

December 19, 2019

Ms. Kate Gordon, Director
Office of Planning and Research
Office of Governor Gavin Newsom
1400 10th Street
Sacramento, California 95814

Dear Ms. Gordon:

Assembly Bill (AB) 900 (Buchanan, Chapter 352, Statutes of 2011), the Jobs and Economic Improvement through Environmental Leadership Act, authorizes the Governor to certify a leadership project for streamlining under the California Environmental Quality Act (CEQA) if the project meets certain conditions. One condition for certification is that the project does not result in any net additional emissions of greenhouse gases (GHG), including GHG emissions from employee transportation, as determined by the California Air Resources Board (CARB).

Google (the Applicant) submitted an original AB 900 application to CARB on August 26, 2019, supplemental information on September 6, 2019 and October 23, 2019, and clarifying information on November 14, 2019 and December 17, 2019, for the proposed Downtown West Mixed Use Plan (proposed project) located in the City of San Jose, California. As required by the Governor's Guidelines for Streamlining Judicial Review under CEQA, the application includes proposed GHG quantification methodologies and supporting documentation.

Due to the programmatic nature of the proposed project and inherent uncertainty surrounding the design features that would influence the project's GHG emissions, it was difficult to verify the net amount of GHG emissions that would occur over this project's lifetime. Applying Public Resources Code Section 21183 subdivision (c) to a project of this scale added a level of complexity and speculation that had not previously been encountered in CARB's AB 900 determinations to date. CARB staff conducted an evaluation of the GHG emissions estimates submitted by the Applicant, and confirmed that the Applicant's methodology, calculations, and documentation are adequate and reasonably conservative, given the plan-level nature of the project.

To ensure that the project would result in no net additional GHG emissions, the Applicant has agreed to purchase GHG offset credits to fully offset the projected net increase in GHG emissions attributable to the proposed project on a pro-rated basis at the time each phase is permitted by the Lead Agency (the City of San Jose). Offsets

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would be purchased in sufficient quantity to mitigate the net increase in GHG emissions for the life of the project as estimated in the AB 900 application, which represents a conservative estimate of the proposed project's emissions.

The Lead Agency has committed to monitor and enforce the Applicant's commitment to secure GHG offsets. All required GHG offsets must be purchased prior to the Lead Agency's issuance of the Final Certificate of Occupancy for the first building in the final phase of construction (Phase 3). The Lead Agency documented its commitment to fully enforce the provision that the project result in no net additional GHG emissions for the life of the obligation, including the extent to which the Applicant relies on GHG offsets to mitigate the project's GHG emissions, as a condition of project approval.

Based on the documentation submitted by the Applicant and the Lead Agency's commitment to enforce the GHG offsets measure as a condition of project approval, CARB has determined that the proposed project will not result in any net additional GHG emissions for purposes of certification under AB 900. CARB staff's evaluation and an Executive Order noting CARB's determination are enclosed.

If you have any questions regarding the evaluation or determination, please contact Ms. Nicole Dolney, Chief of Transportation Systems Planning Branch, Sustainable Transportation and Communities Division, at (916) 322-1695 or nicole.dolney@arb.ca.gov.

Sincerely,



Richard W. Corey
Executive Officer

Enclosures

cc: See next page.

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State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER G-19-154

**Relating to Determination of No Net Additional Greenhouse Gas Emissions
Under Public Resources Code section 21183, subdivision (c)
for
Downtown West Mixed Use Plan**

WHEREAS, in September 2011, Governor Brown signed the "Jobs and Economic Improvement through Environmental Leadership Act" (AB 900);

WHEREAS, under AB 900, the Governor may certify certain projects for judicial streamlining under the California Environmental Quality Act (CEQA) if certain conditions are met;

WHEREAS, under California Public Resources Code section 21183, subdivision (c), one condition for the Governor's certification is that the project does not result in any net additional emission of greenhouse gases (GHG), as determined by the California Air Resources Board (CARB);

WHEREAS, the Governor's Guidelines for Streamlining Judicial Review under the California Environmental Quality Act require for purposes of CARB's determination on GHG emissions that an applicant submit electronically to CARB a proposed methodology for quantifying the project's net additional GHG emissions and documentation that the project does not result in any net additional GHG emissions;

WHEREAS, pursuant to the Governor's Guidelines, Google LLC (the Applicant) submitted its initial proposed GHG quantification methodologies and documentation to CARB on the proposed Downtown West Mixed Use Plan (proposed project) on August 26, 2019, supplemental information submitted on September 6, 2019 and October 23, 2019, and clarifying information submitted on November 14, 2019 and December 17, 2019;

WHEREAS, as set forth in greater detail in the submitted application and CARB staff's evaluation of the AB 900 application for the proposed project, the project's net additional GHG emissions are as follows:

1. Construction GHG Emissions: Additional 157,247 metric tons carbon dioxide equivalent (CO₂e) emissions from construction and demolition activities associated with project Variant A or B, whichever is adopted;
2. Operation-Related GHG Emissions: Net additional 1,456,514 metric tons CO₂e for Project Variant A, over the lifetime of the project through 2060. Operational GHG emissions associated with Project Variant B would be similar to, or slightly less than, emissions under Project Variant A.

