

LANC & TULLY
ENGINEERING AND SURVEYING, P.C.

John J. O'Rourke, P.E., Principal
David E. Higgins, P.E., Principal

John D. Russo, P.E., Principal
John Queenan, P.E., Principal
Rodney C. Knowlton, L.S., Principal

John Lanc, P.E., L.S.
Arthur R. Tully, P.E.

Additional Air Analysis Information

in Response to Public Comment

on the Draft Environmental Impact Statement for LEGOLAND New York

Prepared by Kristen O'Donnell

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Lanc & Tully reviewed the public comments on the Draft Environmental Impact Statement (DEIS) for LEGOLAND New York. The DEIS analysis indicated that "no unavoidable adverse impacts are anticipated to air quality." (DEIS, page 155). This memorandum provides additional information in response to public comment regarding potential air quality impacts.

I. INTRODUCTION

While the immediate vicinity of the Project Site does not contain any major existing sources of emissions, Orange County has historically experienced elevated ozone levels due in part to proximity to the New York/New Jersey metropolitan area. Orange County was also designated nonattainment for fine particulate matter (PM2.5) in the past, but concentrations of both ozone and PM2.5 in Orange County have decreased substantially in the past 10 years. This conclusion is based on information publicly available on the EPA website at: <https://www.epa.gov/air-trends/air-quality-cities-and-counties>.

Additionally, according to the American Lung Association's latest State of the Air report, Orange County's air is cleaner than a decade ago. Between 2013 and 2015, Orange County experienced 4 ozone alert days. That total was 25 such days a decade ago. In 1996, there were 31 total ozone alert days. This information is available on the American Lung Association's website (<http://www.lung.org/our-initiatives/healthy-air/sota/city-rankings/states/new-york/orange.html>). This data shows a clear trend of improving air quality in Orange County, which belies comments that air quality is worsening in Orange County.

In the Town of Goshen air quality analysis was most recently completed for the Amy's Kitchen/Science of the Soul project, which evaluated air quality impacts arising from both stationary emission sources at the Amy's Kitchen proposed manufacturing facility, as well as vehicular emissions associated with both employee trips and Science of the Soul special events. 1,169 daily trips were projected to occur at the Amy's Kitchen facility, and, for Science of the Soul special events, 12,600 attendees are projected to arrive by car and bus. The Science of the Soul site can accommodate 2,036 cars and 130 buses.

The Amy's Kitchen/Science of the Soul DEIS air quality evaluation concluded that:

The additional vehicle trips generated by the Proposed Project and the Proposed Project's stationary sources are not expected to cause any exceedance of ambient air quality standards. None of the locations affected by the Proposed Project would exceed any of the screening criteria. Therefore, additional screening or microscale modeling was not required, and the Proposed Project would not cause any significant adverse air quality impacts from mobile sources.

The Proposed Project would introduce relatively small stationary sources at a large distance from the nearest sensitive locations, and the traffic increments associated with the Proposed Projects would not exceed screening levels. Overall the review of these sources has concluded that the Proposed Project would not cause any significant adverse air quality impacts.

Emissions from vehicles generated by the Proposed Project would be unavoidable, but are not considered impacts as none of the screening locations for mobile source emissions exceed the volume threshold criteria for either carbon monoxide or particulate matter established by NYSDOT. Emissions from stationary sources (process boilers, heat and hot water systems, and ovens) are also considered unavoidable, but are not considered impacts as none of the stationary sources individually or collectively are large enough to require any air quality permits, they would be located a large distance from any sensitive receptor, and because ambient pollutant concentrations are substantially lower than NAAQS. Since the Proposed Project would not result in any significant adverse air quality impacts, no mitigation was required.

The analysis conducted for the Amy's Kitchen/Science of the Soul project supported a determination by the Planning Board, as Lead Agency, that that project would not result in any significant adverse impacts to air quality. A copy of the DEIS Air Quality Analysis conducted for the Amy's Kitchen/Science of the Soul project is included as an addendum herein.

II. EXISTING CONDITIONS

The Clean Air Act (CAA) and its amendments led to the creation of NAAQS by the U.S. Environmental Protection Agency (EPA) for six criteria air pollutants: carbon monoxide (CO), sulfur dioxide (SO₂), ozone (O₃), particulate matter (PM), nitrogen dioxide (NO₂), and lead. There are two types of NAAQS—primary standards and secondary standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The National Ambient Air Quality Standards can be found online at <http://www.epa.gov/air/criteria.html>.

