AIR QUALITY ANALYSIS AND IMPACT REVIEW

SHEFFIELD APARTMENTS DEVELOPMENT, TOWN OF MONTGOMERY

ORANGE COUNTY, NEW YORK

Revised September 2024

Prepared for:

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Background

B. Laing Associates, Inc. is an environmental consulting firm providing air quality analysis services for the proposed development (herein referred to as the Project) located at 1127 New York State Route 17K, in the Town of Montgomery, Orange County, New York. See attached Figure 1 – Site Location Map.

Proposed Action

The Applicant, MILR, LLC, proposes to develop the subject site identified as Section 29, Block 1, Lots 5.1, 5.2, 5.3, 5.4 and 5.5 which totals approximately 53.08 acres (2,312,208 sq ft). The proposed action includes the development of the former, vacant (agricultural) site with residential units (multifamily) to the south and, to the north, some commercial and retail fronting on Route 17K. Currently, the site is undeveloped and largely unimproved, consisting mainly of second-growth wooded habitats; shrubland and woods.

Per the project description listed in the Article 8 of the Environmental Conservation Law (State Environmental Quality Review Act) notice, the existing tax lots will be combined to create two (2) lots and additional road right-of-way. A 261-unit multifamily residential apartment complex will be constructed on one of the lots. Other uses include a 31,000 square feet of retail uses. The site would be developed with 819 vehicle parking spaces. Utilities do not presently serve the property and the applicant has proposed the construction of a wastewater treatment plant on Lot 1; the site is also within Town of Montgomery Sewer District No. 3. New water supply wells have been drilled to serve the site, and a 115-foot-tall water storage tank would be installed at the southerly end of the property. Access to the overall site will be from NYS Route 17K and internal drives will be constructed to access the uses.

The purpose of this analysis is to evaluate temporary or permanent impacts to air quality that may occur as a result of the Project. Mitigation and assessment of significant air quality impacts will be addressed accordingly.

General Air Quality Characteristics

Existing Conditions

Climate

The climate in Montgomery, New York is warm during the summer when average temperatures tend to be in the 70's and very cold during winter when average temperatures tend to be in the 20's. The National Oceanic and Atmospheric Administration (NOAA) record this local climate in Montgomery at the Orange County Airport in Orange County, New York. The warmest month of the year is July with high average temperature of 76.2 degrees Fahrenheit, while the coldest month of the year is January with a maximum recorded temperature 35 degrees Fahrenheit and minimum of 17 degrees Fahrenheit with an average of 25.9 degrees Fahrenheit. Temperature variations between night and day tend to be fairly consistent during summer season with a difference that can reach 23 degrees Fahrenheit, and comparable in winter months with an average difference of approximately 17 degrees Fahrenheit. The annual average rainfall in Montgomery is around 41.11 inches. This locale receives about 41 inches of snow per year on average.

Ambient Air Quality

Existing air quality is good for the Project site. The median air quality index (AQI) in 2022 for Orange County, New York was 33.[1] An AQI between 0 and 50 is satisfactory and air pollution poses little or no risk. Existing air quality standards for New York State are found in the State Ambient Air Quality Standards (SAAQS) which largely mimic the National Ambient Air Quality Standards (NAAQS). Possible relevant pollutants for mobile sources are particulate matter (PM), ozone (O_3) and carbon monoxide (CO). Carbon monoxide is the dominant pollutant and so, it is modeled as provided in NYSDOT's The Environmental Manual (TEM).

Table 1 depicts the N/SAAQS.

NYSDEC monitors air quality throughout the state. There are 58 active air monitoring sites in New York State. The measured parameters vary between air monitoring sites. There are currently six (6) open monitoring sites located within NYSDEC Region 3; 2 of which are within Orange County. Currently, only the 2022 Ambient Air Quality Reports prepared by NYSDEC are available. The closest monitoring site to the Project is Station 3566-09, located on Wakefern Road in Wallkill, New York.[2] Parameters measured at Station 3566-09 are described below:

Carbon Monoxide (CO) is not measured in NYSDEC Region 3. The closest monitoring station is the NYBG station located at the Botanical Gardens in the Bronx.[3] The highest one-hour value in 2022 was 2.42 ppm versus a standard of 35 ppm. The highest running eight-hour value was 1.7 ppm versus a standard of 9.0 ppm.

Lead (Pb) is monitored at Station 3566-09 in Wallkill. In 2022, the maximum 24-hour concentration of lead was recorded at 0.0279 ug/m^3 at station 3566-09. The highest three-month rolling average of lead in 2022 equaled 0.0066 ug/m^3. This three-month rolling average was well below the 0.15 ug/m^3 maximum allowed.

Nitrogen dioxide (NO_2) is not measured in Region 3. The nearest monitoring station is the NYBG station located at the Botanical Gardens in the Bronx. The annual value in 2022 was 13.10 ppb versus a standard of 53 ppb. The average 98th percentile in 2022 was 50.8 ppb. This was well below the 75 ppb maximum allowed.

[1] According to the United States Environmental Protection Agency (EPA) Outdoor Air Quality Data, Air Quality Index Report.
[2] Monitor 3566-09 is approximately 8.5 miles west of Project site.
[3] NYBG station is approximately 48 miles southwest of Project site.

TABLE 1
National/State Ambient Air Quality Standards*

POLLUTANT		PRIMARY/ SECONDARY	AVERAGING TIME	LEVEL	FORM
CARBON MONOXIDE		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
LEAD		primary and secondary	Rolling 3-month average	0.15 $\mu g/m^3$ (1)	Not to be exceeded
NITROGEN DIOXIDE		primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		primary and secondary	Annual	53 ppb (2)	Annual Mean
OZONE		primary and secondary	8-hour	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
PARTICLE POLLUTION	$PM_{2.5}$	primary	Annual	12 $\mu g/m^3$	annual mean, averaged over 3 years
		secondary	Annual	15 $\mu g/m^3$	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 $\mu g/m^3$	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24-hour	150 $\mu g/m^3$	Not to be exceeded more than once per year on average over 3 years
SULFUR DIOXIDE		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

*http://www.dec.ny.gov/chemical/8542.html

Ozone is not measured at the Wallkill station. The nearest station is Station 3951-01 on Mt. Nimham.[4] This monitor is located on Gipsy Trail Road in Kent, New York. Ozone is formed from the long-term transport of hydrocarbon emissions in the mid-western United States and as such, is not a "local" enforcement issue on emissions. It is the only pollutant that occasionally exceeds the standard in most NYSDEC Regions state-wide. The 4th Highest Daily Maximum 8-Hour Average for station 3951-01 in 2022 was 0.064 ppm with a mean 4th max totaling 0.062 ppm (2020-2022). This did not exceed the 0.070 ppm standard. The first highest maximum daily eight-hour average was 0.070 ppm in 2022.

