



## ADDENDUM TO THE NCRSP PCL 49 BAYSIDE CHURCH/ TOPGOLF MITIGATED NEGATIVE DECLARATION (ADOPTED FEBRUARY 26, 2015)

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<b>Project Title/File Number:</b>	NCRSP PCL 49 – Dutch Bros Freedom Point, PL23-0056
<b>Project Location:</b>	1911 Freedom Wy.
<b>Project Description:</b>	The applicant requests a Major Project Permit (MPP) Stage 1 Modification to replace the 12,000 SF Medical Office (Pad T) with a 950 sf Dutch Bros coffee kiosk with a drive-through and reduce the 12,000 sf Medical Office (Pad S) to 8,000 sf. A MPP Stage 2 is requested to review the architecture for the Dutch Bros coffee kiosk with drive-through. A Tentative Parcel Map is also requested to subdivide Lot 9/Parcel 3 into two parcels.
<b>Project Applicant:</b>	Kris Steward, Plan Steward, Inc.
<b>Property Owner:</b>	John Stewart, 1911 Freedom, LLC
<b>Lead Agency Contact:</b>	Sean Morales, Associate Planner, (916)746-1347

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An Addendum to a previously certified and adopted negative declaration or environmental impact report may be prepared for a project if only minor technical changes or additions are necessary or none of the conditions calling for the preparation of a subsequent EIR or negative declaration have occurred (California Environmental Quality Act Guidelines [CEQA] Section 15164). Consistent with CEQA Guidelines Section 15164, the below analysis has been prepared in order to demonstrate that none of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent EIR have occurred and that only minor technical changes or additions are necessary in order to deem the adopted negative declaration adequate to describe the impacts of the proposed project. CEQA Guidelines Section 15164 also states that an addendum need not be circulated for public review, but can be included in or attached to the adopted negative declaration for consideration by the hearing body. This Addendum focuses only on those aspects of the project or its impacts which require additional discussion.

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## PROJECT DESCRIPTION

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### Project Location

The project site is located at 1911 Freedom Wy., within the North Central Specific Plan (NCRSP) area. The project site is adjacent to SR65 to the north, the City's open space Parcel 84 to the east, the Summerhill single-family residential neighborhood to the south, and Washington Boulevard (and the FBI building beyond) to the west. The project site is referred to as "NCRSP Parcel 49" and has a zoning designation of Planned Development/Special Area – North Central Roseville Specific Plan (PD/SA-NC) and Light Industrial/Special Area – North Central Roseville Specific Plan (M1/SA-NC). The General Plan land use designation is Light Industrial (LI).

### Background

The NCRSP Parcel 49 site has been anticipated for development since the 1990 adoption of the NCRSP. In 2000, a project for a Rezone, General Plan, Specific Plan, and Development Agreement Amendment was approved for NCRSP Parcel 49, which established a new Planned Development (PD) zone for a portion of the site that allowed for retail, restaurant, lodging, educational, and offices uses in addition to light industrial uses. In 2007, the City Council designated NCRSP Parcel 49 as a Corporate Center Site, which allowed for an increased building height limit and additional square footage, but also restricted the amount of retail or restaurant uses on the site to 20% of the square footage. The additional square footage increased the development potential of the site to 1.2 million square feet. This development potential has been programmed in the City's service demand models.

On February 26, 2015, the Planning Commission approved several entitlements for development of the NCRSP Parcel 49 site with the project identified as NCRSP Parcel 49 Bayside Church/Topgolf (File Number PL14-0252). The project included the following:

- 130,000 square feet of community assembly use (Bayside Church), including a 2,800 seat assembly area and 45 classrooms/activity rooms;
- 64,232 square feet of indoor/outdoor recreation use (Topgolf);
- 116,500 square feet of office use (5 buildings);
- 37,800 square feet of retail use (7 buildings);
- 11,200 square feet of restaurant use (3 buildings); and a
- 83,700 square-foot hotel (125 rooms).

The entitlements included a Major Project Permit (MPP) Stage 1 permit for the site layout, MPP Stage 2 permit for Topgolf, a Conditional Use Permit for Topgolf, and a Tentative Subdivision Map. The MPP entitlement allowed for phased development of the site. A Mitigated Negative Declaration was also adopted which addressed the potential environmental impacts from development of the site with the project.

On October 27, 2016, the Planning Commission approved a MPP Stage 1 Modification permit to modify the uses on the Phase 2A parcels within the NCRSP Parcel 49 site (File Number PL16-0168). The modification replaced the approved buildings with a 104-room hotel and a 107-room hotel. The modification resulted in a reduction of 17,600 square feet of retail uses and 7,500 square feet of office uses, as well as an overall increase of 86 hotel

rooms for the NCRSP Parcel 499 site. Also approved was the building architecture and on-site improvements for the two hotel parcels, identified as Phase 2A, as well as a Lot Line Adjustment.

On December 14, 2017, the Planning Commission approved a second MPP Stage 1 Modification to change the approved site layout for Parcels 1, 2, and 5. The project increased restaurant square footage by 5,475 square feet and decreased retail square footage by 9,625 square feet. The project included a Major Project Permit Stage 2 for the four single-story restaurant and retail buildings on Parcels 1, 2, and 5 (File Number PL17-0055)

In June 2019, the approval of a Specific Plan Amendment, Ordinance Amendment, MPP Stage 1 Modification, and MPP Stage 2 for the Living Spaces furniture store (File # PL18-0388) resulted in the following use and square footage allocations for the NCRSP Parcel 49 project site:

- 148,790 square feet of hotel (211 rooms, Phase 2A);
- 46,175 square feet of restaurant use;
- 159,075 square feet of retail use;
- 24,000 square feet of office;
- Eliminated the community assembly use (reduction of 130,000 square feet); and
- 64,232 square feet of indoor/outdoor recreation (Topgolf)

On November 14, 2019 the Planning Commission approved a MPP Stage 1 Modification and MPP Stage 2 for Building B, located on Parcel 1 within the Freedom Point portion of the NCRSP Parcel 49 site (File #PL19-260). Currently on the NCRSP Parcel 49 site, Topgolf (Phase 1), the two hotels (Phase 2A), and Phase 2B pad buildings, and the Living Spaces project have been completed.

On July 22, 2021, the Planning Commission approved a MPP Stage 1 Modification and MPP Stage 2, and Tentative Parcel Map for Lot 7 within the Parcel 49 site, which would allow the development of a restaurant, three office buildings, and associated site improvements such as parking and landscaping. The project amended the MPP to increase the overall square footage for Parcel 49 from 436,889 square feet to 463,689 square feet (an increase of 26,800 square feet), and a reallocation of the allowed totals for restaurant and office uses.

On June 22, 2023, the Planning Commission approved a MPP Stage 1 Modification for Lot 9 Parcel 1 to replace approximately 40,000 square feet of retail for Pad P with a 79,260-square-foot, 115-room hotel, as well as a MPP Stage 2 to evaluate the design for the proposed hotel. The proposed modification increased the overall square footage within the Parcel 49 project by 39,260 square feet. The project also modified the phasing for the Parcel 49 project, including creating a future Phase 3D.

Most recently, on February 15, 2023, the Planning Commission approved a MPP Stage 1 to change the approved site development plan for Lot 7 Parcel 3 within the North Central Roseville Specific Plan (NCRSP) Parcel 49 site and a MPP Stage 2 to evaluate architecture and design for an approximately 30,872-square-foot, 60.5-foot-tall indoor climbing gym and fitness center, as well as associated site improvements, on Lot 7 Parcel 3 of the NCRSP Parcel 49 site.

### **Environmental Setting**

The approximately 59-acre project site is located within a developed area of the City of Roseville. The site is partially developed, as mentioned in the Background section. The entire site has been graded and portions are under active construction. No biological or other resources remain on the site.

As shown in the table below, the site is adjacent to State Route 65. Properties to the south have a land use designation of Low Density Residential and are developed with single-family homes. The property to the east has a land use designation of Open Space and includes a tributary of Pleasant Grove Creek. The properties to

the west are part of the partially developed Blue Oaks Commerce Center, which is anticipated for a mix of office and industrial uses, and currently contains a large office building.

<b>Location</b>	<b>Zoning</b>	<b>General Plan Land Use</b>	<b>Actual Use of Property</b>
<b>Site</b>	PD/SA-N & M1/SA-NC	Light Industrial	Commercial
<b>North</b>	Roadway	Roadway	State Route 65
<b>South</b>	RS	Low Density Residential	Single-Family Residential
<b>East</b>	OS	Open Space/Floodplain	Open Space
<b>West</b>	M2	Industrial	Office

**Proposed Project**

The proposed project includes a Major Project Permit (MPP) Stage 1 Modification to replace the 12,000 SF Medical Office (Pad S) with a 950 sf Dutch Bros coffee kiosk with a drive-through and reduce 12,000 sf Medical Office (Pad T) to 8,000 sf. A MPP Stage 2 is requested to review the architecture for the Dutch Bros coffee kiosk with drive-through. A Tentative Parcel Map is also requested to subdivide Lot 9/Parcel 3 into two parcels. The overall square footage of the Parcel 49 project will decrease by 15,050 square feet.

**PURPOSE AND SCOPE OF ADDENDUM**

As discussed in the Background section, a Mitigated Negative Declaration (MND) for the NCRSP PCL 49 Bayside Church/Topgolf project was adopted on February 26, 2015. The MND covered development of the entire NCRSP Parcel 49 project site. The MND, supporting Initial Study, and related attachments are included as Attachment 1 of this Addendum. The adopted MND analyzed impacts related to aesthetics, agricultural and forestry resources, air quality and greenhouse gases, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems. The proposed project is substantially consistent with the previous development project contemplated in the MND, and does not modify the development footprint of the NCRSP Parcel 49 site. The overall building area will decrease by 15,050 square feet.

The analyses below rely on the MND analysis with minor supplements or technical updates where appropriate. Most of the project impacts remain identical to the impacts of the MND because the proposed project changes the anticipated commercial use types but does not change the development footprint, overall circulation and utilities plan, or mass grading assumptions for the site. No changes are proposed to the land use or zoning designation of the site. Impacts to physical resources (such as agricultural land, biological resources, etc.) are based on the grading and development of an area, not on the proposed use types of the buildings (i.e. restaurant vs. retail) on the property. For other types of impacts which are affected by use type and square footage, the project uses reduce or maintain the same level of potential impacts, as discussed in this Addendum.

**ENVIRONMENTAL CHECKLIST FOR ADDENDUM ENVIRONMENTAL REVIEW**

The purpose of this checklist is to evaluate the categories in terms of any “changed condition” (i.e. changed circumstances, project changes, or new information of substantial importance) that may result in a changed environmental result. A “no” answer does not necessarily mean there are no potential impacts relative to the environmental category, but that there is no change in the condition or status of the impact since it was analyzed and addressed in prior environmental documents.

## EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

### Where Impact was Analyzed

This column provides a cross-reference to the pages of the prior environmental documents where information and analysis may be found relative to the environmental issue listed under each topic.

### Do Proposed Changes Involve New Significant Impacts?

Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered and mitigated by the prior environmental review documents and related approvals, or will result in a substantial increase in the severity of a previously identified impact.

### Any new Circumstances Involving New Impacts?

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) which have occurred subsequent to the certification or adoption of prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

### Any new Information Requiring New Analysis or Verification?

Pursuant to Section 15162(a)(3)(A–D) of the CEQA Guidelines, this column indicates whether new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified or adopted is available requiring an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigation measures remain valid. Either “yes” or “no” will be answered to indicate whether there is new information showing that: (A) the project will have one or more significant effects not discussed in the prior environmental documents; (B) that significant effects previously examined will be substantially more severe than shown in the prior environmental documents; (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative. If “no,” then no additional environmental documentation (supplemental or subsequent EIR) is required.

### Mitigation Measures Implemented or Addressing Impacts

Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether the prior environmental documents provide mitigation measures to address effects in the related impact category. In some cases, the mitigation measures have already been implemented. A “yes” response will be provided in any instance where mitigation was included, regardless of whether the mitigation has been completed at this time. If “none” is indicated, this environmental analysis concludes a significant impact does not occur with this project, no mitigation was previously included, and no mitigation is needed.

## DISCUSSION AND MITIGATION SECTIONS

### Discussion

A discussion of the elements of the checklist is provided under each environmental category in order to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue and the status of any mitigation that may be required or has already been implemented.

### Mitigation Measures

Applicable mitigation measures from the prior environmental review that apply to the project are listed under each environmental category.

# CHECKLIST

## I. Aesthetics

	Where Impact Was Analyzed in Prior Environmental Documents	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a. Have a substantial adverse effect on a scenic vista?	Page 10	No	No	No	None
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Same	No	No	No	None
c. In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Same	No	No	No	None
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Same	No	No	No	None

**Discussion:** the primary aesthetic disruption is due to the conversion of an undeveloped site to urban environment. This impact was covered in the MND. The Findings of Fact for the CEQA Implementing Procedures (discussed in the MND) indicate that compliance with the Community Design Guidelines (Resolution 95-347) and applicable Specific Plan policies and/or Specific Plan Design Guidelines will prevent significant impacts related to construction of buildings in urban settings. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the city finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred” relative to aesthetic resources.

**Mitigation Measures:** None required for this project.

**II. Agricultural & Forestry Resources**

	Where Impact Was Analyzed in Prior Environmental Documents	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Page 11	No	No	No	None
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Same	No	No	No	None
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	Same	No	No	No	None
d) Result in the loss of forest land or conversion of forest land to non-forest use?	Page 12	No	No	No	None
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	Same	No	No	No	None
<p><b>Discussion:</b> The MND concluded there were no resources to be affected by conversion of the site to urban uses. This conclusion remains appropriate for this Project. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this Project.</p>					

III. Air Quality

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Conflict with or obstruct implementation of the applicable air quality plan?	Page 12	No	No	No	None
b) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Same	No	No	No	None
c) Expose sensitive receptors to substantial pollutant concentrations?	Page 13	No	No	No	None
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Same	No	No	No	None

**Discussion:** The MND concluded that construction emissions were below significance thresholds adopted by the Placer County Air Pollution Control District (PCAPCD), and that standard dust control and other construction measures would be sufficient to avoid construction impacts. The analysis further found that operational emissions were below adopted PCAPCD significance thresholds, and that there are no substantial odor-producers in the vicinity, nor would the proposed uses produce substantial odors. The proposed project would reduce the overall development size of the Parcel 49 project by approximately 15,000 square feet. Therefore, the construction and operational emissions are within the scope of the prior environmental analysis and will be decreased from what was assumed in the most recent Addendum for the Parcel 49 site.

Staff also considered the operational characteristics of the Dutch Bros coffee shop drive-through. While drive-through uses create an increase in idling vehicles, they do not have a localized or "hot spot" carbon monoxide or toxic air contaminant impact on air quality that exceeds allowed thresholds. As discussed in the MND, hot spots are associated with heavy traffic congestion occurring at high-volume roadway intersections (such as Hwy 65), and analysis showed that none of the roadway intersections affected by the project would exceed carbon monoxide significance thresholds. In fact, the General Plan EIR analysis of Citywide traffic indicates that analyses of existing carbon monoxide concentrations at the most congested intersections in Roseville show that carbon monoxide levels are well below federal and state ambient air quality standards. Similarly, the MND also discussed that toxic air contaminants are associated with freeways and high-volume roads, and that none of the roads and intersections affected by the project would result in significant emissions of toxic air contaminants. Idling vehicles in a drive-through involve significantly less traffic than roadway intersections, and therefore do not result in significant carbon monoxide or toxic air

contaminant impacts. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”

**Mitigation Measures:** None required for this project.

**IV. Biological Resources**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Page 24	No	No	No	None
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Same	No	No	No	None
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Same	No	No	No	None
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Same	No	No	No	None

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Same	No	No	No	None
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Page 25	No	No	No	None

**Discussion:** The MND acknowledged that on-site biological resources have been evaluated on multiple occasions, that no biological resources are present on the site, and all required permits for site development related to biological resources have been obtained and effectuated. At this time, the entire site has been mass graded and more than 50% of the site is developed. The proposed project does not change the previously evaluated and approved development footprint, and does not result in any new or modified impacts to biological resources. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”

**Mitigation Measures:** None required for this project.

**V. Cultural Resources**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Cause a substantial adverse change in the significance of an historic resource pursuant to in Section 15064.5?	Page 26	No	No	No	None
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	Page 27	No	No	No	None
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Same	No	No	No	None
<p><b>Discussion:</b> The MND discussed the potential for subsurface remains or deposits to be found on the site were unlikely due to previous surveys of the plan area. However, the MND applied the City’s standard construction measures, which require cessation of work should any item of cultural interest be found, to ensure the project will have a less than significant impact on cultural resources. This condition remains applicable to the proposed project and no additional mitigation is required. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**VI. Geology and Soils**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	Page 27	No	No	No	None
i) Ruptures of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	Same	No	No	No	None
ii) Strong seismic ground shaking?	Page 28	No	No	No	None
iii) Seismic-related ground failure, including liquefaction?	Same	No	No	No	None
iv) Landslides?	Same	No	No	No	None
b) Result in substantial soil erosion or the loss of topsoil?	Same	No	No	No	None
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Same	No	No	No	None
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Same	No	No	No	None

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	Same	No	No	No	None
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	Same	No	No	No	None

**Discussion:** The MND indicated that compliance with existing regulations and permit requirements would be sufficient to avoid impacts related to these issues. This conclusion remains appropriate for this Project. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”

**Mitigation Measures:** None required for this project.

**VII. Greenhouse Gases**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		No	No	No	None
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		No	No	No	None

**Discussion:** As discussed in the Air Quality section, the proposed project reduces the development area of the site by 15,050 sf, is within the scope of the prior environmental analysis, and will be decreased from what was assumed in the most recent Addendum for the Parcel 49 site. That most recent addendum included an updated greenhouse gas analysis for the proposed project. The study evaluated both construction and operational emissions of the proposed project as compared to current adopted thresholds and standards, using CalEEMod. The study indicated the project will emit 181 metric tons of carbon dioxide equivalent (MT CO2e) annually during the construction of the project, and 368 MT CO2e annually during operation. The PCAPCD has adopted a de minimus threshold of 1,000 MT CO2e annually; project emissions below this threshold are determined to be less than significant. For emissions above this threshold, the PCAPCD has adopted an efficiency threshold of 26.5 MT

CO2e/1,000 square feet annually. Both project construction and operational emissions are below the de minimus threshold. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”

**Mitigation Measures:** None required for this project.

**VIII. Hazards and Hazardous Materials**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Page 29	No	No	No	None
b) Create a significant hazard to the public or the environment though reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Same	No	No	No	None
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Same	No	No	No	None
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Same	No	No	No	None

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Page 30	No	No	No	None
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Same	No	No	No	None
g) Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	Same	No	No	No	None

**Discussion:** The MND considered that the church, commercial, and offices uses proposed for the site do not typically store and/or transport large quantities of hazardous materials. The MND concluded that the City’s existing regulations and permits would prevent significant impacts as it relates to construction activities on the site and the future tenant’s storage and handling of any unanticipated hazardous materials. The proposed project use types remain consistent with the commercial uses considered with the MND. The proposed project’s increase in restaurant uses on the site does not significantly change the project’s potential impacts related to hazardous materials. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”

**Mitigation Measures:** None required for this project.

**IX. Hydrology and Water Quality**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Page 31	No	No	No	None
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Same	No	No	No	None
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	Same	No	No	No	None
i) result in substantial erosion or siltation on or off-site;	Same	No	No	No	None
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	Same	No	No	No	None
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater systems or provide substantial additional sources of polluted runoff; or	Same	No	No	No	None
iv) impede or redirect flood flows?	Page 32	No	No	No	None

d) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Same	No	No	No	None
e) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Same	No	No	No	None
f) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?	Same	No	No	No	None

**Discussion:** The MND indicated that there are no floodplains affecting the project site and there would be no impact with respect to flooding, and that existing regulations and permits would ensure that water quality and stormwater impacts would be less than significant. The proposed project does not change the overall development footprint, and the revisions to the site plan have been evaluated by the City to ensure the design continues to meet current adopted stormwater quality design standards. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”

**Mitigation Measures:** None required for this project.

**X. Land Use and Planning**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Physically divide an established community?	Page 34	No	No	No	None
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?	Same	No	No	No	None
<p><b>Discussion:</b> The MND indicated that there would be no impact with respect to these criteria, and that the project was consistent with the policies of the Zoning Ordinance, NCRSP, and General Plan which are adopted for the purpose of avoiding environmental effects. The proposed project includes amendments of the Specific Plan and the Planned Development Ordinance affecting the property, but these changes have no impacts related to environmental policies. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XI. Mineral Resources**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Page 36	No	No	No	None

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	Same	No	No	No	None
<p><b>Discussion:</b> The MND indicated that there were no significant mineral resources in the area. This conclusion remains appropriate for this project. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XII. Noise**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Page 36	No	No	No	None
b) Generation of excessive ground borne vibration of ground borne noise levels?	Same	No	No	No	None
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	Page 37	No	No	No	None

**Discussion:** The MND addressed construction noise and found the impact to be less than significant. In terms of operational noise, two noise studies were completed to evaluate the potential noise impacts on the adjacent residential properties. Based on the proposed uses and the proposed site plan, the Parcel 49 noise studies concluded that noise produced from the on-going operation of the project, with the exception of the Topgolf facility, will not generate noise that exceeds the Noise Ordinance regulations or result in a substantial permanent increase in existing ambient noise conditions. Mitigation measures were applied to ensure the noise levels from Topgolf would be reduced to less than significant noise levels. Topgolf is constructed and the mitigation measures have been implemented.

