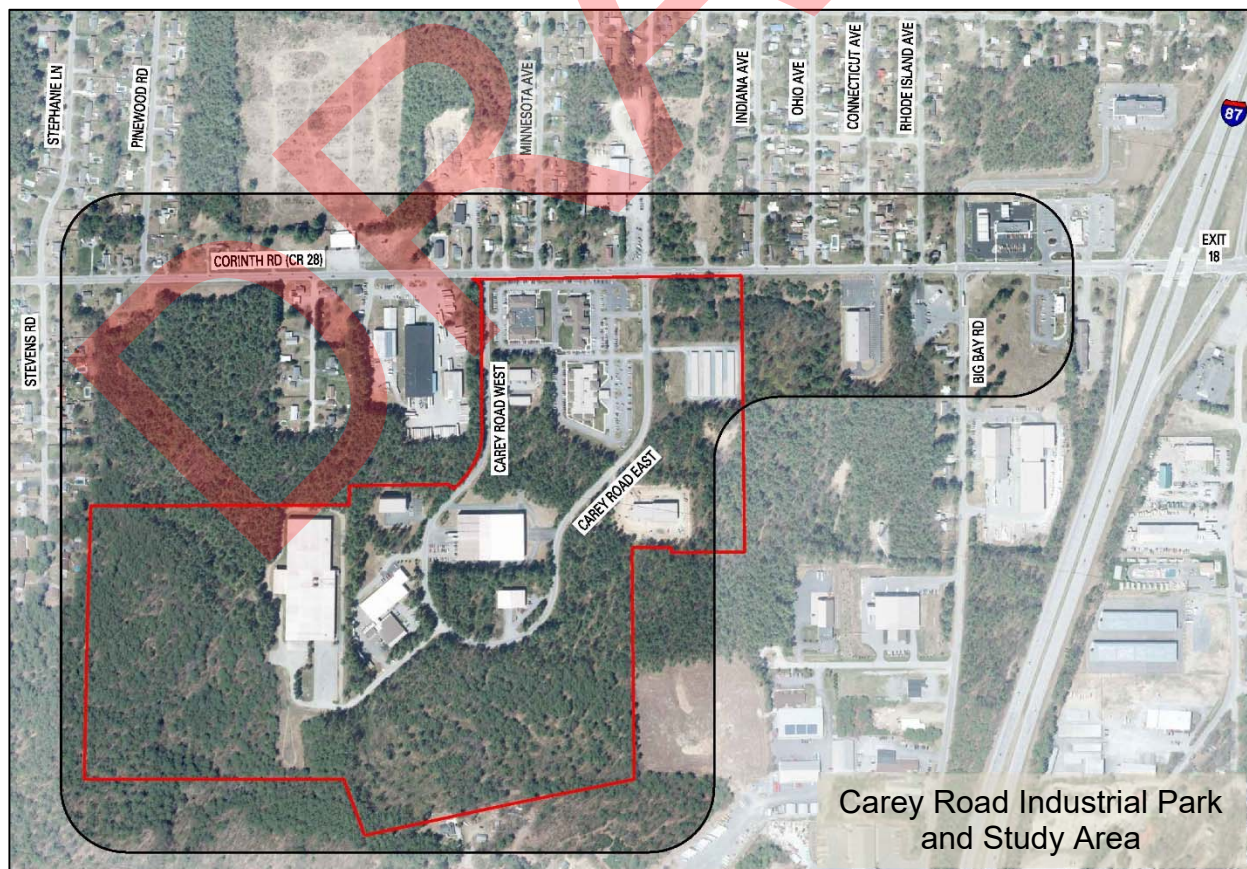
CHAPTER 1. INTRODUCTION

A. STUDY PURPOSE

The Warren County Department of Public Works (DPW) requested technical assistance from the Adirondack/Glens Falls Transportation Council (A/GFTC) to evaluate the operation of existing and projected future traffic conditions at the *Carey Road Industrial Park* and nearby Corinth Road. The purpose of this study is to evaluate existing and future transportation needs in the area, and identify operational improvements and costs to maintain safe and efficient access in the project area.

Corinth Road (CR 28) is an important arterial with relatively high volumes of commuter traffic and truck traffic traveling between I-87 and the *Carey Road Industrial Park*. The recognition of the need for planning for anticipated growth, while attempting to preserve the transportation functionality of this vital corridor, is the primary motive of this study. The Warren County DPW, with funding through the A/GFTC, is evaluating the land use and transportation characteristics within the *Carey Road Industrial Park* and along the Corinth Road corridor, between Exit 18 and the industrial park, to understand the trade-offs of land development decisions and resulting transportation needs and function. Although recent transportation improvement projects have occurred in and around the Corinth Road corridor, no additional publicly funded roadway modification projects are planned in the short term.

This study analyzes existing conditions and roadway capacities, develops land use and traffic growth projections in and around the *Carey Road Industrial Park*, and identifies short- and long-term recommendations and strategies to help the Town and the region plan for growth while preserving the function of the existing surface transportation system.



To advance this Study, an Advisory Committee was established with representatives from the Town of Queensbury, A/GFTC, and the Warren County DPW. Several meetings were held with the Advisory Committee at key milestones to review preliminary analyses and findings as contained throughout the report and in the technical appendices. Discussions at these meetings ultimately shaped the recommendations of this study.

The recommendations presented in this study are intended to support Warren County's and the Town of Queensbury's efforts to develop a consensus vision about the functionality and appearance of the Corinth Road corridor. The recommendations are conceptual and characterize the types of improvements that are desirable, and that may be implemented as part of future land use and transportation improvement projects. All transportation concepts will require further engineering evaluation and review.

B. STUDY AREA

The study area is defined as the one-mile-long section of Corinth Road (CR 28) in the Town of Queensbury, from the Big Bay Road intersection in the east to the Stephanie Lane/Stevens Road intersection in the west.

Within that study area, detailed traffic engineering analyses have been included for the signalized intersection of Big Bay Road and the unsignalized intersections of Carey Road East and Carey Road West that provide access into the industrial park.



Photo #1 = Corinth Road

CHAPTER 2. EXISTING CONDITIONS

A. LAND USE

The study area is generally commercial near Exit 18 and transitions to light industrial west of Big Bay Road. In addition, an established residential neighborhood is located on the north side of Corinth Road between Indiana Avenue and Rhode Island Avenue. The commercially developed area is characterized by fast food restaurants, convenience stations, retail uses, and hotels while uses in the light industrial area include self-storage facilities, warehouses, manufacturing, materials development, and medical offices/services. The residentially developed area is characterized by small parcel sizes as part of an established older neighborhood.

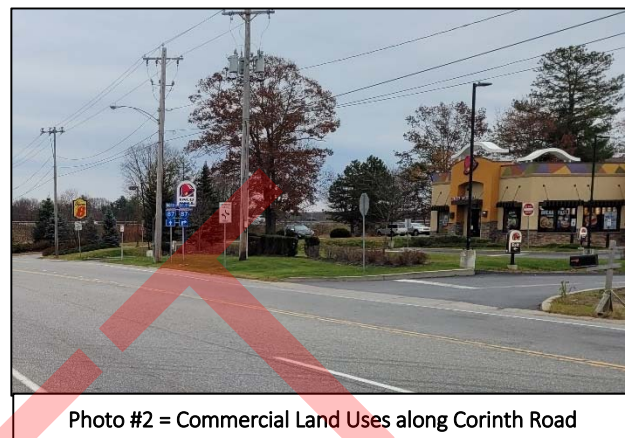
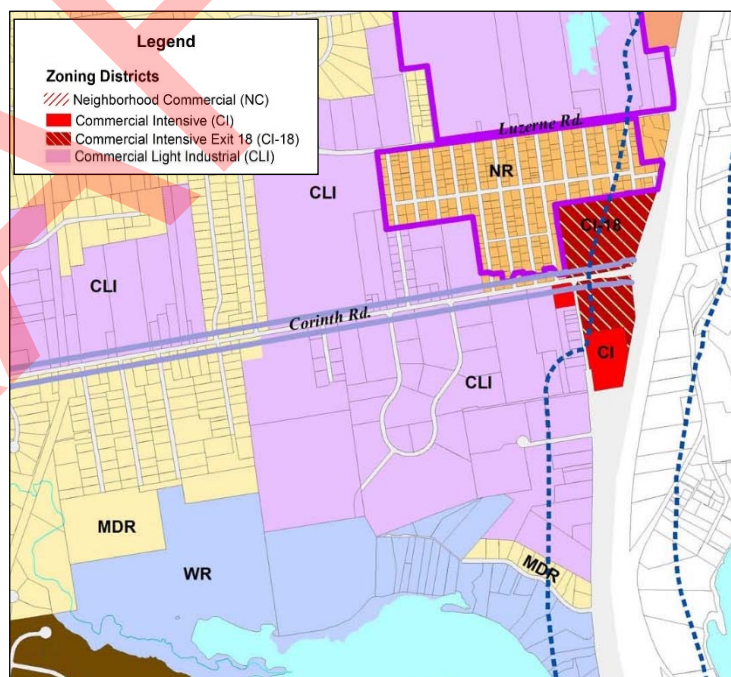


Photo #2 = Commercial Land Uses along Corinth Road

B. ZONING

The purpose of the Zoning Code is to regulate building size, lot coverage, density, and land use by trade, industry, agriculture, residence, and other purposes. The study area is comprised mostly of Commercial Light Industrial (CLI) located on the south side of Corinth Road west of Big Bay Road and on the north side of Corinth Road generally west of Indiana Avenue. The land located immediately east of Big Bay Road is generally zoned Commercial Intensive-Exit 18 (CI-18) and consists of many of the retail and service land uses near the interchange. There are also Neighborhood Residential (NR) parcels associated with homes located on many of the residential streets on the north side of Corinth Road. There are also a couple of properties (*Stewart's Shop* and *Curtis Lumber*) zoned as Commercial Intensive (CI) near Big Bay Road as well. The image (right) highlights the study corridor on the Town of Queensbury Zoning Map.



C. TRANSPORTATION INFRASTRUCTURE

Segments

Corinth Road (CR 28) is classified as an urban minor arterial in the study area and provides east-west access from Call Street (CR 32) to the I-87 Exit 18 interchange. In the study area, Corinth Road features two, three, and four lane roadway sections ranging from 31 to 65 feet in overall width with varying shoulder and travel lane widths as identified in Table 2.2. Most of Corinth Road within the study area lacks curb; however, curbing is provided on the north side of the road from the I-87 Exit 18 interchange to Indiana



Photo #3 = Corinth Road near Carey Road East

Avenue adjacent to the sidewalk provided on this segment of the road. Vehicle passing is not permitted within the study area. The posted speed limit on Corinth Road in the study corridor is predominately 45-mph but transitions to 35-mph east of the *McDonald's* driveway as the road travels toward the I-87 Exit 18 interchange and the City of Glens Falls.

Carey Road is classified as an urban local road that loops through the industrial park and provides access to the commercial and light industrial uses. Carey Road features a 20-foot wide travel way for a single lane in each direction with two-foot wide wedge curbs with an overall width of 24-feet as identified in Table 2.1. No sidewalks are provided on Carey Road. The posted speed limit is 30-mph.