Particulate matter (PM 2.5) is not measured at the Wallkill station, but is measured at Station 3502-04 in Newburgh. This station is the second closest to the site, located at the Newburgh Police Department at 55 Broadway, Newburgh, New York.[5] This station had an annual mean standard for the last three (3) years (2020-2022) of 6.1 $ug/m^{3.}$ This annual mean was well below the 12 ug/m^3 standard. This station had an average 98th percentile for last 3 years of 18.2 $ug/m^{3.}$ This average was well below the 35 ug/m^3 standard.

The closest sulfur dioxide (SO_2) monitor is in Region 2 at the NYBG station at the Botanical Gardens in the Bronx. In 2022, the annual average was recorded at 0.21 parts per billion (ppb) and the annual 99th percentile of 1-hour daily maximum concentrations (2020-2022) totaled 3.67 ppb versus a standard of 75 ppb.

According to the U.S. EPA's New York Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants (last updated November30, 2023), Orange County has not been listed as non-attainment for NAAQS since 2014.

See Table 2 below for the data described above going back 5 years.

[4] Station 3951-01 is approximately 26 miles east of Project site.
[5] Station 3502-04 is approximately 10 miles east of Project site.

TABLE 2 Ambient Air Quality Results 2018-2022					
Pollutant and Standards	Years and Totals				
Carbon Monoxide (NYBG)	2018	2019	2020	2021	2022
1 Hour Max Not to Exceed 35 PPM	2.3	1.94	1.92	1.67	2.42
8 Hour Max Not to Exceed 9 PPM	1.5	1.5	1.3	1.1	1.7
Lead (Wallkill)					
24 Hour Max	0.01	0.08	0.0839	0.0222	0.0279
Rolling 3 Month Ave Max 0.15 µg/m^3	0.01	0.0079	0.0124	0.0078	0.0066
Nitrogen Dioxide (NYBG)					
12 Month Avg Not to Exceed 53 PPB	14.44	12.81	12.36	12.64	13.1
Average 98th Percentile Not to Exceed 75 PPB	53.9	38.8	38.2	36.5	50.8
Ozone (Mt. Nimham)					
4th Highest Max 8-Hr Avg Not to Exceed 0.070 PPM	0.066	0.062	0.058	0.063	0.064
4th Max 8-hour Avg by Site	0.69	0.066	0.065	0.063	0.062
Particulate Matter 2.5 (Newburgh)					
3 Yr Avg of Annual Mean Not to Exceed 12.0 µg/m^3	6.0	6.0	5.8	6.0	6.1
3 Yr Avg 98th Percentile Not to Exceed 35 µg/m^3	17.5	16.9	16.2	18.5	18.2
Sulfur Dioxide (NYBG)					
Annual Average	0.63	0.56	0.44	0.46	0.51
3 Yr Avg 99th Percentile Not to Exceed 75 PPB	6.23	5.23	4.77	3.67	3.67

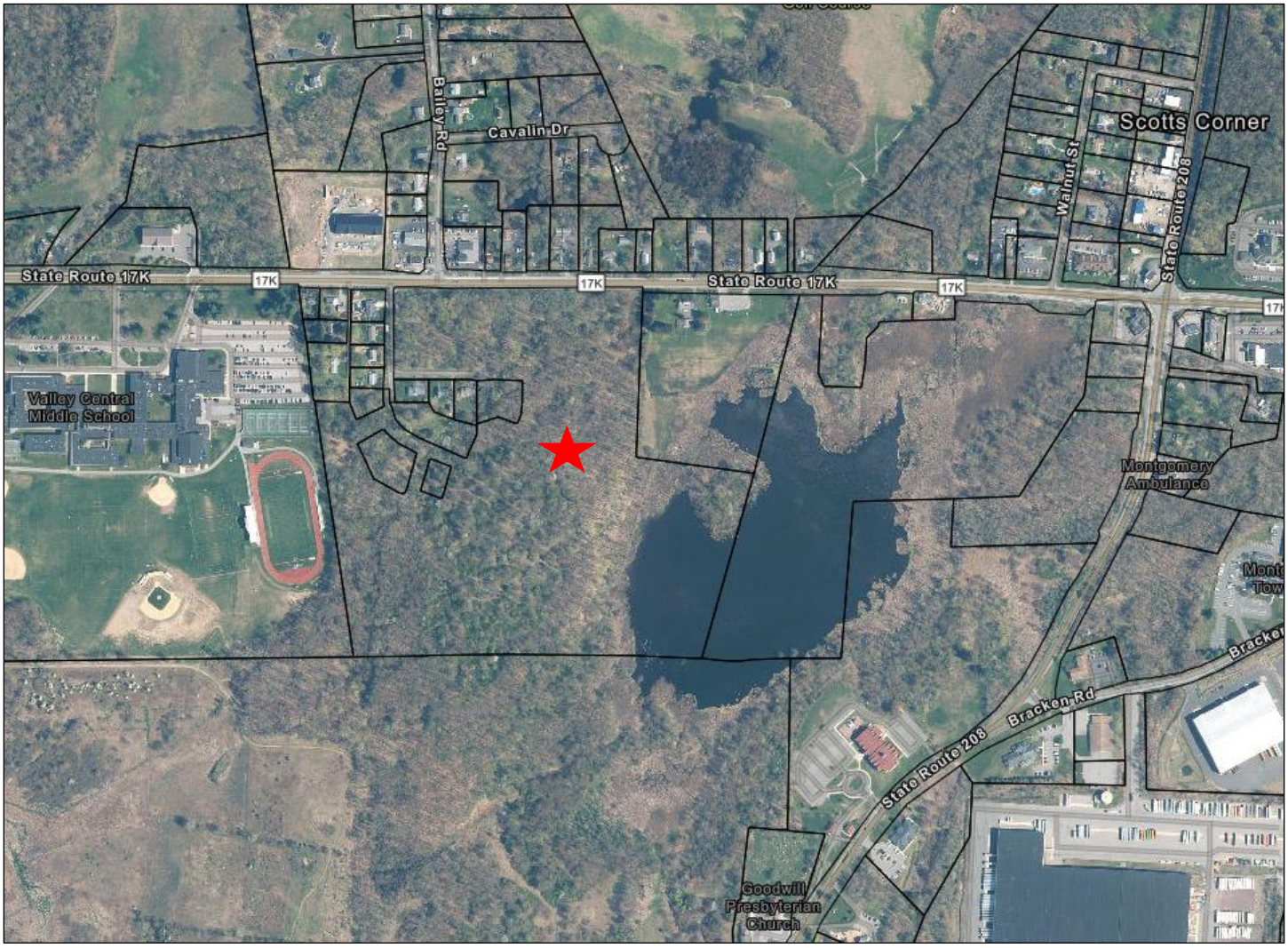


FIGURE 1
SITE LOCATION MAP

1127 NEW YORK STATE ROUTE 17K, TOWN OF MONTGOMERY, ORANGE COUNTY, NEW YORK

(SOURCE: ARCGIS)

Proposed Action Analysis

Mobile Screening:

The first level of "air quality screening" as provided in NYSDOT's The Environmental Manual (TEM) is essentially a traffic analysis consistent with the Highway Capacity Manual (HCM). This Traffic Impact Study was provided by Colliers Engineering & Design last dated September 2024 and is attached to the Environmental Impact Statement (EIS). The TEM provides guidance on determination for a required microscale analysis which is based on the consideration of several standards.