The proposed project will create a coffee kiosk with drive-through use. A noise study was prepared (Attachment 2) to analyze any potential noise impacts created by the drive-through use on the surrounding area beyond what was already analyzed for the rest of the site. In general, the most noise created by a drive-through restaurant is from amplified sound emanating from an electronic order board system. The noise study found that due to the operational characteristics of the Dutch Bros drive-through, which uses person-to-person ordering rather than an amplified speaker board, the noise created would be less. The closest sensitive receptors to the coffee kiosk are the single-family residences to the south of the project on Farridge Court. The nearest residence is located approximately 250 feet from the proposed drive-through. There is a 6-foot masonry wall located on the property line of the nearest residence, in between the project and the residence.

The City's noise standards are 50 dB Leq in the daytime, 45 dB Leq for the nighttime, 70 dB for daytime maximum noise, and 65 dB for nighttime maximum noise. The noise study measured the surrounding ambient conditions and found the existing noise levels currently exceed the City's adopted standards, except for the nighttime maximum. The City's Noise Ordinance states that where existing volumes exceed standards, the ambient noise level should not be increased by more than 3 dBA.

The project is predicted to expose nearby residences to noise levels up to 49 dBA, Leq during both daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) hours, which is less than the existing ambient noise. The project will not increase ambient noise by more than 3 dB, and as a result, no adverse noise impacts are predicted for the proposed drive-through usage at the nearest residences during either daytime or nighttime hours. The uses will be required to comply with Noise Ordinance regulations.

Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that "none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred."

**Mitigation Measures:** None required for this project.

**XIII. Population and Housing**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Page 39	No	No	No	None
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Page 40	No	No	No	None
<p><b>Discussion:</b> The MND concluded that the site development was not housing-related, was consistent with the land use designations and thus would not induce unplanned growth, and would not displace housing. This conclusion remains appropriate for this Project. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XIV. Public Services**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any the public services:					
a) Fire protection?	Page 40	No	No	No	None
b) Police protection?	Same	No	No	No	None
c) Schools?	Same	No	No	No	None
d) Parks?	Page 41	No	No	No	None
e) Other public facilities?	Same	No	No	No	None
<p><b>Discussion:</b> The MND indicates that the City’s General Plan examined Citywide service needs based on land use designations, so any project consistent with existing land use designations would not negatively impact services. The proposed project remains consistent with the land use designation of the site, and therefore this conclusion remains appropriate for this Project. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XV. Recreation**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?	Page 42	No	No	No	None
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Same	No	No	No	None
<p><b>Discussion:</b> As indicated in the MND, development of the property with commercial uses does not result in any additional recreational facility demand. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XVI. Transportation**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	Page 42	No	No	No	MM-3, MM-4, MM-5
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	Page 43	No	No	No	Same
c) Substantially increase hazards due to a geometric design feature(s) (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Same	No	No	No	Same
d) Result in inadequate emergency access?	Same	No	No	No	Same
<p>Discussion: A traffic impact analysis was prepared for the original approval of the project, and for its subsequent modification. Based on the results of the study, the MND and subsequent Addendums found that with mitigation the transportation impacts would be less than significant. The mitigation measures required a dedicated right-turn lane onto HWY 65 from Washington Boulevard with the development of Phase 2A of the site, and with the Bayside Church MPP Stage 2 application, a traffic management plan and operational plan showing a 60 minute separation between service start and end times.</p> <p>In order to evaluate the proposed project, a new transportation analysis was completed for the replacement of 16,000 sf of medical office with a 950 sf coffee kiosk on Lot 9 (Attachment 3). The purpose of the analysis was to evaluate access design, queuing, and effects on adjacent intersections, since the change in overall trips and trip characteristics was too small to warrant a cumulative or citywide evaluation of traffic and vehicle miles traveled and is within the scope of the trips assumed for the site in the General Plan EIR evaluation of vehicle miles traveled.</p> <p>The analysis concludes that the project will not result in any discernable operational deterioration to the Washington Boulevard/Freedom Way intersection, nor would it result in adverse queuing affects at the Freedom Way/Pride Way intersection. The drive-through lanes were also found to provide sufficient stacking to accommodate maximum queues and that the site plan provides adequate throat depth for safe and efficient operation.</p>					

The original MND analysis concluded that the changes in trip generation from the Project were less than significant and would not result in any unanticipated transportation impacts, and the conclusion for the current project is the same. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”

**Mitigation Measures:** None required for this Project. Mitigation was included for the original project, requiring a right-turn pocket on Washington Boulevard (MM-3), and both a Traffic Management Plan and Operational for Bayside Church (MM-4 and MM-5). The proposed project removes Bayside Church from the site plan and replaces it with a furniture store, so MM-4 and MM-5 are no longer required. The updated Mitigation Monitoring and Reporting Program for the project does not include these measures.

**XVII. Utilities and Service Systems**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Page 47	No	No	No	None
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Same	No	No	No	None
c) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project’s projected demand in addition of the provider’s existing commitments?	Page 48	No	No	No	None

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Same	No	No	No	None
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Same	No	No	No	None
<p><b>Discussion:</b> The MND found that the previous project would have a less than significant impact on utilities and services. The proposed project has been analyzed by City and external service and utility providers, and has been found to be consistent with standards, and utilities and service demands are within the scope of the previously analyzed project. Therefore, pursuant to CEQA Guidelines section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.”</p> <p><b>Mitigation Measures:</b> None required for this project.</p>					

**XVIII. Other Considerations**

Since the publication of the MND and its subsequent Addendums, the Office of Planning and Research (OPR) has updated CEQA Guidelines Appendix G (Environmental Checklist Form). These updates address legislative changes to CEQA, clarify language, and update language consistent with case law. None of the changes to the checklist require new analysis related to impacts which were not known or which could not have been known at the time the MND was prepared. The majority of the checklist changes clarify language, reorganize existing language, or eliminate analysis

requirements. For analysis requirements which have been eliminated, this is in response to case law affirming that analysis must focus on impacts caused by the project, not impacts to the project. An example of each of these types of changes is included below:

- Cultural Resources (a): Cause a substantial adverse change in the significance of an historic resource ~~as defined in~~ pursuant to Section 15064.5?

The replacement of “as defined in” with “pursuant to” is a phrasing change which has no impact on required analysis.

- Cultural Resources (c) has been moved to Geology and Soils (f).

Moving the topical section of this analysis requirement (which is related to paleontological resources) from Cultural Resources to Geology and Soils has no impact on required analysis.

- Noise (b): ~~Exposure of persons to or g~~Generation of excessive ground borne vibration of ground borne noise levels?

The above changes redirect the analysis from considering overall exposure of persons to ground borne vibration, and focus the analysis on any ground borne vibration generated by a project. This same change is reflected in all other checklist questions related to noise. Therefore, the MND includes more analysis than is currently required, because it included analysis related to exposing neighboring areas to noise, but also analyzed the effect of noise on the proposed uses; the latter analysis is no longer required.

The updated CEQA Guidelines Appendix G also includes two new sections (Tribal Cultural Resources and Energy) and includes new and modified requirements as part of the Transportation/Traffic section. Although Tribal Cultural Resources section is new, the analysis of this impact area was included in the MND as part of the Cultural Resources section. The new Energy section was formerly included in CEQA Guidelines Appendix F, but has been moved into the Appendix G, so while it is new to the checklist it is not new to the CEQA Guidelines. The changes to the Transportation/Traffic section—which is now called simply Transportation—refocuses the analysis on vehicle miles traveled (VMT). The analysis included in the Addendum does not include VMT analysis in order to be consistent with the original MND.

Based on the foregoing, none of the modifications to CEQA Guidelines Appendix G require new analysis related to impacts which were not known or which could not have been known at the time the MND was prepared. Therefore, an Addendum is the appropriate environmental document to describe the impacts of the proposed project.

**XVIII. Mandatory Findings of Significance**

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?	Page 49	No	No	No	None
b) Does the project have impacts which are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	Same	No	No	No	None
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Same	No	No	No	None

**Discussion:** The MND indicated that because development of the site would be consistent with existing land use designations, that any cumulative impacts had already been addressed via the City’s General Plan and the NCRSP. This conclusion remains appropriate for this Project. The Amoruso Ranch EIR, which included an updated Citywide analysis, evaluated the potential for cumulative impacts. The proposed project would make minor modifications to the type of uses on the site. Therefore, the project would not substantially increase the severity of the identified significant cumulative impacts. Pursuant to CEQA Guidelines Section 15164, subdivision (a), the City finds that “none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred” relative to the mandatory findings.

## **ENVIRONMENTAL DETERMINATION:**

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*In reviewing the site specific information provided for this project and acting as Lead Agency, the City of Roseville, Development Services Department, Planning Division has analyzed the potential environmental impacts created by this project and determined that the findings of CEQA Section 15162 concerning the decision not to prepare a subsequent EIR or negative declaration and the findings of CEQA Section 15164 concerning the decision to prepare an Addendum can be made. As supported by substantial evidence within the Addendum to the Bayside/ Topgolf Mitigated Negative Declaration), the Lead Agency makes the following findings:*

[ X ] No substantial changes are proposed in the project which would require major revisions of the previous EIR or Mitigated Negative Declaration.

[ X ] No substantial changes have occurred with respect to the circumstances under which the project is undertaken.

[ X ] There is no new information of substantial importance which was not known and could not have been known with the exercise of due diligence at the time the previous EIR was certified as complete or the Mitigated Negative Declaration was adopted.

[ X ] Only minor technical changes or additions are necessary in order to deem the adopted environmental document adequate.

Addendum Prepared by:

*Derek Ogden* for:  
\_\_\_\_\_  
Sean Morales, Associate Planner  
City of Roseville, Development Services–Planning Division

## **Attachments:**

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1. NCRSP PCL 49 – Bayside Church/Top Golf Mitigation Negative Declaration
2. Noise Study
3. Traffic Study



## INITIAL STUDY & ENVIRONMENTAL CHECKLIST

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<b>Project Title/File Number:</b>	NCRSP PCL 49 Bayside Church/Topgolf; File # PL14-0252
<b>Project Location:</b>	9000 Washington BL.; Roseville; Placer County; APNs: 363-020-018-000 & 363-020-019-000
<b>Project Description:</b>	<p>The applicant requests approval of a Major Project Permit (MPP) Stage 1 to establish a site development plan (master plan) for the approximately 59-acre site; a MPP Stage 2 for architecture and landscaping for the Topgolf development on Parcel 8 and associated site, landscaping and utility improvements; a Conditional Use Permit to allow the outdoor recreation component of Topgolf; and a Tentative Subdivision Map to merge and resubdivide two parcels into nine parcels.</p> <p>The entitlements will allow the phased development the project site with 130,000 square feet of community assembly (Bayside Church), 64,232 square feet of indoor/outdoor recreation (Topgolf), 116,500 square feet of office, 37,800 square feet of retail, 11,200 square feet of restaurant, and 27,900 square feet of hotel use types. The project also includes on-site landscaping, lighting, and parking, a 25 parking space park-n-ride lot and the realignment of a City bike trail</p>
<b>Project Applicant:</b>	Kris Steward, Phillips Land Law, Inc.; (916) 425-7906; 5301 Montserrat Lane, Loomis, CA 95650
<b>Property Owner:</b>	John Stewart, Bayside Covenant Church; (916) 791-1244; 8205 Sierra College Bl, Roseville, CA 95661
<b>Lead Agency Contact Person:</b>	Gina McColl, Associate Planner - City of Roseville; (916) 774-5276

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This initial study has been prepared to identify and assess the anticipated environmental impacts of the above described project application. The document relies on previous environmental documents and site-specific studies prepared to address in detail the effects or impacts associated with the project. Where documents were submitted by consultants working for the applicant, City staff reviewed such documents in order to determine whether, based on their own professional judgment and expertise, staff found such documents to be credible and persuasive. Staff has only relied on documents that reflect their independent judgment, and has not accepted at face value representations made by consultants for the applicant.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA), (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA

requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an EIR. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If, in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures to which the applicant agrees, the impact will be reduced to a less than significant effect, a mitigated negative declaration shall be prepared.

In reviewing the site specific information provided for this project, the City of Roseville Development Services - Planning Division has analyzed the potential environmental impacts created by this project and determined that with mitigation the impacts are less than significant. As demonstrated in the initial study checklist, there are no "project specific significant effects which are peculiar to the project or site" that cannot be reduced to less than significant effects through mitigation (CEQA Section 15183) and therefore an additional EIR **is not** required. Therefore, **on the basis of the following initial evaluation**, we find that the proposed project **could not** have a significant effect on the environment, and a **Mitigated Negative Declaration** will be prepared.

Prepared by: Gina McColl  
Gina McColl, Associate Planner

Date: 1.23.15

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## PROJECT DESCRIPTION

### *Project Location*

The North Central Roseville Specific Plan (NCRSP) is located in the City of Roseville, Placer County, California (see Figure 1, Regional Location). The NCRSP encompasses approximately 2,330 acres and is situated between Washington Boulevard and generally Interstate 80. The NCRSP was adopted July 5, 1990 by the City Council. Originally, the specific plan included a large land area to the north of State Route (SR) 65; however, through the specific plan entitlement process, this land area was designated as Urban Reserve, and subsequently a separate Specific Plan (Highland Reserve North) and EIR was prepared for that area and approved by the City in May 1997.

Parcel 49 is comprised of two parcels – “A” and “B” – and collectively is referred to as “Parcel 49.” Parcel 49 is located within the NCRSP area directly east of Washington Boulevard and directly south of SR 65 (see Figure 2, Project Site). Parcel A is 46.54 acres and is currently zoned Planned Development/Special Area – North Central Roseville Specific Plan (PD/SA-NC). Parcel B is 12.35 acres and is zoned Light Industrial/Special Area – North Central Roseville Specific Plan (M1/SA-NC) and is traversed by an overhead power line easement. The General Plan land use designation of both parcels is Light Industrial (LI).

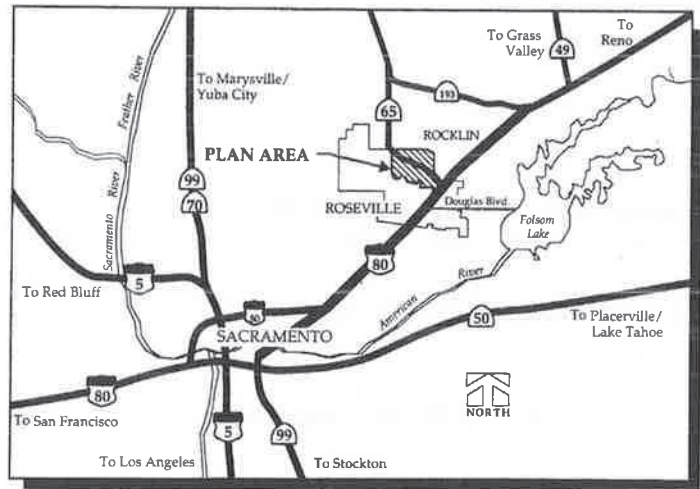


Figure 1: Regional Location

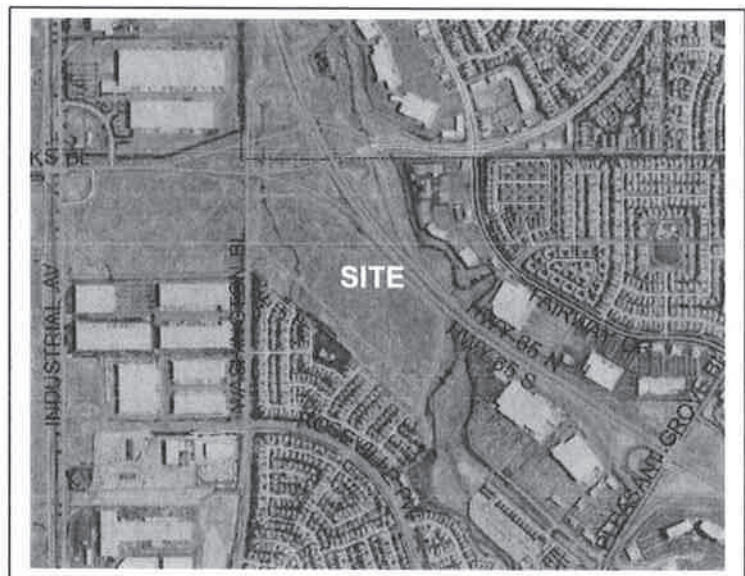


Figure 2: Project Site

### **Background**

#### 1990 NCRSP

The General Plan land use was established with the adoption of the North Central Roseville Specific Plan (NCRSP) by City Council on July 5, 1990. The specific plan is intended to guide the development of the 2,330 acre plan area. The NCRSP anticipated development of Parcel 49 with light industrial uses. An Environmental Impact Report (EIR SCH#88053010) was prepared to address impacts from development of the plan area and was adopted with the NCRSP.

#### 2000 Rezone

With establishment of NCRSP the zoning of this property was Light Industrial with a Special Area-North Central Specific Plan overlay (M1/SA-NC). The M1/SA-NC was intended to allow a broad range of light industrial uses, including a mix of industrial, business park/research and development, and commercial uses. Indoor Entertainment, including movie theaters, was permitted in the M1 zone with approval of a

Conditional Use Permit. In 2000, a Rezone and General Plan, Specific Plan, and Development Agreement Amendments were approved for Parcel 49A which established a new PD zone that allowed for retail, restaurant, lodging, educational, and office uses in addition to light industrial uses. As a result of the PD zoning, Indoor Entertainment and several other commercial and retail uses became principally permitted uses, subject to the following: retail uses were permitted up to twenty percent of the site's development area, allowing for approximately 85,000 square feet in retail uses. An initial study and Negative Declaration were prepared in conjunction with these entitlements and was adopted by the City Council in January 2000.

#### Corporate Center Site

In 2007, the City Council designated Parcel 49 as one of ten Corporate Center Sites within the City of Roseville with adoption of the Corporate Center Ordinance (Ordinance 4624). A Corporate Center is defined by the City's Zoning Ordinance as a ten to fifty acre site with three or more buildings containing more than 100,000 square feet of developed office space. A Corporate Center shall also contain all of the following: 1) Self-contained reciprocal parking, 2) Common conference facility, 3) On-site restaurants (or close proximity to food services, 4) Signage and identification for occupants/tenants, and 5) Exercise facility, showers and lockers. Corporate Center sites are eligible for increased height limits, up to ten stories, as established by the Design Review Permit or Major Project Permit. The increase in height allowed for additional square footage when utilizing the maximum 50% floor area ratio recommendation for Light Industrial land uses. The additional square footage increased the development potential of the site to 1.2 million square feet (58.883 acres x 0.50). The City evaluated the potential infrastructure demand necessary to accommodate the increased development potential of the site. It was determined that the City had adequate infrastructure to support adoption of the ordinance, yet further evaluation would be needed with development of each of the sites.

#### 2007 Rezone

Following the Council's designation of the property as a Corporate Center site, Richland Properties (then owner of the property) processed a rezone to clarify the amount of retail uses that could be developed on site. The existing PD zoning indicated that twenty percent of the site could be developed with retail uses; therefore, based on 1.2 million square feet of development potential, up to 240,000 square feet of retail could be developed on the subject site (1.2 million square feet x 0.20 = 240,000 square feet). In March 2008, the Council adopted a Negative Declaration and approved the rezone.