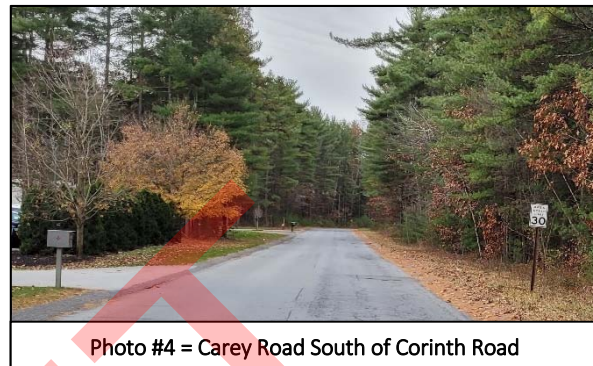


Photo #4 = Carey Road South of Corinth Road

TABLE 2.1 – ROADWAY CROSS-SECTION

Roadway Segment	Left-Turn Lane	Two-way Left-turn	Width in feet		Shoulders	Total
			Through	Right-Turn Lane		
Corinth Road (CR 28)						
Exit 18 to McDonald's Driveway	NA	12-feet	EB = Two 11-feet WB = One 12-feet	12-feet	3.5 to 4-feet	65.5-feet
McDonald's Driveway to Big Bay Road	12-feet	NA	EB = One 11.5-feet WB = One 12-feet	NA	3.5 to 4-feet	43-feet
Big Bay Road to Stephanie Lane/Stevens Road	NA	NA	EB = One 12-feet WB = One 12-feet	NA	3.5-feet	31-feet
Carey Road						
Corinth Road to Corinth Road	NA	NA	NB = One 10-feet SB = One 10-feet	NA	2-feet	24-feet

NA = Not Applicable

Intersections

- Corinth Road/Big Bay Road – This is a four-leg intersection operating under actuated traffic signal control. The northbound Big Bay Road approach provides a single lane for shared travel movements while the southbound approach provides a shared left-turn/through lane and a separate right-turn lane. The eastbound Corinth Road approach provides a single lane for shared travel movements while the westbound Corinth Road approach provides an exclusive left-turn lane and a shared through/right-turn lane. A sidewalk is provided on the north side of Corinth Road and on the southwest quadrant of the intersection along the *Stewart's Shop* property. A marked crosswalk is provided on the west leg of the intersection with pedestrian push buttons and countdown timers. A marked crosswalk is provided on the north leg of the intersection.
- Corinth Road/Carey Road East/Tracey Equipment Driveway – This is a four-leg intersection with the northbound Carey Road East approach operating under stop-sign control and the southbound Tracey Equipment Driveway approach yielding to traffic on Corinth Road. All four intersection approaches provide a single lane for shared travel movements.



Photo #5 = Corinth Road/Big Bay Road Intersection

- Corinth Road/Carey Road West – This is a three-leg intersection with the northbound Carey Road West approach operating under stop-sign control. All intersection approaches provide a single lane for shared travel movements.

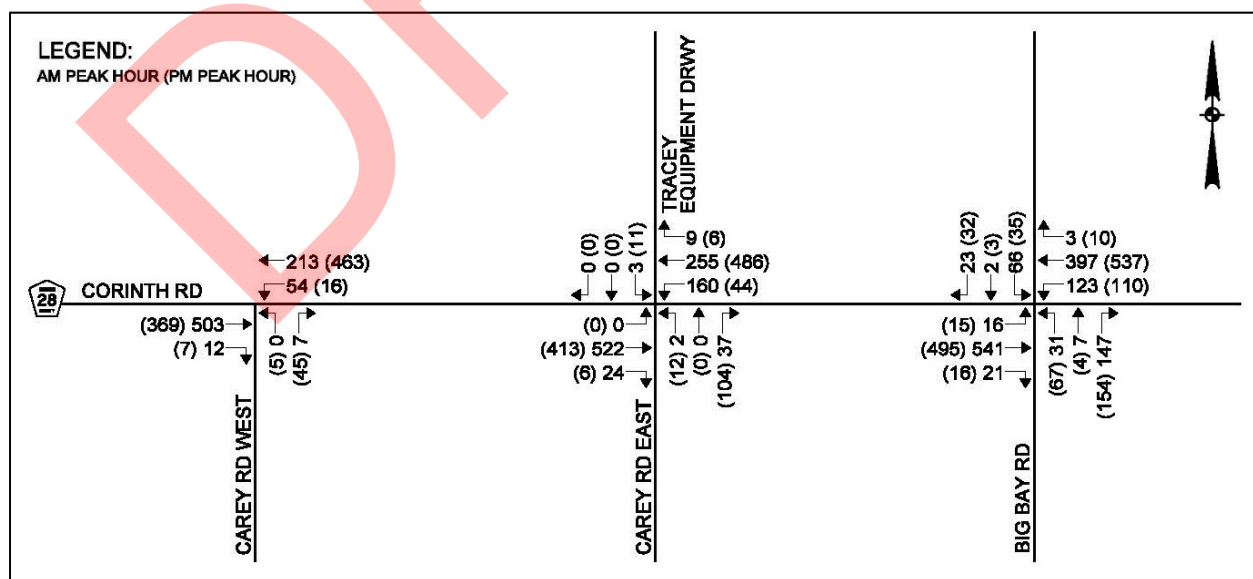
D. TRAFFIC VOLUMES AND TRAFFIC OPERATIONS

Turning movement counts were conducted at the study area intersections on Thursday, November 18, 2021 during the morning peak (7:00 to 9:00 a.m.) and afternoon peak (3:00 to 6:00 p.m.) at the Corinth Road/Big Bay Road intersection. In addition, turning movements counts were also conducted at the Carey Road East and Carey Road West intersections on Corinth Road from 7:00 a.m. to 7:00 p.m. on a weekday. The observed peak hours at the three study area intersections were generally from 7:15 to 8:15 a.m. during the morning peak and from 3:30 to 4:30 p.m. during the afternoon peak. The raw turning movement count data is included under Appendix A.

An automatic traffic recorder (ATR) was installed on Corinth Road between the unsignalized Carey Road intersections and on Corinth Road west of the industrial park near a historical traffic count from Wednesday, November 17, 2021 to Friday, November 19, 2021 to collect volume and speed data. Data collected from the ATRs shows that Corinth Road currently serves approximately 9,440 vehicles per day (vpd).

In order to account for altered traffic conditions associated with impacts related to travel and employment patterns resulting from the COVID-19 pandemic, traffic counts conducted in November 2021 were compared to traffic count data in the *Traffic Data Viewer* collected in October 2018 on Corinth Road by NYSDOT. The traffic count comparison indicates that the recent traffic volume data collected in November 2021 is approximately 15% lower during the AM peak hour and 7% lower during the PM peak hour. Due to the decreased peak hour volumes, the 2021 AM peak and PM hour traffic volumes were factored up due to COVID-19 pandemic-related alterations in traffic patterns. It is noted that the 2021 traffic volumes at the study area intersections during the weekday morning and afternoon peak hours were seasonally adjusted to typical conditions based on NYSDOT seasonal factors and are shown on Figure 2-1.

FIGURE 2.1 – EXISTING TRAFFIC VOLUMES



In addition, ATR's were installed on Carey Road East and Carey Road West during the same time period. These traffic counts can be used to develop a trip generation estimate for the existing industrial uses located in the park. The ATR data is also included under Appendix A.

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. Evaluations of the signalized and unsignalized intersections were made using Synchro software. Levels of service range from A to F, with LOS A conditions considered excellent (very little delay) while LOS F represents conditions with very long delays. Table 2.2 summarizes the existing LOS results in the study corridor. The detailed level of service reports are included under Appendix B.

TABLE 2.2 – LEVEL OF SERVICE SUMMARY

Intersection			Existing	
			AM Peak Hour	PM Peak Hour
Corinth Road/Carey Road West				
Corinth Road WB	L		A (8.7)	A (8.1)
Carey Road West NB	LR		B (12.1)	B (11.7)
Corinth Road/Carey Road East/ Tracey Equipment Driveway				
Corinth Road EB	L		A (0.0)	A (0.0)
Corinth Road WB	L		A (9.6)	A (8.4)
Carey Road East NB	LTR		B (14.3)	B (14.4)
Tracey Equipment Drwy SB	LTR		E (38.8)	D (31.8)
Corinth Road/Big Bay Road				
Corinth Road EB	LTR		B (14.7)	B (13.8)
Corinth Road WB	L		A (5.6)	A (6.1)
	TR		A (5.2)	A (6.5)
Big Bay Road NB	LTR		C (21.9)	B (17.9)
Big Bay Road SB	LT		B (19.3)	B (15.2)
	R		B (18.0)	B (15.0)
	Overall		B (12.0)	B (11.0)

L, T, R = Left-turn, Through, or Right-turn movement

X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

The LOS table shows that the unsignalized Carey Road West intersection on Corinth Road currently operates at goods levels of service during both peak hours. In addition, the northbound Carey Road East approach to the unsignalized Corinth Road intersection currently operates at LOS B during both peak hours; however, the southbound Tracey Equipment Driveway approach operates at LOS E/D during the AM and PM peak hours. A review of queuing and the volume to capacity ratio (V/C) during the AM and PM peak hours indicates that adequate storage and capacity is currently provided on the southbound approach. The table also indicates that the signalized intersection operates at an overall LOS B during both peak hours with all movements operating at LOS C or better.

E. TRANSIT

Greater Glens Falls Transit (GGFT) currently operates transit service in the study area corridor via Bus Route 7 – West Glens Falls, which is a loop route that starts at the Ridge Street terminal and travels west on Luzerne Road and uses VanDusen Road to access Corinth Road in order to travel east back to the Ridge Street Terminal. The service operates on weekdays from 7:00 a.m. to 5:05 p.m. and on Saturdays from 9:00 a.m. to 5:35 p.m. with a bus once every two hours on average. A bus stop and shelter is provided on the south side of Corinth Road in front of the *Kinney Drugs* store between the Carey Road East and West intersections.

F. PEDESTRIANS AND BICYCLISTS

A sidewalk is provided on the north side of Corinth Road from the I-87 Exit 18 interchange to Indiana Avenue. In addition, a sidewalk is provided on the frontage of the *Stewart's Shop* located in the southwest quadrant of the Corinth Road/Big Bay Road intersection. Information provided by the Town of Queensbury Planner indicates that a sidewalk is planned on the south side of Corinth Road between the *Sky Zone Trampoline Park* and the *Stewart's Shop*. Pedestrian infrastructure at the Corinth Road/Big Bay Road intersection was discussed in Section C above. It is noted that marked crosswalks are provided at the unsignalized intersections on the north side of Corinth Road between Big Bay Road and Indiana Avenue. Bicycle traffic on Corinth Road is supported by the approximate 3.5 to 4-foot wide paved shoulders.

G. CRASH EVALUATION

Collision data was requested from A/GFTC and NYSDOT to determine crash trends on the segment of Corinth Road between the Big Bay Road and Carey Road West intersections. Collision summaries and details were provided by the NYSDOT Safety and Information Management System. A crash analysis was performed in accordance with NYS Highway Design Manual (HDM) Chapter 5 using the most recent three years of data that excludes travel periods impacted by the corona virus (January 1, 2017-December 31 2019) to quantify the number of crashes and identify any collision patterns or concentrations. The predominant collision types on Corinth Road are summarized in Table 2.3.