Per TEM I-1 Level of Service (LOS) Screening, intersections potentially impacted by the Project must be screened for overall Level of Service (LOS). If the LOS is A, B, or C, no further analyses are required. If any signalized intersections have LOS predicted D, E, or F, significant vehicle queuing may occur and further analysis may be required for up to the three worst intersections. Traffic analyses and LOS summaries were developed from current traffic counts collected by representatives of Colliers Engineering & Design CT, P.C., through previous traffic studies from projects within the vicinity and NYSDOT. Six (6) intersections, as listed in Table 2, were analyzed by the engineer. The traffic data included four (4) signalized intersections and two (2) unsignalized intersections. These intersections were analyzed in the A.M., P.M., and Saturday Peak scenarios. LOS was analyzed in these scenarios for base/existing condition (2023), no build (2026), and build phase (2026). Figure 2 depicts the analyzed intersections in aerial view.

A search for "sensitive" noise receptors within 1,500 feet of the site was undertaken for this air quality analysis. Sensitive receptors are defined by the EPA to "…include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities." The receptors within 1,500 feet of the proposed action included residential parcels, commercial uses, Valley Central High School, and Goodwill Church. Thus, sensitive receptors exist within the vicinity of the site. However, the ambient air quality standards cited above were set to protect the public health and welfare, including sensitive individuals. Thus, in the end, all such receptors are subject to the same standards.

TABLE 3
ANALYZED INTERSECTIONS

NO.	INTERSECTION	ANALYZED
1	NYS Route 17K and NYS Route 208	signalized
2	NYS Route 17K and Bailey Road	unsignalized
3	NYS Route 17K & Valley Central School Exit Driveway/ Dollar General Driveway	signalized
4	NYS Route 17K & Valley Central School Entry Driveway	signalized
5	NYS Route 17K and NYS Route 211	signalized
6	NYS Route 17K & Site Access	unsignalized

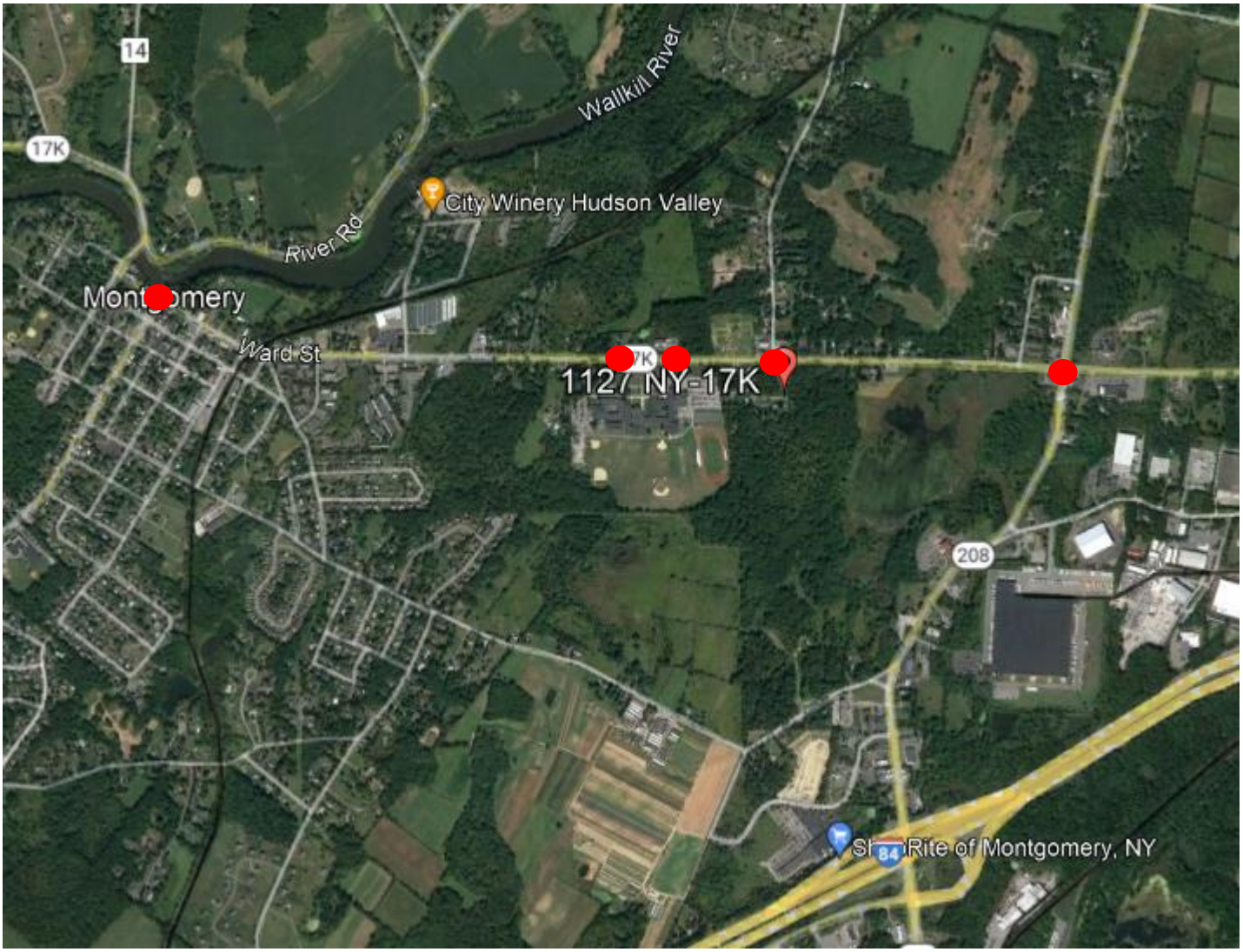


FIGURE 2

INTERSECTION ANALYSIS AERIAL MAP

1127 NEW YORK STATE ROUTE 17K, TOWN OF MONTGOMERY, ORANGE COUNTY, NEW YORK

(SOURCE: GOOGLE EARTH AERIAL)

AM Peak Scenario

2023 Existing Condition:
Four (4) signalized intersections were analyzed for the first level of screening in the AM, PM and Saturday peak hour scenario in the Traffic Impact Report. These included NYS Route 17K and NYS Route 208, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway, NYS Route 17K and Valley Central School Entry Driveway and NYS Route 17K and Union Street (NYS Route 211). In the AM condition, the findings of the capacity analysis determined that the overall LOSs for the intersections in the 2023 existing/base condition achieves an LOS of A, B or C. Thus, no further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

One (1) unsignalized intersection, NYS Route 17K and Bailey Road, was examined as part of the Colliers Engineering & Design traffic study in the AM 2023 existing condition scenario. Per the traffic analysis, NYS Route 17K and Bailey Road intersect at a "T" type intersection with Bailey Road being stop-sign controlled. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. LOS at unsignalized intersections are defined by minor movements since the "through" movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers in the minor movements at non-signalized intersections. The LOS of the location is typically a result of stacking by attempted turners. In this case, all approaches resulted in an LOS of A, B or C.