#### ***Physical or Natural Features On-Site***

The project site is currently undeveloped and is comprised mostly of annual grasslands. The previous property owner obtained permits from the US Army Corps of Engineers (Corps) to fill an intermittent drainage channel totaling 0.269 acres that traversed the western portion of the property. The appropriate permits to fill the wetlands were received and the permits were effectuated in 2012. No native oak trees are present on the site.

#### ***Physical or Natural Features on Adjacent Property***

- Directly north of the subject parcel is SR 65.
- Directly south of the subject parcel is the Summerhill Neighborhood which is zoned Small Lot Residential (RS). Also adjacent to the site is a 2.8 acre neighborhood park. A 50 foot easement for an existing city bike trail is located along on the north edge of the Summerhill neighborhood.
- Directly east of the subject parcel is Parcel 84, which is zoned Open Space (OS). A tributary to Pleasant Grove Creek runs directly through this open space property.

Directly west, across Washington Boulevard, is a vacant parcel located within the North Industrial Planning Area (NIPA) that has a zoning designation of General Industrial (M2). In May 2010, the Planning Commission approved a Major Project Permit (MPP) Stage 1 to allow 540,000 square feet of mixed use light industrial, office and neighborhood commercial uses on the site. The project included two new public



Building architecture and specific landscape plans for each of the buildings will be evaluated under subsequent MPP Stage 2 entitlements as initiated by the property owner. Site development is intended to occur in three phases, with the Topgolf parcel developing first and the remaining parcels being developed as market conditions allow.

**Major Project Permit Stage 2**

The project includes a request for approval of a MPP Stage 2 for Topgolf’s building architecture and the site landscaping. Topgolf will be located on Parcel 8 (11.522 acres) and totals 64,232 square feet. The building includes three floors, 102 hitting bays, restaurant and bar services, a corporate meeting/event space, and outdoor terrace. The outfield is approximately four acres and 240 yards in length. The outfield perimeter is enclosed with steel netting strung between 150 foot tall poles around all three sides.

Development of the first phase triggers various site improvements aside from the associated parking, lighting, and landscaping improvements on Parcel 8. The first phase of development also includes:

- The construction of a public/private collector roadway (Road A) to Parcel 8;
- A traffic signal will be constructed at the intersection of Washington Boulevard and Road A;
- Landscape improvements within the 50 foot landscape buffer area along the southern property line;
- Sidewalk and landscaping within the public right-of way along Washington Boulevard between Road A and the City bike trail;
- Realignment of the bike trail;
- Extension of utilities to serve Topgolf;
- Water and sewer loop connections;
- Temporary access from Topgolf to the Emergency Vehicle Access road at the southeastern corner of the project site.

Construction of the remainder of the buildings and site improvements entitled under the MPP Stage 1 will be required to obtain MPP Stage 2 approvals prior to submitting for building permits (MPP Stage 3) and commencing construction.

**Major Project Permit Stage 3**

Following the MPP Stage 1 & 2 approvals, the applicant may submit the final plans for review through the MPP Stage 3 process. The final plans shall incorporate any changes and conditions stipulated with the Stage 1 & 2 approvals and are reviewed for compliance by the Planning Division. Building Permits or grading plans may be issued once the Planning Division has approved the final plans.

**Conditional Use Permit**

A Conditional Use Permit (CUP) is required by the PD zoning designation for the outdoor recreation component of the Topgolf facility. The CUP will include conditions to ensure the operating characteristics of Topgolf will be compatible with and will not adversely affect persons residing or working in the area or be detrimental or injurious to public or private property or improvements.

**Tentative Subdivision Map**

As noted in the project background section, Parcel 49 is made up of Parcel A and B. The applicant has applied for a Tentative Subdivision Map to merge these two parcels and resubdivide the parcels into nine separate parcels and a 0.641 acre dedication of public right-of-way. The resulting parcels will range from 1.4 to 25.92 acres based on gross acreage.

<b>Parcel 1 – 2.51 acres</b>	<b>Parcel 2 – 3.45 acres</b>	<b>Parcel 3 – 3.97 acres</b>	<b>Parcel 4 - 2.51 acres</b>
<b>Parcel 5 – 1.4 acres</b>	<b>Parcel 6 – 2.23 acres</b>	<b>Parcel 7 – 4.73 acres</b>	<b>Parcel 8 – 11.52 acres</b>
<b>Parcel 9 – 25.9 acres</b>			

The MPP application includes a development plan for the new parcels shown in the Tentative Subdivision Map application. The Tentative Subdivision Map will be evaluated to ensure that the required findings for approval can be made, including that the size and design of the parcels are consistent with City standards, the lots can be built upon, and that the design and density of the subdivision will not violate any Regional Water Quality Board requirements.

## ZONING AND LAND USE

Site and surrounding zoning and land use is as follows:

Location	Zoning	General Plan Land Use	Actual Use of Property
On-Site	Planned Development (PD/SA-NC) & Light Industrial (M1/SA-NC)	Light Industrial (LI)	Vacant
North	-	-	State Route 65
South	Small Lot Residential (RS) & Parks & Recreation (PR)	Low Density Residential (LDR) & PR	Single Family Residential & Neighborhood Park
East	Open Space (OS)	OS	Open Space Preserve & Tributary to Pleasant Grove Creek
West	General Industrial (M2)	General Industrial (IND)	Vacant

## UNIFORMLY APPLIED POLICIES AND STANDARDS

The State CEQA Guidelines allow a lead agency to rely on previously adopted development policies or standards as mitigation for environmental effects, when the standards have been adopted by the City, with findings based on substantial evidence, that the policies or standards will substantially mitigate environmental effects, unless substantial new information shows otherwise (CEQA Guidelines §15183(f)). In April 2008, the City of Roseville adopted Findings of Fact related to the mitigating policies and standards, and adopting the City of Roseville CEQA Implementing Procedures for the preparation, processing, and review of environmental documents (Resolution 08-172). These findings are applicable to the following regulations and ordinances, which include standards and policies that are uniformly applied throughout the City, and will substantially mitigate specified environmental effects of future projects:

- City of Roseville General Plan Policies
- City of Roseville Zoning Ordinance (RMC Title 19)
- Noise Regulation (RMC Ch.9.24)
- Flood Damage Prevention Ordinance (RMC Ch.9.80)
- Traffic Mitigation Fee (RMC Ch.4.44)
- Highway 65 Joint Powers Authority Improvement Fee (Resolution 2008-02)
- South Placer Regional Transportation Authority Transportation and Air Quality Mitigation Fee (Resolution 09-05)
- Drainage Fees (Dry Creek [RMC Ch.4.49] and Pleasant Grove Creek [RMC Ch.4.48])
- City of Roseville Improvement Standards (Resolution 02-37)
- City of Roseville Construction Standards (Resolution 01-208)
- Tree Preservation Ordinance (RMC Ch.19.66)
- Subdivision Ordinance (RMC Title 18)
- Community Design Guidelines (Resolution 95-347)
- North Central Specific Plan Environmental Impact Report (SCH # 88053010)
- Specific Plan Design Guidelines:

- North Central Roseville Specific Plan, and
- North Central Roseville Specific Plan Landscape Design Guidelines (Resolution 90-170)

The City's Mitigating Policies and Standards are referenced, where applicable, in the Initial Study Checklist. The City of Roseville has adopted CEQA Findings that these Mitigating Policies and Standards substantially mitigate specified environmental impacts of the future project.

## **EXPLANATION OF INITIAL STUDY CHECKLIST**

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The California Environmental Quality Act (CEQA) Guidelines recommend that lead agencies use an Initial Study Checklist to determine potential impacts of the proposed project to the physical environment. The Initial Study Checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by this project. This section of the Initial Study incorporates a portion of Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines.

There are four (4) possible answers to the Environmental Impacts Checklist on the following pages. Each possible answer is explained herein:

- 1) A "Potentially Significant Impact" is appropriate if there is enough relevant information and reasonable inferences from the information that a fair argument based on substantial evidence can be made to support a conclusion that a substantial, or potentially substantial, adverse change may occur to any of the physical conditions within the area affected by the project. When one or more "Potentially Significant Impact" entries are made, an EIR is required.
- 2) A "Potentially Significant Unless Mitigation Incorporated" answer is appropriate where the applicant has agreed to incorporate a mitigation measure to reduce an impact from "Potentially Significant" to a "Less than Significant." For instance, impacts to flood waters could be reduced from a "potentially significant impact" to a "less than significant impact" by relocating a building to an area outside of the floodway. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level. Mitigation Measures are identified as MM followed by a number.
- 3) A "Less Than Significant Impact" answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant, or that the application of development policies and standards to the project will reduce the impact(s) to a less than significant level. For instance, the application of the City's Improvement Standards reduces potential erosion impacts to a less than significant impact.
- 4) A "No Impact" answer is appropriate where it can be clearly seen that the impact at hand does not have the potential to adversely affect the environment. For instance, a project in the center of an urbanized area will clearly not have an adverse effect on agricultural resources or operations.

All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project level, indirect as well as direct, and construction as well as operational impacts.

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources cited in the parentheses following each response. A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards.

**INITIAL STUDY CHECKLIST**

**I. Aesthetics**

Would the project:

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

**Setting:**

The project site is located within the North Central Roseville Specific Plan Area (NCRSP). Parcel 49 is one of the last parcels to be developed in the plan area and is surrounded by development or land that has been entitled for development. The site is adjacent to HWY-65 to the east, single family residential to the south, Washington Boulevard and the entitled Blue Oaks Commerce Center office and light industrial development to the west, and Blue Oaks Boulevard and industrial development to the north. The site is within an urbanized area.

**Discussion of Checklist Answers:**

a-c) The project site does not abut and is not visible from any designated scenic vista or scenic highway. The project will convert a vacant parcel to urban development that has been anticipated for development by both the NCRSP and the General Plan. The General Plan EIR identified that the conversion of an undeveloped parcel to urban development as an unavoidable significant impact for which the City Council also adopted a statement of overriding considerations. The site is now surrounded by either development or approved development projects. Since the setting is now an urban environment, converting the site from vacant to developed land is considered a less than significant impact.

The City of Roseville has adopted Community Design Guidelines (CDG) with the purpose of minimizing the aesthetic impacts of new development projects. The CDG includes guidelines for building design, site design and landscape design, which have the purpose of improving the built environment. The North Central Roseville Specific Plan also contains design policies that promote high standards of architectural design and continuity within the specific plan area. Both the CDG and the NCRSP guidelines were identified as documents that substantially mitigate the environmental effects of future projects in the City's Mitigating Policies and Standards. Staff has evaluated the proposed Major Project Permit (MPP) Stage 2 for Topgolf for potential impacts to the surrounding properties and determined that the site, building, and landscape designs meet the City's requirements. The City's approving authority (Planning Commission) will ultimately review the Major Project Permit (MPP) - Stage 1 & 2, the Conditional Use Permit, and Tentative Subdivision Map for conformance with City standards and requirements.

Due to the project’s location within an urban environment and design being addressed with the MPP application, the project will not substantially damage or degrade the aesthetics of the site or the aesthetics of its surroundings.

d) Light and glare will increase above the existing condition. Light and glare associated with the proposed project will result from parking lot lighting, exterior building lighting, and lighting to illuminate the Topgolf outfield. As part of the Major Project Permit process, site lighting is reviewed for aesthetic concerns as well as off-site effects. The Community Design Guidelines (CDG’s) include lighting standards for pole height, orientation, cut-off lenses and shields to avoid off-site glare, all of which will reduce the potential impacts from new lighting to a less than significant level. Additionally, a photometric plan has been provided to show illumination levels generated on the Parcel 8. The plans show there is no light spillage onto adjacent parcels from Topgolf light sources. All other on site lighting will be reviewed with the MPP Stage 2 and Stage 3 process to avoid off-site light spillage. The proposed project therefore demonstrates compliance with the CDG’s.

Based on the above discussion, aesthetic impacts will be less than significant.

## II. Agricultural & Forestry Resources

In determining whether impacts to agricultural resources would have significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
zoned Timberland Production (as defined by Government Code section 51104(g))?				
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

**Discussion of Checklist Answers:**

a, e) The subject property contains no prime farmland, unique farmland, or farmland of statewide importance or active agricultural operations. The NCRSP EIR identified the soil type in the project area as Cometa-Fiddymont Complex. This soil type is not listed as a high quality soil that supports agriculture. Therefore there will be no impact to farmlands and no mitigation is required.

b) The subject property is not currently under a Williamson Act contract or zoned for agricultural use. Development of the proposed project will not conflict with existing zoning for agriculture use or an active Williamson Act contract and no mitigation is required.

c- e) The project site does not support any forest resources and the land is not zoned for forestry activities or timberland. The project would have no impacts to forest resources. No mitigation is required.

No agricultural or forestry resources are present on the site. Therefore, the proposed project will not have an impact on agricultural or forestry resources.

**III. Air Quality and Greenhouse Gases**

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?				
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

**Setting:**

Air quality and Greenhouse Gas (GHG) is monitored through the efforts of various international, federal, State, regional and local government agencies. These agencies work jointly and individually to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies and policies regulating the air quality within the Roseville area have been outlined in the Air Quality and Greenhouse Gas Impact Analysis study that was prepared by Raney Planning & Management Inc. (Raney) for the proposed project. A copy of the study is included as Appendix A. The purpose of the study is to evaluate the potential impacts from construction and operation of the proposed project, on both a project and cumulative level, in the context of the existing regional and local air quality conditions and regulations. The contents of the study are in most part, included in the discussion of the checklist answers below.

**Discussion of Checklist Answers:**

a) The proposed project site is located within the Sacramento Valley Air Basin (SVAB) and is under the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). The SVAB is designated nonattainment for the federal particulate matter 2.5 microns in diameter (PM<sub>2.5</sub>) and the State particulate matter 10 microns in diameter (PM<sub>10</sub>) standards, as well as for both the federal and State ozone standards. The federal Clean Air Act requires areas designated as federal nonattainment to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The SIP contains the strategies and control measures for states to use to attain the national ambient air quality standards (NAAQS). The SIP is periodically modified to reflect the latest emissions inventories, planning documents, rules, and regulations of air basins as reported by the agencies with jurisdiction over them. In compliance with regulations, the PCAPCD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the NAAQS, including control strategies to reduce air pollutant emissions via regulations, incentive programs, public education, and partnerships with other agencies.

The current applicable air quality plan for the proposed project area is the *Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (Ozone Attainment Plan), adopted by the PCAPCD on February 19, 2009. The California Air Resources Board (CARB) determined that the Ozone Attainment Plan met federal Clean Air Act requirements and approved the Plan on March 26, 2009 as a revision to the SIP. Revisions to the Placer County portion of the SIP or Ozone Attainment Plan were made and adopted on August 11, 2011. In addition, an update to the plan, *2013 Revisions to the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (2013 Ozone Attainment Plan), has been prepared and was adopted on September 26, 2013, and approved by CARB as a revision to the SIP on November 21, 2013. The 2013 Ozone Attainment Plan was submitted to the U.S. Environmental Protection Agency (USEPA) as a revision to the SIP on December 31, 2013. The USEPA determined the motor vehicle emission budgets in the Plan to be adequate and made such findings effective August 25, 2014. In addition, the USEPA proposes to approve and promulgate the 2013 Ozone Attainment Plan. The comment period for the proposed rule ended November 14, 2014, and the USEPA's final ruling is pending.

The 2013 Ozone Attainment Plan demonstrates how existing and new control strategies would provide the necessary future emission reductions to meet the CAA requirements, including the NAAQS. It should be noted that in addition to strengthening the 8-hour ozone NAAQS, the USEPA also strengthened the secondary 8-hour ozone NAAQS, making the secondary standard identical to the primary standard. The SVAB remains classified as a severe nonattainment area with an attainment deadline of 2027. The USEPA is in the process of preparing the final implementation rule of the revised NAAQS for ozone to address the requirements for reasonable further progress, modeling and attainment demonstrations, and reasonably available control measures (RACT) and reasonably available control technology (RACT). The actions of the air districts within the SVAB are pending the publication of the final rule.

A project would be considered to conflict with, or obstruct implementation of, regional air quality plans if the project would be inconsistent with the emissions inventories contained in the regional air quality plan and/or result in emissions that exceed the PCAPCD established thresholds of significance. Emission inventories are developed based on projected increases in population, employment, regional vehicle miles traveled (VMT), and associated area sources within the region, which are based on regional projections that are, in turn, based on the City's General Plan and zoning designations for the region. The proposed project is consistent with the existing zoning on the site. Thus, Bayside Church, offices, restaurants, a hotel and indoor recreation are all permitted uses in the Planned Development zone, as well as outdoor recreation uses are conditionally permitted and allowed with approval of a conditional use permit. The proposed project would result in substantially less square footage than what is currently allowable per the existing zoning for the site. As a result, the proposed project would decrease the number of vehicle trips associated with the site from what is currently anticipated. Because emissions inventories were determined based on allowed uses per the City's land use and/or zoning designations, overall emissions related to buildout of the site would be less with implementation of the proposed project than what would have been included in the emissions inventories of the 2013 Ozone Attainment Plan. Furthermore, the PCAPCD's permits, rules, and regulations are in compliance with the 2013 Ozone Attainment Plan, and the proposed project is required to comply with all PCAPCD rules and regulations.

General conformity requirements of the Plan include whether a project would cause or contribute to new violations of any NAAQS, increase the frequency or severity of an existing violation of any NAAQS, or delay timely attainment of any NAAQS. As analyzed and determined in the discussions below, the proposed project would not result in emissions that exceed the recommended PCAPCD's thresholds of significance. Thus, the project would not cause or contribute to new violations of any NAAQS, increase the frequency or severity of an existing violation of any NAAQS, or delay timely attainment of any NAAQS.

Because the proposed project would not conflict with the emissions inventories of the regional air quality plan, would result in emissions below PCAPCD thresholds of significance, and would not conflict with or obstruct implementation of the applicable air quality plan, impacts would be considered less than significant.

b) In order to evaluate ozone and other criteria air pollutant emissions and support attainment goals for those pollutants that the area is designated nonattainment, the PCAPCD recommends significance thresholds for emissions of PM<sub>10</sub>, carbon monoxide (CO), and ozone precursors – reactive organic gases (ROG) and nitrous oxides (NO<sub>x</sub>). The significance thresholds, expressed in pounds per day (lbs/day), listed in Table 1 are the PCAPCD's recommended thresholds of significance for use in the evaluation of air quality impacts associated with proposed development projects. The City of Roseville, as lead agency, utilizes the PCAPCD's recommended project-level criteria air pollutant thresholds of significance for CEQA evaluation purposes. Thus, if the proposed project's emissions exceed the pollutant thresholds presented in Table 1, the project could have a significant effect on air quality and the attainment of federal and State AAQS.

<b>Pollutant</b>	<b>Construction/Operational Threshold (lbs/day)</b>
ROG	82
NO <sub>x</sub>	82
PM <sub>10</sub>	82
CO	550

*Source: PCAPCD, 2012.*

Implementation of the proposed project would contribute local emissions in the area during both the construction and operation of the proposed project. The proposed project's short-term construction-related and long-term operational emissions were estimated using the California Emissions Estimator Model (CalEEMod) version 2013.2.2 software - a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify air quality emissions, including GHG emissions, from land use projects. The model applies inherent default values for various land uses, including trip generation rates based on the ITE Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data was available, such data was input into the model (e.g., construction phases and timing, projected trip rate, sustainable design features, etc.).

### Construction Emissions

During construction of the project, various types of equipment and vehicles would temporarily operate on the project site. Construction exhaust emissions would be generated from construction equipment, earth movement activities, construction workers' commute, and construction material hauling for the entire construction period. The aforementioned activities would involve the use of diesel- and gasoline-powered equipment that would generate emissions of criteria pollutants. Project construction activities also represent sources of fugitive dust, which includes PM emissions. As construction of the proposed project would generate air pollutant emissions intermittently within the site, and in the vicinity of the site, until all construction has been completed, construction is a potential concern because the proposed project is in a nonattainment area for ozone and PM.

The project is required to comply with all PCAPCD rules and regulations for construction, including, but not limited to, the following (which would be noted on City-approved construction plans):

- Rule 202 related to visible emissions;
- Rule 217 related to asphalt paving materials;

- Rule 218 related to architectural coatings; and
- Rule 228 related to fugitive dust.