7 WEST GLENS FALLS							
WEEKDAY SERVICE							
WESTBOUND: CITY TO VAN DUSEN RD.				EASTBOUND: TO CITY			
Ridge St. Terminal	Broad St. & Staple St.	Hannaford (Pull-In)	VanDusen Rd. & Luzerne Rd.	Main St. McDonald's	Broad St. & Staple St.	Glens Falls Hosp.	Ridge St. Terminal
A	B	C	D	E	F		A
7:00	7:05	7:06	7:15	7:16	7:19	On-Request	7:25
9:00	9:05	9:06	9:15	9:16	9:19	On-Request	9:25
11:00	11:05	11:06	11:15	11:16	11:19	On-Request	11:25
-PM-							
1:00	1:05	1:06	1:15	1:16	1:19	On-Request	1:25
2:00	2:05	2:06	2:15	2:16	2:19	On-Request	2:25
3:30	3:35	3:36	3:45	3:46	3:49	On-Request	3:55
4:40	4:45	-	4:55	4:56	5:00	On-Request	5:05
SATURDAY SERVICE (Approx. every 2 hrs 9am - 5:10pm)							
WESTBOUND: CITY TO VAN DUSEN RD.				EASTBOUND: TO CITY			
Ridge St. Terminal	Broad St. & Staple St.	Hannaford (pull-in)	VanDusen Rd. & Luzerne Rd.	Main St. McDonald's	Broad St. & Staple St.	Glens Falls Hosp.	Ridge St. Terminal
A	B	C	D	E	F		A
9:00	9:05	9:06	9:15	9:16	9:19	On-Request	9:25
11:00	11:05	11:06	11:15	11:16	11:19	On-Request	11:25
-PM-							
1:00	1:05	1:06	1:15	1:16	1:19	On-Request	1:25
3:00	3:05	3:06	3:15	3:16	3:19	On-Request	3:25
5:10	5:15	5:16	5:25	5:26	5:29	On-Request	5:35



Photo #6 = Transit Stop on Corinth Road



Photo #7 = Pedestrian Crossing Corinth Road

TABLE 2.3 – CORINTH ROAD CRASH SUMMARY (1/1/2017 – 12/31/2019)

Intersections and Segments	Collision Severity				Collision Type										
	Non-Reportable	Property Damage	Injury	Fatality	Rear-End	Right Angle	Head-On	Animal	Left-Turn	Right-Turn	Fixed Object	Sideswipe	Overtaking	Pedestrian	Total
Roadway Segments															
Big Bay Rd to Rhode Island Ave	2	2	0	0	3	0	0	0	0	0	0	1	0	0	4
Rhode Island Ave to Connecticut Ave	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
Connecticut Ave to Ohio Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ohio Ave to Indiana Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indiana Ave to Carey Rd East	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Carey Rd East to Minnesota Ave	0	0	1	1	0	0	0	0	0	1	0	0	0	1	2
Minnesota Ave to Carey Rd West	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Segment	2	3	1	1	4	0	0	0	0	1	0	1	0	1	7
Intersections															
Corinth Rd/Big Bay Rd	4	16	0	0	13	2	1	0	1	0	0	3	0	0	20
Corinth Rd/Rhode Island Ave	3	10	9	0	4	16	0	0	2	0	0	0	0	0	22
Corinth Rd/Connecticut Ave	1	1	1	0	0	1	1	1	0	0	0	0	0	0	3
Corinth Rd/Ohio Ave	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1
Corinth Rd/Indiana Ave	0	1	1	0	1	1	0	0	0	0	0	0	0	0	2
Corinth Rd/Carey Rd East	1	5	0	0	3	0	0	1	0	0	2	0	0	0	6
Corinth Rd/Minnesota Ave	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Corinth Rd/Carey Rd West	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Intersection	10	34	11	0	21	20	2	2	3	0	3	3	1	0	55
Total Intersection and Segment	12	37	12	1	25	20	2	2	3	1	3	4	1	1	62

¹ A non-reportable accident indicates no personal injuries occurred and property damages totaled less than \$1,000.

Table 2.3 shows that there were 62 crashes on Corinth Road between the Big Bay Road intersection and the Carey Road West intersection. None of the collisions involved a bicyclist. Of the 62 crashes, 55 occurred at an intersection and seven occurred on the roadway segments. The five property damage crashes that occurred on Corinth Road between Connecticut Avenue and Big Bay Road were generally rear end collisions related to nearby intersection operations. In addition, a pedestrian was struck and killed on Corinth Road west of the Carey Road East intersection. The MV-104 report indicates that a vehicle traveling westbound hit the pedestrian who was apparently crossing Corinth Road near the existing transit stop. The motorist could not see the person crossing since it was dark at that time of the collision.

It is noted that the majority of the intersection collisions occurred at the signalized Big Bay Road intersection and the unsignalized Rhode Island/Stewart's Driveway intersection. The crashes that occurred at the Big Bay Road intersection generally included rear end collisions which is typical at signalized locations and were mainly the result of following too closely. The majority of the crashes at the Rhode Island/Stewart's Driveway intersection were right-angle collisions that were the result of failing to yield the right-of-way. Based on the collision descriptions, operations and queuing associated with the adjacent traffic signal contributes to limited sight lines and congestion in the area. A review of the unsignalized Carey Road East intersection indicates that the three rear-end collisions occurred while a motorist waited to make a left-turn onto Carey Road East. The remaining three collisions (animal strike and two fixed object crashes) were not related to the geometry of the intersection. The overtaking collision that occurred at the unsignalized Carey Road West intersection involved improper turning by two vehicles turning right onto the side street.

The crash rate for the approximate 0.40 mile long segment of Corinth Road and the intersections on this segment were calculated and compared to the statewide crash rate as shown on Table 2.4. It is noted that

the character of County roads may be different than state highways; therefore, the comparison to the statewide average crash rate may not be as applicable to these types of roadways.

TABLE 2.4 – CORINTH ROAD CRASH RATES (1/1/2017 – 12/31/2019)

Crash Location	Crash Rate	
	Calculated	NYS DOT Average
Roadway Segment (ACC/MVM)		
Corinth Road – Big Bay Road to Carey Road West	1.69	2.23
Study Area Intersections (ACC/MEV)		
Corinth Rd/Big Bay Rd	1.12	0.52
Corinth Rd/Carey Rd East	0.46	0.29
Corinth Rd/Carey Rd West	0.09	0.18

ACC/MVM = Accidents per Million Vehicle Miles
ACC/MEV = Accidents per Million Entering Vehicles

The roadway segment crash rate (excluding intersection crashes) is lower than the statewide average for similar facilities. In addition, the unsignalized Carey Road West intersection is also lower than the statewide average; however, the unsignalized Carey Road East and the signalized Big Bay Road intersections on Corinth Road are higher than the statewide average. Appendix C contains TE-213 summary tables. The recommendations of the study will consider crash reduction benefits when determining appropriate intersection geometry.

H. LIGHTING

Lighting along Corinth Road is limited through the corridor. Overhead cobra style lighting is provided on the north side of Corinth Road at the unsignalized Ohio Avenue and Indiana Avenue intersections and on the south side of the road at the unsignalized Pinewood Avenue intersection. East of Ohio Street, no overhead roadway lighting is provided. The Town has expressed concerns about the limited lighting in the corridor, primarily in the eastern end of the corridor near the existing gas stations and retail/service centers where pedestrian and bicyclists can be difficult to see at night.

CHAPTER 3. FORECASTS

The Town of Queensbury is seeking to develop the *Carey Road Industrial Park* and the surrounding available land near Exit 18. The changing land uses and development pressure could negatively impact mobility throughout the study corridor, unless growth is managed and transportation improvements occur in concert with development. This chapter summarizes the land development potential in the corridor associated with full build-out of the *Carey Road Industrial Park* and the construction of approved/speculative projects in the vicinity of the park. These development milestones include the following:

- **Carey Road Industrial Park – Full Build-Out**

This development scenario represents 100 percent build-out potential within the *Carey Road Industrial Park* based on existing zoning, available developable square footage, and pending plans.

- **Full Project Area Build-Out**

In addition to full build-out of the *Carey Road Industrial Park*, there is development potential that includes construction of other known and speculative projects located in the project area identified by the Town of Queensbury and the Advisory Committee.



A. LAND USE AND TRIP GENERATION

Land use forecasts for future conditions are based on projects that are currently approved or pending but are not yet built or projects that are speculative based on an assessment of vacant land that is prime for development. A meeting with representatives from A/GFTC and the Town of Queensbury Planner identified these types of projects within the *Carey Road Industrial Park* and in the surrounding area. The following summarizes the development milestones identified above.

Carey Road Industrial Park – Existing Conditions

A review of turning movement count data indicates that the existing *Carey Road Industrial Park* currently generates approximately 245 trips during the AM peak hour and 253 trips during the PM peak hour. Table 3.1 summarizes the existing uses located within the park.

TABLE 3.1 – EXISTING CAREY ROAD INDUSTRIAL PARK LAND USES

#	Name	Land Use	Address	Size (SF)	Acres
1	Hudson Headwaters Health	Professional Office	9 Carey Road	24,818	2.16
2	Hudson Headwaters Health	Professional Office	151/161 Carey Road	11,068/28636	6.90
3	Adirondack Radiology Associates	Professional Office	170 Carey Road	14,540	2.87
4	Northway Self-Storage	Self-Storage	162 Carey Road	24,000	2.77
5	Rocksport Indoor Climbing Gym	Commercial	54 Carey Road	10,588	2.44
6	Northeast Power Systems	Industrial	66 Carey Road	37,280	4.58
7	Mohawk Industrial Werks	Industrial	140 Carey Road	14,965	6.45
8	HHW Training Buildings	Warehouse	27 Carey Road	8,846	1.71
9	Morris Products	Industrial	53 Carey Road	63,146	4.70
10	Molemab	Warehouse	91 Carey Road	10,000	1.68
11	Legendary Auto Salon/Fireteck/Motimac	Warehouse	75 Carey Road	12,000	1.68
12	Native Development Associates	Warehouse	24 Native Drive	116,490	7.80
Total				376,377	45.74

Carey Road Industrial Park – Full Build-Out

Build-out of approved projects within the *Carey Road Industrial Park* and anticipated development of vacant parcels within the park is summarized in Table 3.2 and on Figure 3.1 at the end of this chapter.

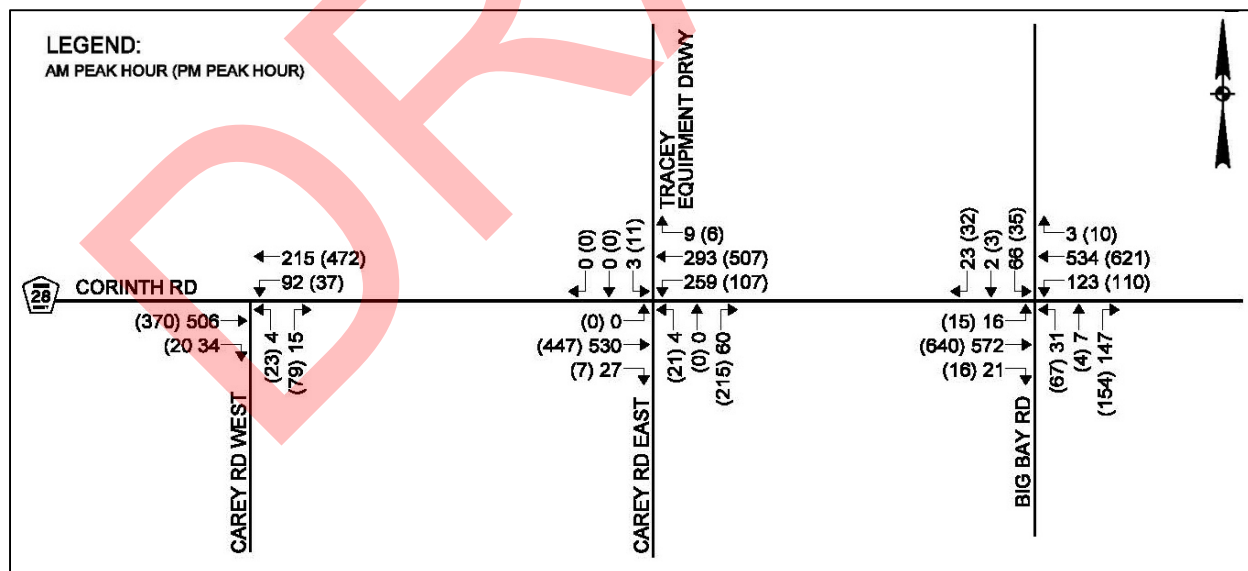
TABLE 3.2 – APPROVED/PENDING PROJECTS WITHIN THE CAREY ROAD INDUSTRIAL PARK OR VACANT PARCELS

(BIG BAY/SILVER CIRCLE OR OTHER CLI/COMMERCIAL PROPERTIES)