2026 No Build
Four (4) signalized intersections were analyzed for the first level of screening in the 2026 No Build peak AM scenario in the Traffic Impact Report. The findings of the capacity analysis determined that the overall LOS for intersections of NYS 17K and Union Street, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway and NYS Route 17K and Valley Central School Entry Driveway achieves an LOS of A, B or C in the 2026 No Build condition. The findings of the capacity analysis determined that the overall LOS for the intersection of NYS Route 17K and NYS Route 208 achieves an LOS of D in the 2026 No Build Condition. No further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

One (1) unsignalized intersection, NYS Route 17K and Bailey Road, was examined as part of the Colliers Engineering & Design traffic study in the AM 2026 No Build scenario. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. The LOS of the location is typically a result of stacking by attempted turners. In this case, all approaches resulted in an LOS of A, B or C.

2026 Build
Four (4) signalized intersections were analyzed for the first level of screening in the 2026 Build peak AM scenario in the Traffic Impact Report. The findings of the capacity analysis determined that the overall LOS for intersections of NYS 17K and Union Street, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway and NYS Route 17K and Valley Central School Entry Driveway achieves an LOS of A, B or C in the 2026 Build condition. The findings of the capacity analysis determined that the overall LOS for NYS Route 17K and NYS Route 208 achieves an LOS of D in the 2026 Build Condition. No further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

Further assessment of the intersection with LOS D in both the No Build and Build scenarios was performed. According the HCM the general description of LOS D is "Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)." Intersection LOS D is a result in the slight increase in signal delay. For the intersection of NYS Route 17K and NYS Route 208, the delay increases from 35.2 seconds per vehicle in the No Build condition to 39.1 seconds per vehicle in the Build condition. This is an increase of 3.9 seconds. Average control delay for LOS D is >35 -55 seconds per vehicle. Thus, the LOS level will not significantly decline as a result of the Project built or not built in 2026.

Two (2) unsignalized intersections, NYS Route 17K and Bailey Road and NYS Route 17K and Site Access, were examined as part of the Colliers Engineering & Design traffic study in the AM 2026 Build scenario. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. The LOS of the location is typically a result of stacking by attempted turners. In this case, all approaches resulted in an LOS of A, B, C in the intersection of NYS Route 17K and Bailey

Road. NYS Route 17K and Site Access will result in LOS E in the Site Access northbound approach. However, with the addition of a separate left turn lane westbound, LOS will be reduced in this approach to LOS D. Again, as described above, unsignalized intersections are unpredictable in delays, and so, LOS criteria are not an overall performance of the intersection.

TABLE 4 *LEVEL OF SERVICE SUMMARY TABLE* *WEEKDAY PEAK AM HOUR*					
INTERSECTION	ANALYZED	2023 EXISTING Overall LOS	2026 NO-BUILD Overall LOS	2026 BUILD Overall LOS	WITH SIGNAL TIMING MODIFICATION
NYS Route 17K and NYS Route 208	signalized	C	D	D	D
NYS Route 17K and Bailey Road	unsignalized	No Overall Provided – LOS a, b or c	No Overall Provided – LOS a, b or c	No Overall Provided – LOS a, b or c	
NYS Route 17K & Valley Central School Exit Driveway/ Dollar General Driveway	signalized	B	C	C	C
NYS Route 17K & Valley Central School Entry Driveway	signalized	B	B	B	
NYS Route 17K and NYS Route 211	signalized	C	C	C	C
NYS Route 17K & Site Access	unsignalized	-	-	No Overall Provided – LOS a, b or c/d, e or f	

PM Peak Scenario

2023 Existing Condition:

Four (4) signalized intersections were analyzed for the first level of screening in the AM, PM and Saturday peak hour scenario in the Traffic Impact Report. These included NYS Route 17K and NYS Route 208, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway, NYS Route 17K and Valley Central School Entry Driveway and NYS Route 17K and Union Street (NYS Route 211). In the PM condition, the findings of the capacity analysis determined that the overall LOS for the intersections in the 2023 existing/base condition achieves an LOS of A, B or C. Thus, no further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

One (1) unsignalized intersection, NYS Route 17K and Bailey Road, was examined as part of the Colliers Engineering & Design traffic study in the PM 2023 existing condition scenario. Per the traffic analysis, NYS Route 17K and Bailey Road intersect at a "T" type intersection with Bailey Road being stop-sign controlled. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. LOS at unsignalized intersections are defined by minor movements since the "through" movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers in the minor movements at non-signalized intersections. The LOS of the location is typically a result of stacking by attempted turners. In this case, all approaches resulted in an LOS of A, B or C.

2026 No Build

Four (4) signalized intersections were analyzed for the first level of screening in the 2026 No Build peak PM scenario in the Traffic Impact Report. The findings of the capacity analysis determined that the overall LOS for intersection of NYS Route 17K and Valley Central School Entry Driveway achieves an LOS of A, B or C in the 2026 No Build condition. The findings of the capacity analysis determined that the overall LOSs for the intersections of NYS Route 17K and NYS Route 208, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway and NYS Route 17K and Union Street achieves LOS D, E or F in the 2026 No Build Condition. No further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

One (1) unsignalized intersection, NYS Route 17K and Bailey Road, was examined as part of the Colliers Engineering & Design traffic study in the PM 2026 No Build scenario. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. In this case, the southbound Bailey Road approach resulted in an LOS of D. LOSs at unsignalized intersections is defined by minor movements since the "through" movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers in the minor movements at non-signalized intersections. The LOS of the location is typically a result of stacking by attempted turners. In this case, this is due to an increase in the average control delay as a result of an individual movement(s). Average control delay for an unsignalized intersection with LOS D is >25 -35 seconds per vehicle. Thus, again, unpredictable in delays, and not an overall performance of the intersection.

2026 Build

Four (4) signalized intersections were analyzed for the first level of screening in the 2026 Build peak PM scenario in the Traffic Impact Report. The findings of the capacity analysis determined that the overall LOS for NYS Route 17K and Valley Central School Entry Driveway achieves an LOS of A, B or C in the 2026 Build PM condition. The findings of the capacity analysis determined that the overall LOSs for the intersections of intersections of NYS Route 17K and NYS Route 208, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway and NYS Route 17K and Union Street achieves an LOS of D or E in the 2026 Build Condition. No further air quality analysis would be required for those intersections (at LOS A, B or C as cited above). Those that achieve overall intersection LOS D, E or F were further analyzed.