3. Total Project-Related GHG Emissions: Net additional 1,613,761 metric tons CO₂e from combined construction and operation of the proposed project (Variant A). Total emissions associated with Project Variant B would be similar to, or slightly less than, emissions under Project Variant A.

WHEREAS, the Applicant has committed to purchase voluntary GHG offsets in an amount sufficient to offset the cumulative net increase in construction-related GHG emissions on a pro-rated basis prior to the Lead Agency's (the City of San Jose) issuance of building permits for construction of each phase within the project.

WHEREAS, the Applicant has committed to purchase GHG offsets in an amount sufficient to offset the cumulative net increase in operational emissions over the life of the project on a pro-rated basis prior to the Lead Agency's issuance of the Final Certificate of Occupancy for the first building constructed in each phase of the project.

WHEREAS, all GHG offsets shall be purchased from a CARB-accredited carbon registry, such as the American Climate Registry, Climate Action Reserve, or Verra (formerly Verified Carbon Standard or VCS). Courtesy copies of any offset contracts will be promptly sent to the Lead Agency, CARB, and the Governor's Office after execution of such contracts.

WHEREAS, enforcement of compliance for GHG emissions reduction measures and procurement of offsets will be documented within the project's Mitigation Monitoring and Reporting Program, and those conditions will be fully monitored and enforced by the Lead Agency for the life of the obligation, pursuant to Public Resources Code section 21183, subdivision (e);

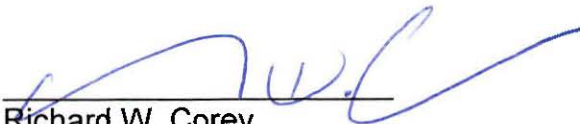
WHEREAS, CARB staff reviewed and evaluated the application in consultation with the Lead Agency;

WHEREAS, CARB staff conducted an evaluation of the GHG emission estimates and mitigation included in the application submitted by the Applicant and confirmed the documentation provides an adequate technical basis for conservatively estimating total projected GHG emissions for the proposed project;

WHEREAS, CARB's review and determination on the proposed project's GHG emissions is for the limited purpose of the Governor's findings and certification under AB 900 and should not be construed as meeting any other requirement under State or federal law, including CEQA; the Lead Agency remains responsible for full CEQA compliance for this project;

NOW, THEREFORE, based on CARB Staff's Evaluation (Attachment 1) of the documentation submitted by the Applicant (Attachment 2), I determine that the Downtown West Mixed Use Plan will not result in any net additional GHG emissions pursuant to Public Resources Code section 21183, subdivision (c) for purposes of certification under AB 900.

Executed this 19th day of December 2019, at Sacramento, California.


Richard W. Corey
Executive Officer

Attachments

1. CARB Staff Evaluation of AB 900 Application for Downtown West Mixed Use Plan
2. Downtown West Mixed Use Plan AB 900 Application and Supplemental Documentation

ATTACHMENT 1 to CARB Executive Order G-19-154

CARB Staff Evaluation of AB 900 Application for Downtown West Mixed Use Plan

CARB Staff Evaluation of AB 900 Application for Downtown West Mixed Use Plan

December 19, 2019

1. Executive Summary

The project Applicant, Google LLC (the Applicant), proposes to develop a mixed-use project within an approximately 80-acre property located in downtown San Jose, California. The proposed project would redevelop existing light industrial and parking uses that are also interspersed with a small amount of commercial and residential land uses.

The Applicant is seeking certification for the proposed project under Assembly Bill (AB) 900 (Buchanan, Chapter 352, Statutes of 2011), the Jobs and Economic Improvement through Environmental Leadership Act as amended effective January 1, 2018, and codified in Public Resources Code Section 21178 et. seq. AB 900 provides for streamlined judicial review under the California Environmental Quality Act (CEQA) if certain conditions are met. One condition is that the proposed project does not result in any net additional greenhouse gas (GHG) emissions as determined by the California Air Resources Board (CARB). This is the only condition that involves a determination by CARB. This technical evaluation summarizes CARB staff's analysis of the GHG emissions from the proposed project and CARB's determination.