#	Name	Land Use	Address	Size (SF)	Acres	AM Trips	PM Trips
13	Adirondack Radiology Associates Expansion	Professional Office	170 Carey Road	3,040	2.87	7	5
14	Northway Self-Storage Expansion	Mini-Self Storage	162 Carey Road	10,000	2.77	1	2
15	Native Development Associates Expansion	Warehouse	24 Native Drive	19,320	0.84	6	8
16	Native Development 5-Lot Subdivision	Warehouse	24 Native Drive	300,000	24.73	87	129
17	Roofing Office Building (Built but Vacant)	Office	44 Carey Road	7,100	2.62	15	12
18	Vacant	Industrial	0 Carey Road	13,560	1.54	4	6
19	Vacant	Industrial	0 Carey Road	19,636	2.23	6	8
20	Vacant	Industrial	0 Carey Road	185,086	21.02	54	80
21	Vacant	Industrial	27 Silver Circle	31,875	3.62	10	14
22	Vacant	Industrial	140 Carey Road	27,648	3.14	8	12
Total				617,266	65.38	198	276

Table 3.2 shows that there are five approved or pending commercial and light industrial projects as identified by the Town and that there are an additional five vacant parcels still available within the *Carey Road Industrial Park*. These projects could include more than 615,000 square-feet (SF) of development on 65 acres. It is anticipated that these proposed projects and vacant parcels will generate approximately 198 AM peak hour trips and 276 PM peak hour trips. Traffic volumes that include trips generated by the approved and pending projects within the *Carey Road Industrial Park* are shown on Figure 3.2

FIGURE 3.2 – CAREY ROAD INDUSTRIAL PARK – FULL BUILD-OUT TRAFFIC VOLUMES



Full Project Area Build-Out

A number of parcels located outside the *Carey Road Industrial Park* are more likely to develop based on known projects and a review of vacant property and development pressure. During coordination with representatives from the Town of Queensbury, the corridor was evaluated on a parcel by parcel basis to

identify the most likely locations for development. Table 3.3 summarizes the known and “speculative” (or potential) corridor growth which is also illustrated on Figure 3.1 and is consistent with zoning and/or permitted by special permit. The development type, size, and number of AM and PM peak hour trips are intended for planning purposes only. The actual development in the corridor may vary significantly from those summarized in Table 3.3. The development potential was estimated utilizing the most recent GIS mapping data and information available from the Town.

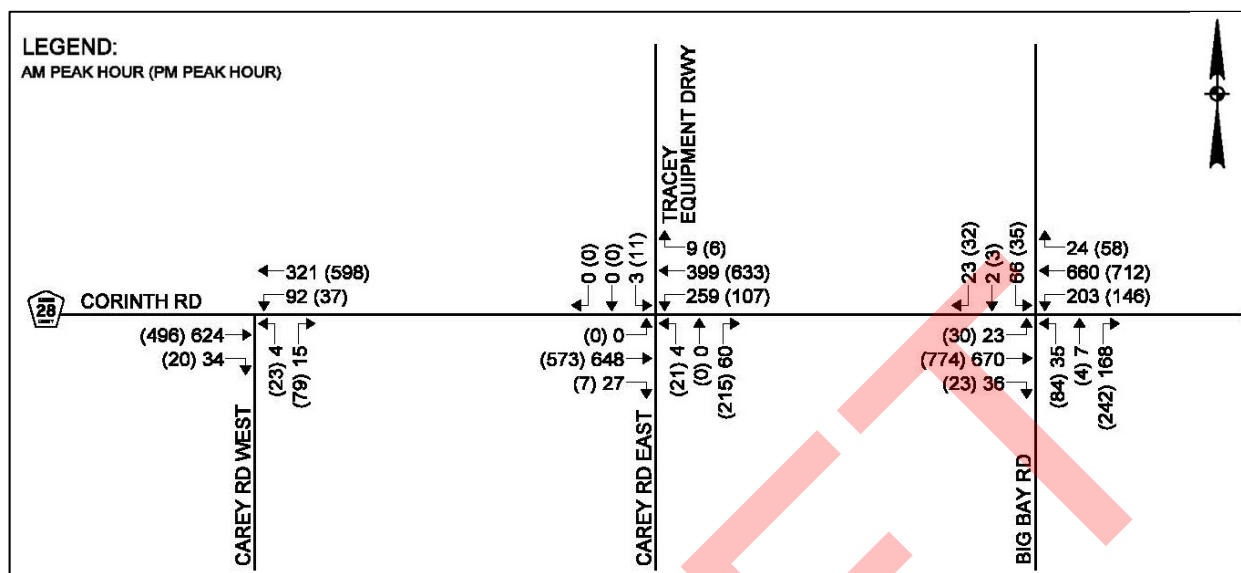
TABLE 3.3 – KNOWN AND SPECULATIVE DEVELOPMENT OUTSIDE THE CAREY ROAD INDUSTRIAL PARK

#	Name	Land Use	Address	Size (SF)	Acres	AM Trips	PM Trips
West Of Industrial Park							
23	Hacker Boat Storage	Storage	315 Corinth Road	0	6.39	0	0
24	Halcyon Properties, Inc.	Industrial (LUC 130)	377 Corinth Road	195,477	22.20	66	66
25	Honey Do Storage	Storage	442 Corinth Road	960	0.69	0	0
26	Luxury Box Recreational Facility	Recreational (LUC 435)	428 Corinth Road	4,685	12.00	0	17
27	Seaton Property Firewood	Manufacturing (LUC 140)	308, 310, 334 Corinth Road	15,000	66.60	19	11
28	West Mountain PDD *	Recreational Area (LUC - Various)	West Mountain	428 units, 75 Rooms		213	255
North of Industrial Park							
29	Tracey Equipment	Equipment Storage	280 Corinth Road	0	3.93	0	0
30	Luzerne Mixed Use Development	Manufacture/Office/Warehouse (LUC 150 & 710)	120 Luzerne Road	49,600	13.59	54	53
East of Industrial Park							
31	NDC Realty LLC	Industrial (LUC 130)	249 Corinth Road	121,336	13.78	41	41
32	Skyzone Storage	Storage	235 Corinth Road	1,800	6.20	0	0
33	Parker Hammond Development	Industrial (LUC 130)	0 Silver Circle	69,209	7.86	24	24
34	North County Ice/Snow Removal	Service (LUC 180)	415 Big Bay Road	5,400	1.72	9	10
35	Gross Property	Office (LUC 710)	407 Big Bay Road	16,000	1.62	35	36
36	Silver Circle LLC	Warehouse (LUC 150)	33 Silver Circle	32,000	7.78	27	30
37	Adirondack Winery	Wine Tasting (LUC 140, 172, 970)	395 Big Bay Road	16,320	2.07	18	34
38	Holiday Inn Express Hotel, Retail	Hotel (LUC 310) Retail (LUC 822)	507 Big Bay Road/ 199 Corinth Road	89 Rooms, 10,000	6.70	46	92
39	Switchco LLC Commercial	Commercial – Est. (LUC 822)	22 Rhode Island Ave	20,000	8.54	45	127
Total						597	796

* The West Mountain PDD is not in the Corinth Road study corridor, but is a major development within the Town and is therefore included with the speculative developments.

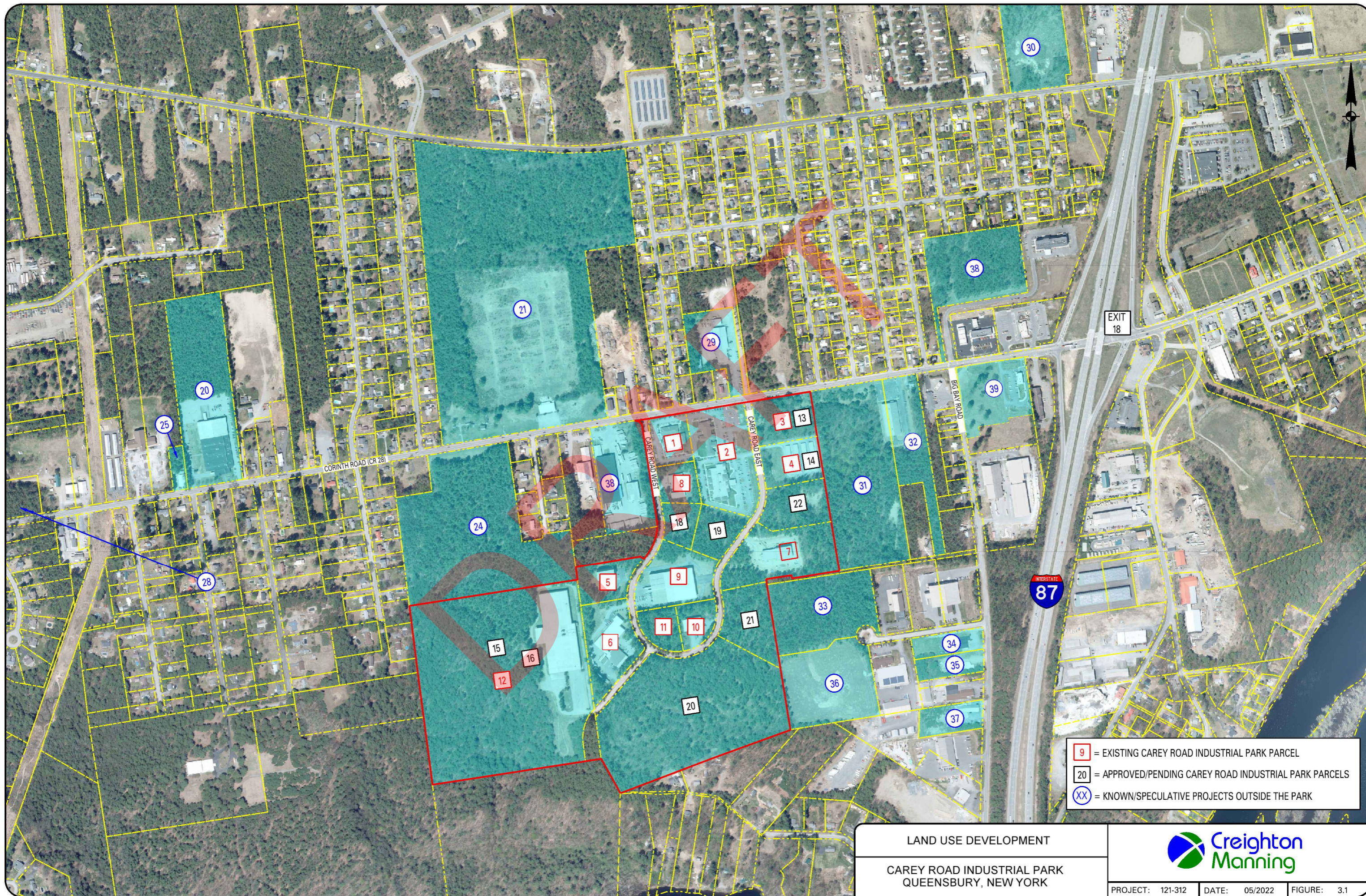
Table 3.3 shows that the Town identified 17 other known or speculative projects that are approved, pending, or anticipated in the vicinity of the *Carey Road Industrial Park*. It is anticipated that these proposed projects and vacant parcels will generate approximately 597 AM peak hour trips and 796 PM peak hour trips (above and beyond the trips generated by full build-out of the *Carey Road Industrial Park*). Full Project Area Build-Out traffic volumes which include the known and speculative projects outside the *Carey Road Industrial Park* are shown on Figure 3.3. It is noted that traffic generated by full build-out of the *Carey Road Industrial Park* is also included in this traffic volume scenario.

FIGURE 3.3 – FULL PROJECT AREA BUILD OUT TRAFFIC VOLUMES



It is recognized that development proposals are constantly changing as existing proposals become more refined, are withdrawn, and/or new projects are introduced, so these forecasts are intended for planning purposes only.

FILE NAME : N:\P-projects\2021\121-312 ACFTC - Carey Industrial Park\Working\0400\0401\121-312.cpl.gpx-03.dgn
DATE/TIME : 5/4/2022
USER : mmorrissey



- 9 = EXISTING CAREY ROAD INDUSTRIAL PARK PARCEL
- 20 = APPROVED/PENDING CAREY ROAD INDUSTRIAL PARK PARCELS
- XX = KNOWN/SPECULATIVE PROJECTS OUTSIDE THE PARK

CHAPTER 4. EVALUATIONS AND RECOMMENDATIONS

The purpose of this chapter is to summarize the intersection evaluations and recommendations in the corridor, and to establish the implementation strategies to maintain acceptable traffic operations. Several potential improvements were identified to address the study area needs, and meet the project's goals and objectives. The recommendations were developed in consideration of the technical analyses, agency coordination, and Advisory Committee input. A public meeting was also held to seek community input on these recommendations. The Corridor Plan summarizes the recommendations set forth in this chapter as illustrated on Figure 4.1 and Figure 4.2.