In review, LOS of the intersections will be D in both the No Build and Build scenarios for the intersections of NYS Route 17K and NYS Route 208 and NYS 17K and Union Street. According the HCM the general description of LOS D is "Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)." Intersection LOS D is a result in the slight increase in signal delay. For the intersection of NYS Route 17K and NYS Route 208, the delay increases from 38.6 seconds per vehicle in the No Build condition to 44.7 seconds per vehicle in the Build condition. This is an increase of 6.1 seconds. However, with proposed signal timing modifications, delay will be decreased to 44.2 seconds per vehicle or a difference of 5.6 seconds. Thus, the LOS level will not significantly decline as a result of the Project built or not built in 2026. For the intersection of NYS Route 17k and Union Street, the delay increases from 41.6 seconds per vehicle in the No Build condition to 50.7 seconds per vehicle in the Build condition. This is an increase of 9.1 seconds; however, is still categorized as LOS D. Thus, the LOS level will not significantly decline as a result of the Project built or not built in 2026.

Valley Central School Exit Driveway/Dollar General Driveway sees a reduction in LOS D to E from the No Build to Build scenario. According the HCM the general description of LOS E is "Unstable flow (intolerable delay)." Intersections with an LOS of E is a result in the slight increase in signal delay in the intersection of NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway. The delay increases from 53.9 seconds per vehicle in the No Build condition to 62.9 seconds per vehicle in the Build condition. This is an increase of 9.0 seconds. Average control delay for LOS E is >55 -80 seconds per vehicle. However, with proposed signal timing modifications, delay will be decreased from 62.9 seconds per vehicle to 32.5 seconds per vehicle (-30.4 seconds per vehicle) and will achieve LOS C. Thus, the LOS level, with proposed signal timing modifications, will increase the Level of Service criteria to adequate levels. Thus, the LOS level will not significantly decrease as a result of the Project built or not built in 2026.

Two (2) unsignalized intersections, NYS Route 17K and Bailey Road and NYS Route 17K and Site Access, were examined as part of the Colliers Engineering & Design traffic study in the PM 2026 Build scenario. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. In this case, the southbound Bailey Road approach resulted in an LOS of D. LOSs at unsignalized intersections are defined by minor movements since the "through" movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers in the minor movements at non-signalized intersections. The LOS of the location is typically a result of stacking by attempted turners. In this case, this is due to an increase in the average control delay as a result of an individual movement(s). The delay increases from 24.0 seconds per vehicle in the No Build condition to 26.3 seconds per vehicle in the Build condition. This is an increase of 2.3 seconds. Average control delay for an unsignalized intersection with LOS D is >25 -35 seconds per vehicle. NYS Route 17K and Site Access will result in an LOS of F in the site access northbound approach. However, with the addition of a separate left turn lane westbound, LOS will be reduced in this approach to an LOS of E. Again, as described above, unsignalized intersections are unpredictable in delays, and so, LOS criteria are not an overall performance of the intersection.

TABLE 5
LEVEL OF SERVICE SUMMARY TABLE
WEEKDAY PEAK PM HOUR

INTERSECTION	ANALYZED	2023 EXISTING Overall LOS	2026 NO-BUILD Overall LOS	2026 BUILD Overall LOS	WITH SIGNAL TIMING MODIFICATION
NYS Route 17K and NYS Route 208	signalized	C	D	D	D
NYS Route 17K and Bailey Road	unsignalized	No Overall Provided – LOS a, b or c	No Overall Provided – LOS a, b or c/d,e or f	No Overall Provided – LOS a, b or c/d,e or f	
NYS Route 17K & Valley Central School Exit Driveway/ Dollar General Driveway	signalized	C	D	E	C
NYS Route 17K & Valley Central School Entry Driveway	signalized	A	A	A	
NYS Route 17K and NYS Route 211	signalized	C	D	D	
NYS Route 17K & Site Access	unsignalized	-	-	No Overall Provided – LOS a, b or c/d,e or f	

Saturday Peak Scenario

2023 Existing Condition:
Four (4) signalized intersections were analyzed for the first level of screening in the AM, PM and Saturday peak hour scenario in the Traffic Impact Report. These included NYS Route 17K and NYS Route 208, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway, NYS Route 17K and Valley Central School Entry Driveway and NYS Route 17K and Union Street (NYS Route 211). In the Saturday Peak condition, the findings of the capacity analysis determined that the overall LOS for the intersections in the 2023 existing/base condition achieves LOS of A, B or C. Thus, no further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

One (1) unsignalized intersection, NYS Route 17K and Bailey Road, was examined as part of the Colliers Engineering & Design traffic study in the AM 2023 existing condition scenario. Per the traffic analysis, NYS Route 17K and Bailey Road intersect at a "T" type intersection with Bailey Road being stop-sign controlled. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. LOS at unsignalized intersections are defined by minor movements since the "through" movement on the main roadway is not affected by intersection traffic control. In addition, there is often much more unpredictability in the delay experienced by individual drivers in the minor movements at non-signalized intersections. The LOS of the location is typically a result of stacking by attempted turners. In this case, all approaches resulted in an LOS of A, B or C.

2026 No Build

Four (4) signalized intersections were analyzed for the first level of screening in the 2026 No Build Saturday peak scenario in the Traffic Impact Report. These included NYS Route 17K and NYS Route 208, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway, NYS Route 17K and Valley Central School Entry Driveway and NYS Route 17K and Union Street (NYS Route 211). In the Saturday Peak condition, the findings of the capacity analysis determined that the overall LOS for the intersections achieves an LOS of A, B or C. Thus, no further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

One (1) unsignalized intersection, NYS Route 17K and Bailey Road, was examined as part of the Colliers Engineering & Design traffic study in the 2026 Saturday condition scenario. In this case, all approaches resulted in an LOS of A, B or C.

2026 Build

Four (4) signalized intersections were analyzed for the first level of screening in the 2026 Build Saturday peak scenario in the Traffic Impact Report. These included NYS Route 17K and NYS Route 208, NYS Route 17K and Valley Central School Exit Driveway/Dollar General Driveway, NYS Route 17K and Valley Central School Entry Driveway and NYS Route 17K and Union Street (NYS Route 211). In the Saturday Peak condition, the findings of the capacity analysis determined that the overall LOS for the intersections achieves an LOS of A, B or C. Thus, no further air quality analysis would be required for those intersections (at LOS A, B or C as cited above).

Two (2) unsignalized intersections, NYS Route 17K and Bailey Road and NYS Route 17K and Site Access, were examined as part of the Colliers Engineering & Design traffic study in the Saturday Hour 2026 Build scenario. No overall intersection LOS is provided for unsignalized intersections in the Traffic Impact Report. In this case, all approaches in the intersection of NYS Route 17K and Bailey Road resulted in an LOS of A, B or C. NYS Route 17K and Site Access will result in an approach of LOS D, E or F. However, as described above, unsignalized intersections are unpredictable in delays, and so, LOS criteria are not an overall performance of the intersection.