The Table below summarizes the *National Ambient Air Quality Standards* for primary and secondary NAAQS for the criteria pollutants. The six criteria pollutants are briefly described below, including a brief discussion of the relevance of each pollutant to the emissions sources involved with the Proposed Project.

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 µg/m ³	not to be exceeded
Nitrogen dioxide	primary		1-hour	100 ppb	98th percentile, averaged over 3 years
	primary and secondary		Annual	53 ppb	annual mean
Ozone	primary and secondary		8-hour	0.075 ppm	annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particulate matter	PM _{2.5}	primary	Annual	12 µg/m ³	annual mean, averaged over 3 years
		secondary	Annual	15 µg/m ³	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 µg/m ³	98th percentile, averaged over 3 years
	PM ₁₀	primary and secondary	24-hour	150 µg/m ³	not to be exceeded more than once per year on average over 3 years
Sulfur dioxide	primary		1-hour	75 ppb	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

Carbon Monoxide (CO)

Carbon monoxide is a colorless, odorless gas emitted from combustion processes, including engine exhaust. Elevated carbon monoxide concentrations can cause adverse health impacts by reducing oxygen delivery to vital organs. For this Project, carbon monoxide is primarily a consideration in the vicinity of congested intersections.

Lead (Pb)

Lead is a toxic heavy metal that can have numerous adverse health impacts, including neurological damage to children and cardiovascular effects in adults. Lead emissions can contribute to exposure through the air directly or indirectly by causing soil/water contamination. Prior to the phase out of leaded gasoline, automobiles were a source of lead emissions. According to the EPA, the major sources of lead emissions to the air today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline.⁴¹⁸ The Proposed Project does not involve lead emissions; therefore, lead is not discussed further in the air quality analysis.

Nitrogen Dioxide (NO₂)

NO₂ is one of a group of reactive gases called nitrogen oxides or NO_x. NO₂ forms small particles that penetrate deep in the lungs and can cause or worsen existing respiratory system problems such as asthma, emphysema, or bronchitis. NO₂ emission sources associated with the Proposed Project include autos and

trucks, construction equipment, and natural gas boilers, among others. NOx are also a precursor to the formation of ozone and PM2.5.

Ozone (O3)

Ground-level ozone is an important component of smog and is formed through reactions of nitrogen oxides (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Sources of NOx and VOC emissions include both mobile and stationary sources. Health effects of ozone exposure include respiratory irritation, reduced lung function, worsening of diseases such as asthma. People with lung disease, children, older adults, and people who are active outdoors may be particularly sensitive to ozone. Elevated ozone can also impact sensitive vegetation.⁴²⁰ Ozone formation is a regional air quality concern; therefore the potential impacts in terms of ozone formation are addressed by quantifying the contribution of the Project to precursor emissions rather than predicting Project Site- specific ozone concentrations.

Particulate Matter (PM)

PM is a broad class of air pollutants that exist as liquid droplets or solids, with a wide range of size and chemical composition. Smaller particulates that are smaller than or equal to 10 and 2.5 microns in size (PM10 and PM2.5) are of particular health concern because they can get deep into the lungs and affect respiratory and heart function. Particulates can also impact visibility; damage soil, plants, and water quality; and stain stone materials. PM emissions are primarily a concern for heavy-duty trucks and other equipment with diesel engines, although some level of PM emissions also occurs from gasoline and natural gas combustion.

Sulfur Dioxide (SO2)

SO2 is part of a group of reactive gasses called oxides of sulfur. Health effects of SO2 exposure include adverse respiratory effects, such as increased asthma symptoms. The largest sources of SO2 emissions nationally are from fossil fuel combustion at power plants/industrial facilities, electrical utilities, and residential/commercial boilers. Mobile sources are not a significant source of SO2 emissions.

New York State Air Quality Standards

The NAAQS for CO, annual NO2, and SO2 have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12-month basis rather than for calendar years only.