In addition, the City has adopted design and construction standards that apply to all projects within the City limits that require projects to meet specific engineering and design requirements. The proposed project would be required to comply with the City of Roseville Design and Construction Standards, including Section 111, which is intended to minimize fugitive dust and PM<sub>10</sub> emissions during construction activities. Compliance with the engineering and design requirements would be noted on City-approved construction plans as well.

As shown in Table 1 above, the PCAPCD threshold of significance for construction is 82 pounds per day for ROG, NO<sub>x</sub>, and PM<sub>10</sub> and 550 pounds per day for CO. Table 2 below presents the maximum estimated construction-related emissions of ROG, NO<sub>x</sub>, PM<sub>10</sub>, and CO resulting from the proposed project. CalEEMod inherently accounts for applicable PCAPCD rules, with the exception of Rule 218 related to architectural coatings; accordingly, the modeling was adjusted to reflect that the project would use only low volatile organic compound (VOC) paints per PCAPCD rules and regulations.

<b>TABLE 2</b>				
<b>Unmitigated Maximum Project Construction Emissions (lbs/day)</b>				
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>CO</b>
Proposed Project	49.43	79.13	21.30	93.28
PCAPCD Thresholds	82.0	82.0	82.0	550.0
<b>Exceed Thresholds?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<i>Source: CalEEMod, January 2015 (see Appendix A).</i>				

As Table 2 indicates, the project's maximum unmitigated construction-related emissions would be below the applicable thresholds of significance. Therefore, construction activities associated with development of the proposed project would not substantially contribute to the PCAPCD's nonattainment status for ozone or PM, and a less-than-significant impact associated with construction emissions would occur.

### Operational Emissions

Operational emissions of ROG, NO<sub>x</sub>, CO, and PM<sub>10</sub> would be generated by the proposed project from mobile and area sources. Day-to-day activities such as future employee and patron vehicle trips to and from the project site would make up the majority of the mobile emissions. Emissions would also occur from area sources such as natural gas combustion from heating mechanisms, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, cleaning products, spray paint, etc.).

As stated above, the project is required to comply with all PCAPCD rules and regulations, such as those listed previously for construction, as well as those applicable to operations including Rule 205 associated with nuisance. CalEEMod inherently accounts for applicable PCAPCD rules, with the exception of Rule 218 related to architectural coatings. Accordingly, the modeling was adjusted to reflect that the project would only use low VOC paints per PCAPCD rules and regulations. In addition, the project's anticipated trip rate, inherent site or project design features (i.e., pedestrian network improvements and proximity to nearest bus stop), and compliance with applicable regulations (i.e., California Building Energy Efficiency Standards) have been included in the project modeling.

The total estimated operational emissions for the proposed project are presented below in Table 3.

<b>TABLE 3</b>				
<b>Maximum Project Operational Emissions<sup>1</sup></b>				
	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>CO</b>
Proposed Project <sup>1</sup>	76.89	61.42	62.77	319.08
PCAPCD Thresholds	82.0	82.0	82.0	550.0
<b>Exceed Thresholds?</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>	<b>NO</b>
<sup>1</sup> Includes use of only low VOC paints, pedestrian network improvements, proximity to nearest bus stop, and compliance with the California Building Energy Efficiency Standards.				
<i>Source: CalEEMod, January 2015 (see Appendix A).</i>				

As indicated in Table 3, the project's operational emissions would be below the PCAPCD's recommended thresholds. Accordingly, the project would not substantially contribute to the PCAPCD's nonattainment status of ozone or PM, and related impacts would be considered less than significant.

Conclusion

The proposed project would not exceed the applicable thresholds of significance for air pollutant emissions during construction or operation. Therefore, the project would not substantially contribute to the PCAPCD's nonattainment status for ozone or PM and would not violate any air quality standards. Accordingly, impacts would be considered less than significant.

c) The SVAB is designated nonattainment for both the federal and State ozone standards. In order to improve air quality and attain the health-based standards, reductions in emissions are necessary within nonattainment areas. The project is part of a pattern of urbanization occurring in the greater Sacramento ozone nonattainment area. The growth and combined population, vehicle usage, and business activity within the nonattainment area from the project, in combination with other past, present, and reasonably foreseeable projects within Placer County and surrounding areas, could either delay attainment of the standards or require the adoption of additional controls on existing and future air pollution sources to offset emission increases. Thus, the project could be considered to contribute towards cumulative regional air quality effects from emissions of criteria air pollutants.

To aid in determining an individual project's cumulative contribution to regional air quality, the PCAPCD suggests a 10 pounds per day level for ROG and NO<sub>x</sub> emissions at which point a project is recommended to implement mitigation measures that would reduce the project's contribution towards cumulative emissions. However, the City, as lead agency, prefers to rely on a two-tier criteria pollutant cumulative analysis methodology similar to that adopted by the Sacramento Metropolitan Air Quality Management District (SMAQMD), as outlined in the SMAQMD *Guide to Air Quality Assessment in Sacramento County*. That is, if a project would not result in significant project-level criteria air pollutant emissions for which the region is designated non-attainment (i.e., would not exceed the PCAPCD recommended operational project-level threshold of 82 lbs/day for ROG or NO<sub>x</sub>), project emissions would not be considered cumulatively considerable and a less-than-significant cumulative impact would result. However, should a project exceed the thresholds, a Tier 2 evaluation should be conducted to determine SIP consistency to determine if a substantial lessening of impact would occur in accordance with CEQA Guidelines Section 15064(h)(3). Under the Tier 2 analysis, projects found consistent with the SIP and which would not conflict with the SIP emissions budget are considered less than cumulatively considerable. The City finds the above methodology appropriate to Roseville projects considering the City is located within the SVAB, the same air basin where the above methodology is utilized by numerous CEQA lead agencies with concurrence and support from the SMAQMD.

### Tier 1: Cumulative Emissions Threshold

As shown in Table 3 above, the project's operational emissions are predicted to be below the City's recognized project-level threshold. In addition, the proposed project includes a variety of sustainability design features, such as sidewalks, connections to bike trails, showers and locker facilities, transit amenities, and shade trees (as outlined in the AQ/GH Study), and inherent site location features that would contribute to a reduction in overall project-related emissions. Therefore, the proposed project would not result in a substantial cumulative contribution of criteria air pollutants, and the cumulative impact is found to be less than significant based on the City's Tier 1 threshold evaluation methodology. Given this finding, a Tier 2 evaluation is not required. However, as discussed above, the proposed project would result in overall fewer emissions than what has been anticipated for buildout of the site in the applicable air quality plan per the existing zoning. As such, the project would result in fewer emissions than anticipated by such and, thus, would not conflict with or obstruct implementation of the applicable air quality plan. For the aforementioned reasons, and the fact that the air quality plan has been shown to substantially lessen cumulative emissions from land use projects, according to CEQA Section 15064(h)(3), the project's incremental contribution to regional emissions would not be cumulatively considerable under a Tier 2 evaluation. Therefore, under either a Tier 1 or Tier 2 evaluation, the proposed project would result in a less than significant cumulative impact to air quality.

d) The major pollutant concentrations of concern are localized CO emissions and toxic air contaminant (TAC) emissions, which are addressed in further detail below.

### Localized CO Emissions

Localized concentrations of CO are related to the levels of traffic and congestion along streets and at intersections. Implementation of the proposed project would increase traffic volumes on streets near the project site; therefore, the project would be expected to increase local CO concentrations. High levels of localized CO concentrations are only expected where background levels are high, and traffic volumes and congestion levels are high. The statewide CO Protocol document identifies signalized intersections operating at Level of Service (LOS) E or F, or projects that would result in the worsening of signalized intersections to LOS E or F, as having the potential to result in localized CO concentrations in excess of the State or federal AAQS, as a result of large numbers of cars idling at stop lights.

In accordance with the State CO Protocol, the PCAPCD recommends further analysis for localized CO concentrations if any intersection or roundabout is determined by a traffic study to degrade to a LOS E or F as a result of a project, alone or cumulatively, or if total project-level CO emissions exceed 550 pounds per day. As shown above, the proposed project would result in CO emissions of 319.08 lbs/day during operations, which would be well below the PCAPCD's 550 pounds per day threshold of significance. According to the Transportation Impact Study prepared for the proposed project, all intersections would operate at acceptable levels (LOS D or better) with implementation of the mitigation measures set forth in the Transportation Impact Study, which require a northbound right-turn pocket of 250 feet to be constructed on Washington Boulevard at the Blue Oaks Boulevard/Washington Boulevard intersection. The mitigation measures would be required for the proposed project to reduce impacts to less than significant, would be incorporated into the project, and adopted as conditions of approval that would be enforced by the City. Accordingly, the intersections would operate acceptably with implementation of the proposed project, as the project would include the necessary mitigation measures to reduce all impacts at the affected intersections. Thus, further CO analysis would not be required, as the above intersections would operate at acceptable levels with implementation of the required mitigation measures.

Furthermore, the proposed project would result in fewer vehicle trips than anticipated for buildout of the site per the currently permitted uses. Therefore, further CO analysis is not required and the proposed

project would not be expected to result in substantial concentrations of CO emissions at any intersection.

### TAC Emissions

Another category of environmental concern is TACs. The CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM in particular are primarily associated with long-term exposure and associated risk of contracting cancer.

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, and/or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Sensitive receptors are typically defined as facilities where sensitive receptor population groups (i.e., children, the elderly, the acutely ill, and the chronically ill) are likely to be located. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, playgrounds, childcare centers, retirement homes, convalescent homes, hospitals, and medical clinics.

The proposed project would consist of a mix of commercial and office uses, which are not typically considered sensitive receptors. Although the project includes a hotel, church, and other uses where people tend to congregate, substantial numbers of sensitive individuals would not be expected to be on-site for any extended periods of time. Therefore, the proposed project would not be considered a sensitive receptor and, thus, would not expose any new sensitive receptors to any substantial pollutant concentrations associated with any existing nearby operations.

Operational-related emissions of TACs are typically associated with stationary diesel engines or land uses that involve heavy truck traffic or idling. The project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. The CARB's Handbook includes facilities (distribution centers) with associated diesel truck trips of more than 100 trucks per day as a source of substantial TAC emissions. The project is not a distribution center and is not anticipated to receive 100 deliveries per day or more. In addition, heavy-duty diesel vehicles are prohibited from idling for more than five minutes per CARB regulations. Accordingly, the proposed project would not involve diesel truck trips in excess of 100 per day, and, overall, the proposed project would not expose any existing sensitive receptors (i.e., nearby residences to the south) to any new permanent or substantial TAC emissions.

It should be noted that construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. Off-road heavy-duty diesel equipment used for site grading, paving, and other construction activities result in the generation of DPM. The nearby residences could become temporarily exposed to DPM emissions from the site during construction activities. However, construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. In addition, only portions of the site would be disturbed at a time during buildout of the proposed project, with operation of construction equipment regulated by PCAPCD rules and regulations, restricted to certain hours per the City of Roseville Noise Ordinance, and occurring intermittently throughout the course of a day. Thus, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period of time would be very low. Because health risks associated with exposure to DPM or

any TAC are correlated with high concentrations over a long period of exposure (e.g., over a 70-year lifetime), the temporary, intermittent construction-related DPM emissions would not be expected to cause any health risks to nearby sensitive receptors. Thus, construction of the proposed project would not expose any nearby existing sensitive receptors to any substantial adverse concentrations of TACs.

Because the proposed project would not introduce new sensitive receptors to the area, would not affect any existing sensitive receptors, and is not located near any substantial sources of TACs, development of the proposed project would not expose sensitive receptors to substantial pollutant concentrations.

### Conclusion

Based on the above, the proposed project would not expose sensitive receptors to substantial pollutant concentrations. Thus, impacts associated with such would be considered less than significant.

e) Odors are generally regarded as an annoyance rather than a health hazard. Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, quantitative methodologies to determine the presence of a significant odor impact do not exist. According to the CARB's Handbook, some of the most common sources of odor complaints received by local air districts are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, autobody shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The proposed project site is not located near any such land uses, and the project would not introduce any such land uses.

Commercial and office uses are not typically associated with the creation of objectionable odors. However, restaurants, especially fast food restaurants, can generate substantial sources of odors as a result of cooking processes and waste disposal. Char broilers, deep-fryers, and ovens tend to produce food odors that can be considered offensive to some people. The food waste produced by restaurants can putrefy if not properly managed, which can also produce objectionable odors. The proposed project is anticipated to include restaurant uses that would involve food preparation, including charbroiling that could result in cooking exhaust and smoke, and would produce food waste. As odors are highly subjective, one receptor may consider cooking exhaust and related smoke an acceptable odor, while another receptor may find such odors objectionable. Nonetheless, the restaurant uses would be required to comply with all State and local regulations associated with cooking equipment and controls such as grease filtration and removal systems, exhaust hood systems, and blowers to move air into the hood systems, through air cleaning equipment, and then outdoors. Such equipment would ensure that pollutants associated with smoke and exhaust from cooking surfaces would be captured and filtered, allowing only filtered air to be released into the atmosphere. Furthermore, the areas on the project site that would involve food preparation would be located near the center or in the northeastern portions of the site, separated by a landscape buffer and parking lot areas from the nearest existing sensitive receptors (i.e., nearby residences to the south). Because odors associated with cooking exhaust would be minimized and odors dissipate with distance, such odors would not be considered a major source of objectionable odors that would affect a substantial number of people.

Decomposition of biological materials, such as food waste and other trash, could create objectionable odors if not properly contained and handled. The proposed project would provide waste receptacles throughout the facilities and would utilize outdoor trash dumpsters with lids, which would be picked up regularly during normal solid waste collection operating hours within the City. The dumpster lids are intended to contain odors emanating from the dumpsters. The garbage collected on-site and stored in the outdoor dumpsters would not be on-site long enough to cause substantial odors. Thus, the outdoor, enclosed, and covered trash dumpsters that would be picked up regularly would provide proper containment and handling of the trash generated on-site.

Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, as discussed above, construction is temporary and diesel emissions would be minimal and

regulated through compliance with the PCAPCD's rules and regulations. In addition, the project site is not considered a sensitive receptor and would not be substantially affected by any existing sources of odors, including potential odors associated with emissions of DPM from the nearby freeway traffic. Thus, odors related to DPM would not be expected to be considerable or affect a substantial number of people.

PCAPCD Rule 205, Nuisance, addresses the exposure of "nuisance or annoyance" air contaminant discharges, including odors, and provides enforcement of odor control. Rule 205 is complaint-based, where if public complaints are sufficient to cause the odor source to be considered a public nuisance, then the PCAPCD is required to investigate the identified source, as well as determine and ensure a solution for the source of the complaint, which could include operational modifications to correct the nuisance condition. Thus, although not anticipated, if odor or air quality complaints are made upon development of the proposed project, the PCAPCD would be required (per PCAPCD Rule 205) to ensure that such complaints are addressed and mitigated, as necessary. Therefore, overall, the proposed project would not create objectionable odors that would affect a substantial number of people, and a less-than-significant impact would occur.

f, g) Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

In September 2006, then-Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, which requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. AB 32 delegated the authority for implementation to the CARB and directs the CARB to enforce the statewide cap. In accordance with AB 32, CARB prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008. The Scoping Plan provides the outline for actions to reduce California's GHG emissions. Based on the reduction goals called for in the 2008 Scoping Plan, a 29 percent reduction in GHG levels relative to a Business As Usual (BAU) scenario would be required to meet 1990 levels by 2020. A BAU scenario is a baseline condition based on what could or would occur on a particular site in the year 2020 without implementation of a proposed project or any required or voluntary GHG reduction measures. A project's BAU scenario is project and site specific, and varies from project to project.

In 2011, the baseline or BAU level for the Scoping Plan was revised to account for the economic downturn and State regulation emission reductions (i.e., Pavley, Low Carbon Fuel Standard [LCFS], and Renewable Portfolio Standard [RPS]). Again, the BAU condition is project site specific and varies. The BAU scenario is based on what could or would occur on a particular site in the year 2020 without implementation of a proposed project or consideration of any State regulation emission reductions or voluntary GHG reduction measures. Accordingly, the Scoping Plan emission reduction target from BAU levels required to meet 1990 levels by 2020 was modified from 29 percent to 21.7 percent (where BAU levels is based on 2010 levels). The amended Scoping Plan was re-approved August 24, 2011.

The PCAPCD recommends that the threshold of significance for GHG emissions selected by lead agencies be related to compliance with AB 32 reduction goals (i.e., whether a project's GHG emissions would substantially hinder the State's ability to attain the reduction goals of AB 32, where the reduction goal is reducing statewide GHG emissions from BAU emissions sufficient to meet 1990 levels by 2020). In accordance with CARB and PCAPCD recommendations, the City of Roseville, as lead agency, requires a quantitative GHG analysis for development projects in order to demonstrate a project would promote sustainability and implement operational GHG emission reduction strategies that would reduce GHG emissions according to the emission reduction targets of the Scoping Plan. Thus, the City utilizes a threshold of a 21.7 percent reduction from BAU levels, where BAU levels are based on 2010 levels

(i.e., then-current Title 24 and mobile emissions), and estimated 2020 levels. Therefore, if the proposed project does not show a 21.7 percent reduction of project-related GHG emissions between BAU levels and estimated 2020 levels, the project would be considered to result in a cumulatively considerable contribution to global climate change.

GHG emission reduction measures could include, but are not limited to, compliance with local, State, or federal plans or strategies for GHG reductions, on-site and off-site mitigation recommendations from the Office of the Attorney General, and sustainable design features. It should be noted that the proposed project would be required to comply with the minimum mandated measures of the most recent CALGreen Code, which includes such measures as compliance with California Building Energy Efficiency Standards, a 20 percent mandatory reduction in indoor water use, and diversion of 50 percent of construction waste from landfills. A variety of voluntary CALGreen Code measures also exist that would further reduce GHG emissions, but are not mandatory.

Implementation of the proposed project along with other past, present, and reasonably foreseeable future projects would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of CO<sub>2</sub> and other GHG pollutants, such as methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O), from mobile sources and utility usage. The proposed project's short-term construction-related and long-term operational GHG emissions were estimated using the CalEEMod software. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, and water use. Emissions are expressed in annual metric tons of CO<sub>2</sub> equivalent units of measure (i.e., MTCO<sub>2e</sub>), based on the global warming potential of the individual pollutants.

Short-Term Construction GHG Emissions

Estimated increases in GHG emissions associated with construction of the proposed project are summarized in Table 4.

<b>Table 4</b>	
<b>Unmitigated Proposed Project Construction GHG Emissions</b>	
	<b>GHG Emissions (MTCO<sub>2e</sub>)</b>
<b>Total Construction GHG Emissions</b>	<b>5,212.45</b>
<i>Source: CalEEMod, January 2015 (see Appendix A).</i>	

Construction GHG emissions are a one-time release and are typically considered separate from operational emissions, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. However, the proposed project's construction GHG emissions have been amortized over the total estimated duration of construction, which is anticipated to occur over a span of a total of approximately seven years, and included in the annual operational GHG emissions for disclosure purposes. Assuming that construction-related GHG emissions would continue to occur each year after construction is complete would represent a conservative estimation of annual GHG emissions.

Long-Term Operational GHG Emissions

The long-term operational GHG emissions estimate for the proposed project incorporates the project's potential area source and vehicle emissions, emissions associated with utility and water usage, and the generation of wastewater and solid waste. In addition, as stated above, the one-time release of construction GHG emissions has been amortized and included in the annual operational GHG emissions estimate in order to provide a conservative analysis. Furthermore, the project's use of only low VOC paints, anticipated trip rate, inherent site or project design features (i.e., pedestrian network

improvements and proximity to nearest bus stop), and compliance with applicable regulations (i.e., California Building Energy Efficiency Standards) have been included in the project modeling.

Estimated GHG emissions associated with the proposed project at operational year 2020 are summarized in Table 5.