CARB staff reviewed the projected GHG emissions provided by the Applicant and confirmed that the assumptions and GHG emission factors used to estimate construction and operational emissions are reasonable and conservative.

The documentation provided by the Applicant includes the original AB 900 application submitted on August 26, 2019, supplemental information submitted on September 6, 2019 and October 23, 2019, and clarifying information submitted November 14, 2019 and December 17, 2019. Collectively these materials comprise the Application and are included in Attachment 2.

Construction and operation of the proposed project would result in a total net increase of 1,613,761 metric tons (MT) carbon dioxide equivalent (CO₂e) over the project's entire 10-year construction period and 30-year operational life. The Applicant would purchase GHG offset credits to fully offset the cumulative net increase in GHG emissions. A detailed description of emissions by source is described in subsequent sections of this report.

To offset the projected net increase in GHG emissions, the Applicant will enter into one or more contracts to purchase GHG credits issued by a CARB-accredited carbon registry. The offset contracts for construction emissions will be executed on a pro-rated basis prior to the Lead Agency's (City of San Jose) issuance of the first building permit for each phase of construction. Offset contracts for projected cumulative operational emissions will be executed on a pro-rated basis prior to the Lead Agency's issuance of the Final Certificate of Occupancy for the first building in each phase of construction. The Lead Agency would enforce the requirement to purchase GHG offsets as a condition of project approval, and the details regarding this requirement will be documented in the project's Mitigation Monitoring and Reporting Program.

Based on an evaluation of the documentation provided by the Applicant, CARB staff concludes that, with commitments to implement feasible GHG emissions reduction measures and/or purchase GHG offsets as documented in Attachment 2, the proposed project would not result in any net additional GHG emissions relative to the baseline. CARB staff confirms that the proposed project would meet the GHG emissions requirements of the Jobs and Economic Improvement through Environmental Leadership Act. (Pub. Resources Code, §21178 et seq.)

This evaluation includes a description of the proposed project, a technical review and assessment of GHG emissions sources, the Applicant's and Lead Agency's commitments to offset any net increase in GHG emissions, and CARB staff's recommendation on the AB 900 GHG emissions determination for the proposed project.

2. Overview of AB 900

AB 900, as amended by Senate Bill (SB) 743 (Steinberg, Chapter 386, Statutes of 2013), SB 734 (Galgiani, Chapter 210, Statutes of 2016), and AB 246 (Santiago, Chapter 522, Statutes of 2017), provides streamlined judicial review for development projects if, among other conditions, the “project does not result in any net additional emissions of greenhouse gases, including greenhouse gas emissions from employee transportation, as determined by the State Air Resources Board pursuant to Division 25.5 (commencing with Section 38500) of the Health and Safety Code.” (Pub. Resources Code, §21183, subd. (c).)

The Governor’s Guidelines for AB 900 applications require applicants to submit a proposed methodology for quantifying the project’s GHG emissions and documentation that the project will not result in any net additional GHG emissions. The documentation must quantify direct and indirect GHG emissions associated with the project’s construction and operation, including GHG emissions from employee transportation, and the net emissions of the project after accounting for any mitigation measures. The project’s net emissions, after mitigation, must be monitored and enforced consistent with Public Resources Code section 21183, subdivision (e).

The role of CARB in reviewing AB 900 applications for purposes of the Governor’s certification is limited to an evaluation of the quantification methods and documentation submitted by the Applicant to determine whether the project would result in no net additional GHG emissions. CARB staff evaluated the technical elements of the project application, including baseline emissions in the absence of the project, input data and assumptions used for GHG emissions and mitigation calculations, quantification methods, and an estimate of the project’s net GHG emissions after any mitigation.

3. Existing Baseline Conditions

The proposed project site is located in downtown San Jose, generally within the Diridon Station Area Plan. The site is currently occupied by existing light industrial and parking uses interspersed with a small amount of commercial and residential land uses, including: 13 single-family residential units, approximately 169,000 square feet of commercial uses, approximately 383,700 square feet of light industrial uses, a 9,000 square foot place of worship, and approximately 11 acres of surface parking. Approximately 170 trees would also be removed from the site.

The San Jose Diridon Station, a central passenger rail hub served by numerous rail and bus services, is located to the west of the project boundary. The SAP Center, an indoor arena with the San Jose Sharks professional hockey team as the primary tenant, is adjacent to the project site.

4. Proposed Project Description

The proposed project is a mixed-use plan, and the application includes two project variants. The level of development would be similar under either variant, but the distribution of land uses on the project site would differ. Project Variant A could accommodate slightly higher intensity of development than Variant B by approximately 200 residential units and 200,000 square feet of additional office space.