A. INTERSECTION EVALUATION

Intersection Level of Service (LOS) and capacity analysis relate traffic volumes to the physical characteristics of an intersection. In order to identify potential improvements at the study area intersections, evaluations were made using Synchro version 11 software which automates the procedures contained in the *Highway Capacity Manual*. Table 4.1 summarizes the LOS results of the intersection evaluations after full build-out of the *Carey Road Industrial Park* and after development of other known or speculative projects in the study corridor. The detailed analyses are contained in Appendix D.

TABLE 4.1 – LEVEL OF SERVICE SUMMARY

Intersection	Control	Full Build-Out of Carey Road Industrial Park				Total Build-Out of Project Area			
		Existing Geometry		Improvements		Existing Geometry		Improvements	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Corinth Road/Carey Road West									
Corinth Road WB L	U	A (9.0)	A (8.2)	--	--	A (9.5)	A (8.6)	--	--
Carey Road West NB LR		B (14.2)	B (14.3)	--	--	C (16.8)	C (18.1)	--	--
Corinth Road/Carey Road East/Tracey Equipment Driveway									
Corinth Road EB L	U	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)	A (0.0)
Corinth Road WB L		B (10.4)	A (8.7)	B (10.4)	A (8.7)	B (11.3)	A (9.2)	B (11.3)	A (9.2)
Carey Road East NB LTR		C (17.7)	C (22.5)	B (14.8)	C (17.8)	C (23.5)	E (39.4)	C (17.2)	C (23.6)
Tracey Drwy SB LTR		F (73.4)	F (68.6)	F (67.4)	F (65.5)	F (126)	F (137)	F (109)	F (129)
Corinth Road EB LTR	S	--	--	A (3.7)	A (5.9)	--	--	A (4.0)	A (7.6)
Corinth Road WB L		--	--	A (8.6)	A (8.1)	--	--	B (11.3)	B (11.8)
TR		--	--	A (2.8)	A (6.4)	--	--	A (3.0)	A (8.5)
Carey Road East NB LTR		--	--	B (14.3)	B (10.0)	--	--	B (18.8)	B (12.5)
Tracey Drwy SB LTR		--	--	B (13.6)	A (8.7)	--	--	B (17.1)	A (9.8)
Overall		--	--	A (4.9)	A (6.8)	--	--	A (5.7)	A (9.0)
Corinth Road/Big Bay Road									
Corinth Road EB LTR	S	B (16.1)	B (15.5)	--	--	D (51.9)	D (48.7)	--	--
[L]		--	--	--	--	--	--	B (17.6)	B (18.4)
[TR]		--	--	--	--	--	--	D (48.5)	C (30.5)
Corinth Road WB L		A (5.7)	A (5.8)	--	--	B (13.0)	A (9.4)	D (37.2)	B (18.8)
TR		A (6.2)	A (6.8)	--	--	B (12.3)	B (14.1)	B (11.1)	B (11.8)
Big Bay Road NB LTR		C (23.7)	C (22.5)	--	--	D (35.3)	F (112)	--	--
[L]		--	--	--	--	--	--	C (24.4)	C (25.5)
[TR]		--	--	--	--	--	--	C (28.5)	C (29.5)
Big Bay Road SB LT		C (20.5)	B (18.7)	--	--	C (26.7)	C (25.8)	--	--
R		B (19.0)	B (18.3)	--	--	C (22.4)	C (21.2)	--	--
[L]		--	--	--	--	--	--	C (34.8)	C (34.4)
[TR]		--	--	--	--	--	--	C (23.1)	C (22.9)
Overall		B (12.7)	B (12.5)	--	--	C (30.4)	D (40.4)	C (30.6)	C (22.6)

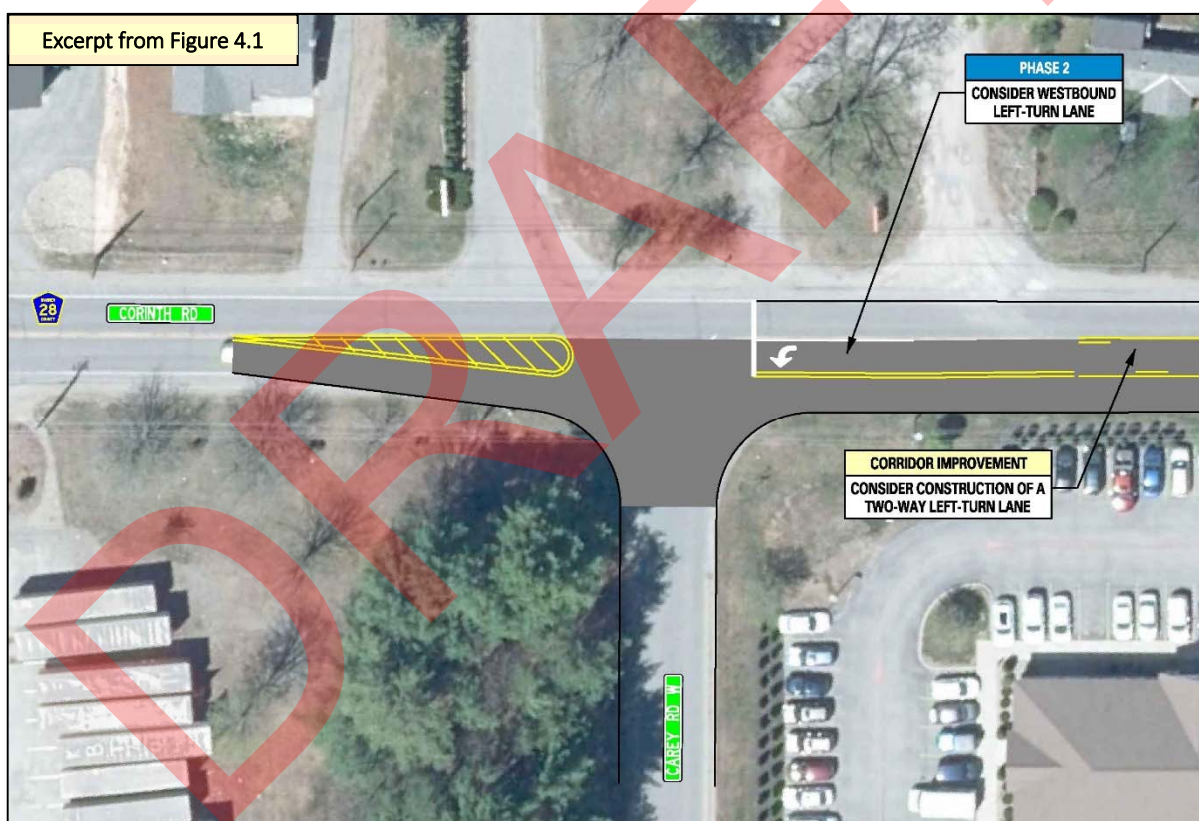
U = Unsignalized, S = Signalized

L, T, R = Left-turn, Through, or Right-turn movement

X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

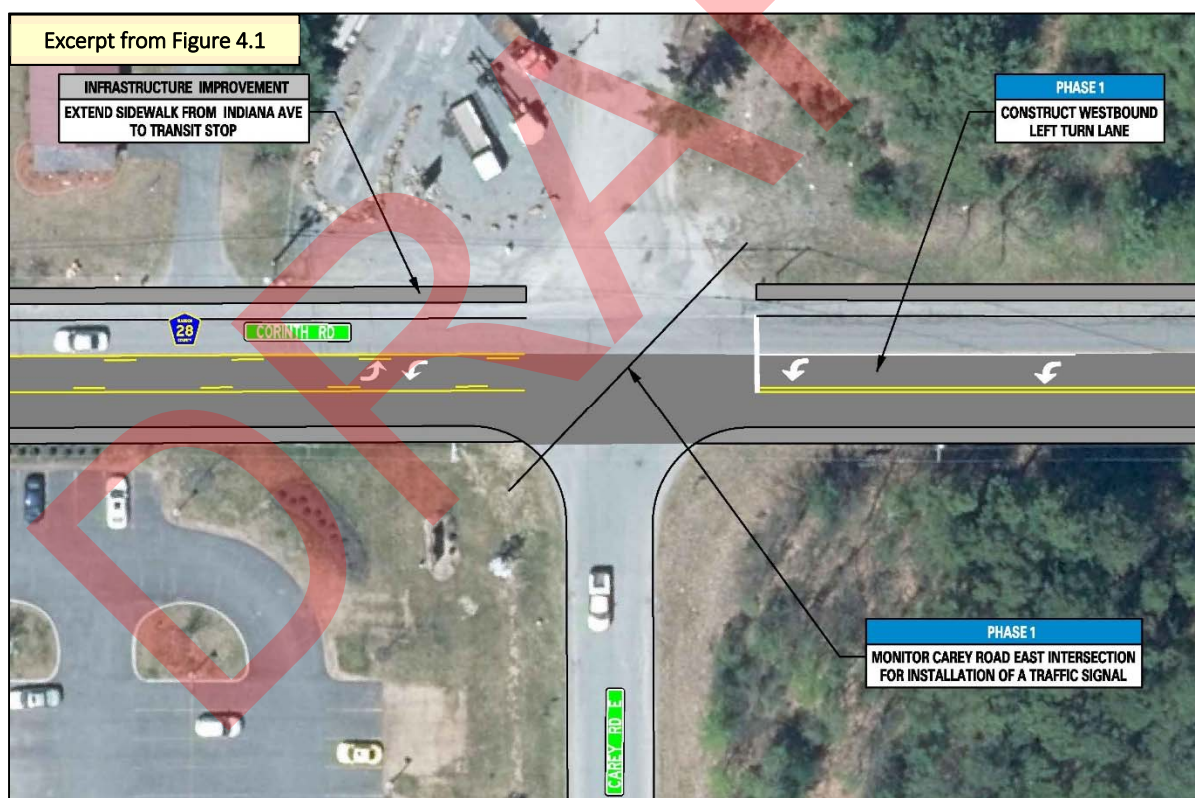
The following summarizes the results of the level of service analysis:

- Corinth Road/Carey Road West – The analysis indicates that the northbound Carey Road approach will continue to operate at LOS B during both peak hours after full build-out of the *Carey Road Industrial Park*. After build-out of all approved and speculative development in the surrounding project corridor, the level of service on the northbound approach will change to LOS C during both peak hours. A review of the westbound approach indicates that the left-turn movement will operate at LOS A after full build-out of the industrial park and build-out of the surrounding corridor. The left-turn volumes at this intersection were compared to AASHTO guidelines for the installation of a separate westbound left-turn lane on Corinth Road. The assessment indicates that the AASHTO left-turn guidelines would be met; however, a review of other criteria for the installation of a left-turn suggest that there is a low probability that a vehicle traveling westbound on Corinth Road would be impacted by a vehicle waiting to turn left onto Carey Road West. It is recommended that this intersection be monitored for the installation of a westbound left-turn lane (as shown below and on Figure 4.1 at the end of this chapter) that could potentially be constructed as part of a larger corridor improvement project described below.