The NYSDEC has issued standards for certain non-criteria compounds, including non-methane hydrocarbons, fluorides, beryllium, and hydrogen sulfide. The Project would not involve industrial operations or other potential sources of fluoride or beryllium emissions; therefore, these pollutants will not be considered further.

NYSDEC also developed short-term and annual guideline concentrations (SGCs and AGCs) for numerous non-criteria pollutants. The NYSDEC guidance thresholds represent ambient levels that are considered safe for public exposure.

Attainment Status

Areas that do not meet the NAAQS are classified as nonattainment areas for that pollutant. Areas that

have never been designated nonattainment for a pollutant and NAAQS are considered attainment areas. State implementation plans are designed to bring nonattainment areas into compliance with the NAAQS, including the establishment of emissions “budgets” or the maximum emissions allowed for different source categories to ensure the air quality standards would be met. Former nonattainment areas currently meeting the NAAQS are designated maintenance areas. Former nonattainment areas currently meeting the NAAQS are designated maintenance areas and must have maintenance plans for 20 years.

The Project would be located within Orange County, New York. The EPA designates Orange County as a maintenance area for the 1997 and 2006 PM_{2.5} NAAQS.

Orange County is also part of a nonattainment area for the 1997 8-hr ozone standard, but is in attainment with the lower 2008 8-hr ozone standard (0.075 ppm). This has occurred because ozone levels have decreased over time in Orange County, and the county met the 2008 standard at the time nonattainment designations were made. The 1997 ozone standard nonattainment status has not been changed to maintenance; however for purposes of transportation conformity the 1997 ozone standard has been revoked by a 2012 EPA final rule. In addition, in 2013 EPA proposed revoking the 1997 ozone standard for all remaining purposes other than transportation conformity.

Orange County is an attainment/ unclassifiable area for the remaining Clean Air Act criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, coarse particulate matter (PM₁₀), and lead.

III. AMBIENT AIR QUALITY MONITORING DATA

Existing ambient air quality monitoring data for the criteria pollutants was obtained from EPA’s AirData portal, which incorporates the monitoring data reported by states (including NYSDEC and NJDEP). No existing air quality monitoring sites are located on or adjacent to the Project Site. Therefore, the monitoring sites available for each criteria pollutant were reviewed to identify the most representative monitoring site considering the distance from the Project area, elevation, and land use patterns. Table III.13-2 *Regional Air Quality Monitoring Data, 2011-2013* summarizes the available regional air quality monitoring data for the three year period from 2011 through 2013. The available monitoring data provide a general context for understanding existing air quality conditions, as well as the source of background concentrations of criteria pollutants for incorporation in air quality analysis. Background concentrations are needed in combination with the modeling results to determine the total predicted pollutant concentrations for comparison to the NAAQS.

Carbon Monoxide (CO)

There are no active CO monitoring sites in Orange County and very few active CO monitors in the region. As shown in Table III.13-2, CO concentrations at the Bronx Pfizer lab site (the closest monitoring site to the Project area) were well below the 1-hr and 8-hr NAAQS.

The following maximum CO concentrations from three years of data from the Bronx monitoring site were used for background concentrations in air quality modeling:

- 1-hr CO background concentration- 3.2 ppm
- 8-hr CO background concentration- 2.8 ppm

Nitrogen Dioxide (NO₂)

There are no active NO₂ monitors in Orange County. The Mohawk Mountain site in Connecticut, although distant from the Project area, reflects the rural Project area land use and shows a three-year average 98th percentile 1-hr NO₂ concentration of 19 ppb for 2011- 2013, which is less than the 1-hr standard of 100 ppb. The highest annual average concentration is 2.5 ppb, which is less than the standard of 53 ppb. For background concentrations for the 1-hr NO₂ NAAQS, the 98th percentile concentration in the year with the highest concentration was used (25 ppb in 2013).

Ozone (O₃)

O₃ monitoring data are also available for the Village of Montgomery, Orange County, New York (approximately 10 miles north of the Project Site, located farther from New York City than the Project area, at a lower elevation, 37 meters). The three-year average of the 4th highest 8-hr concentrations at this site was 0.063 ppm for 2011-2013 and below the NAAQS. NYSDEC submitted an Attainment Demonstration for Poughkeepsie, New York, area (which includes Orange County) to EPA in 2008. The attainment demonstration State Implementation Plan was approved by EPA on February 11, 2013.