The Applicant is including both Project Variants A and B to ensure both Variants would meet the AB 900 requirement that the project would result in no net additional GHG emissions. For purposes of this AB 900 evaluation, CARB staff focused its evaluation on Project Variant A because it represents a more development-intensive, and thereby conservative, scenario for the proposed project's anticipated GHG emissions. If the Lead Agency (City of San Jose) were to adopt Project Variant B, the GHG emissions associated with Project Variant B would be within the scope of CARB staff's evaluation.

The proposed project would result in the demolition and conversion of existing land uses, as described above.

Project Variant A would include development of up to 5,900 residential units, up to 500,000 square feet of retail space, up to 300 hotel rooms, up to 800 limited corporate accommodation rooms, up to 7.3 million square feet of office space, 100,000 square foot event center, a central district system utility plant, 100,000 square feet of logistics/warehouse space, 6,010 parking stalls, approximately 15 acres of open space, and 750 new trees. Approximately 30 diesel-powered emergency generators would be installed throughout the project site.

The baseline and proposed land uses are summarized in Table 1.

Table 1: Baseline and Proposed Land Uses

Land Use Type	Baseline	Project Variant A	Project Variant B
Residential Units	13 du	5,900 du	5,700 du
Retail/Commercial	123,200 gsf	500,000 gsf	500,000 gsf
Hotel	-	300 rooms	300 rooms
Limited-term Corporate Accommodations	-	800 rooms	800 rooms
Office	46,000 gsf	7,300,000 gsf	7,100,000 gsf
Event Center	-	100,000 gsf	100,000 gsf
District Systems	-	100,000 gsf	100,000 gsf
Logistics/Warehouse	-	100,000 gsf	100,000 gsf

Light Industrial	383,700 gsf	-	-
Worship	9,000 gsf	-	-
Open Space	-	15 acres	15 acres
Parking	469,371 gsf	6,010 stalls	5,830 stalls
Notes: du = dwelling units, gsf = gross square feet Source: as documented in Attachment 2.			

5. Technical Review and Assessment

ESA and ARUP, on behalf of the Applicant, prepared a GHG emissions assessment for the proposed project to document how the requirements of Public Resources Code section 21183 subdivision (c) would be met. A full copy of the supporting documentation can be found in Attachment 2.

The Applicant relied upon a variety of sources for activity data and emission factors to quantify GHG emissions. This CARB staff evaluation is focused on reviewing the data sources, emission factors, emission calculations, and assumptions used for the application, and determining whether these sources and assumptions are reasonable.

The Applicant relied upon a combination of project-specific data and Version 2016.3.2 of the California Emissions Estimator Model (CalEEMod), a widely used emissions quantification tool developed in coordination with local air districts to quantify criteria pollutant and GHG emissions from land use development projects in California. CalEEMod uses widely accepted sources for emission estimates combined with appropriate default data that can be used if site-specific information is not available. CalEEMod is populated with data from the United States Environmental Protection Agency AP-42 emission factors, CARB's on-road and off-road equipment emission models such as the Emission Factor 2014 model (EMFAC2014), and the Off-road Emissions Inventory Program model (OFFROAD). The Applicant used the latest CalEEMod version, correction factors to reflect future renewable electricity standards, and project-specific data including transportation data and energy demand modeling, to calculate GHG emissions from project construction and operation.

6. Project Construction Emissions

Construction-related GHG emissions are one-time, direct emissions and would occur over an approximately 10-year construction period. The Applicant estimated GHG emissions associated with project construction by using the CalEEMod tool. The Applicant used CalEEMod default settings to generate construction-related GHG emissions, along with the proposed project's phasing plan. Construction-related GHG emissions reflect the types of equipment expected and the number of hours of operation

anticipated over the construction schedule. This includes heavy-duty equipment, such as refuse hauling trucks, excavators, cranes, pavers, tractors, generators, and conventional work vehicles. The Applicant estimates a total of 157,247 metric tons carbon dioxide equivalent (MT CO₂e) would be emitted over the project construction period, as shown in Table 2 below.

Table 2 shows estimated GHG emissions generated by construction activities from Project Variant A, which would be similar to Variant B because either would be constructed in three overlapping phases. Project construction is expected to be completed in approximately 10 years, with demolition activities beginning in 2021.

CARB staff concluded that the methodology and estimated GHG emissions provided by the Applicant for construction are appropriate and conservative.