- Corinth Road/Carey Road East – The level of service analysis indicates that the westbound left-turn lane on Corinth Road will operate at LOS B/A during the AM and PM peak hours after full build-out of the *Carey Road Industrial Park* and build-out of all known approved and speculative developments in the surrounding project corridor. The left-turn volumes at this intersection were also compared to AASHTO guidelines for the installation of a separate westbound left-turn lane on Corinth Road. The assessment indicates that the AASHTO left-turn guidelines are currently met for existing conditions and that a review of other criteria for the installation of a left-turn suggest that there is a reasonable probability

that a vehicle traveling westbound on Corinth Road will be impacted by a vehicle waiting to turn left onto Carey Road East. It is recommended that a westbound left-turn lane be installed at this intersection and that a short two-way left-turn lane (TWLTL) be extended past the intersection to the west for approximately 100-feet which will allow northbound vehicles exiting the site to use the TWLTL to execute a two-stage left-turn when entering the westbound traffic flow on Corinth Road. The level of service summary indicates that the northbound Carey Road East approach will improve to LOS C or better during the peak hours with this improvement. This modification (shown on Figure 4.1) will better facilitate vehicle maneuvers in and out of the *Carey Road Industrial Park* and will mitigate impacts to westbound through traffic on Corinth Road. The design will require approval and permitting from Warren County. Based on a review of available parcel mapping and survey, it is anticipated that adequate right-of-way (ROW) along Corinth Road is available to provide the recommended geometry. If it is determined that a westbound left-turn lane should be constructed at the Carey Road West intersection (as noted above), extension of the TWLTL should be considered across the entire frontage of the *Carey Road Industrial Park* which would connect with the new turn lane. The TWLTL will provide a good transition between each westbound left-turn lane on Corinth Road and will also improve access to various residential driveways and the unsignalized Minnesota Avenue intersection located between these Carey Road intersections. The proposed improvement is shown below and on Figure 4.1 at the end of this chapter.



The level of service analysis indicates that the northbound Carey Road East approach will operate at LOS C during the peak hours after full build-out of the *Carey Road Industrial Park* and will operate at LOS C/E during the AM and PM peak hours after build-out of the known and speculative developments surrounding the project corridor. In addition, the southbound Tracey Equipment Driveway approach will operate at LOS F during both peak hours through full build-out of the area. A review of queuing and

the V/C ratio during the AM and PM peak hours indicates that adequate storage and capacity will be provided on the northbound and southbound approaches; however, a signal warrant assessment was conducted to determine if the installation of a traffic signal should be considered at this intersection. The two-way traffic volumes on Corinth Road, the northbound Carey Road East approach, and the southbound Tracey Equipment Driveway approach were compared to the signal warrant criteria contained in the *2009 Manual of Uniform Traffic Control Devices* (National MUTCD), published by the Federal Highway Administration (FHWA). This publication specifies the minimum criteria which must be met in order for a new traffic signal to be justified. The satisfaction of a signal warrant in-itself is not necessarily justification for a traffic signal. Other engineering and operational factors need to be considered. It is noted that the majority of traffic on the northbound Carey Road East intersection approach will turn right toward I-87 or the City of Glens Falls; therefore, the right-turn traffic volumes were reduced by 75% based on information provided in the National MUTCD and a review of the traffic simulation model. The National MUTCD notes that a portion of right-turn vehicles from the minor approach can be removed from the traffic signal warrant evaluation if it is determined that their effect on the warrant may be minimized through right-turn on-red movements. The traffic signal evaluation reviewed the following three traffic volume related warrants at this intersection:

- Warrant 1, Minimum Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour

Corinth Road, Carey Road East, and Tracey Equipment Driveway volumes were obtained from the 12 hour count conducted at the study area intersection. The 2021 count data on Corinth Road and Carey Road East were increased by traffic associated with full build-out of the *Carey Road Industrial Park* to represent future conditions. The site generated traffic volumes were distributed throughout the day using hourly distribution percentages collected from the existing *Carey Road Industrial Park*. Table 4.2 summarizes the results of the signal warrant analysis which is included under Appendix E.

TABLE 4.2 – SIGNAL WARRANT SUMMARY

Time Begin (1-hour period)	Carey Road Industrial Park Build-Out Volumes			Signal Warrants Met?			
	Corinth Road ¹	Carey Road East ²	Tracey Driveway ²	Warrant #1		Warrant #2	Warrant #3
	EB/WB	NB	SB	Condition A	Condition B		
7:00 AM	951	14	3				
8:00 AM	910	24	3				
9:00 AM	787	64	7		✓	✓	
10:00 AM	741	65	7		✓	✓	
11:00 AM	672	90	9		✓	✓	
12:00 PM	921	74	9		✓	✓	
1:00 PM	857	55	8		✓		
2:00 PM	801	68	4		✓	✓	
3:00 PM	936	73	11		✓	✓	
4:00 PM	941	88	5		✓	✓	✓
5:00 PM	844	57	6		✓		
6:00 PM	576	19	0				
Required Volumes	One Lane Major Street			350	525	See Figure 4C- 2	See Figure 4C- 4
	Two Lane Minor Street			105	53		
Overall Warrant Met?				No	Yes	Yes	Yes

¹ Volumes on Corinth Road, Carey Road Easy, and Tracey Equipment Driveway as per data collected in 2021.

² The hourly traffic volume distribution for vehicles exiting the site is based on a review of the *Carey Road Industrial Park* traffic volumes.

The signal warrant analysis indicates that traffic volumes over the course of a typical day at the Corinth Road/Carey Road East/Tracey Equipment Driveway intersection will meet the minimum traffic signal criteria for all three signal warrants investigated after full build-out of the *Carey Road Industrial Park*. Since the volumes noted above are based on future traffic projections of the industrial park, it is recommended that a study be completed at this intersection periodically to determine when a traffic signal is actually warranted. This could coincide with development milestones, or once every three to five years, or at full development as necessary. The level of service analysis indicates that this intersection will operate at an overall LOS A during both peak hours with all movements operating at LOS B or better under traffic signal control.

It is noted that a preliminary signal warrant analysis conducted at the Corinth Road/Carey Road West intersection indicates that a traffic signal is not currently warranted at this location; however, two of the three volume warrants noted above would be met after full build-out of the *Carey Road Industrial Park*. It is anticipated that a traffic signal would be warranted at the Carey Road East intersection prior to one being warranted at the Carey Road West intersection. It is not recommended that a traffic signal be installed at the Carey Road West intersection since this driveway provides access the same land and is located approximately 700-feet west of the Carey Road East intersection and more than one traffic signal is not considered necessary for access in and out of the industrial park.

- Corinth Road/Big Bay Road – The level of service analysis indicates that this signalized intersection will operate at an overall LOS B with all movements operating at LOS C or better during both peak hours after full build-out of the *Carey Road Industrial Park*. In addition, the assessment indicates that the intersection will degrade to an overall LOS C/D with the northbound Big Bay Road approach operating at LOS D/F during the AM and PM peak hours after build-out of the known and speculative developments surrounding the project corridor. A review of the SimTraffic simulation indicates that while the level of service on the eastbound Corinth Road approach will operate at LOS D during this build-out condition, continued growth will significantly increase queuing on this approach from Big Bay Road. A queuing summary is provided in Table 4.3.

TABLE 4.3 – QUEUING SUMMARY

Intersection		Existing				Full Build-Out of Carey Road Industrial Park				Total Build-Out of Project Area			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		50 th	95 th	50 th	95 th	50 th	95 th	50 th	95 th	50 th	95 th	50 th	95 th
Corinth Road/Big Bay Road													
Corinth Road EB	LTR	147	261	134	257	162	302	192	390	453	908	1270	1724
Corinth Road WB	L	50	86	42	75	47	83	47	82	80	134	65	130
	TR	66	125	86	155	84	153	100	185	124	217	170	295
Big Bay Road NB	LTR	72	130	73	130	70	123	87	153	95	169	147	251
Big Bay Road SB	LT	45	96	22	57	44	91	24	60	64	122	54	101
	R	15	45	19	48	14	44	19	48	19	55	24	56

L, T, R = Left-turn, Through, or Right-turn movement

X (Y.Y) = Level of Service (Average delay in seconds per vehicle)

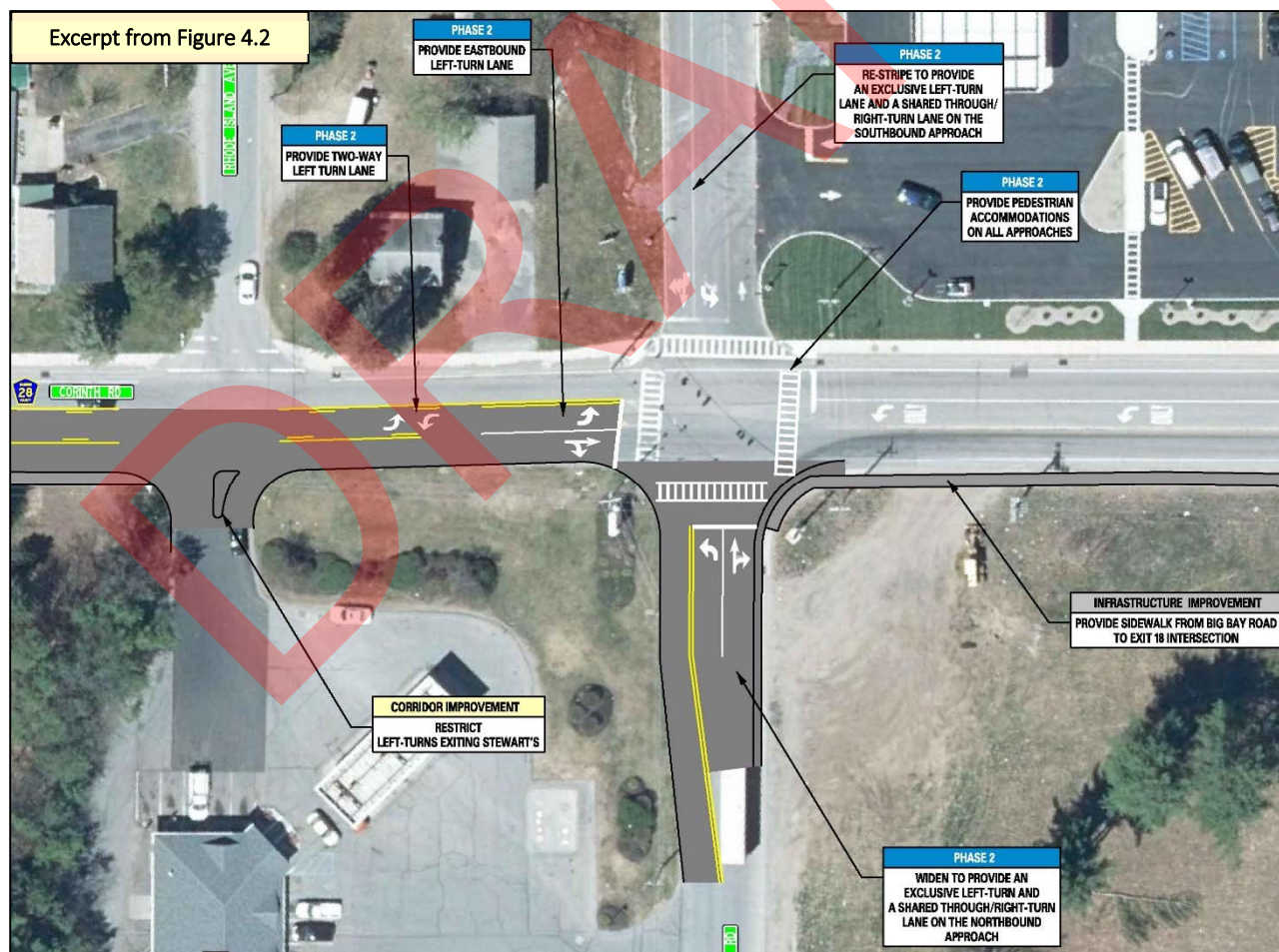
50th = 50th percentile or average queue conditions

95th = 95th percentile queue is the queue length that has a 5-percent probability of being exceeded during the analysis time period.