PM_{2.5}

PM_{2.5} monitoring in the City of Newburgh, Orange County, New York, shows 24-hr and annual average concentrations below the NAAQS. The Newburgh monitor, which is the only active PM_{2.5} monitoring site in Orange County, is located approximately 20 miles northeast of the Project Site. The annual average PM_{2.5} concentration for the 2011-2013 period in Newburgh was 7.8 µg/m³, compared to recently lowered standard of 12 µg/m³. The 24-hr concentration was 20.2 µg/m³, compared to the 24-hr standard of 35 µg/m³. As noted above in the section on attainment status, Orange County has been redesignated to maintenance for PM_{2.5}.

The PM_{2.5} monitoring data from Newburgh, New York was used for purposes of establishing background concentrations for air quality modeling. The PM_{2.5} annual standard is expressed as the average of three consecutive years of annual averages, each estimated using equally weighted quarterly averages. Based on the Newburgh monitoring data, the background concentration for the Project area is 7.8 µg/m³.

Rather than using a single background concentration, the 24-hr PM_{2.5} standard is defined based on the average of the 98th percentile 24-hr concentrations over three consecutive years. The procedure for calculating design values specified under a second tier analysis in the EPA PM hot-spot guidance requires gathering information on the eight highest 24-hr concentrations by quarter over the three years of monitoring data for combination with the modeled data.

PM₁₀

PM₁₀ monitoring data are not available in Orange County or northern New Jersey. PM₁₀ monitoring at a regional scale rural site at Mohawk Mountain, Connecticut, shows a maximum 24-hr concentration of 25 µg/m³ in 2011, which is well below the NAAQS of 150 µg/m³.

Sulfur Dioxide (SO₂)

There are no active SO₂ monitors in Orange County or adjacent New Jersey counties to the south. Sulfur dioxide monitoring at Nimham Mountain in Putnam County, New York, shows 1-hr and 3-hr concentrations well below the NAAQS in 2013.

Lead (Pb)

There are three lead monitoring locations in Orange County associated with the monitoring of industrial sources in the Town of Wallkill. As source-oriented monitors, these sites are likely not representative of background concentrations in areas (such as the Project area) that do not have industrial lead emission sources nearby. The available monitoring data shows concentrations well above the NAAQS at the selected Wallkill monitor in 2011, but substantially lower concentrations below the NAAQS in 2012 and 2013.

Pollutant	Averaging Time	NAAQS	2011	2012	2013	Monitor Location/Site ID
Carbon Monoxide	8-hr	9 ppm	2.8 ppm	1.6 ppm	1.5 ppm	Pfizer Lab Site, Bronx, NY / 36-005-0133
	1-hr	35 ppm	3.2 ppm	2.4 ppm	2.1 ppm	
Nitrogen Dioxide	1-hour	100 ppb	23 ppb (98th percentile)	9 ppb (98th percentile)	25 ppb (98th percentile)	Mohawk Mt-Cornwall, Litchfield County, CT / 09-005-0005
	annual	53 ppb	2.5 ppb	1.7 ppb	1.6 ppb	
Ozone	8-hour	0.075 ppm	0.074 ppm	0.079 ppm	0.074 ppm	2 South Mountain Road, Rockland County NY / 36-087-0005
PM2.5	annual	12 µg/m3	8.6 µg/m3	7.8 µg/m3	7.1 µg/m3	55 Broadway, Newburgh, NY / 36-071-0002
	24-hour	35 µg/m3	20.8 µg/m3 (98th percentile)	20.2 µg/m3 (98th percentile)	19.6 µg/m3 (98th percentile)	
PM10	24-hour	150 µg/m3	25 µg/m3	24 µg/m3	23 µg/m3	Mohawk Mt-Cornwall, Litchfield County, CT / 09-005-0005
Sulfur Dioxide	1-hour	75 ppb	10.6 ppb (99th percentile)	6.3 ppb (99th percentile)	6.0 ppb (99th percentile)	NYSDEC Field Headquarters, Gypsy Trail Rd., Putnam County NY / 36-079-0005
	3-hour	500 ppb	12.1 ppb	10.4 ppb	8.1ppb	
Lead	Rolling 3 month average	0.15 µg/m	1.03 µg/m	0.15 µg/m	0.11 µg/m	Wallkill Wakefern, 290 Ballard Rd., Wallkill, NY/ 36-071-3002 (source-oriented)

ppm = parts per million, ppb = parts per billion, µg/m3 = micrograms per cubic meter

IV. PROJECT EMISSIONS AND ANALYSIS

This section provides an inventory of the onsite source of emissions associated with the Project.