Table 2: Project Construction-Generated GHG Emissions¹

Construction Year	Project Phase	GHG Emissions (MT CO ₂ e/year)
2021	1	6,695
2022	1	18,363
2023	1	17,302
2024	1 & 2	18,917
2025	2	18,301
2026	2	17,697
2027	2 & 3	18,536
2028	3	15,352
2029	3	15,129
2030	3	10,954
Total²		157,247 MT CO₂e
Net Increase in Construction-Generated GHG Emissions³		157,247 MT CO₂e
Notes: GHG = greenhouse gas; MT CO ₂ e = Metric tons carbon dioxide equivalent; ¹ Source: as documented in Attachment 2 (Table 9 of Appendix C to the original AB 900 application, dated August 26, 2019) and confirmed by CARB staff. ² Totals may not sum exactly due to rounding. ³ The process the Applicant will follow for acquiring GHG offsets is described in Section 10. "Method to Offset Emissions."		

7. Baseline Operational Emissions

Operational emissions from land uses at the existing project site (Table 1) that would be vacated, demolished, and removed as part of the project represent baseline conditions. Default CalEEMod operational emissions in year 2023 serves as the baseline for purposes of this analysis, which represents existing conditions at the time the first phase of the proposed project would become operational. GHG emissions were quantified using CalEEMod default values for mobile, electricity, natural gas, area, stationary, solid waste, water, wastewater, and vegetation sources.

CARB staff evaluated the Applicant's GHG emission estimations, demand factors, and assumptions used in the Applicant's baseline calculations. CARB staff concluded that the methodology and estimated baseline GHG emissions provided by the Applicant are appropriate. Baseline emissions are reflected in Table 3 in the following section, VIII. "Proposed Project Operational Emissions."

8. Proposed Project Operational Emissions

Operational GHG emission sources from the proposed project would include mobile, electricity, area, stationary, solid waste, water, wastewater, and vegetation sources. Operational GHG emissions from the proposed project would begin as early as 2024, with full buildout as early as 2030.

Table 3 summarizes the estimated net increase in operation-related GHG emissions from Project Variant A through the lifetime of the project (defined by the Applicant as 30 years for each phase). Operational emissions from Project Variant B would be similar to, or slightly less than, Project Variant A because Variant A could accommodate slightly higher intensity of development than Variant B. The continued operation of the existing land uses that would be demolished under the proposed project serves as the reference point for defining a baseline.

Due to the scale and plan-level nature of the proposed project, the feasibility of certain project design features and mitigation measures was still under study at the time this report was prepared. The Applicant's original AB 900 application submission (dated August 26, 2019) did not include certain design features that would reduce the project's operational GHG emissions. For this reason, CARB staff requested that the Applicant provide a second GHG emissions scenario, where more on-site GHG emissions reducing measures were incorporated, as feasible. Both scenarios, referred to in this report as the "Unmitigated" and "Mitigated" emissions scenarios, respectively, were evaluated by CARB staff, and supporting documentation is provided in Attachment 2 to this report.

CARB staff evaluated the proposed project's emission calculations, demand factors, and assumptions used to estimate operational GHG emissions, and concluded that the Applicant's assumptions and inputs represented by the "Unmitigated" GHG emissions scenario are overly conservative (see Attachment 2: Appendix C to AB 900 Application dated August 26, 2019). The "Mitigated" GHG emissions scenario includes assumptions that more closely align with the project's design features, such as LEED Gold certification for Google's office buildings, on-site solar photovoltaic generation, and reduced water demand from on-site wastewater collection for recycled water systems (see Attachment 2: Supplemental Documentation to the AB 900 Application dated October 23, 2019). Given the scale and nature of the proposed project, CARB staff concluded that the methodology, assumptions, and estimated "Mitigated" operational GHG emissions provided by the Applicant are a reasonably conservative characterization of the projected GHG emissions that could occur during project operation and the appropriate basis for mitigation.

Based on the Applicant's proposal, annual project operational emissions would exceed baseline throughout the lifetime of the project, as summarized in Table 3.

