

ILLINGWORTH & RODKIN, INC.
Acoustics • Air Quality

1 Willowbrook Court, Suite 120
Petaluma, California 94954

Tel: 707-794-0400
www.illingworthrodkin.com

Fax: 707-794-0405
illro@illingworthrodkin.com

May 7, 2014

Brian Griggs
Griggs Resource Group
250 Lafayette Circle, Suite 100
Lafayette, Ca. 94549

Via email: Brian@griggsgroup.com

Subject: Workday Stoneridge Corporate Plaza Expansion Air Quality Assessments –
Response to Comments

Dear Brian:

We reviewed comments you forwarded to us regarding the air quality assessment for the Stoneridge Corporate Plaza Expansion project. These comments were provided by Citizens for a Caring Community and questioned the use of CalEEMod default trip lengths in the air quality modeling. Our responses to the comments pertaining to trip type and trip lengths used in the air quality assessment are as follows:

Comment: (1) The maximum miles per Home to Work trip is 9.50. Pleasanton's 75% in-commute with a majority from outside the Tri-Valley, and one of the worst jobs/housing balances in the 9 county Bay Area, makes the use of the 9.50 default number unreliable. The TIR shows freeway intersections impacted most heavily, which tends to support the conclusion that additional traffic and associated VMT associated with the Workday project will originate from points further than 9.50 miles. (2) The percentages assigned to the kinds of trips also seems like it would prove inaccurate in reality. Only 33% of the trips are assigned to the proposed offices relating to employee commutes and business to business trips, while 48% of the trips are associated with shopping.

Response: In the absence of project-specific data, the air quality assessment relied on the default values in the CalEEMod model, which are commonly used for air quality studies in the Bay Area. Note that commute trips may contain more than one type of trip. For instance, a trip home in the pm period may contain multiple trips as a commuter makes stops along the way home (e.g., commercial-work and commercial-non work).

Note that CalEEMod defines commercial trip types as follows:

A commercial-customer trip represents a trip made by someone who is visiting the

commercial land use to partake in the services offered by the site. The commercial-work trip represents a trip made by someone who is employed by the commercial land use sector. The commercial-nonwork trip represents a trip associated with the commercial land use other than by customers or workers.

In response to this comment, the City’s transportation consultant, Kittelson & Associates, Inc., provided an estimate of morning (am) commute trip lengths at 16.6 miles. Under a worst-case scenario, the effect of changing all commercial-work and commercial-customer trip lengths to 16.6 miles was evaluated with the CalEEMod model. The revised emissions using these trip lengths would remain below the significance thresholds; therefore, the use of the longer trip lengths would not change the conclusion of this impact. These emissions are provided below and the revised CalEEMod model output is attached.

Air Pollutant Emissions from Operation of the Project

Scenario	ROG	NOx	PM₁₀	PM_{2.5}
2017 Annual	7.01 tons	7.57 tons	4.93 tons	1.41 tons
<i>Annual Emission Thresholds</i>	<i>10</i>	<i>10</i>	<i>15</i>	<i>10</i>
Exceed Threshold?	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
2017 Average Daily Emissions	38.4 pounds	41.5 pounds	27.0 pounds	7.7 pounds
<i>Daily Emission Thresholds</i>	<i>54</i>	<i>54</i>	<i>82</i>	<i>54</i>
Exceed Threshold?	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Attachment: Revised CalEEMod Model Output for 16.6 mile Commute Trip Lengths

**Stoneridge Corporate Plaza Expansion
Bay Area AQMD Air District, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	430.00	1000sqft	6.90	430,000.00	0
Unenclosed Parking with Elevator	700.00	Space	0.00	280,000.00	0
Unenclosed Parking with Elevator	900.00	Space	2.00	360,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	349	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Using PG&E CPUC forecasted emission rate for 2018

Land Use - From Traffic Report. 700-space parking structure included in 6.9-acre site

Construction Phase - Operational run

Off-road Equipment - Based on Construction list provided

Off-road Equipment - Operational run

Trips and VMT -

Demolition -

Grading - operational run

Architectural Coating -

Vehicle Trips - Entered trip generation rate from traffic with 3% transit reduction and applied to weekends. Changed commute trips to 16.6 miles

Construction Off-road Equipment Mitigation - Tier 2 and BMPs for fugitive dust

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LotAcreage	9.87	6.90
tblLandUse	LotAcreage	6.30	0.00
tblLandUse	LotAcreage	8.10	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	349
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleTrips	CC_TL	7.30	16.60
tblVehicleTrips	CW_TL	9.50	16.60
tblVehicleTrips	ST_TR	2.37	1.93
tblVehicleTrips	SU_TR	0.98	0.80
tblVehicleTrips	WD_TR	11.01	8.97