The summary indicates that the 95th percentile eastbound queue will extend up to the Connecticut Avenue intersection located approximately 400-feet west of Big Bay Road after build-out of the *Carey Road Industrial Park*; however, the 95th percentile eastbound queue will extend past the Carey Road East

intersection located over 1,350-feet west of the Big Bay Road intersection. It is noted that the 95th percentile queue is often used in designing storage areas. The traffic simulation indicates that eastbound left-turn movements at the Big Bay Road intersection significantly impact through traffic and would benefit from an exclusive left-turn lane located opposite the existing westbound left-turn lane. It is recommended that the existing hatched area be widened to accommodate a 50-foot long eastbound left-turn lane and that a short TWLTL be extended back from the left-turn lane past the *Stewart's* driveway in order to minimize impacts to the westbound through movement on Corinth Road as shown on Figure 4.2.

In addition, a review of the level of service analysis indicates that the northbound Big Bay Road approach will operate at LOS F during the PM peak hour. In order to mitigate this condition, it is recommended that the existing southbound approach be re-stripped to provide an exclusive left-turn lane and a shared through/right-turn lane. This will allow the northbound approach to be widened to the west in order to accommodate an exclusive left-turn lane and a shared through/right-turn lane. This geometric improvement will impact utility poles, a fire hydrant, and a catch basin on the southwest quadrant of the intersection as shown below and on Figure 4.2 at the end of this chapter. It is noted that a span wire analysis will need to be conducted to determine if the existing traffic poles can accommodate additional signage associated with the geometric improvements. The level of service analysis indicates that this signalized intersection will operate at an overall LOS C with all movements operating at LOS D or better during both peak hours after full build-out of all known and speculative developments in the corridor.



Threshold Assessment

An assessment of the proposed intersection improvements at the Corinth Road/Big Bay Road intersection indicates the following improvements may be warranted generally coinciding with the build-out of the *Carey Road Industrial Park* and other known/speculative developments:

- Eastbound Left-Turn Lane – The queuing analysis indicates that the 95th percentile queue will extend back and impact the Carey Road East intersection after full build-out of the *Carey Road Industrial Park* and approximately 60% percent of the trips associated with the known and speculative development is added to the roadway network.
- Big Bay Road Widening and Restriping – The level of service assessment indicates that the northbound Big Bay Road approach will fail after full build-out of the *Carey Road Industrial Park* and approximately 90 percent of the trips associated with the known and speculative development is added to the roadway network.

It is noted that the improvements identified are based on planning level evaluations and could occur earlier than anticipated based on build-out of the area. It is recommended that the Corinth Road/Big Bay Road intersection continue to be monitored as development occurs in the Town of Queensbury.

B. PEDESTRIAN, BICYCLE, AND TRANSIT ACCOMMODATIONS

The following pedestrian and cyclist improvement recommendations have been identified in the project corridor and are shown on Figures 4.1 and 4.2. These recommendations will improve safety and comfort by providing accommodations for pedestrians and bicyclists and will also encourage more bicycle and pedestrian activity in the corridor. These recommendations include:

- Provide pedestrian push buttons and countdown timers on the north leg of the Corinth Road/Big Bay Road intersection.
- Stripe marked crosswalks on the east and south leg of the Corinth Road/Big Bay Road intersection and provide pedestrian push buttons, countdown timers, and ADA compliant ramps.
- Provide a 5-foot wide sidewalk on the south side of Corinth Road along the property frontage in the southeast quadrant of the Corinth Road/Big Bay Road intersection. This could potentially be part of a site plan improvement if/when development is proposed on that parcel. The sidewalk could be extended to the signalized I-87 Exit 18 intersection.
- Provide a sidewalk connection on the south side of Corinth Road from the existing *Skyzone* building to the *Stewart's Shop*. This will connect to the existing sidewalk recently constructed along the *Stewart's Shop* frontage.
- Provide a pedestrian connection from the existing transit stop to the new *Adirondack Radiology Associates* building either along Corinth Road or through the *Carey Road Industrial Park*.
- In the long-term and as additional development occurs, construct a 5-foot wide sidewalk along the south side of Corinth Road from the bus stop located along the *Carey Road Industrial Park* frontage to the *Skyzone* property.
- Prior to installation of the long-term vision for sidewalks, provide or maintain minimum 4-foot wide shoulders throughout the corridor to maximize space for bicycle trips and create a more comfortable pedestrian walking environment. Although narrower shoulders may be allowed according to the minimums in the NYSDOT Highway Design Manual, the Town wants to maintain wide shoulders in areas without sidewalks. (Design of any roadway improvements would follow NYSDOT practices).

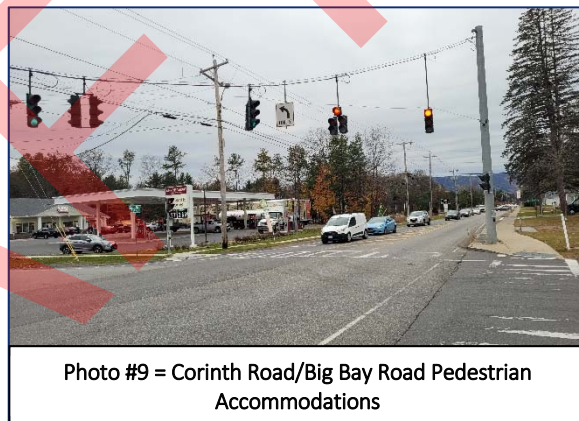
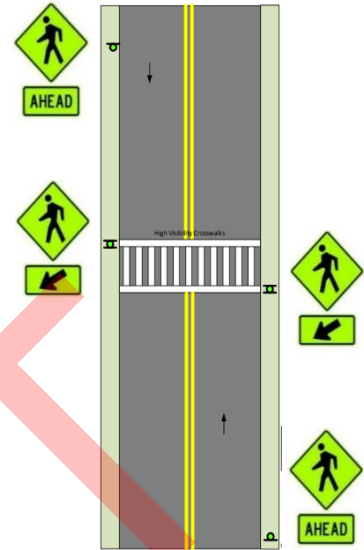


Photo #9 = Corinth Road/Big Bay Road Pedestrian Accommodations

- In the long-term and as additional development occurs, construct a 5-foot wide sidewalk along the north side of Corinth Road from the Indiana Avenue intersection to the bus stop located along the *Carey Road Industrial Park* frontage. Consider installing a mid-block pedestrian crossing at this location so that transit riders can access the commercial area located near Exit 18. Signing for the crosswalk should meet guidelines developed as part of the State’s Pedestrian Safety Action Plan and provided in the NMUTCD. (as shown on the diagram to the right) and summarized below:
 - Install back to back “Pedestrian Warning” signs (W11-2) at the crosswalk along with diagonal downward pointing arrow plaques (W16-7P).
 - Install “Pedestrian Warning” signs (W11-2) along with “Ahead” plaques (W16-9P) approximately 360-feet east and west of the crosswalk.
 - Provide ADA compliant landings.
 - If a traffic signal is installed at the Carey Road East intersection, consider relocating the bus stop to this intersection in order to provide access to a signalized crosswalk.



Pedestrian and bicycle improvements may be implemented through developer mitigation and/or initiated through the Town and coordinated through state and federal funding opportunities.

C. IMPROVEMENTS AND CONCEPTUAL COSTS

The estimated conceptual costs for the following improvement options are summarized in Table 4.4. The estimated costs are summarized by construction costs and soft costs associated with design, inspection, and contingencies.

Spot Intersection Improvements

- Phase 1 –
 - 1) Construct westbound left-turn lane on Corinth Road at the Carey Road East intersection.
 - 2) Monitor for installation of a traffic signal at the Corinth Road/Carey Road East intersection.
- Phase 2 –
 - 1) Monitor for construction of a westbound left-turn lane on Corinth Road at the Carey Road West intersection.
 - 2) Construct an eastbound left-turn lane on Corinth Road at the Big Bay Road intersection.
 - 3) Widen the northbound Big Bay Road approach at the Corinth Road intersection to provide an exclusive left-turn lane and a shared through/right-turn lane. Restripe the southbound approach to provide an exclusive left-turn lane and a shared through/right-turn lane. Modify or replace the signal as needed to accommodate the new lane arrangement. Incorporate pedestrian upgrades at the signal.
 - 4) Provide pedestrian accommodations on all approaches to the Corinth Road/Big Bay Road intersection.

Infrastructure Improvements

- Sidewalks –
 - Construct a sidewalk on the south side of Corinth Road along the property frontage located in the southeast quadrant of the Corinth Road/Big Bay Road intersection. (potentially built by others)
 - Construct a sidewalk connection from the existing *Skyzone* building to the *Stewart’s Shop* on

- the south side of Corinth Road. (potentially built by others)
- o Extend the sidewalk along the north side of Corinth Road from the Indiana Avenue intersection to the bus stop located along the *Carey Road Industrial Park* frontage.
- o Construct a sidewalk on the south side of Corinth Road from transit stop to *Skyzone*.
- o Construct a pedestrian connection from the transit stop to *Adirondack Radiology Associates*.
- Install a mid-block pedestrian crossing at the existing transit stop.

Corridor Improvements

- Consider constructing a two-way left-turn lane between the Carey Road East and Carey Road West intersections across the frontage of the *Carey Road Industrial Park*.
- Consider constructing a two-way left-turn lane on Corinth Road between the Carey Road East and Big Bay Road intersections.
- Consider adding lighting on the north side of Corinth Road along the proposed sidewalk extension.
- Restrict through movements and left-turns exiting Stewart's.

TABLE 4.4 – COST SUMMARY

		Improvement	Cost
Intersection Improvements	Phase 1	WB Left-Turn Lane on Corinth Road at the Carey Road East intersection	\$840,000
		Traffic Signal at the Corinth Road/Carey Road East intersection	\$245,000
	Phase 2	WB left-turn lane on Corinth Road at the Carey Road West intersection	\$860,000
		EB left-turn lane on Corinth Road at the Big Bay Road intersection	\$515,000
		Provide NB exclusive left-turn lane and a shared through/right-turn lane at the Corinth Road/Big Bay Road intersection. Restripe SB approach to match. Modify traffic signal.	\$135,000
Infrastructure Improvements		Provide pedestrian accommodations on all approaches to the Corinth Road/Big Bay Road intersection	\$85,000
		Sidewalk on the south side of Corinth Road along the property frontage located in the southeast quadrant of the Corinth Road/Big Bay Road intersection that extends to the I-87 Exit 18 intersection	NA if built by developer
		Sidewalk connection from the <i>Skyzone</i> building to <i>Stewart's Shop</i>	NA if built by developer
		Extend the sidewalk along the north side of Corinth Road from Indiana Avenue to the existing transit stop	\$75,000
		Construct a sidewalk on the south side of Corinth Road from transit stop to <i>Skyzone</i>	\$150,000
		Construct a pedestrian connection from the transit stop to <i>Adirondack Radiology Associates</i>	\$30,000
Corridor Improvements		Install mid-block pedestrian crossing at the existing transit stop if needed or relocate to potential signalized intersection at Carey Road East.	\$15,000
		Construct two-way left-turn lane between the Carey Road East and Carey Road West intersections	\$1,150,000
		Construct two-way left-turn lane between the Carey Road East and Big Bay Road intersections	\$1,550,000
		Add lighting on the north side of Corinth Road along the proposed sidewalk extension	\$120,000
		Restrict through movements and left-turns exiting Stewart's	\$15,000
Construction Costs Sub-Total			\$5,785,000
Soft Costs – Design, Construction/ Inspection, Contingencies, etc. (approximately 30% of Construction Costs)			\$1,735,000
Improvement Cost Total			\$7,520,000

It should be noted that the total improvement cost reflects anticipated costs if these recommendations were constructed individually. The overall improvement cost would be dramatically reduced to approximately \$3,455,000 (approximately 55% less) if the improvements were completed as part of a larger project that included construction of multiple improvements at the same time. For example, the estimates for the two-way left-turn lanes include areas that would need to be improved in order to implement the proposed eastbound and westbound left-turn lanes on Corinth Road; therefore, these types of improvements should be implemented in a phased approach in order to minimize construction costs.