<b>Emission Source</b>	<b>Annual GHG Emissions (MTCO<sub>2</sub>e/yr)</b>
<b>Construction Emissions<sup>2</sup></b>	<b>744.64</b>
<b>Operational Emissions</b>	<b>10,152.83</b>
Area	0.06
Energy	2,102.80
Mobile	7,264.20
Solid Waste	662.15
Water	123.62
<b>TOTAL ANNUAL GHG EMISSIONS</b>	<b>10,897.47</b>
<sup>1</sup> Includes use of only low VOC paints, pedestrian network improvements, proximity to nearest bus stop, and compliance with the California Building Energy Efficiency Standards. <sup>2</sup> Amortized total construction emissions (5,212.45 MTCO <sub>2</sub> e) over an estimated seven-year construction period for the project (5,212.45 MTCO <sub>2</sub> e / 7 years = 744.64 MTCO <sub>2</sub> e/yr).	
<i>Source: CalEEMod, January 2015 (see Appendix A).</i>	

The threshold of significance utilized by the City requires a minimum GHG emission reduction of 21.7 percent from what the project would have emitted under a BAU scenario, where BAU levels are based on 2010 emissions. Thus, the project's BAU emission levels were evaluated in order to determine the net change in the proposed project's GHG emissions over time. For the project BAU modeling, the same land use trip rates, and features of the project were applied, with the exception of those features that would not necessarily be inherent under a BAU scenario (e.g., pedestrian access improvements), for the year 2020, but with vehicle emissions, Title 24, and regulatory assumptions for the year 2010. The BAU GHG emissions were estimated as presented in Table 6 below.

<b>Emission Source</b>	<b>Annual GHG Emissions (MTCO<sub>2</sub>e/yr)</b>
<b>Construction Emissions<sup>1</sup></b>	<b>744.64</b>
<b>Operational Emissions</b>	<b>14,002.46</b>
Area	0.06
Energy	2,763.99
Mobile	10,434.35
Solid Waste	662.15
Water	141.90
<b>TOTAL ANNUAL GHG EMISSIONS</b>	<b>14,747.10</b>
<sup>1</sup> Construction emission would be similar to the proposed project.	
<i>Source: CalEEMod, January 2015 (see Appendix A).</i>	

Consequently, the proposed project would result in approximately a 26.10 percent reduction in annual GHG emissions from the BAU level by 2020, as presented in Table 7 ( $[(14,747.10 \text{ MTCO}_2\text{e} - 10,897.47 \text{ MTCO}_2\text{e}) / 14,747.10 \text{ MTCO}_2\text{e} \times 100\% = 26.10\%]$ ). The reduction in GHG emissions would be attributable to the proposed project's inherent site or design features, the advancement of vehicle and equipment efficiency, as well as more stringent standards and regulations as time progresses. It should be noted that although a reduction related to such attributes would occur for every development project, CalEEMod takes into consideration how much of each attribute is applied for each specific project

based on the size of the project and associated land uses. As shown in the table, the proposed project would meet the minimum GHG emission reduction requirement utilized by the City of 21.7 percent by 2020 compared to BAU levels.

	<b>Annual GHG Emissions (MTCO<sub>2</sub>e/yr)</b>
Total BAU	14,747.10
Total Proposed Project Year 2020	10,897.47
Total Reduction from BAU by 2020	3,849.63
<b>PERCENT REDUCTION<sup>1</sup></b>	<b>26.10%</b>

<sup>1</sup> Percent reduction of project GHG emissions from BAU levels by 2020 (see calculation in text above).

Because the project would meet the City's 21.7 percent minimum reduction threshold, the project would not be expected to hinder the State's ability to reach the GHG reduction target or conflict with an applicable plan, policy, or regulation related to GHG reduction. Therefore, impacts related to GHG emissions and global climate change would be considered less than significant.

#### IV. Biological Resources

Would the project:

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?			X	

**Setting:**

The property is located in the North Central Roseville Specific Plan (NCRSP) area. The biological resources within the specific plan area were previously evaluated in the NCRSP EIR. The loss of biological resources was considered to be significant and mitigation measures were adopted. Consistent with the Roseville General Plan, which has a no net loss of wetlands policy, preserve areas were identified within the NCRSP to allow avoidance and or the opportunity for creation of additional wetlands resulting in a no net loss of wetlands. It should be noted that NCRSP final EIR Mitigation Measure 3.4-24 also allows for the securing of off-site mitigation bank credits as an alternative to ensuring on-site no net loss of wetlands.

Following adoption of the NCRSP, the property owner of 1,285 acres within the plan area (including the subject site) applied for and obtained a 404 permit to fill wetlands associated with the development of the Regional 65 Center mixed-use community development project. A detailed wetland delineation and wetland value assessment was prepared by Sugnet & Associates for the 404 permit application. No state or federally listed plant species were known to exist on the property. Measures to minimize the impacts to wetlands included the designation of 128 acres of wetland preserves and construction of vernal pool habitat within designated open space areas in the NCRSP area. These measures have been effectuated and the open space areas are monitored annually as part of the City’s long-term Operations and Management Plan.

As part of a previous development proposal, approximately 0.269 acres of waters of the United States were identified on the project site. The previous property owner received authorization from the following resource agencies for the fill of the wetlands and channelization of the intermittent drainage;

- Pursuant to Section 404 of the Clean Water Act, construction activities in waters of the US are subject to approval of the US Army Corps of Engineers (Corps);
- Pursuant to Section 401 of the Clean Water Act, impacts to wetlands and waters of the state shall be certified by the Central Valley Regional Water Quality Control Board (CVRWQB);
- A Streambed Alteration Agreement (1603) is required by the California Department of Fish and Wildlife (CDFW) for impacts to water features that have a defined bed and bank; and
- Consultation with the US Fish and Wildlife Service (USFWS) is required for the potential impacts to federally listed species on the project site.

The regulated construction activities were completed in 2012.

Grading and drainage improvements may be necessary and may require drainage outfalls that are designed to discharge into the adjacent open space. Swales between outfalls and creeks are not automatically allowed in Preserves but they can be installed if they meet certain design criteria and are approved by the open space manager. During the improvement plan stage, the Development Services - Engineering Division Department and Open Space Manager will review the proposed design to ensure that the design of the drainage outfalls/swales is consistent with design details contained in Appendix 15 of the Open Space Preserve Overarching Management Plan (OSPOMP).

The site is undeveloped but disturbed by the grading activities associated with the prior construction of drainage and frontage improvements, the filling of wetlands pursuant to a Section 404 permit, and the overhead power line corridor. The site has also been disked. There are no trees present. The site is surrounded by urban development.

**Discussion of Checklist Answers:**

a-f) The biological resources have been evaluated on multiple occasions and the required permits have been obtained and mitigation measures were adopted. The applicant provided a summary of the previous environmental evaluations and permits for the site (Appendix B). The project was also routed to the applicable agencies mentioned above, and the City did not receive any additional comments. The potential impacts are summarized as follows;

- No sensitive or special status species are known to exist on the site.
- The grassland was identified as having a limited value to wildlife within the plan area and conservation areas for grasslands of higher value have already been preserved.
- There are no trees on the project site.
- The project site is surrounded by urbanized development; therefore there are no wildlife movement corridors on the site. Further, the limited value and paucity of the grasslands, and the lack of tree canopy, the site is not conducive to wildlife. Development of the site will not substantially reduce the number of wildlife species.
- This project would not affect existing or proposed habitat conservation plans. Preserve areas that would support wildlife have been established elsewhere in the City.
- The previous property owner secured a 404 permit through the Corps to fill on-site wetlands. Upon the expiration of this permit, the property owner received a Letter of Permission (LOP) from the Corps on January 12, 2006 to fill the intermittent drainage. On November 28, 2011, the permit was extended. The authorized work outlined in the 404 permit was completed in 2012. On July 27, 2012, a Compliance Certificate was filed with the Corps for the completed work; and
- The NCRSP identified open space areas that can accommodate wetlands, resulting in no net loss. The loss of wetlands was considered significant and unavoidable. Mitigation was the establishment of the open space preserves. Issuance and effectuation of the 404 Permit satisfies the City's General Plan policy.

As the applicant has verified all necessary permits have been obtained and no biological resources are present on the site. Therefore, the project's impacts to biological resources are less than significant.

**V. Cultural Resources**

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historic			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
resource as defined in Section 15064.5?				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

**Discussion of Checklist Answers:**

a-d) Archaeological surveys were performed for the entire NCRSP area and the findings were used to support the NCRSP EIR. The evaluation utilized field surveys of the Specific Plan area and a record search with the North Central Information Center of the California Archaeological Inventory. These surveys revealed recorded sites of archaeological significance within the NCRSP; however, no cultural resources were identified on Parcel 49. Sites within the NCRSP that were deemed valuable were incorporated into open space within the plan area as mitigation.

Although no archaeological resources are known to be present on the project site, there is a possibility that activities during construction could disturb unknown archeological or paleontological resources beneath the surface. The City of Roseville Construction Standards (Resolution 01-208) requires that “[i]n the event that previously unidentified cultural resources are present on a project site, impacts to those resources would be prevented by the requirements of the City’s 2013 Design/Construction Standards. The Construction Standards require that “If signs of an archeological site, such as any unusual amounts of stone, bone, or shell are uncovered during grading or other construction activities, work shall be halted within 100 feet of the find and the City’s Environmental Coordinator shall be notified immediately. A qualified archaeologist shall be consulted for an on-site evaluation. Additional mitigation may be required by the archaeologist.” As discussed in the Uniformly Applied Policies and Standards section, the City’s Construction Standards are uniformly applied to development projects throughout the City and consequently mitigates potential impacts to unknown buried archaeological and/or paleontological resources. Therefore, related impacts are considered less than significant and no mitigation is required.

**VI. Geology and Soils**

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Rupture of a known earthquake			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)				
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X

**Discussion of Checklist Answers:**

- a) The project will not expose people or structures to potential substantial adverse effects involving seismic shaking, ground failure or landslides.
  - i-iii) The project site is located in Roseville, which is within Placer County. The California Department of Mines and Geology classifies the South Placer area as a low severity earthquake zone. No active faults are known to exist within the County. The project site is considered to have low seismic risk with respect to faulting, ground shaking, seismically related ground failure and liquefaction. Therefore, less than significant impacts would occur in association with rupture of a known earthquake fault or seismic related ground failure.
  - iv) Landslides typically occur where soils on steep slopes become saturated or where natural or manmade conditions have taken away supporting structures and vegetation. The existing and proposed slopes are not steep enough to present a hazard during development or upon completion of the project. In addition, during construction, measures would be incorporated to shore slopes and prevent potential earth movement. Therefore, impacts associated with landslides are considered less than significant.

b) Grading activities require approval of a grading permit from the Engineering Division of the Development Services Department. The grading plan will be reviewed for compliance with the City's Improvement Standards, including the provision of proper drainage, appropriate dust control and erosion control measures. Grading and erosion control measures will be incorporated into the required grading plans. A geotechnical study will also be required prior to building permit issuance to more fully address other erosion hazards. As conditioned, the project will be consistent with the City's Improvement Standards. Therefore, the impacts associated with disruption, displacement, and compaction of soils associated with the development is considered less than significant.

c-d) As noted above, the project site is not located in a sensitive geologic area and does not expose people to potential geologic impacts. Additionally, such impacts are considered to be less than significant since new buildings and structures are required to comply with all applicable building codes. The City of Roseville Building Department will review construction plans before a building permit is issued and the Engineering Division will review and approve all grading plans to insure that all grading and structures would withstand shrink-swell potentials and earthquake activity in this area.

e) No septic tanks are proposed as part of the project. All wastewater generated by the project will be required to be collected in a piped system and conveyed to the Pleasant Grove Wastewater Treatment Plant. Therefore, no impact to soils relative to supporting the use of septic tanks would occur.

## VII. Hazards and Hazardous Materials

Would the project:

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	

**Discussion of Checklist Answers:**

a-c) The California Health and Safety Code and local City Ordinances regulate the handling, storage, and transportation of hazardous and toxic materials. The California Health and Safety Codes require a Risk Management and Prevention Program (RMPP) for those uses that handle specified quantities of toxic and/or hazardous materials. The church, commercial, and offices uses proposed for this project do not typically store and/or transport large quantities of hazard materials. Should future tenants store and/or use toxic/hazardous materials exceeding the identified thresholds, a RMPP would be required.

A Hazardous Materials Management Program (HMMP) will be required if hazardous materials quantities exceed specified thresholds. Furthermore, if a HMMP is triggered, business owners must file a site-specific business plan with the City Fire Department before a new building is occupied. All plans would specify what to do in the event of an accident, and which transportation routes would be used. It is not known at this time if any hazardous materials will be used or stored on-site that exceed specified quantities. However, any potential impacts as a result of the use or storage of hazardous materials are reduced to less than significant levels with implementation of the RMPP, HMMP and business plan requirements.

The nearest school to the project site is Vencil Brown Elementary school, which is over a half mile away. No new schools are proposed within a quarter mile of the site. Any potential impacts as a result of the use or storage of hazardous materials are reduced to less than significant levels with implementation of the RMPP, HMMP and business plan requirements.

d) The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, and therefore would not create a significant hazard to the public or the environment. Therefore, the project would have no impact.

e-f) The project site is not located within an airport land use plan or within two miles of a public or private airport or airstrip. Therefore, the project would have no impact.

g) This project is located within an area currently receiving City emergency services. Both Fire Station 7 and Fire Station 8 are located less than one mile from the property and would be able to serve the site within the City's standard response time. The project will increase the demand for emergency services but that demand has been incorporated into the existing emergency response plans, and therefore will have a less than significant impact to the City's Emergency Response or Management Plans.

h) The project site is surrounded by existing and planned urban development and open space areas. Although the project site is adjacent to City owned open space, the properties are not considered wildlands. The City of Roseville maintains the open space and preforms annual weed abatement through the City's Open Space Operations and Maintenance Program. These weed control measures reduce the potential occurrence of wildfires in the vicinity of the project site to less than significant impact levels.

### VIII. Hydrology and Water Quality

Would the project:

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of			X	

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
existing or planned stormwater drainage systems or provide substantial additional sources of polluted water?				
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?			X	
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?			X	
j) Inundation by seiche, tsunami, or mudflow?				X

**Discussion of Checklist Answers:**

a, c-f) The proposed project will result in over-covering of soils with impervious surfaces such as asphalt paving and structures. This will result in a reduced rate of absorption of surface water runoff and will increase water being directed into the City’s drainage system. The City evaluated the potential impacts related to increased runoff in the General Plan EIR. The General Plan EIR assumed full build-out of the site and other properties in the City and evaluated downstream flooding impacts resulting from increased surface water runoff. The General Plan EIR found that, with the implementation of City standards and programs, the potential flooding impacts would be less than significant.

The project is subject to the Clean Water Act (CWA) with regards to the discharge of pollutants into waters of the U.S. Should it be determined the project will result in direct discharges into surface waters, the developer will be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit. As a condition of approval, all drainage will be collected through an on-site storm drain system and directed to the City’s storm drain system. Prior to discharge from the site, the storm water shall be treated with appropriate storm water pollution treatment device(s) as required by the City’s Stormwater Quality Design Manual.

The City’s March 2003 Stormwater Management Plan (SWMP) contains a comprehensive set of priorities, activities, and strategies that comprise the City’s minimum control measures and best management practices (BMPs) intended to address the State Water Resource Control Board – MS4 Permit requirements for Phase II communities. The goal is to reduce pollutants in stormwater to the maximum extent practicable. The SWMP identifies activities to implement the following six minimum control measures required under the City’s MS4: public outreach, public involvement, illicit discharge detection and elimination, construction site runoff, new development and redevelopment, and municipal operations. The SWMP includes minimum required control measures for new development, such as structural and non-structural control strategies, and long-term operation and maintenance of controls. It

also includes specific guidance for volume and flow control design parameters for structural controls such as detention ponds, vegetative areas, and runoff pretreatment.

The City adopted the “Urban Stormwater Quality Management and Discharge Control Ordinance” (Stormwater Ordinance) (Ord. 4395 § 2 (part), 2006.) in order to establish a regulatory frame work to implement construction and post-construction stormwater controls. This Ordinance is a uniformly applied development policy or standard applicable to this project. In March 2007, the City adopted the Stormwater BMP Guidance Manual for Construction, and in May 2007, the City adopted the Stormwater Quality Design manual. The City has the authority during plan checks, as well as site inspections, to enforce the Stormwater Management Plan. Prior to final approval, the owner of any stormwater control structure will be required to submit an operations and maintenance manual and a proposed maintenance schedule. Additional detail on post construction controls is provided in the SWMP which is available on the City’s website ([www.roseville.ca.us](http://www.roseville.ca.us)).

The City also maintains policies and guidelines regarding grading, erosion control, inspection, and permitting. Section 16.20.040 of the Roseville Municipal Code regulates stockpiling and grading, and addresses conditions under which permits and grading plans are required. Section 16.20.070 identifies grading plan performance standards. These policies and guidelines, as set forth in the City Code, constitute uniformly applied development policies or standards applicable to this project.

Section 16.20.020 requires that all grading be performed in accordance with either City of Roseville Improvement Standards or Title 16 of the Roseville Municipal Code, whichever is more restrictive. The Development Services – Engineering Division requires that a grading permit be obtained prior to grading activities. At that time, the applicant must submit, for review and approval, Improvement and/or Grading Plans along with a site-specific Stormwater Pollution Prevention Plan (SWPPP). Slopes or banks along creek channels must be designed with proper slope protection to prevent soil erosion and channel-bank undercutting. The City has also adopted standards that would apply to projects within public right-of-way or easements.

Section 10 of the City’s Improvement Standards identifies hydrologic and hydraulic methods to determine peak flow rates and criteria for identifying appropriate design and capacity for storm drainage infrastructure. Design criteria include requirements for channels and outfall design, cross culverts, inlet and outlet structures, and piping materials.

Because the site would disturb more than one acre, approval of a Storm Water Pollution Prevention Plan (SWPPP) from the Regional Water Quality Control Board is required. Implementation of the SWPPP would ensure that the project will not result in the release of materials that could affect water quality. The SWPPP, combined with grading permit best management practices (BMP’s) like erosion controls with hydro-seeding and mulching, and sediment control with fiber rolls and sediment basins, would serve to mitigate storm water erosion and related water quality impacts. Residual effects would therefore be less than significant.

b) The project will rely on domestic water from the Roseville municipal system and no groundwater withdraw is proposed. The development of the site with impervious surfaces will reduce the area available for infiltration of surface water. Ground water occurs between 70 and 100 feet below the surface. As analyzed in the NCRSP EIR, due to the limited permeability of the clay soil over hardpan, surface water will have limited permeability to the ground water depth and therefore the impact from the project on groundwater recharge will be less than significant.

g-i) A The proposed project does not include any housing and the project site is not located within the regulatory floodplain or flood hazard area, as designated by the Federal Emergency Management Agency. People and structures would not be exposed to hazards resulting from a 100-year flood event and buildout of the project site would not significantly increase flood elevations beyond the existing condition.

j) The project site is not located in the vicinity of a large body of water that could generate a seiche or tsunami and is located on a site with generally flat topography that would not be expected to be subject to substantial risk of mudflow. Therefore, this is considered to have no impact on the proposed project.

## IX. Land Use and Planning

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?			X	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

### Discussion of Checklist Answers:

a) The project will not divide an existing community; therefore, no impact would occur.

b) Land use conflicts can arise when new development or land use causes impacts on persons or the physical environment in the vicinity of the project site, or conditions on or near the project site could have impacts on the persons or development introduced onto the site by the new project. Both of these circumstances are evaluated when considering land use compatibility. Depending on the nature of the impact and its severity, land use compatibility conflicts can range from minor irritations and nuisances, to significant effects on human health or safety.

Long term incompatibility can arise when adjacent land uses conflict with each other. This condition can result from the generation of excessive noise, light, dust, odor, traffic, or hazardous emissions that interfere with people's sleep or general use of their property (outdoor use such as recreation, etc.). The North Central Roseville Specific Plan (NCRSP) considered the compatibility of land uses and the land use implications of development of the project site. Consideration of adjacent land uses was also evaluated with the zoning of the subject site. With adoption of the NCRSP, the subject site was anticipated to be fully developed.