2.0 Emissions Summary

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Energy	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	2,022.5159	2,022.5159	0.1428	0.0352	2,036.4335
Mobile	2.2372	7.2092	28.4126	0.0676	4.8011	0.0978	4.8989	1.2885	0.0900	1.3785	0.0000	5,210.9141	5,210.9141	0.2071	0.0000	5,215.2641
Waste						0.0000	0.0000		0.0000	0.0000	81.1761	0.0000	81.1761	4.7974	0.0000	181.9208
Water						0.0000	0.0000		0.0000	0.0000	24.2463	91.4178	115.6641	2.4979	0.0604	186.8363
Total	7.0158	7.5724	28.7365	0.0698	4.8011	0.1255	4.9265	1.2885	0.1176	1.4061	105.4224	7,324.8841	7,430.3064	7.6453	0.0956	7,620.4931

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Energy	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	2,022.5159	2,022.5159	0.1428	0.0352	2,036.4335
Mobile	2.2372	7.2092	28.4126	0.0676	4.8011	0.0978	4.8989	1.2885	0.0900	1.3785	0.0000	5,210.9141	5,210.9141	0.2071	0.0000	5,215.2641
Waste						0.0000	0.0000		0.0000	0.0000	81.1761	0.0000	81.1761	4.7974	0.0000	181.9208
Water						0.0000	0.0000		0.0000	0.0000	24.2463	91.4178	115.6641	2.4975	0.0603	186.7976
Total	7.0158	7.5724	28.7365	0.0698	4.8011	0.1255	4.9265	1.2885	0.1176	1.4061	105.4224	7,324.8841	7,430.3064	7.6449	0.0955	7,620.4544

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.09	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/10/2015	6/10/2015	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.2372	7.2092	28.4126	0.0676	4.8011	0.0978	4.8989	1.2885	0.0900	1.3785	0.0000	5,210.914 1	5,210.914 1	0.2071	0.0000	5,215.264 1
Unmitigated	2.2372	7.2092	28.4126	0.0676	4.8011	0.0978	4.8989	1.2885	0.0900	1.3785	0.0000	5,210.914 1	5,210.914 1	0.2071	0.0000	5,215.264 1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	3,857.10	829.90	344.00	12,904,947	12,904,947
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Unenclosed Parking with Elevator	0.00	0.00	0.00		
Total	3,857.10	829.90	344.00	12,904,947	12,904,947

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	16.60	7.30	33.00	48.00	19.00	77	19	4
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Unenclosed Parking with	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546114	0.062902	0.174648	0.122995	0.034055	0.004856	0.015640	0.024397	0.002087	0.003279	0.006673	0.000688	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,627.3783	1,627.3783	0.1352	0.0280	1,638.8911
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,627.3783	1,627.3783	0.1352	0.0280	1,638.8911
NaturalGas Mitigated	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424
NaturalGas Unmitigated	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	7.4046e+006	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424
Total		0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	7.4046e+006	0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424
Total		0.0399	0.3630	0.3049	2.1800e-003		0.0276	0.0276		0.0276	0.0276	0.0000	395.1377	395.1377	7.5700e-003	7.2400e-003	397.5424

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	8.4753e+006	1,341.6717	0.1115	0.0231	1,351.1633
Unenclosed Parking with Elevator	1.0152e+006	160.7100	0.0134	2.7600e-003	161.8469
Unenclosed Parking with Elevator	789600	124.9966	0.0104	2.1500e-003	125.8809
Total		1,627.3782	0.1352	0.0280	1,638.8911

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	8.4753e+006	1,341.6717	0.1115	0.0231	1,351.1633
Unenclosed Parking with Elevator	1.0152e+006	160.7100	0.0134	2.7600e-003	161.8469
Unenclosed Parking with Elevator	789600	124.9966	0.0104	2.1500e-003	125.8809
Total		1,627.3782	0.1352	0.0280	1,638.8911

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Unmitigated	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Total	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.5579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.1789					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.8300e-003	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384
Total	4.7387	1.8000e-004	0.0190	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.0363	0.0363	1.0000e-004	0.0000	0.0384

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	115.6641	2.4975	0.0603	186.7976
Unmitigated	115.6641	2.4979	0.0604	186.8363

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	76.4255 / 46.8414	115.6641	2.4979	0.0604	186.8363
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		115.6641	2.4979	0.0604	186.8363

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	76.4255 / 46.8414	115.6641	2.4975	0.0603	186.7976
Unenclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		115.6641	2.4975	0.0603	186.7976

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	81.1761	4.7974	0.0000	181.9208
Mitigated	81.1761	4.7974	0.0000	181.9208

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	399.9	81.1761	4.7974	0.0000	181.9208
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		81.1761	4.7974	0.0000	181.9208

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	399.9	81.1761	4.7974	0.0000	181.9208
Unenclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Total		81.1761	4.7974	0.0000	181.9208

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Vegetation