Table 3: Comparison of Baseline and Project Operation-Related GHG Emissions¹

Year ²	GHG Emissions (MT CO ₂ e/year)				
	Baseline ³	Project Variant A (Unmitigated) ⁴	Net Increase (Unmitigated)	Project Variant A (Mitigated) ⁴	Net Increase (Mitigated) ⁵
2024	8,350	29,703	21,353	23,458	15,108
2025	8,350	29,221	20,871	23,094	14,744
2026	8,350	28,739	20,389	22,729	14,379
2027	8,350	66,769	58,419	51,632	43,282
2028	8,350	65,756	57,406	50,819	42,469
2029	8,350	64,702	56,352	50,006	41,656
2030	8,350	86,749	78,399	67,324	58,974
2031	8,350	85,304	76,954	66,192	57,842
2032	8,350	83,859	75,509	65,108	56,758
2033	8,350	82,401	74,051	63,976	55,626
2034	8,350	80,942	72,592	62,844	54,494
2035	8,350	79,484	71,134	61,712	53,362
2036	8,350	78,025	69,675	60,580	52,230
2037	8,350	76,567	68,217	59,447	51,097
2038	8,350	75,109	66,759	58,315	49,965
2039	8,350	73,650	65,300	57,183	48,833
2040	8,350	72,192	63,842	56,051	47,701
2041	8,350	70,733	62,383	54,919	46,569
2042	8,350	69,275	60,925	53,787	45,437
2043	8,350	67,816	59,466	52,654	44,304
2044	8,350	66,358	58,008	51,522	43,172
2045	8,350	65,167	56,817	50,597	42,247
2046	8,350	65,154	56,804	50,584	42,234
2047	8,350	65,140	56,790	50,570	42,220
2048	8,350	65,127	56,777	50,557	42,207
2049	8,350	65,113	56,763	50,544	42,194

2050	8,350	65,100	56,750	50,530	42,180
2051	8,350	65,087	56,737	50,517	42,167
2052	8,350	65,073	56,723	50,503	42,153
2053	8,350	65,060	56,710	50,490	42,140
2054	8,350	65,060	56,710	50,477	42,127
2055	8,350	46,002	37,652	35,141	26,791
2056	8,350	45,993	37,643	35,133	26,783
2057	8,350	45,985	37,635	35,124	26,774
2058	8,350	17,646	9,296	13,785	5,435
2059	8,350	17,643	9,293	13,782	5,432
2060	8,350	17,639	9,289	13,778	5,428
Net Increase in Operational-Related GHG Emissions⁶			1,966,392		1,456,514
<p>Notes: GHG = greenhouse gas; MT CO₂e = Metric tons carbon dioxide equivalent.</p> <p>¹ Source: as documented in Attachment 2, and confirmed by CARB staff.</p> <p>² The Applicant estimates that the useful life of each project phase would be 30 years, and that operational emissions associated with each phase would sunset 30 years after construction of each respective phase is completed. The first year of occupancy for project phase 1 would be as early as 2024, phase 2 would be as early as 2027, and the first year of full project operation of all three phases concurrently would be as early as 2030.</p> <p>³ Baseline emissions are represented by the continued operation of the existing land uses on the project site that would be vacated and demolished as part of the project (Attachment 2: Table 8 of Appendix C to the original AB 900 Application, dated August 26, 2019).</p> <p>⁴ Due to the scale and plan-level nature of the proposed project, feasibility of certain project design features and mitigation measures was still under study at the time this report was prepared. As a result, the Applicant provided two emissions scenarios: an “Unmitigated” scenario relies on very conservative assumptions (Attachment 2: Table 20 Appendix C to AB 900 Application, dated August 26, 2019), and a “Mitigated” scenario, which relies on reasonably conservative assumptions including mitigation measures currently under consideration (Attachment 2: Supplemental Documentation to the AB 900 Application, Table 7 dated October 23, 2019).</p> <p>⁵ The process the Applicant will follow for acquiring GHG offsets is described in Section 10. “Method to Offset Emissions.”</p> <p>⁶ Totals may not sum exactly due to rounding.</p>					

Energy Emissions

The proposed project would seek Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) Gold certification, which includes measures applicable to both construction and operation. At the time of this analysis, the exact LEED credits and project features that would be selected to achieve LEED-ND Gold Certification had not yet been determined, but would include a transit-oriented location and linkages to off-site land uses, walkable neighborhood design, green infrastructure, and building energy efficiency elements. A full discussion of the LEED-ND Gold project features that would contribute to certification is included in Attachment 2. LEED-ND requires at least one building in the project achieve LEED Gold certification for building energy efficiency. The Applicant has committed that the Google office buildings will achieve LEED Gold Certification.

In the “Unmitigated” GHG emissions scenario in Table 3, building energy consumption from the proposed project was conservatively estimated assuming that buildings would be constructed to comply with the 2019 Building Energy Efficiency Standards (California

Code of Regulations Title 24, Part 6, i.e., “Title 24”). This is a conservative assumption because the Applicant has documented its commitment that all Google office buildings would be LEED Gold Certified, and the City of San Jose building code would require a minimum of LEED Silver Certification, both of which are higher standards than Title 24. The “Mitigated” GHG emissions scenario in Table 3 reflects energy demand assumptions that are more closely aligned with LEED Gold and Silver Certification. Furthermore, on-site renewable energy systems are still under investigation and would be included in the project design where feasible. On-site solar photovoltaic generation was evaluated as part of the “Mitigated” GHG emissions scenario (Table 3).