D. FUNDING OPPORTUNITIES

Transportation funding resources are constrained, and as of the date of this document, there is no public funding commitment for any of the changes identified in this study, so pursuing funding is a major step in the implementation plan.

It is recommended that the Town of Queensbury and Warren County work proactively to identify funding to fund the design and construction of the preferred intersection improvements, which may include some developer mitigation and working with A/GFTC to get a project or projects on the Transportation Improvement Program (TIP). The TIP is a five-year capital improvement program that allocates federal highway funds to surface transportation projects that have been selected through A/GFTC's planning process. A/GFTC updates the TIP every two years to maintain a current list of projects. The Sponsor should also identify local funding sources to establish the local match assuming Federal funds cover 80% of the costs. The funding and implementation will require further coordination and commitment from the Town, the County, and the A/GFTC. Below is a description of potential Federal and State funding sources.

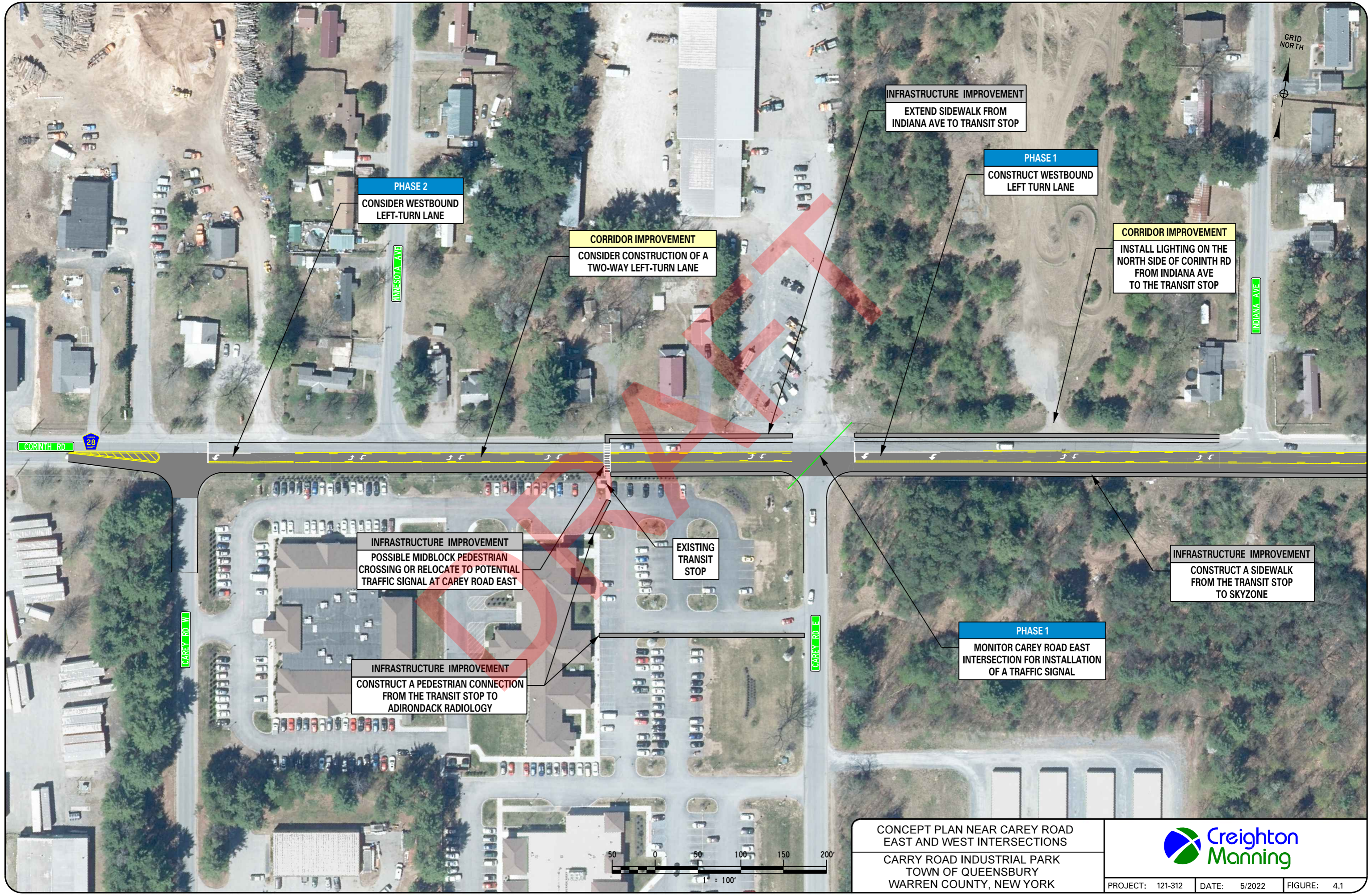
Federal

- HSIP – Highway Safety Improvement Program funding is for projects designed to achieve significant reductions in traffic fatalities and serious injuries on all public roads. Selected recommendations may be eligible for HSIP funding since the crash rate at the Big Bay Road and Carey Road East intersections on Corinth Road exceed the statewide average. These improvements would include (but are not limited to) the provision of pedestrian accommodations along Corinth Road, installation of a mid-block pedestrian crossing near the transit stop or a traffic signal at the Carey Road East intersection with pedestrian accommodations, and the construction of two-way left-turn lanes which would reduce rear-end and right-angle collisions.
- NHPP/STBG – National Highway Performance Program (NHPP) and Surface Transportation Block Grants (STBG) are sources of funding for projects that support progress toward achievement of national performance goals for improving infrastructure condition, safety, travel time reliability, and mobility. These funding sources, when programmed towards non State-owned facilities, are typically administered by the Metropolitan Planning Organization process coordinated by A/GFTC.
- TA – Transportation Alternatives funding is a set-aside of funds under the Surface Transportation Block Grant (STBG) Program for on and off road pedestrian and bicycle facilities, non-driver access to public transportation, and safe routes to schools. States have flexibility in how the TA program is administered and the New York State program is run through the state level TAP office. This funding source could be pursued if the pedestrian and bicycle improvements exceed the minimum Federal Award of \$500,000.
- The Make the Connection Program is an A/GFTC - administered funding set-aside intended for bicycling- and pedestrian-specific improvements at targeted locations.

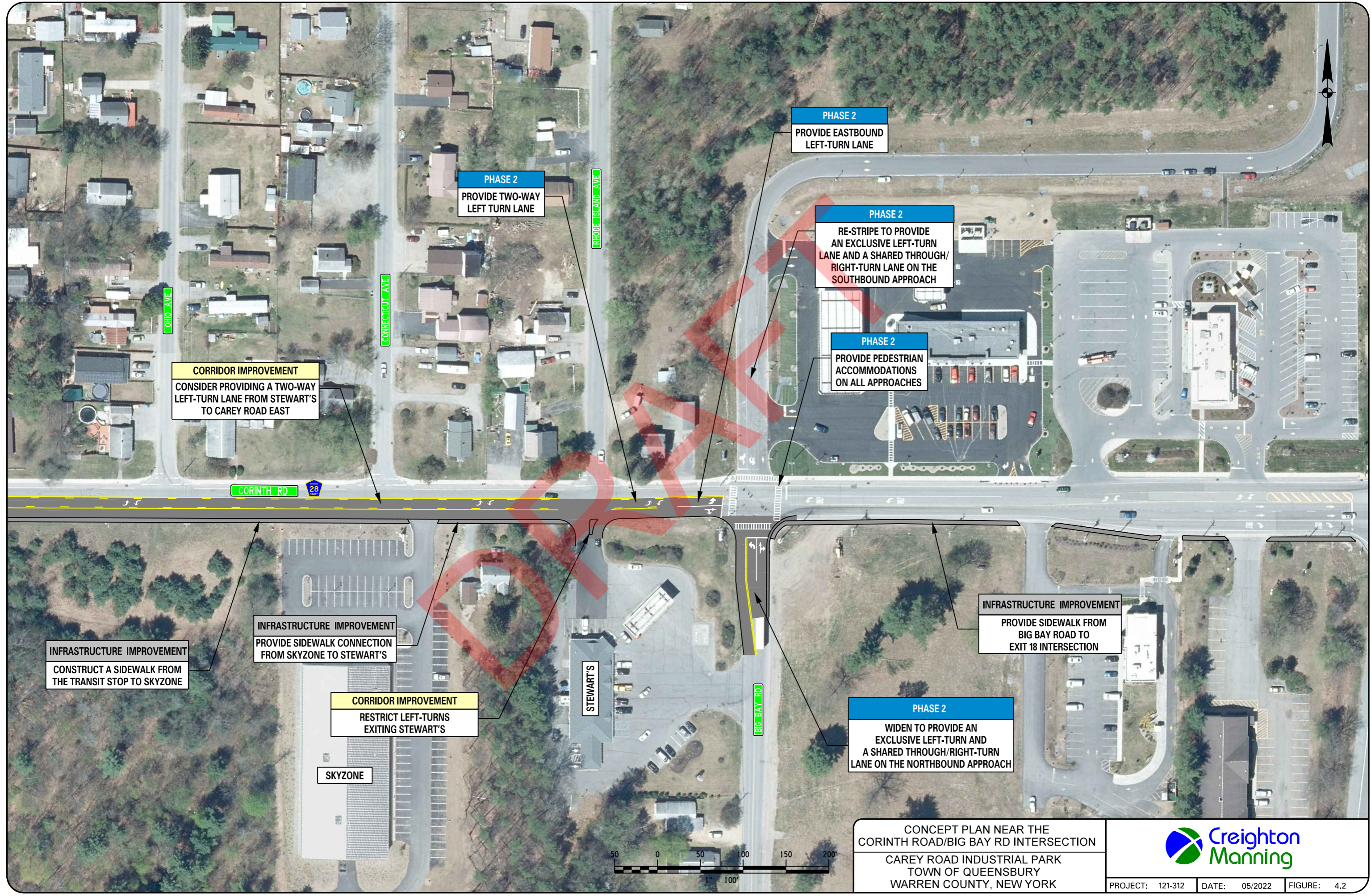
State

- CHIPS – The Consolidated Local Street and Highway Improvement Program provides State funds to municipalities to support the construction and repair of highways. In order to be eligible for CHIPS funding, the project must be undertaken by a municipality (i.e. Town of Queensbury), be for a highway-related purpose, and have a service life of 10 years or more.

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USER : mmorrissey



CORRIDOR IMPROVEMENT
CONSIDER PROVIDING A TWO-WAY LEFT-TURN LANE FROM STEWART'S TO CAREY ROAD EAST

PHASE 2
PROVIDE TWO-WAY LEFT TURN LANE

PHASE 2
PROVIDE EASTBOUND LEFT-TURN LANE

PHASE 2
RE-STRIPE TO PROVIDE AN EXCLUSIVE LEFT-TURN LANE AND A SHARED THROUGH/RIGHT-TURN LANE ON THE SOUTHBOUND APPROACH

PHASE 2
PROVIDE PEDESTRIAN ACCOMMODATIONS ON ALL APPROACHES

INFRASTRUCTURE IMPROVEMENT
CONSTRUCT A SIDEWALK FROM THE TRANSIT STOP TO SKYZONE

INFRASTRUCTURE IMPROVEMENT
PROVIDE SIDEWALK CONNECTION FROM SKYZONE TO STEWART'S

CORRIDOR IMPROVEMENT
RESTRICT LEFT-TURNS EXITING STEWART'S

SKYZONE

STEWART'S

BIG BAY RD

INFRASTRUCTURE IMPROVEMENT
PROVIDE SIDEWALK FROM BIG BAY ROAD TO EXIT 18 INTERSECTION

PHASE 2
WIDEN TO PROVIDE AN EXCLUSIVE LEFT-TURN AND A SHARED THROUGH/RIGHT-TURN LANE ON THE NORTHBOUND APPROACH

CONCEPT PLAN NEAR THE CORINTH ROAD/BIG BAY RD INTERSECTION
CAREY ROAD INDUSTRIAL PARK
TOWN OF QUEENSBURY
WARREN COUNTY, NEW YORK