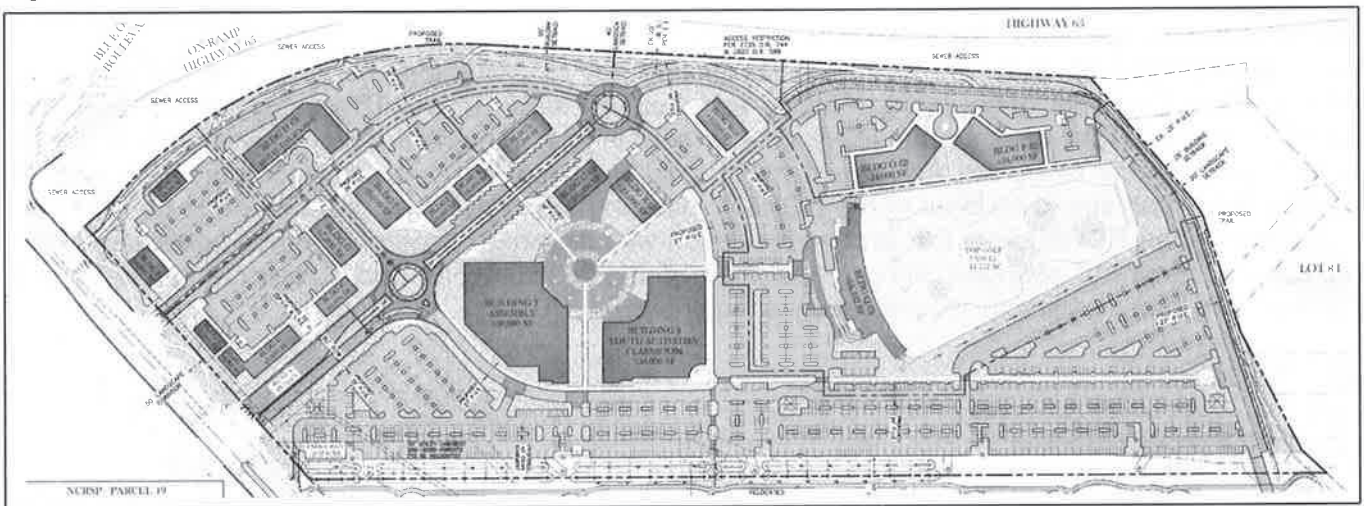
As noted in the Project Background and Location Section under Environmental Setting, the project site consists of two parcels, A and B, which total approximately 59 acres. The zoning of Parcel A is Planned Development (PD) for an array of light industrial, office and commercial uses and Parcel B is Light Industrial/Special Area-North Central Roseville Specific Plan (M1/SA-NC). Parcel B is restricted by overhead powerline easements and development under the power lines will be limited to parking areas and landscaping.

The PD zoning was established in 2000, and a complete list of the permitted uses under the PD zoning is provided as Appendix C. The proposed project includes the following, all of which are permitted under the PD zoning:

- Community Assembly (3 buildings),
- Commercial Recreation-Indoor Recreation (principally permitted) & Outdoor Recreation (conditionally permitted) (1 building),
- Office (5 buildings),
- Eating and Drinking Establishments (3 buildings),
- Retail Sales and Services (7 buildings), and
- Lodging Services (1 building).

Retail uses are permitted by right up to 20 percent of the developed area or 240,000 square feet (whichever is greater) per the PD zoning. As the project is currently proposed, 49,000 square feet of retail uses are proposed (restaurant and general retail space). The outdoor recreation component of Topgolf, which accounts for approximately 12.6% of the total square footage of the project, requires a Conditional Use Permit (CUP) as permitted by the PD zoning. The CUP will be conditioned to ensure the operating characteristics of Topgolf will be compatible with and will not adversely affect persons residing or working in the area or be detrimental or injurious to public or private property or improvements. The uses proposed in the project are consistent with the PD permitted and conditionally permitted uses list as shown in Attachment 5 and have been deemed as suitable and compatible for this project site.

**Figure 3 – Site Plan**



The nearest building to the adjacent residential neighborhood will be approximately 250 feet from the southern property line. The 50 foot landscape buffer on the project site and 50 foot bike/pedestrian trail/landscape area located between the project site and the residential neighborhood will provide an additional buffer between the proposed project uses and adjacent residential uses.

Construction of the project is anticipated to be phased over time. As part of the first phase of the proposed project, the applicant proposes to construct the Topgolf portion of the project in addition to frontage, access, utility connections, the landscaping within the 50' landscape buffer area along the southern property line, and the realignment of the bike trail as described under Project Description. While future phases are subject to approval of a MPP Stage 2 entitlement for architecture and landscaping plans as well as building permits, the overall site design and allowed uses are defined by the MPP Stage 1 as described above (Bayside Church, Topgolf, office, hotel, restaurant, and retail) and as shown in Figure 3 – Site Plan. A deviation from this plan that is inconsistent with the MPP Stage 1 plan would require a MPP Stage 1 Modification, which would be subject to environmental review under CEQA. The proposed project is consistent with the land use plan, NCRSP, and Zoning Ordinance, therefore the impact to land use and planning is less than significant.

c) There are no Habitat Conservation Plans or Natural Community Conservation Plans covering the project site. Therefore, no impact would occur.

## X. Mineral Resources

Would the project:

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	

### Discussion of Checklist Answers:

a-b) The NCRSP EIR document identifies the project site as being located within the MRZ-1 zone based on the California Department of Mines and Geology survey lists. This designation means that significant mineral resources are not likely to be located in this area and the project site is not known to include any mineral resources that would be of local, regional, or statewide importance. Impacts to mineral resources due to buildout of the NCRSP, including the project site, were found to be less than significant by the NCRSP final EIR and no mitigation was required. Mineral resource conditions of the project site have not changed since preparation of the NCRSP EIR and consequently the impact remains less than significant. No mitigation is required.

## XI. Noise

Would the project result in:

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		X		

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

**Setting:**

The City’s General Plan Noise Element includes noise policies to protect residents from excessive noise and establishes acceptable noise levels generated from fixed sources or transportation related noise sources. The overall goal of the Noise Element is to protect the health and welfare of the community by promoting community development which is compatible with noise level criteria. Consistent with the Noise Element, land use is established in part with consideration of limiting potential effects from either fixed source noise generators or transportation related noise sources. The Noise Element defines a sound level criterion that is deemed acceptable for sensitive receptors (i.e. residential, schools, hospitals) during daytime hours and nighttime hours. The Noise Element also evaluated the noise levels generated from major roadways on sensitive land uses. It acknowledged that traffic volumes along major roadways are expected to increase, therefore increasing the noise levels from transportation related sources along the roadways. Sensitive land use already located near major roadways would be exposed to increased noise levels that are normally considered unacceptable.

The City’s Noise Ordinance contains regulations relating to the measurement and regulation of noise generation. Using the sound level criteria identified as acceptable in the General Plan, the Noise Ordinance includes sound level limits for uses adjacent to sensitive receptors. Per the Noise Ordinance, it is unlawful for a person/use to generate a noise that either exceeds the ambient noise level by 3 dBA or the noise or exceed the sound levels established in the Ordinance, whichever is greater, when measured at the property line of the sensitive receptor. While the Noise Ordinance could allow noise generated from the project to exceed the ambient noise level by 3 dBA, the City has chosen a more conservative standard of the ambient noise level being the threshold for this project.

The project site is located adjacent to major roadways, including SR 65, Washington Boulevard and Blue Oaks Boulevard. The site is also adjacent to single-family residential.

**Discussion of Checklist Answers:**

a-d) Two noise studies were prepared by Paul Bollard of Bollard Acoustical Consultants (BAC) for this project and are provided as Appendices D and E to this Initial Study. A noise study, dated December 8, 2014, was prepared to evaluate the noise generated from the Topgolf facility and is referred to as the Topgolf noise study (Appendix D). The second noise study, dated December 19, 2014, was prepared to evaluate the potential long-term impacts from noise generated from activities occurring on the project site

and the potential short-term impacts from construction related noise activities from development of the site to the nearest sensitive receptors (residential) and is referred to as the Parcel 49 Project noise study (Appendix E). The Parcel 49 Project noise study incorporated the noise data from the Topgolf noise study.

The Parcel 49 noise study measured the existing ambient noise levels at the nearest residential properties to project site. The study found that the existing ambient noise levels at the residential properties exceed the maximum acceptable sound levels established in the City's General Plan-Noise Element and the Noise Ordinance. The increase in noise levels is due to the close proximity of those properties to SR 65 and other major roadways. Consistent with the Noise Ordinance, the analysis addresses noise level standards equal to the existing ambient noise level.

With exception to the Topgolf facility, the primary long-term activities that would generate noise are from the on-site truck circulation and unloading, mechanical equipment, and parking lot activities. The Topgolf noise analysis is discussed in further detail below. Based on the proposed uses and the proposed site plan, the Parcel 49 Project study concludes that noise produced from the on-going operation of the project will not generate noise that exceeds the Noise Ordinance regulations or result in a substantial permanent increase in existing ambient noise conditions.

During the construction phase of the project, noise from construction activities would add to the noise environment in the immediate vicinity. Typically, construction noise levels are higher than on-going project operation noise levels. The Noise Study did consider the impacts from construction noise to the nearest residential property approximately 250 feet away and the regulations within the Noise Ordinance, which allows for private construction to be between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday, and between the hours of 8:00 a.m. and 8:00 p.m. Saturday and Sunday; provided, however, that all construction equipment shall be fitted with factory installed muffling devices and that all construction equipment shall be maintained in good working order. With adherence to the Noise Ordinance, which is a uniformly applied development policy or standard within the meaning of CEQA Guidelines section 15183, impacts from construction noise were found to be less than significant.

A separate noise study was prepared for Topgolf due to their unique operating characteristics; the building is three stories tall and open on one side to allow patrons to hit golf balls onto the outfield targets, is open until 2 am, and includes an outdoor terrace for live music. Bollard used noise data from a comparable Topgolf facility in Texas to prepare the noise study for this project. The study found that Topgolf would generate noise levels at the nearest residential property in excess of the ambient noise levels after 8 pm. Mitigation is required to ensure at no time Topgolf generates noise levels that exceed the ambient noise levels. The Topgolf noise study includes a list of mitigation measure that address building design and operational restrictions. The MPP and Conditional Use Permit entitlements allow for conditions to be applied to the project to ensure the noise levels are not exceeded. With implementation of the following mitigation measures the project impacts from noise will be reduced to less than significant.

**MM-1: The Topgolf plans submitted for a building permit shall incorporate all noise mitigation measures related to the building design that are listed in the Topgolf Noise Study (BAC, 12/8/14). The mitigation measures are as follows:**

- Drive-bay speakers shall be oriented at a 45-degree angle inward rather than straight down.
- Installation of extensive sound absorbing materials in and around the drive bays (50% treatment of wall, column, and ceiling areas with NRC 0.8 materials).
- Install sound absorbing turf around the hitting mats from the front edge of the drive bay to the support columns.
- The terrace wall height shall be a minimum of seven (7) feet tall and may consist of a four (4) foot solid wall with a three (3) foot Plexiglas barrier above the wall, as

shown on the MPP plans. The design of the terrace wall shall provide approximately 3 dBA of noise reduction.

- The terrace shall be located on the northwestern side of the building, as shown on the MPP plans.
- Installation of sound absorbing materials within the terrace area to provide approximately 3 dBA of noise reduction.

The project architect shall provide confirmation that the above listed noise reduction measures have been incorporated into the building design and, in conjunction with the operation noise reduction measures listed in the Noise Study, result in the required noise reduction as outlined in the table below.

**MM-2:** The Topgolf operations shall be restricted as follows:

- Live and DJ-generated music on the terrace shall not be permitted after 10PM.
- The house sound system output shall be gradually reduced so that the noise level standards, as outlined in the table below, are not exceeded.
- Low-frequency sound (for frequencies below 50-60 hertz) shall be filtered via a limiter or high-pass filter on the house amplifier, or similar procedure.
- Live bands shall utilize electric drum kits so sound output can be regulated.

**Noise Level Standards for Topgolf**

Hour of Day	Hourly Average Level – $L_{eq}$ , dBA	Maximum Level – $L_{max}$ , dBA
Facility opening to 8 pm	60	65
8 pm – 9 pm	59	64
9 pm – 10 pm:	56	61
10 pm – 11 pm:	53	60
11 pm – Midnight:	50	57
Midnight – 1 am	49	56
1 am – 2 am:	47	55

e-f) The project site is not located within two miles of an airport, or within an airport land use plan and therefore is considered no impact.

## **XII. Population and Housing**

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
indirectly (for example, through extension of roads or other infrastructure)?				
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

**Discussion of Checklist Answers:**

a) The project does not include housing and therefore will not substantially increase the residential population in the area. Development of the site will introduce new population to the area either through jobs or visitors to the site. The introduction of population to the area is not a significant impact by itself, but can have an impact on other factors such as traffic, air, water, and land. These impacts have been analyzed in the respective portions of this study.

The project will generate short-term construction jobs and long term permanent jobs. The General Plan and NCRSP land use designation of Light Industrial assumes the site as a job creation site. The General Plan Land Use Element and the Housing Element include goals and policies to address the City's jobs/housing balance. The General Plan assumed Roseville to be a regional importer of jobs and that there are more jobs than housing. The Housing Element addresses the need for housing and measures to add housing units in the City. Since the Light Industrial land use was allocated, the Housing Element was updated to increase the amount of housing units available in the City. The Housing Element is current, has been deemed to comply with State housing regulations by the California Department of Housing and Community Development, and has been adopted by the Roseville City Council. Since the site was already planned for development with adoption of the General Plan and the amount of housing available has since increased, the project itself will have a less than significant impact on housing.

b-c) The project site is currently undeveloped and therefore will not cause displacement of any existing housing or people. Therefore, there will be no impact.

**XIII. Public Services**

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
d) Parks?			X	
e) Other public facilities?			X	

**Discussion of Checklist Answers:**

a) Tenants or customers of the development may require the services of the Roseville Fire Department (RFD) in the event of an emergency. The RFD operates eight fire stations within the City of Roseville, with additional fire stations planned within the new specific plan areas. The closest fire station to the project site is Station 7 at 911 Highland Pointe Drive which is less than one mile from the project site. RFD has reviewed the project and determined that there is adequate service available to meet the anticipated demand.

The development of this project would require adequate water pressure in the water lines and must comply with the Uniform Fire and Building Codes used by the City of Roseville to ensure fire protection measures are in place and lessen the demand on Fire service. Additionally, the applicant is required to pay a fire service construction tax, which is used for purchasing capital facilities for the Fire Department. Adherence to the uniformly applied fees and construction standards are adequate to mitigate potential impacts to fire services.

b) Tenants of the project may also require the services of the Roseville Police Department in the event of an emergency. The site is within an area of the City that is currently receiving police services. As part of the MPP evaluation the project will be required to incorporate the City identified Crime Prevention through Environmental Design (CPTED) elements identified in the uniformly applied Community Design Guidelines, which will assist in reducing the need for police services. With adherence to these guidelines, any potential impacts to police services will be reduced to less than significant.

c) The construction of commercial buildings can generate secondary impacts to local schools by inducing growth. The applicant for this project is required to pay school impact fees (“Sterling Fees”) at a rate determined by the local school districts. The “Sterling Fees” presently pay 25% of the cost of new facilities for new students. School fees will be collected prior to the issuance of building permits. Pursuant to state law, the payment of these fees is deemed to mitigate the school-related impacts of the project to a less than significant level.

d) The City’s General Plan Parks and Recreation policies calculate the need for parks facilities based on the residential population. Since the project does not include residential development, the project will not require the need for additional parks facilities. The project will provide a connection to the existing Summerhill neighborhood park. With the introduction of population to the project area and the new park connection, it is possible that the project will result in an increase of use the park. This increase in demand is evaluated in the Recreation section of this study. Because the project will not require new facilities, the potential impact to parks is considered less than significant.

e) The project site has had land use designations and zoning since 1990 and development potential of the site, including from increased development of the site pursuant to City approvals starting in 2000, has been incorporated into the City’s service delivery models. Since the project is consistent with the land use and zoning the project will not have a significant effect upon, or create any additional need for, public services (i.e. fire protection, police services, schools, parks). The impacts associated with this project upon public services are considered less than significant.

#### XIV. Recreation

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

#### Discussion of Checklist Answers:

a) As previously mentioned the project is located adjacent to and provides a connection to the existing Summerhill neighborhood park and a City bike trail. With the introduction of population to the project area and the new park and bike trail connection, it is possible that the project will result in an increase of use to park and bike trail. The park connection was planned in the City's Parks Master Plan. Increase usage of the facility was also anticipated and the Parks and Recreation Department has an approved budget for on-going maintenance of the park. Connection to the bike trail is encouraged in General Plan-Circulation Element and recommend in the Community Design Guidelines and NCRSP. Active use of bikeway system is anticipated and incorporated into the funding sources for trail systems. Therefore impacts to recreation facilities are considered less than significant.

b) The City has a park dedication standard for residential development of 9 acres per every 1,000 residents. Because the site does not include residential development, the project will not be required to dedicate land or contribute to new parkland. The project site has, however, been designated as a Corporate Center site. As such, the office component of the project will be required to include on-site exercise facilities, showers and lockers. The facilities will be reviewed with the Major Project Permit Stage 3 to ensure they comply with City standards. Impacts are considered less than significant.

#### XV. Transportation/Traffic

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?		X		

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads and highways?		X		
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
e) Result in inadequate emergency access?			X	
f) Result in inadequate parking capacity?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?			X	

**Setting:**

The City’s General Plan established the land use for the project site. With the General Plan EIR, a traffic model was prepared that took into account the anticipated land use within the City. The traffic model is continuously updated as parcels are developed and or land uses are modified. The City’s Development Services - Engineering Division maintains the traffic model. Based on the traffic model, a City wide Capital Improvement Projects (CIP) program was prepared to identify roadway improvements necessary to ensure an adequate transportation system is in place. The current CIP was updated with the Creekview Specific Plan and identifies projects to 2025. Funding for the recommended CIP improvements has already been accounted for through grants and/or traffic mitigation fees.

Roadway operating conditions are described in terms of Level of Service (LOS). LOS is a qualitative measure of the effect of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs. LOS are designated “A” through “F” from best to worst, which cover the entire range of traffic operations that might occur. LOS A through E generally represent traffic volumes at less than roadway capacity, while LOS F represents over capacity and/or forced conditions. The General Plan-Circulation Element contains a roadway service level policy to maintain a LOS C or better at a minimum 70% signalized intersections in the City during weekday PM peak hours. The City does not have a LOS policy for weekday AM peak hour or weekend trips. The General Plan was updated in 2012 to acknowledge and accept that 40 intersections within the City would operate at worse than LOS C under 2025 PM peak conditions.

The *State Route (SR) 65 Corridor System Management Plan (CSMP)* (Caltrans, 2009) identifies a concept LOS F for the segment of SR 65 between I-80 and Blue Oaks Boulevard. According to this

document, this designation refers to the minimum acceptable LOS over the next twenty years. Page 9 of the CSMP states, “Some heavily congested route segments now have a concept LOS F because the improvements required to achieve LOS E are not feasible due to environmental, right-of-way, financial, and other factors”. According to the CSMP, for existing LOS F operations, no further exacerbation is permitted, as indicated by delay or other performance measurement. The CSMP establishes a concept LOS E for SR 65 from north of Blue Oaks Boulevard into and through the City of Lincoln.

It is standard City practice to evaluate the traffic model when a development project is proposed and ensure that the project is consistent with the General Plan policies. As mentioned, typically only the potential impacts from a project’s weekday PM peak hour trips are evaluated because there are no policies for weekday AM peak hour or weekend trips. Evaluation of the traffic model during non weekday PM peak hour times is for informational purposes. At its discretion, the City can consider impacts during non weekday PM peak times as significant impacts. The current traffic model reflects the 1990 adoption of the North Central Roseville Specific Plan (NCRSP), the 2000 and 2007 rezones of NCRSP Parcel 49, approval of the Sierra Vista Specific Plan in 2010, and approval of Creekview Specific Plan in 2012.

SR 65 (aka. HWY 65) is a major transportation corridor running through the City that is maintained by Caltrans. As of October 15, 1990, the City of Roseville, the City of Rocklin, and Placer County entered into an agreement to form the HWY 65 JPA, to address development impacts to the HWY 65 corridor interchanges between Galleria Boulevard/Stanford Ranch Road and Sunset Boulevard. The agreement outlines impact fees and infrastructure improvements necessary to maintain service levels. The HWY 65 JPA has determined that fees in lieu of improvements are acceptable mitigation for interchange impacts to the Highway 65 corridor. The City also has an agreement with the South Placer Regional Transportation Authority (SPRTA) that is structured to fund improvements along Sierra College Boulevard from Highway 193 to the Sacramento County line, portions of Auburn/Folsom Road, Douglas/I80 Interchange, Placer Parkway, and \$67 million for the widening of Highway 65 based on 2025 development levels. Per the respective Highway 65 JPA and SPRTA Memorandums of Understanding (MOA’s), development impact fees are collected by participating agencies at building permit issuance. These fees are uniformly applied to development projects and are identified as acceptable mitigation for any impacts.