TABLE 6 *LEVEL OF SERVICE SUMMARY TABLE* *WEEKDAY PEAK SAT HOUR*					
INTERSECTION	ANALYZED	2023 EXISTING Overall LOS	2026 NO-BUILD Overall LOS	2026 BUILD Overall LOS	WITH SIGNAL TIMING MODIFICATION
NYS Route 17K and NYS Route 208	signalized	C	C	C	
NYS Route 17K and Bailey Road	unsignalized	No Overall Provided – LOS a, b or c	No Overall Provided – LOS a, b or c	No Overall Provided – LOS a, b or c	
NYS Route 17K & Valley Central School Exit Driveway/ Dollar General Driveway	signalized	B	B	B	
NYS Route 17K & Valley Central School Entry Driveway	signalized	A	A	A	
NYS Route 17K and NYS Route 211	signalized	B	B	B	
NYS Route 17K & Site Access	unsignalized	-	-	No Overall Provided – LOS a, b or c/d,e or f	

As a result of the above traffic findings, no significant change in delays for signalized intersections will occur as a result of the project build out. Mobile analysis should not be required for the Project as it would not result in a significant air quality impact based upon traffic changes. The unsignalized intersections, identified as two-way stop controlled (TWSC), have no overall intersection LOS calculated. Although some of the approaches result in an LOS of D, E or F, these delays are based on individual movements that cause delays and are unpredictable and so, not an overall performance of the intersection. The TEM provides guidance on determination for a required microscale analysis which is based on the consideration of several standards. TEM is utilized for signalized intersections. Thus, TEM was used to guide the air quality, qualitative analysis in this study. Thus, no significant change in the Level of Service of signalized intersections will result from the proposed Project.

The are no NY State-regulated point sources of air pollution proposed for the site.

Air Quality Impacts

No significant air quality impacts are anticipated as a result of the buildout of the Project. The traffic data included four (4) signalized intersections and one, existing (1) unsignalized intersection plus a future, proposed intersection to the site. These intersections were analyzed in the A.M., P.M., and Saturday Peak scenarios. LOS was analyzed in these scenarios for base/existing condition (2023), no build (2026), and build phase (2026). These analyses were utilized to determine the impacts, if any, to air quality as a result of the proposed action. As provided above, similar Levels of Service and delays of signalized intersections will be experienced under the 2026 No-Build and 2026 Future Build Conditions and so, again, no significant air quality impacts are anticipated.

The applicant proposes the development of the former, vacant (agricultural) site with residential units multifamily to the south and, to the north, some commercial and retail fronting on Route 17K. As per the traffic analysis, intersections will not significantly reduce in LOS levels from the 2026 No Build and 2026 Build scenarios. Intersections that are categorized as A, B or C do not require additional microscale analyses per The Environmental Manual. Intersections that do not achieve this will run at LOSs similar to the No Build scenarios. Signal modifications are also proposed to mitigate two of the signalized intersections. Thus, no significant impacts are anticipated.

As previously mentioned, a search for "sensitive" noise receptors within 1,500 feet of the site was undertaken for this air quality analysis. In microscale dispersion modeling, link length and queues for intersections are set between 1,000 and 1,200-foot receptor analysis for free flow links. This is required by TEM. The receptors within 1,500 feet of the proposed action included residential parcels, commercial uses, Valley Central High School, and Goodwill Church. Thus, sensitive receptors exist within the vicinity of the site. However, the ambient air quality standards cited above were set to protect the public health and welfare, including sensitive individuals. Thus, in the end, all such receptors are subject to the same standards.

Climatic inversions are the result of a warm layer of air that rises and traps a layer of cooler air at ground level, usually for a period of a day or days. If this warm layer persists at the surface for a day or more, it prevents dispersion of pollutants, including vehicle emissions, dust and smoke. Such inversions are typical of areas with mountain valleys or areas clustered up against a mountain range. The local topographical and meteorological characteristics at this site are not conducive to the formations of climatic inversions.

Construction

The short-term use of heavy equipment operations will result in a temporary, minor increase in pollutant emissions from various equipment used in the construction process.

The Central Valley High School campus fields for athletic training share a side lot line with the proposed site. While it is true that the site will produce particulate emissions due to largely diesel-fueled construction equipment, it is not axiomatic that this would have a significant effect upon human health at the athletic fields south of the site.

As presented in the Air Quality Analysis of November 2023 (And above), Particulate Matter (PM 2.5) is measured at Station 3502-04 in Newburgh. This station is located at the Newburgh Police Department at 55 Broadway, Newburgh, New York.6 This station had an annual mean standard for the last three (3) years (2020-2022) of 6.1 ug/m3. This annual mean was well below the 12 ug/m3 standard. This station had an average 98th percentile for the last 3 years of 18.2 ug/m3. This average was well below the 35 ug/m3 standard. However, the ambient air quality standards cited above were set to protect the public health and welfare, including sensitive individuals [emphasis added]. Thus, in the end, all such receptors are subject to the same standards.

The PM 2.5 level at this NYSDEC air quality monitoring station on April 03, 2024, at 9 AM, was 0.9 ug/m^3 (see Attachment A) and is also well below the above standards. The existing NYSDEC's ambient air quality site is very similar and, in fact, experiences more traffic than the existing Central Valley High School location. That is, the Annual Average Daily Traffic (AADT) on NYS Route 17K is 11,580 versus 14,590 AADT on Broadway (an eastern extension of Rt 17K in the City of Newburgh. Not counting all other local traffic with traffic controls). There is 26% more traffic at (and closer to) the City of Newburgh monitoring site verses Rt 17K at the project site. Further, the AADT Rt I84 south of project site is 49,658 versus 66,450 on Rt I84 north of Broadway in Newburgh (see Attachment B). Thus, there is 34% more interstate traffic near the City of Newburgh Air Quality monitoring site.

[6] Station 3502-04 is approximately 10 miles east of Project site.

Thus, there is an air quality monitoring site near and under more environmentally conservative conditions than the project site or the Central Valley High School location.

The site is expected to generate far fewer emissions[7] than Route 17K, with two traffic lights[8] also adjacent to the site. If the combined emissions affecting the NYSDEC's Newburgh station cause it to record only 0.9 ug/m^3 and the traffic is 26 % to 34% higher than the major roadways/Interstate near the High School, then it is very unlikely that the project site' particulate emissions would have any significant impact and/or exceed the standards established to protect the publics' health and welfare.

A major concern during the construction operation will be the control of fugitive dust during site clearing, excavation, demolition grading and blasting operations. Fugitive dust is essentially airborne, larger aerodynamic diameter soil particles caused by heavy equipment operations entraining the freshly exposed soil into the air. To a lesser extent, some fugitive dust emissions will arise from wind erosion of the exposed soils. Their larger size causes them to be filtered by the fine 'hair-like' structures and mucus in peoples' nose and throat. While these can be a nuisance, they do not generate the health concern which can be caused by PM2.5.