The Applicant is investigating sourcing its electricity from providers with a higher proportion of renewable energy, such as San Jose Clean Energy. However, the Applicant conservatively used GHG emission factors for electricity from Pacific Gas and Electric (PG&E), and assumed that the electric grid would be decarbonized over time according to Renewable Portfolio Standard requirements. The Applicant assumed that the project would be served by 100 percent carbon free electricity by year 2045 consistent with the mandates of SB 100 (DeLeon, Chapter 312, Statutes of 2018). The project design assumes that all thermal systems would be electric; therefore, no natural gas consumption was included in the GHG emissions calculations.

Mobile Source Emissions

For mobile sources, the Applicant conservatively relied on default mobile source emission factors from CARB’s EMFAC 2014 model for operational year 2023. The Applicant conservatively did not account for future improvements in fleet fuel economy due to implementation of CARB’s Advanced Clean Cars regulations that would foreseeably reduce mobile source GHG emissions during the project’s lifetime due to vehicle technology improvements, electrification, and fleet turnover. Default trip generation rates were adjusted to more closely match the anticipated ground floor retail uses as documented in the Attachment 2: Supplement to the original AB 900 application (dated October 23, 2019)

Solid Waste, Water and Wastewater, Area, Stationary, and Vegetation Emissions

CalEEMod default emission factors and calculation methods were also used to conservatively estimate GHG emissions from solid waste disposal, water consumption and wastewater sources, area sources, and vegetation in the “Unmitigated” GHG emissions scenario. The “Mitigated” GHG emissions scenario in Table 3 reflects reduced water demand from on-site wastewater collection for recycled water systems. The Applicant also assumed up to 50 hours per year for operations and testing of 30 emergency generators.

9. Total Net Additional Emissions

Due to the large scale, plan-level nature, and multi-phase buildout of the proposed project, there is a greater degree of uncertainty in the GHG emissions analysis than for smaller scale development projects with more defined project descriptions. For purposes of this AB 900 Determination, CARB staff concurs with the Applicant's assumptions in the "Mitigated" GHG emissions scenario, which represents a reasonably conservative characterization of the projected GHG emissions that could occur during project operation with feasible mitigation incorporated. Table 4 below summarizes the total projected net increase in GHG emissions attributable to the proposed project.

Table 4: Year-by-Year Net Additional GHG Emissions¹

Year	GHG Emissions (MT CO ₂ e/year)	
	Construction	Operation
2021	6,695	----
2022	18,363	----
2023	17,302	----
2024	18,917	15,108
2025	18,301	14,744
2026	17,697	14,379
2027	18,536	43,282
2028	15,352	42,469
2029	15,129	41,656
2030	10,954	58,974
2031	----	57,842
2032	----	56,758
2033	----	55,626
2034	----	54,494
2035	----	53,362
2036	----	52,230
2037	----	51,097
2038	----	49,965
2039	----	48,833
2040	----	47,701
2041	----	46,569
2042	----	45,437
2043	----	44,304
2044	----	43,172
2045	----	42,247
2046	----	42,234

2047	----	42,220
2048	----	42,207
2049	----	42,194
2050	----	42,180
2051	----	42,167
2052	----	42,153
2053	----	42,140
2054	----	42,127
2055	----	26,791
2056	----	26,783
2057	----	26,774
2058	----	5,435
2059	----	5,432
2060	----	5,428
Sub Total ²	157,247 MT CO ₂ e	1,456,514 MT CO ₂ e
Total ^{2, 3} (Construction + Operations)	1,613,761 MT CO₂e	
Notes: GHG = greenhouse gas; MT CO ₂ e = Metric tons carbon dioxide equivalent.		
¹ Source: as documented in Attachment 2, and confirmed by CARB staff.		
² Totals may not sum exactly due to rounding.		
³ The process the Applicant will follow for acquiring GHG offsets is described in Section 10. "Method to Offset Emissions."		

To ensure that the project would result in no net additional GHG emissions under Public Resources Code 21183 subsection (c), the Applicant has committed to offset the total projected net increase in GHG emissions generated under the "Mitigated" scenario in Table 3. The Applicant has committed to execute contracts to offset the net increase in GHG emissions generated during project operation on a pro-rated basis for any phase of the project prior to issuance of the final Certificate of Occupancy for the first building constructed during that phase. The details of this commitment are described in the following section, documented in Attachment 2, and will also be included within the proposed project's Mitigation Monitoring and Reporting Program, which is binding and enforceable by the Lead Agency (City of San Jose) for the life of the project.