A transportation impact study was prepared by Fehr & Peers to analyze the transportation impacts associated with development of the Parcel 49 project (Appendix C). The study considered existing and cumulative conditions and previous traffic studies, including the City’s 2025 Capital Improvement Program (CIP) Travel Demand Model (TDM), the previous 2000 and 2007 rezones of the site and the State Route 65 Corridor System Management Plan. The study analyzed weekday AM peak and PM peak hour trips, as well as Saturday evening and Sunday (after service) periods due to the high traffic activity expected with Bayside Church’s weekend church services. The study analyzed transportation impacts to City roadways as well as SR 65 during each of the three phases of the project development. Comments from responsible agencies in the project vicinity and potential impacts to the adjacent City of Rocklin roadways were considered in the study. The Fehr & Peers study also analyzed the parking demand that would be generated from the project based on the proposed uses. Following release of the Traffic Study and comments received from the public, Fehr & Peers prepared a memorandum (attached to the Traffic Study) to analyze the recommended time interval between Sunday morning services and the parking demand for full occupancy of the church assembly/worship building.

**Discussion of Checklist Answers:**

a-b) The Fehr & Peers study determined that the proposed buildout of the project would result in 592 new weekday AM trips and 843 new PM peak hour trips. Compared to the current zoning of the site and the anticipated development potential, the proposed project would result in a 65 percent decrease in new weekday AM peak trips and a 55 percent decrease in new PM peak hour trips. Compared to the previous Cinemark project proposed for the project site, the proposed project would result in a 57 percent decrease in new AM peak hour trips and a 41 percent decrease in PM peak hour trips.

The Fehr & Peers study determined that the weekday AM and PM peak hour traffic impacts from Phase 1 (Topgolf) of the project will not result in any significant impacts. Traffic impacts from Phase 1 plus Phase 2 (all other development excluding Bayside Church) results in significant impacts at two intersections during weekday PM peak hour; the Blue Oaks Boulevard/Washington Boulevard/Hwy 65 ramp intersection would worsen from LOS D to E, and the Washington Boulevard/Road A intersection would worsen from LOS B to F. No significant impacts occur during weekday AM trips from Phase 1 plus Phase 2. There are also no significant impacts to SR 65 during AM peak or PM peak hours. Buildout of the project will not result in any additional traffic impacts during the weekday AM and PM peak hours.

The traffic study determined that the significant impacts to weekday PM peak hour trips can be mitigated with the construction of a northbound right-turn pocket of 250 feet on Washington Boulevard at the Blue Oaks Boulevard/Washington Boulevard intersection. With this mitigation, the Blue Oaks Boulevard/Washington Boulevard intersection would operate acceptably at LOS D and the Washington Boulevard/Road A intersection would operate acceptably at LOS C. The project plans show the recommended improvement to Washington Boulevard. The City's Engineering Division has reviewed the plans and determined they meet City standards. The following mitigation measure is added to ensure the improvements to Washington Boulevard are implemented and the transportation impacts to the City's LOS standards are reduced to less than significant.

**MM-3: With construction of Phase 2 of the project, a northbound right-turn pocket of 250 feet shall be constructed on northbound Washington Boulevard at the Washington Boulevard/Blue Oaks Boulevard intersection. The improvement shall be shown on the Phase 2 improvement plans submitted to the City's Development Services - Engineering Division. Construction of the turn pocket shall be completed with construction of any portion of Road B.**

Using state-of-practice traffic simulations, Fehr & Peers made recommendations for design improvements to the project to improve traffic conditions on and off the project site. The improvements, such as the design of the roundabouts and the right-in-only driveway on Washington Boulevard, were incorporated into the project design. The City's Development Services – Engineering Division reviewed the plans and deemed them consistent with City standards. Conditions of approval will be placed on the project to ensure the improvements shown on the project plans are incorporated into construction permit plans.

Due to high traffic level expected during weekend church services, the City requested that the traffic study also analyze potential transportation impacts from a Saturday evening church service and a Sunday morning service. The study estimated the amount of traffic that would be generated at project buildout, in 15-minute increments, within the one-hour before and after weekend church services. For this project the same LOS standard for AM and PM peak hour trips was applied to weekend trips. The traffic study determined that the project would not degrade LOS standards to unacceptable levels during any one-hour period on the weekends. During the peak 15 minutes of the peak hour (5:15 pm to 6:15 pm) before Saturday evening service, the Blue Oaks Boulevard/Washington Boulevard intersection will operate at LOS E. However, the operation of the Blue Oaks Boulevard/Washington Boulevard intersection will operate at LOS D over the entire peak hour (5:15 pm to 6:15 pm). LOS D is an acceptable level for this intersection. All other study intersections will operate at acceptable levels.

The traffic study findings for weekend trips were based on the condition that there would be temporary on-site traffic management the hour before the Saturday and Sunday services to ensure traffic is flowing smoothly through the site. The memorandum to the traffic study also recommended a 60 minute interval between services. Therefore with the following mitigation measures, the project at buildout will not cause a substantial increase to traffic or exceed acceptable levels of service.

**MM-4: A Traffic Management Plan will be required with submittal of the Bayside Church MPP Stage 2 application. The traffic management plan shall incorporate the following:**

- **The right-in only driveway on Washington Boulevard south of Road A shall be open for church traffic one hour before each service and remain open until the start of service. This driveway would be closed at all other times.**
- **Prior to church services, the internal roadway connecting to the south leg of the west roundabout shall be converted to one-way inbound operation with two lanes. Traffic exiting the parking area south and west of the church shall circulate through the parking area between the church and Topgolf.**
- **Church traffic entering the project site via Road A shall be divided between the right-turn bypass lane and the roundabout.**

**MM-5: The Bayside Church MPP Stage 2 application shall include an Operations Plan and shall include service times for the church. The services shall be planned during the times assumed with the NCRSP Parcel 49 traffic study. There shall be a minimum of 60 minutes between teach service on the weekends, unless additional traffic analysis prepared with the MPP Stage 2 application support modification to the spacing of the services.**

The project at buildout will not result in an impact to HWY 65 operations during weekend travel. Additionally the project will be required to pay the agreed upon HWY 65 JPA and SPRTA fees. The fees represent a fair share funding contribution towards future improvements to HWY 65. The Highway 65 JPA and SPRTA fee technical memorandums describing the fee programs and what they pay for and what the fees are is available at the City of Roseville, Permit Center, and are listed as uniformly applied and acceptable mitigation per CEQA Guidelines section 15183.

With the above mitigation, impacts to roadways are less than significant.

c) No airports are located in proximity to the project site. The project will not result in a change to air traffic patterns. No impact would occur.

d) The design of on-site circulation is reviewed as part of the MPP application. The City has adopted standards for roadway design, parking lot designs, and vehicular queuing. Development Services-Engineering Division and the Fehr & Peers traffic study evaluated the project design to ensure City standards were met and no hazardous conditions were present. Any modifications required from their review were either already incorporated into the project design or will be incorporated into the conditions of approval. The impact is therefore less than significant.

e) The City's Fire Department reviewed the project and determined that the design will provide adequate emergency access and meets their design criteria code requirements. With adherence to the City of Roseville Design and Construction Standards, the project will have a less than significant impact to emergency access.

f) The City's Zoning Ordinance outlines the parking requirements for projects based on the proposed square footages and use types. Per the Zoning Ordinance standards, 2,230 parking spaces are required. The project will provide 2,789 parking spaces.

Due to the unique operating characteristics of Topgolf and Bayside Church, the City requested that Fehr & Peers prepare a parking demand study to ensure that the City's parking standards are adequate. The parking study utilized the Zoning Ordinance standards for the retail, restaurant and hotel uses parking demand assumptions. Parking demand for Topgolf was based on parking utilization studies completed at

the Topgolf Scottsdale facility. Parking demand for the church is based on trip generation information contained within the traffic study and vehicle occupancy data collected at the Bayside Granite Bay location and Adventure Church in Rocklin. It also assumes the office space would have little parking demand on the weekend. The study found that the ratio of parking demand to supply is estimated to be 71 percent on Saturday evening and 73 percent on Sunday morning. The study also determined that parking is placed appropriately throughout the site.

The City requested that Fehr & Peers also determine the parking assuming maximum attendance at both the Saturday evening and Sunday morning church services. The Fehr & Peers Memorandum found that even with full occupancy (worst case scenario) of the church, the parking lot would still have 241 parking spaces available during Saturday evening and 404 parking spaces available during Sunday morning services.

Additionally, the project will be incorporating measures to reduce the anticipated parking demand. Measures include, but are not limited to the following: providing a pedestrian connection to the City's existing pedestrian paths that connect to adjacent residential and commercial projects, providing a continuous pedestrian link throughout the project, providing connections to bicycle paths and providing on-site amenities such as lockers and showers for bicyclists, providing bus and dial-a-ride drop off and pick up areas, and preparing a Transportation Systems Management (TSM) plan to reduce vehicle trips and reduce peak hour traffic generated from the project. The on-site parking will be reviewed and evaluated with the MPP but, as described, is anticipated to be adequate for the project, and therefore is a less than significant impact.

g) The project is considered to be a job center. Consistent with City policy, the project will provide a 25 space park and ride lot to encourage ride sharing. As mentioned, the project is conditioned to provide a Transportation Systems Management (TSM) plan to reduce vehicle trips and reduce peak hour traffic generated from the project. There is not an adopted standard for reduction that shall be met, but the applicant must show alternative commute options are encouraged as part of the TSM plan. The City's Alternative Transportation Division will review and approve the plan prior to building permit approval of the project.

The project will provide bike parking consistent with the requirements in the Green Building Code. The installation of sidewalks, continuation of bicycle lanes anticipated in the City's Bicycle Master Plan, installation of bus shelters along the existing bus route, and improvements to the existing bike path will encourage alternative transportation methods, which have the potential to further reduce the amount of vehicle trips generated from the project. The Alternative Transportation division has reviewed the project to ensure that it will not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. As such, the project is anticipated to have a less than significant impact on alternative transportation.

**XVI. Utilities and Service Systems**

Would the project:

<b>Environmental Issue</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant With Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition of the provider's existing commitments?			X	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	

**Discussion of Checklist Answers:**

a-g) Development of the project site has been anticipated since the 1990 adoption of the North Central Roseville Specific Plan (NCRSP). As part of the NCRSP EIR, impacts to utility and service systems were evaluated. The City's service demand model addresses the NCRSP anticipated impact. The service demand model was updated to not only reflect the NCRSP Parcel 49 2000 and 2007 rezones, but also current conditions and City wide anticipated future demands.

Water and sewer services will be provided by the City of Roseville. A Water Supply Assessment (WSA) as required by Senate Bill 610, was prepared for the previous Cinemark project proposed on the site. The Cinemark WSA was approved by the City Council on June 1, 2011, and indicated that the City will have sufficient water to meet projected water demands for the project in addition to meeting the existing service area's planned future demands for the next 20 years during average, single-dry, and multiple dry-year scenarios. The Cinemark project consisted of 770,000 square feet of development. The proposed project includes 50% less square footage than the Cinemark project. This proposed project does not meet the criteria for which a WSA would be required. Regardless, the City has determined that adequate water and sewer capacity is available for the proposed project.

The developer will be responsible for extending new lines onto the site in order to serve the project. Storm water will be collected on-site and transferred via pipe into an off-site storm drain system. Solid waste will be collected by the City of Roseville’s Refuse Department. The City of Roseville will provide electric service to the site, while natural gas will be provided by PG&E. Comcast will provide cable. All agencies have been informed of this project. It has been determined that adequate services are available to the project, therefore, impacts to utilities are considered to be less than significant.

**XVII. Mandatory Findings of Significance**

Environmental Issue	Potentially Significant	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

**Discussion of Checklist Answers:**

All of the noise and transportation/traffic issues raised in question (a) above are described and evaluated under the Biological Resources and Cultural Resources sections of this report and include mitigation measures to reduce impacts to less than significant. The cumulative impacts, the focus of question (b), have been addressed in each section throughout this document where applicable.

Potentially substantial adverse effects on human beings, the concern of question (c), are dealt with in chapters addressing potential health-related impacts (e.g., Air Quality, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Transportation/Traffic). With implementation of the proposed mitigation measures the project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of any wildlife species or create substantial adverse effects on human beings.

**ENVIRONMENTAL DETERMINATION:**

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*As shown in the checklist prepared as part of this Initial Study, City staff has not identified any impacts that are not peculiar to the parcel that cannot be mitigated to less than significant levels, whether offsite or cumulative in nature, and the City's Mitigating Policies and Standards, have been undertaken.*

On the basis of this initial evaluation:

I find that the proposed project COULD, but with mitigation agreed to by the applicant clearly will not, have a significant effect on the environment and a MITIGATED NEGATIVE DECLARATION will be prepared.

Initial Study Prepared by:

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Gina McColl, Associate Planner  
City of Roseville, Development Services - Planning Division

**Attachments:**

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1. Project Plans

**Appendices:**

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- A. Air Quality Impact and Greenhouse Gas Analysis, Raney Planning & Management, Inc., January 2015.
- B. Parcel 49 Regulatory Permitting Documents, September 5, 2014.
- C. Roseville Ordinance 4643 – PD Ordinance for Parcel 49, 2008.
- D. Environmental Noise Assessment for Topgolf, Bollard Acoustical Consultants, December 8, 2014.
- E. Environmental Noise Assessment for Parcel 49, Bollard Acoustical Consultants, December 8, 2014.
- F. Transportation Impact Study for Parcel 49, Fehr & Peers Associates, November 14, 2014.  
Memo from Alan Telford of Fehr & Peers Associates to Marc Stout at City of Roseville re: NCRSP Parcel 49 Traffic Impacts, January 8, 2015.

## NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

**Notice** is hereby given that, as Lead Agency, the City of Roseville, Development Services Department, Planning Division has prepared an Initial Study leading to a Mitigated Negative Declaration for the project referenced below. This Mitigated Negative Declaration is being circulated for a 30-day review period beginning January 23, 2015 and ending February 23, 2015 at 5:00 pm. The Mitigated Negative Declaration may be reviewed during normal business hours at the Planning Division offices, located at 311 Vernon Street. It may also be viewed online at [http://www.roseville.ca.us/gov/development\\_services/planning/current\\_projects/ncrsp\\_parcel\\_4\\_9.asp](http://www.roseville.ca.us/gov/development_services/planning/current_projects/ncrsp_parcel_4_9.asp). **Written comments on the adequacy of the Mitigated Negative Declaration may be submitted to Gina McColl, Planning Division, 311 Vernon Street, Roseville, CA 95678, and must be received no later than 5:00 pm on February 23, 2015.**

**Project Title/Name:** NCRSP PCL 49 Bayside Church/Top Golf

**File #:** PL14-0252

**Project Address:** 9000 Washington Bl

**Owner:** John Stewart, Bayside Covenant Church

**Applicant:** Kris Steward, Phillips Land Law, Inc.

**Current Zoning:** PD/SA-NC & M1/SA-NC

**Project Planner:** Gina McColl, Associate Planner

**Request:** The applicant requests approval of entitlements that would allow the phased development of the approximately 59 acre site with 130,000 square feet of community assembly (Bayside Church), 64,232 square feet of indoor/outdoor recreation (Top Golf), 116,500 square feet of office, 37,800 square feet of retail, 11,200 square feet of restaurant, and 27,900 square feet of hotel use types. The project also includes on-site landscaping, lighting, and parking, a 25 parking space park-n-ride lot, and improvements associated with the realignment of a City's bike trail.

This project will be scheduled for a public hearing before the City's Planning Commission. At this hearing, the Planning Commission will consider the Mitigated Negative Declaration and associated project entitlements. The tentative hearing date is February 26, 2015.

Kevin Payne  
Development Services Director

Dated: January 15, 2015

Publish: January 23, 2015



## Environmental Noise Assessment

# Dutch Bros. Freedom Point

City of Roseville, California

February 21, 2024

Project #240204

Prepared for:

**Plan Steward, Inc.**

5716 Folsom Boulevard, #339

Sacramento, CA 95819

Prepared by:

**Saxelby Acoustics LLC**



**Luke Saxelby, INCE Bd. Cert.**

**Principal Consultant**

**Board Certified, Institute of Noise Control Engineering (INCE)**



## INTRODUCTION

The Dutch Bros. Freedom Point Project is located in the City of Roseville, California. The project will consist of a drive-thru coffee shop with a parking lot. The primary noise source associated with operation of the project is drive-thru operations and parking lot circulation. Single family residential uses are located to the south of the project site. The purpose of this analysis is to predict the noise generation associated with these uses and to achieve compliance with the applicable City of Roseville noise level standards.

**Figure 1** shows the project site plan. **Figure 2** shows an aerial photo of the project site and noise measurement locations.

## ENVIRONMENTAL SETTING

### BACKGROUND INFORMATION ON NOISE

#### *Fundamentals of Acoustics*

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

DUTCH BROS. & BLDG 1  
 LOT 9 - PARCEL 3  
 MAJOR PROJECT PERMIT  
 ROSEVILLE, CA  
 SHEET 1 OF 2



**PARCEL 40 PROJECT SUMMARY**  
 NOT TO SCALE

OWNER	ADDRESS & PLAT	TOTAL AREA (SQ FT)	USE
ROSEVILLE	1000 WASHINGTON BLVD	1,117,783 AC	COMMERCIAL CENTER
LOT 1	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 2	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 3	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 4	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 5	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 6	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 7	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 8	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 9	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 10	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 11	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 12	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 13	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 14	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 15	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 16	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 17	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 18	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 19	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 20	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 21	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 22	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 23	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 24	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 25	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 26	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 27	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 28	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 29	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 30	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 31	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 32	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 33	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 34	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 35	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 36	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 37	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 38	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 39	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 40	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 41	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 42	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 43	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 44	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 45	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 46	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 47	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 48	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 49	34,599 SQ FT	1.000 AC	RESIDENTIAL
LOT 50	34,599 SQ FT	1.000 AC	RESIDENTIAL

**PARCEL 40 PARKING SUMMARY**

TYPE	NO.	AREA (SQ FT)	AREA (AC)
Surface	1,117	1,117,783	25.5
Other	0	0	0.0
<b>Total</b>	<b>1,117</b>	<b>1,117,783</b>	<b>25.5</b>

**NCRSP - PARCEL 40 FLOOR AREA SUMMARY**

USE	FLOOR AREA (SQ FT)	FLOOR AREA (AC)
RESIDENTIAL	1,117,783	25.5
Other	0	0.0
<b>Total</b>	<b>1,117,783</b>	<b>25.5</b>