New York State Department of Environmental Conservation (NYSDEC) considers potential impacts as a result of blasting in the State Environmental Quality Review Act in the Environmental Assessment Form. If blasting occurs more than 1,500 feet from any residence, hospital, school, day care or nursing home, then no significant impacts are anticipated. A small impact may occur if blasting occurs during the construction phase of the project. However, if blasting occurs within 1,500 feet of the above referenced residence receptors, no significant impacts will be anticipated as mitigating measures will be taken. Blasting mats will be utilized at the construction site. These mats will control the blast, as well as prevent high velocity fragments from damaging structures, prevent dust exposure and will suppress noise. Further, blasting blankets will be used in combination with the mats to provide further suppression of material. Vibration and air blasts as a result of blasting will not create a significant impact to receptors. The energy levels produced by blasting events decrease rapidly with distance.

All construction related air quality impacts will be of relatively short duration. Best construction management practices will be employed to reduce soil erosion and possible sources of fugitive dust. This generally includes the daily use of water/spray trucks in dry periods, anti-tracking pads at construction entrances, street sweeping at the entrances as needed on the site's interior, paved surfaces and adherence to a Storm Water Pollution Prevention Plan (SWPPP), which provides Erosion and Sediment Control.

Increases in pollutant emissions can, in some cases, result from construction traffic enroute to a project site. Construction traffic, specific to this project, is temporary, self-correcting and is not anticipated to decrease overall existing air quality. 40 CFR 93.123(c)(5) which states: "CO, PM10, and PM2.5 hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established "Guideline" methods. Temporary increases are defined as those which occur only during the construction phase and last five years or less at any individual site." Efforts will be maximized to reduce haul distances, minimize idling, use alternative fuels, use hybrid equipment, or retrofit construction equipment to reduce the potential of impacts to air quality during the construction phase of the project. In addition to the above, The Environmental Manual (TEM) will be utilized as an additional source of guidance for reducing potential impacts to air quality. However, as mentioned above, construction traffic specific to this project is temporary. As such, this traffic is "self-correcting" and is not anticipated to decrease overall existing air quality.

[7] The High School will be separated by 150 feet of undeveloped lands with the exception of one storm basin (which will not produce operational emissions).

[8] When the Central Valley High School significantly expanded its on-site parking lots and two traffic lights were added on Route 17K immediately adjacent to same no similar concern for these added emissions was expressed or analyzed.

Trucks, compressors, cranes, excavators and other equipment will be maintained and in good working condition and turned off when not in use. This will reduce the idling of unused equipment in adherence of state regulations as cited above. Reduced idling will reduce potential air pollution.

As a result of the findings, no further analysis in regards to potential air quality impacts due to construction is necessary as it would not result in a significant or extended impact on air quality as a result of the project.

Conclusions:

In review of screening guidelines of The Environmental Manual (TEM), no further air quality analysis should be required at this time for the Project as it would not result in a significant increase in impacts to air quality.

ATTACHMENT A
PARTICULATE MATTER (PM 2.5) LEVELS IN ORANGE COUNTY, NY

NYSDEC PM2.5 Monitoring Site Location

Project Site Location

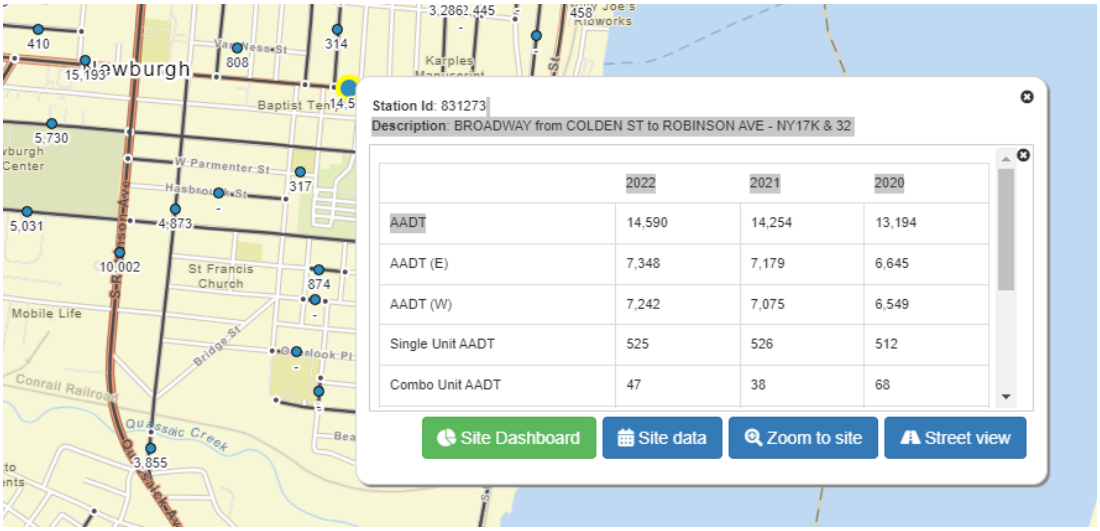
Newburgh

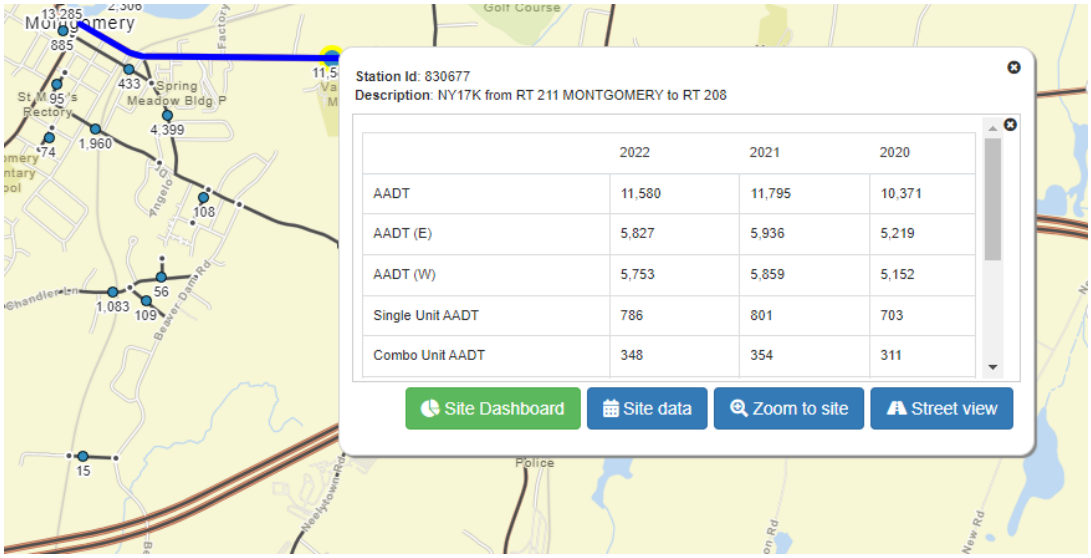
Station Info	
Station Name	Newburgh
Location	
Region	3
Owner	NYSDEC
Purpose	AIR QUALITY
Latitude	41.49918
Longitude	-74.008886
Elevation	0
Environment	