On site sources of emissions at LEGOLAND California and LEGOLAND Florida are limited to minor emitters, consisting of only the following equipment:

- Two diesel emergency backup generators (one for the hotel and the other to power rides in the event of a power failure)
- A portable gas-powered generator mounted on a trailer to run power tools and welding equipment when not near a power outlet
- Two forklifts based in the warehouse
- 3 trucks
- 1 diesel Bobcat
- 12 gas powered carts
- 2 portable 5 hp Honda electric generators
- 8 lawn mowers
- 12 backpack blowers

- 10 weed trimmers
- 5 hand held hedge trimmers
- 2 chainsaws
- 4 rototillers

LEGOLAND New York would be equipped with similar equipment to that listed above, with the addition of four additional generators: one for the sewer pump station and one for the water booster station which would run in the event of a power outage but would automatically test run for a few minutes approximately once a week. One generator would be placed at the hotel and one generator would be required at the aquarium both also for use in the event of a power failure. Generators are anticipated to be 4.5 liter, 80kW diesel engines with an acoustical enclosure.

LEGOLAND New York would be serviced by electricity, with no natural gas service anticipated.

The total stationary sources emissions would be below the levels that would result in the Project being classified as a major facility. The Project is not considered a major facility for air permitting purposes because it does not have the potential to emit 25 tons/year or more of VOC or NOx. These are the major source thresholds for NOx or VOC in the New York City metropolitan area, which is defined by NYSDEC to include the Town of Goshen (6 NYCRR §201-2.1). Emissions of other criteria pollutants would be well under the 100 tons/year major source threshold.

In terms of permitting requirements, “emissions from process, exhaust or ventilating systems in bakeries and restaurants which derive over 50 percent of their revenues from retail sales on premises” are considered trivial sources that do not require NYSDEC air permits.

Because they would be used for backup operation only and would operate less than 500 hours per year, the diesel backup generators are classified as “exempt” from NYSDEC air permitting requirements at a non-Title V facility (6 NYCRR §201-3.2).

Pesticide/Herbicide Use

Airborne pesticides and herbicides would not be used at the Proposed Project; therefore, air quality impacts related to the use of pesticides and herbicides do not need to be evaluated.

V. CONFORMITY

Section 176(c) of the Clean Air Act (CAA; 42 U.S.C. § 7506(c)) requires federal agencies that license, permit or approve any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) before the action is approved. In this context, "conformity" requires that federal actions be consistent with the objective of SIPs to eliminate or reduce the severity and number of violations of the NAAQS, and achieve expeditious attainment of those standards.

Two different regulations implement the conformity requirement of the CAA: the transportation conformity regulations and the general conformity regulations. Transportation conformity applies to highway/transit projects and transportation plans developed, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 et seq.), while general conformity applies to all other Federal actions.

General Conformity

EPA’s general conformity regulations at 40 C.F.R. Part 93 Subpart B apply to federal activities except those covered under transportation conformity (40 C.F.R. Part 93 Subpart A). Since the Proposed Project requires approval by the U.S. Army Corps of Engineers for a Section 404 permit, but would not be funded or require approval under title 23 U.S.C. or the Federal Transit Act, 49 U.S.C 1601 et seq, general conformity requirements are applicable. General conformity regulations apply to a federal action in a nonattainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutants caused by the federal action equal or exceed certain *de minimis* rates. If the action will cause emissions above the *de minimis* rates and the action is not otherwise exempt, “presumed to conform,” or included in the existing emissions budget of the SIP, the agency must conduct a conformity determination before it takes the action.

Orange County is part of a moderate ozone nonattainment area for 1997 8-hr NAAQS.