10. Method to Offset GHG Emissions

Under the GHG emissions quantification methodology used by the Applicant, the proposed project would result in a net GHG emissions increase of 157,247 MT CO₂e during project construction over a ten-year period, and an estimated net increase of approximately 1,456,514 MT CO₂e for the operation of Project Variant A. GHG emissions associated with Project Variant B would be similar to, or less than, Variant A.

Operational emissions would be on-going for the project lifetime (defined by the Applicant as 30 years for each phase), and would be expected to decline over the life of the project as emission factors decline associated with adoption of renewable sources of electricity and cleaner vehicle technologies.¹

Over the project's lifetime as defined by the Applicant, the project would conservatively result in a cumulative net increase in GHG emissions of approximately 1,613,761 MT CO₂e.

The Applicant has agreed to meet the requirement set forth in California Public Resources Code section 21183, subdivision (c) to demonstrate that either project variant, whichever is adopted, would result in no net additional GHG emissions through adoption of GHG emissions reduction measures identified in the "Mitigated" scenario, and procurement of GHG offset credits issued by a CARB-accredited carbon registry.

GHG Emissions Offset Verification Process Over Three Phases: Construction Emissions

The Applicant commits to the following process for acquiring GHG offsets for construction emissions:

- a. The project Applicant will purchase GHG offsets necessary to offset construction-generated emissions on a pro-rated basis prior to obtaining the first building permit in each phase of construction, for a total of three offset payments over three construction phases. The total projected GHG emissions from construction are reflected in Table 9 of Appendix C to the original AB 900 application (dated August 26, 2019) and will be pro-rated into three offset purchases according to the phasing schedule in Table 2 of the original application (dated August 26, 2019), which reflects three construction phases. The total (100 percent) of estimated construction-generated GHG emissions (157,247 MT CO₂e) must be fully offset prior to the Lead Agency's issuance of the first building permit for the third phase of construction.
- b. All GHG offsets shall be purchased from a CARB-accredited carbon registry, such as the American Climate Registry, Climate Action Reserve, or Verra (formerly Verified Carbon Standard or VCS). Courtesy copies of any offset contracts will be promptly sent to the Lead Agency, CARB, and the Governor's Office after execution of such contracts. The details of this commitment will also be included within the project's

¹ The Applicant did not account for future GHG emissions reductions from technology and fuel efficiency improvements to the vehicle fleet.

Mitigation Monitoring and Reporting Program, which is binding and enforceable by the Lead Agency.

GHG Emissions Offset Verification Process Over Three Phases: Operational Emissions

The Applicant commits to the following process for acquiring GHG offsets for operational emissions:

- a. The project Applicant will purchase GHG offsets necessary to offset the cumulative net increase in operational emissions over the life of the project on a pro-rated basis prior to the Lead Agency's issuance of the final Certificate of Occupancy for the first building in each phase of construction, for a total of three offset payments over three construction phases. The total projected net increase in GHG emissions from project operation is reflected in Table 7 of the Supplement to the original AB 900 application (dated October 23, 2019) less the baseline emissions reflected in Table 8 of Appendix C to the original application and will be pro-rated according to the phasing schedule in Table 2 of the original application (dated August 26, 2019), which reflects three construction phases. The total (100 percent) of projected net additional operation-related GHG emissions (1,456,514 MT CO₂e) must be fully offset prior to the Lead Agency's issuance of the final Certificate of Occupancy for the first building in the third phase of construction.
- b. All GHG offsets shall be purchased from a CARB-accredited carbon registry, such as the American Climate Registry, Climate Action Reserve, or Verra (formerly Verified Carbon Standard or VCS). Courtesy copies of any offset contracts will be promptly sent to the Lead Agency, CARB, and the Governor's Office after execution of such contracts. The details of this commitment will also be included within the project's Mitigation Monitoring and Reporting Program, which is binding and enforceable by the Lead Agency for the life of the Project.

The total projected quantity of GHG offsets required to fully offset the cumulative net increase in GHG emissions attributable to construction and operation of the project is 1,613,761 MT CO₂e.

The Lead Agency documented its commitment to fully enforce the provision that the project result in no net additional GHG emissions for the life of the obligation, including the extent to which the Applicant relies on GHG offsets to mitigate the project's GHG emissions, as a condition of project approval (Attachment 2: Supplemental Documentation to the AB 900 Application, Attachment D, letter to CARB dated October 22, 2019).

11. Conclusions and Recommendations

Based on an evaluation of the documentation provided by the Applicant, its commitment to purchase GHG offsets issued by a CARB-accredited carbon registry, and the Lead Agency's commitment to fully enforce the requirement that the net increase in GHG emissions from the project would be fully offset for the life of the obligation as a condition of approval, CARB staff concludes that the proposed project will not result in any net additional GHG emissions relative to the baseline.