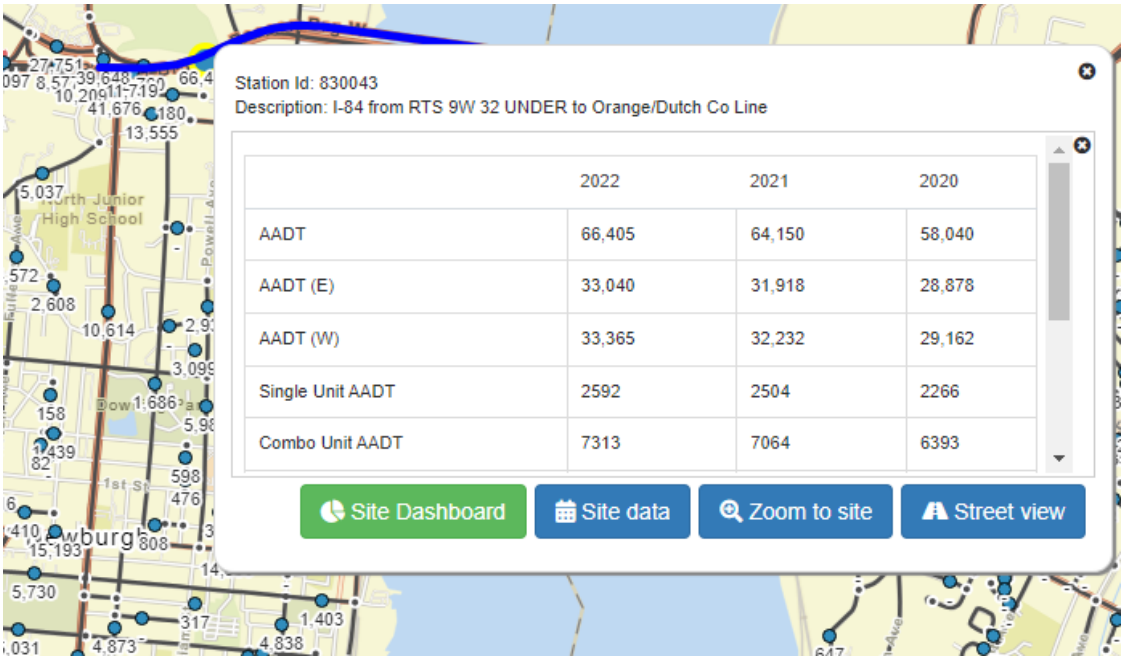
Last Received Values

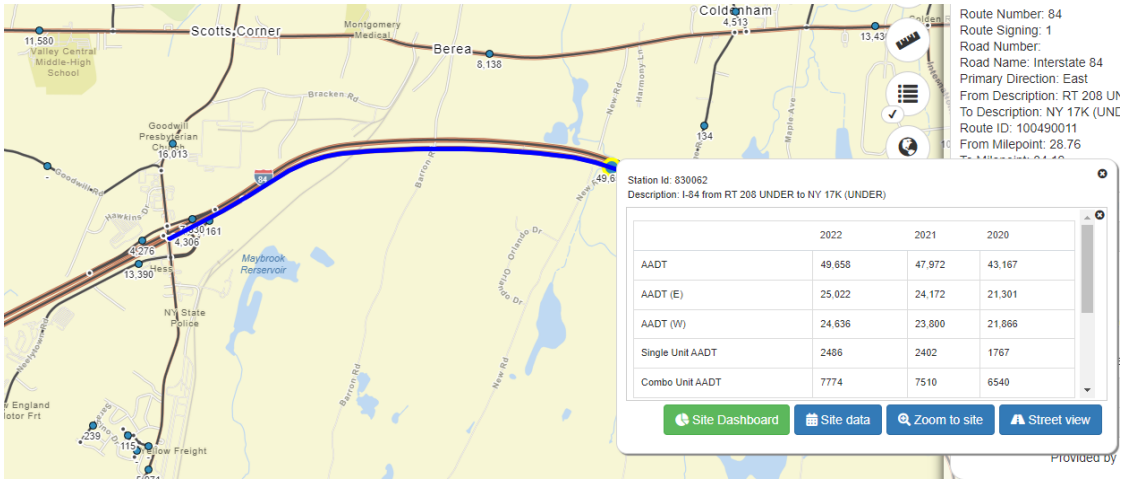
4/4/2024 9:00 AM	
PM25C	0.9 [ug/m3LC]

ATTACHMENT B
TRAFFIC LEVELS MONTGOMERY VS. NEWBURGH, NY
(at NYSDEC AQ monitoring station)


Station Id: 831273
Description: BROADWAY from COLDEN ST to ROBINSON AVE - NY17K & 32
2022 2021 2020
AADT 14,590 14,254 13,194
AADT (E) 7,348 7,179 6,645
AADT (W) 7,242 7,075 6,549
Single Unit AADT 525 526 512
Combo Unit AADT 47 38 68
Site Dashboard
Site data
Zoom to site
Street view


Station Id: 830677
Description: NY17K from RT 211 MONTGOMERY to RT 208
2022 2021 2020
AADT 11,580 11,795 10,371
AADT (E) 5,827 5,936 5,219
AADT (W) 5,753 5,859 5,152
Single Unit AADT 786 801 703
Combo Unit AADT 348 354 311
Site Dashboard
Site data
Zoom to site
Street view


Station Id: 830043
Description: I-84 from RTS 9W 32 UNDER to Orange/Dutch Co Line
2022 2021 2020
AADT 66,405 64,150 58,040
AADT (E) 33,040 31,918 28,878
AADT (W) 33,365 32,232 29,162
Single Unit AADT 2592 2504 2266
Combo Unit AADT 7313 7064 6393
Site Dashboard
Site data
Zoom to site
Street view


Route Number: 84
Route Signing: 1
Road Number:
Road Name: Interstate 84
Primary Direction: East
From Description: RT 208 UN
To Description: NY 17K (UND
Route ID: 100490011
From Milepoint: 28.76
Station Id: 830062
Description: I-84 from RT 208 UNDER to NY 17K (UNDER)
2022 2021 2020
AADT 49,658 47,972 43,167
AADT (E) 25,022 24,172 21,301
AADT (W) 24,636 23,800 21,866
Single Unit AADT 2486 2402 1767
Combo Unit AADT 7774 7510 6540
Site Dashboard
Site data
Zoom to site
Street view