The table below shows that total stationary source emissions would be well under the General Conformity *de minimis* thresholds. General conformity considers all direct and indirect emissions. Direct emissions are defined as “emissions of a criteria pollutant or its precursors that are caused or initiated by the Federal action and originate in a nonattainment or maintenance area and occur at the same time and place as the action and are reasonably foreseeable” (40 CFR 93.152).

	Tons/Year	Major Source /Facility Thresholds (tons)	General Conformity De Minimis Thresholds (tons)
CO	29.5	100	N/A
VOC	2.2	25	50 (ozone precursor)
NOx	18.5	25	100 (ozone and PM2.5 precursor)
PM	3.0	100	100
SO2	0.4	100	100 (PM2.5 precursor)
CO2e	47,582	100,000 (CO2e)	N/A

Note: General conformity does not apply to CO because Orange County is an attainment area for CO. There is no *de minimis* threshold for CO2.

Transportation Conformity

A transportation conformity determination for the relocation of Exit 125 is not required because no FHWA funding or approval is anticipated; thus, the relocation of Exit 125 is not an “FHWA/FTA project” as defined in the regulations (40 CFR 93.101). Non-FHWA regionally significant highway projects are still subject to certain other transportation conformity requirements under 40 CFR 93.121, if they require approval from a state, regional, or local routine recipient of Title 23 highway funds.

NYS DOT is required to approve the relocation of Exit 125 as operator of the NYS Route 17. Although a relatively minor part of NYS DOT’s overall funding sources, NYS DOT is a routine recipient of Title 23 funds and is therefore subject to 40 CFR 93.121. The applicable regulations per 40 CFR 93.121(a) are excerpted

below:

...no recipient of Federal funds designated under title 23 U.S.C. or the Federal Transit Laws shall adopt or approve a regionally significant highway or transit project, regardless of funding source, unless the recipient finds that the requirements of one of the following are met:

(1) The project comes from the currently conforming transportation plan and TIP (or meets the requirements of §93.104(f) during the 12-month lapse grace period), and the project's design concept and scope have not changed significantly from those that were included in the regional emissions analysis for that transportation plan and TIP;

(2) The project is included in the regional emissions analysis for the currently conforming transportation plan and TIP conformity determination (or meets the requirements of §93.104(f) during the 12-month lapse grace period), even if the project is not strictly included in the transportation plan or TIP for the purpose of MPO project selection or endorsement, and the project's design concept and scope have not changed significantly from those that were included in the regional emissions analysis; or

(3) A new regional emissions analysis including the project and the currently conforming transportation plan and TIP demonstrates that the transportation plan and TIP would still conform if the project were implemented (consistent with the requirements of §§93.118 and/or 93.119 for a project not from a conforming transportation plan and TIP).

The relocation or possible closure of Exit 125 has been evaluated by NYSDOT for many years without being advanced due to fiscal constraints in long-range transportation planning (no funding was available for the project). The Exit 125 Relocation will be included in the next Transportation Improvement Plan (TIP) update by the Orange County Transportation Council (OCTC) and will be included in the associated regional conformity determination.

V. MITIGATION

Direct Project-related Health Impacts

As discussed above, the primary NAAQS are health-based standards. NAAQS would not be exceeded as a result of the Proposed Project. Therefore, no health impacts related to Project-generated air emissions can be reasonably anticipated.

Construction-related Health Impacts

During construction, air quality could be temporarily affected by dust from disturbed areas during dry periods and emissions from construction vehicles and other machinery. Best Management Practices will be employed during construction activities to reduce the potential for fugitive dust generation at the site. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction site. Tracking pads would be established at construction exits to prevent dirt from being tracked onto roadways. Any truck routes within the site would be either watered as needed or, in cases where such routes would remain in the same place for an extended duration, the routes would be stabilized, covered with gravel, or temporarily paved to avoid the re-suspension of dust. During dry

weather, exposed soil areas (unpaved access roads, soil piles, staging areas etc.) would be watered once per day to control fugitive dust. All trucks hauling loose material would have their loads securely covered prior to leaving the construction sites. To minimize fugitive dust emissions, vehicles on-site would be limited to a speed of 10 mph. The temporary concrete batch plant would also incorporate dust control measures (e.g., dust collectors and covers limiting pathways for dust).

Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes consistent with NYSDEC regulations. Clear signage indicating idling limits shall be provided for construction workers at all access points.

Additionally, during construction, fugitive dust from soil erosion from the 149.9 acres of total disturbance is the largest potential contributor to air pollution. This is a temporary impact. Adherence to the *New York State Pollution Discharge Elimination System General Permit for Storm Water Discharges from Construction Activity*, combined with the required storm water pollution prevention plan and soil Best Management Practices, would further reduce the potential for soil erosion. Proposed erosion and sediment control measures consistent with Section 97-42 of the Town Code are proposed. All erosion and sedimentation control measures shall be installed before any land disturbance. The BMPs would include but not be limited to the following:

- The smallest practical area of land shall be exposed at one time;
- When land is exposed during development, the exposure shall be the shortest practical period of time;
- Temporary vegetation and other protective measures shall be provided to ensure soil stabilization to steeply slope areas;
- Provide controls to reduce soil erosion and intercept/slow storm water flows;
- Cover stockpiled soil;
- Use dust suppressants, such as watering soils and unpaved roadways;
- Preserve existing vegetation where no construction activities are planned and wherever possible; and
- Replant/re-vegetate all exposed disturbed areas immediately upon completion of construction.

During the excavation process, all the topsoil in disturbed areas would be cleaned and reused on-Site; sound rock, if encountered, could be crushed and utilized as base material. Dewatering would be required during the construction of building foundations, underground utility trenching/excavations, and any additional subsurface construction.

Carbon monoxide (CO) and other emissions associated with engine combustion are generally localized, causing elevated concentrations within a relatively short distance from heavily traveled areas or areas where several vehicles or pieces of machinery are operating simultaneously. Impacts from construction vehicles is anticipated to be minor for several reasons including proper maintenance of equipment, requiring vehicles to maintain strict minimal speed limits on site, controlling unnecessary idling for vehicles and equipment and providing sufficient onsite parking for construction workers. Further, according to the NYS DOT's Environmental Procedures Manual, emissions from construction vehicles and equipment is temporary and "self-correcting once the Project is completed".

Traffic-related Impacts

No mitigation for mesoscale emission increases on Route 17 and other roadways is proposed. There is no accepted impact threshold for the level of mesoscale emissions that would require mitigation. In addition, existing countywide modeling by the OCTC indicates that interchange improvements generally result in a net reduction in emissions even after accounting for additional trip generation, due to the reduction of traffic congestion. For example, the proposed Interchange 15B project associated with the Sterling Forest Resort undertook both a microscale and mesoscale modelling to evaluate the potential air quality impact of an additional 6.9 million visitors to that site in the Town of Tuxedo, and no impacts requiring mitigation were identified. The Sterling Forest Resort was the only casino proposal in Orange County that had proposed substantial interchange improvements, akin to the Proposed Project, and had an accepted DEIS with associated air quality analysis of those improvements. A copy of the air quality analysis for the Sterling Forest Resort is included as an addendum hereto.

Taken together, the Exit 125 Relocation and New York State's improvements at Exit 131 will significantly decrease the traffic impact of visitors traveling to and from the Proposed Project, as well as reducing legacy traffic congestion on Route 17. The Exit 125 Relocation would likewise be subject to a regional transportation conformity determination and added to OCTC's long-range plan and Transportation Improvement Plan.

VII. CONCLUSION

In general, air quality in Orange County has improved substantially, as shown by the decreased levels of Ozone and PM2.5 throughout the County. Air quality impacts for LEGOLAND New York would be limited to stationary emissions from onsite equipment as well as mobile emissions from guest and employee vehicles.

There will be no stationary sources emitting quantities of pollutants above EPA or NYSDEC permitting thresholds for this project, nor any source which would result in a change in the ambient air quality standards.

Emissions from vehicles generated by the Proposed Project would be unavoidable, but are not considered impacts to air quality as none of the mobile source emissions exceed the volume threshold criteria for either carbon monoxide or particulate matter established by NYSDOT, and the proposed traffic improvement plan will reduce traffic congestion of visitors to the Proposed Project, which has been shown to reduce impacts to air quality.

During construction, air quality could be temporarily affected by dust from disturbed areas during dry periods and emissions from construction vehicles and other machinery. Best Management Practices will be employed during construction activities to reduce the potential for fugitive dust generation at the site.