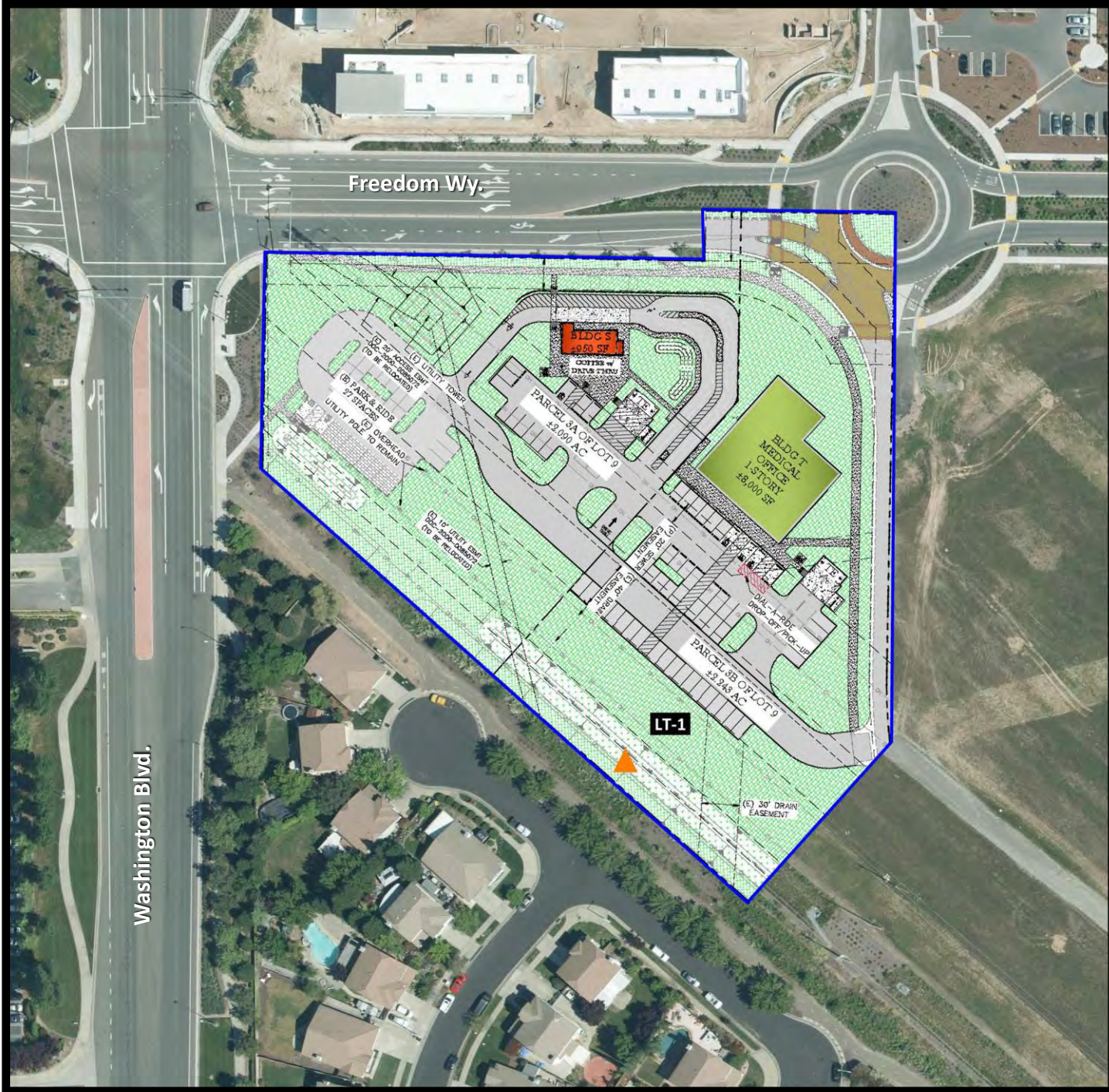
**NCRSP PARCEL 40 PRELIMINARY DEVELOPMENT SUMMARY**

USE	FLOOR AREA (SQ FT)	FLOOR AREA (AC)
RESIDENTIAL	1,117,783	25.5
Other	0	0.0
<b>Total</b>	<b>1,117,783</b>	<b>25.5</b>

**Dutch Bros. Freedom Point**  
 City of Roseville, California

Figure 1  
 Project Site Plan






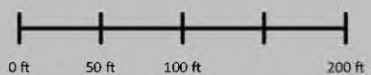
**Dutch Bros. Freedom Point**

City of Roseville, California

**Figure 2**  
Noise Measurement Sites

**Legend**

- Project Site
- ▲ Noise Measurement Site - Long Term

Projection: UTM Zone 10 / WGS84 / meters  
 Rev. Date: 02/21/2024



The decibel scale is logarithmic, not linear. In other words, two sound levels 10-dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10-dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool is the average, or equivalent, sound level ( $L_{eq}$ ), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise.

The day/night average level ( $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10-decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

**Table 1** lists several examples of the noise levels associated with common situations. **Appendix A** provides a summary of acoustical terms used in this report.

**TABLE 1: TYPICAL NOISE LEVELS**

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft.)	--100--	
Gas Lawn Mower at 1 m (3 ft.)	--90--	
Diesel Truck at 15 m (50 ft.), at 80 km/hr. (50 mph)	--80--	Food Blender at 1 m (3 ft.) Garbage Disposal at 1 m (3 ft.)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft.)	--70--	Vacuum Cleaner at 3 m (10 ft.)
Commercial Area Heavy Traffic at 90 m (300 ft.)	--60--	Normal Speech at 1 m (3 ft.)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

Source: Caltrans, *Technical Noise Supplement, Traffic Noise Analysis Protocol*. September, 2013.

### ***Effects of Noise on People***

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as hearing loss or sudden startling

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it.

With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6-dB per doubling of distance from the source, depending on environmental conditions (i.e. atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

## EXISTING AMBIENT NOISE LEVELS

The existing noise environment in the project area is defined primarily by traffic on Washington Boulevard and Freedom Way.

To quantify the existing ambient noise environment in the project vicinity, Saxelby Acoustics conducted a continuous (24-hr.) noise level measurement at one location on the project site. Noise measurement locations are shown on **Figure 2**. A summary of the noise level measurement survey results is provided in **Table 2**. **Appendix B** contains the complete results of the noise monitoring.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value, denoted  $L_{max}$ , represents the highest noise level measured. The average value, denoted  $L_{eq}$ , represents the average of all of the noise received by the sound level meter microphone during the monitoring period. The median value, denoted  $L_{50}$ , represents the sound level exceeded 50 percent of the time during the monitoring period.

Larson Davis Laboratories (LDL) model 820 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with a CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

**TABLE 2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA**

Location	Date	$L_{dn}$	Daytime $L_{eq}$	Daytime $L_{50}$	Daytime $L_{max}$	Nighttime $L_{eq}$	Nighttime $L_{50}$	Nighttime $L_{max}$
LT-1 (west project boundary)	2/9/24	58	55	52	71	51	50	61
	2/10/24	59	56	51	72	52	50	62
	2/11/24	56	51	49	67	50	49	63
	2/12/24	57	52	49	69	51	49	62
Average		58	54	50	70	51	50	62

**Notes:**

- All values shown in dBA
- Daytime hours: 7:00 a.m. to 10:00 p.m.
- Nighttime Hours: 10:00 p.m. to 7:00 a.m.
- Source: Saxelby Acoustics 2024

## REGULATORY CONTEXT

### FEDERAL

There are no federal regulations related to noise that apply to the Proposed Project.

### STATE

There are no state regulations related to noise that apply to the Proposed Project.

### LOCAL

#### ***City of Roseville Municipal Code - § 9.24.100 Sound limits for sensitive receptors.***

It is unlawful for any person at any location to create any sound, or to allow the creation of any sound, on property owned, leased, occupied or otherwise controlled by such person, which causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by three dBA or exceed the sound level standards as set forth in Table 1 (**Table 3**), by three dBA, whichever is greater.

**TABLE 3: SOUND LEVEL STANDARDS (FOR NON-TRANSPORTATION OR FIXED SOUND SOURCES)**

Sound Level Descriptor	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 a.m.)
Hourly $L_{eq}$ , dB	50	45
Maximum Level, dB	70	65

- A. Each of the sound level standards specified in Table 1 (**Table 3**) shall be reduced by five dB for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus three dB.
- B. If the intruding sound source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient sound level can be measured, the sound level measured while the source is in operation shall be compared directly to the sound level standards of Table 1 (**Table 3**).

(Ord. 3638 § 1, 2001)

#### ***Summary of Noise Level Standards***

**Table 3** shows the City of Roseville Municipal Code noise level standards for stationary noise sources. The Municipal Code sets a base noise level standard of 50 dBA  $L_{eq}$  during daytime (7:00 a.m. to 10:00 p.m.) hours and 45 dBA  $L_{eq}$  during nighttime (10:00 p.m. to 7:00 a.m.) hours at the property line of the adjacent residential uses. Where ambient noise exceeds these standards, the standard becomes the ambient noise level plus 3 dB.

As shown by **Table 2**, the average day/nighttime noise levels are 54 dBA  $L_{eq}$  and 51 dBA  $L_{eq}$ , respectively. Therefore, Saxelby Acoustics adjusted the City of Roseville stationary noise level standard to 57 dBA  $L_{eq}$  for daytime (7:00 a.m. to 10:00 p.m.) hours and 54 dBA  $L_{eq}$  for nighttime (10:00 p.m. to 7:00 p.m.) hours.

In addition, the City of Roseville maximum stationary noise level standard should be adjusted to 74 dBA  $L_{max}$  during daytime (7:00 a.m. to 10:00 p.m.) hours based on measured average maximum ambient noise levels. The nighttime maximum standard was left at 65 dBA  $L_{max}$  based upon the average nighttime maximum of 62 dBA  $L_{max}$ .

## EVALUATION OF PROJECT OPERATIONAL NOISE ON EXISTING SENSITIVE RECEPTORS

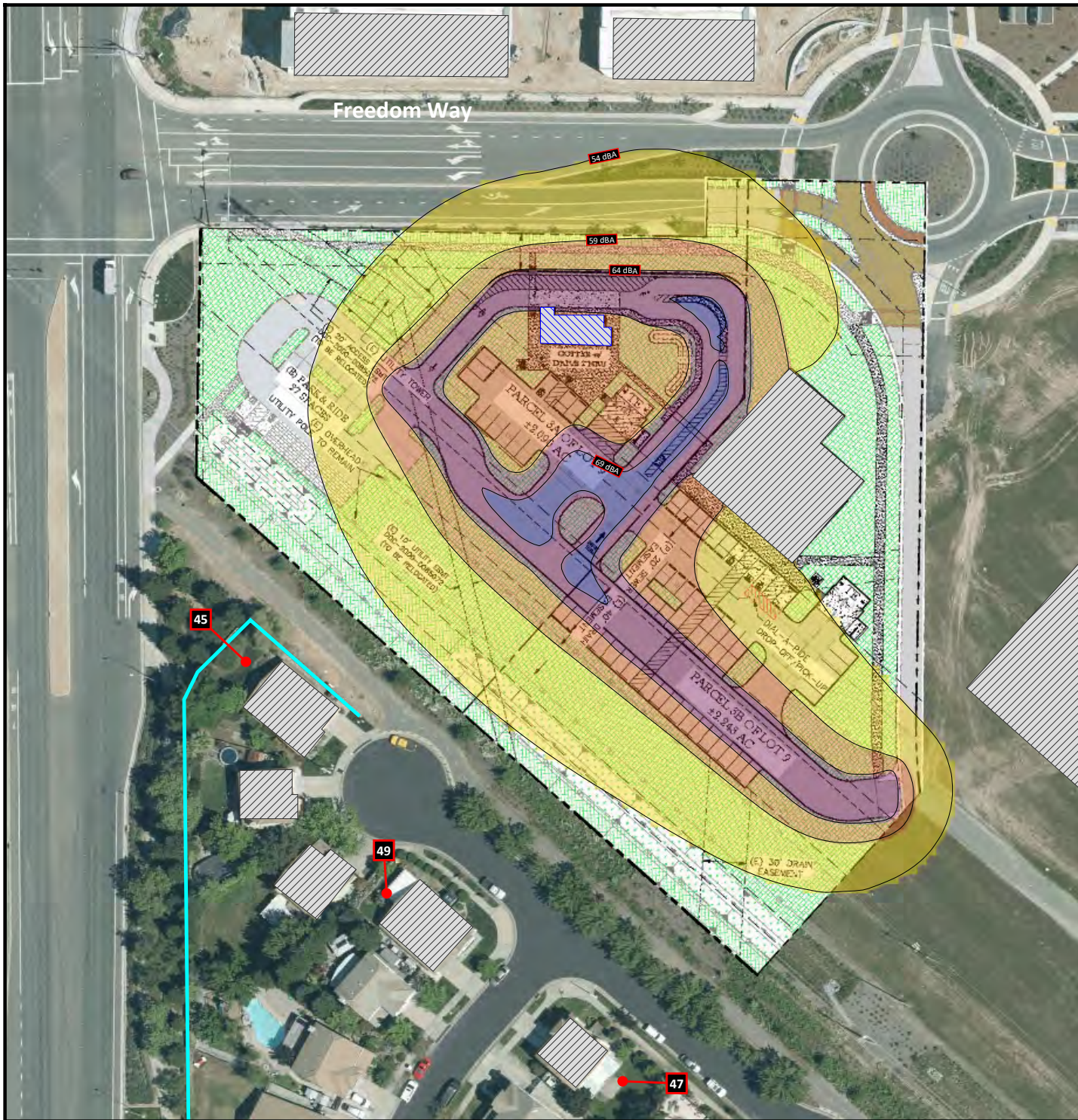
The primary noise source on the proposed project site would be vehicle idling from the drive-thru lane with the addition of general parking lot circulation and deliveries. Saxelby Acoustics used noise level data collected by Bollard Acoustical Consultants (BAC) for a similar Dutch Bros.<sup>1</sup> It should be noted that Saxelby Acoustics conservatively assumed that the proposed project could operate daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.) hours.

**Drive-Thru:** Saxelby Acoustics estimated that project drive through lane usage could occur continuously during the day or night hours. The drive-through aisle are predicted to produce continuous noise levels of 61 dBA  $L_{eq}$  and 71 dBA  $L_{max}$  at 15 feet. No ordering speaker is proposed as all orders will be taken by Dutch Bros staff on foot in the drive-through queue lanes. Data includes normal car stereo noise, vehicle idling, and conversational speech between Dutch Bros staff and patrons.

**On-Site Circulation:** The project parking lot is assumed to fill and empty in a busy hour and could include up to two heavy trucks for deliveries or garbage collection. Parking lot movements are predicted to generate a sound exposure level (SEL) of 71 dBA SEL at 50 feet for cars and 85 dBA SEL at 50 feet for trucks. Saxelby Acoustics data.

Saxelby Acoustics used the SoundPLAN noise prediction model. Inputs to the model included sound power levels for the proposed amenities, existing and proposed buildings, terrain type, and locations of sensitive receptors. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors). ISO 9613 is the most commonly used method for calculating exterior noise propagation. **Figure 3** shows the noise level contours resulting from operation of the project.

<sup>1</sup> Bollard Acoustical Consultants (BAC), Dutch Bros. Coffee Drive-Through Environmental Noise Assessment Elk Grove, June 2020.



# Dutch Bros Freedom Point

City of Roseville, CA




Figure 3

Stationary Noise Level Contours  
Leq dBA

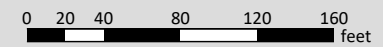
Noise Level, dB(A)

54 <	≤ 59
59 <	≤ 64
64 <	≤ 69
69 <	

### Legend

-  Project Building
-  Existing Building
-  Project Site

Scale 1:100



### **Operational Noise at Existing Sensitive Receptors**

As shown on **Figure 4**, the project is predicted to expose nearby residences to noise levels up to 49 dBA,  $L_{eq}$  during both daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) hours. The predicted project noise levels would meet the ambient-adjusted noise level standard for stationary noise sources of 54 dBA,  $L_{eq}$ .

It should be noted that maximum noise levels generated by on-site activities are predicted to be 10-15 dBA, or less, than the average ( $L_{eq}$ ) values. Based upon the predicted average noise levels of 49 dBA  $L_{eq}$ , the maximum noise levels are estimated to be 59-64 dBA  $L_{max}$ . This complies with the City's ambient adjusted daytime limit of 74 dBA  $L_{max}$  and nighttime limit of 65 dBA  $L_{max}$ .

### **CONCLUSIONS**

The proposed project is predicted to comply with the City of Roseville noise level standards with no additional noise control measures.

## REFERENCES

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## Appendix A: Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>ASTC</b>	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
<b>DNL</b>	See definition of Ldn.
<b>IIC</b>	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
<b>Ldn</b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>Lmax</b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>L(n)</b>	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>NIC</b>	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
<b>NNIC</b>	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
<b>Noise</b>	Unwanted sound.
<b>NRC</b>	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
<b>RT60</b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>Sabin</b>	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
<b>SEL</b>	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
<b>SPC</b>	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
<b>STC</b>	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.
<b>Impulsive</b>	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
<b>Simple Tone</b>	Any sound which can be judged as audible as a single pitch or set of single pitches.

## **Appendix B: Continuous Ambient Noise Measurement Results**

**Appendix B1a: Continuous Noise Monitoring Results**

Site: LT-1

Project: Dutch Bros. Freedom Point

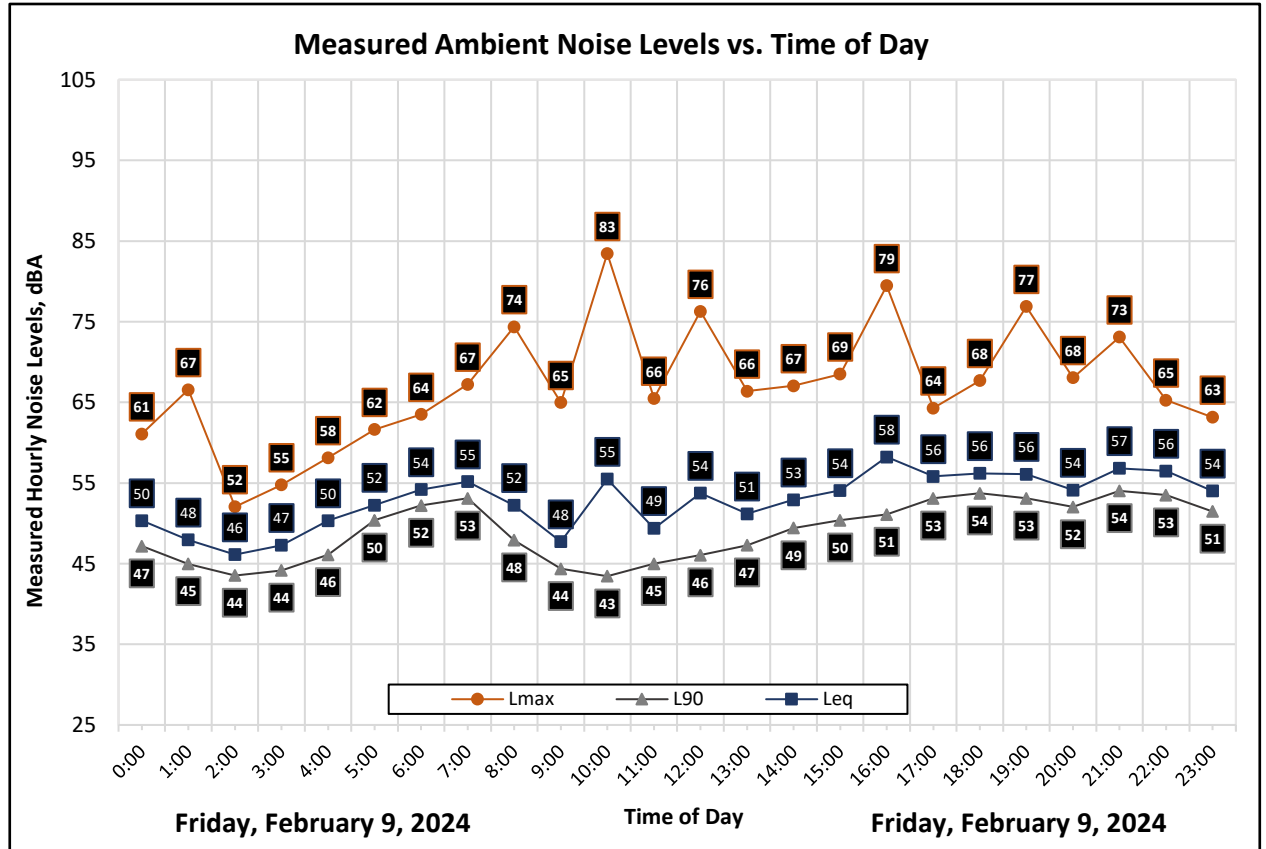
Meter: LDL 820-6

Location: South of the Project Site

Calibrator: CAL200

Coordinates: 38.791147°,-121.298612°

Date	Time	Measured Level, dBA			
		L <sub>eq</sub>	L <sub>max</sub>	L <sub>50</sub>	L <sub>90</sub>
Friday, February 9, 2024	0:00	50	61	50	47
Friday, February 9, 2024	1:00	48	67	47	45
Friday, February 9, 2024	2:00	46	52	46	44
Friday, February 9, 2024	3:00	47	55	47	44
Friday, February 9, 2024	4:00	50	58	50	46
Friday, February 9, 2024	5:00	52	62	52	50
Friday, February 9, 2024	6:00	54	64	54	52
Friday, February 9, 2024	7:00	55	67	55	53
Friday, February 9, 2024	8:00	52	74	50	48
Friday, February 9, 2024	9:00	48	65	46	44
Friday, February 9, 2024	10:00	55	83	46	43
Friday, February 9, 2024	11:00	49	66	47	45
Friday, February 9, 2024	12:00	54	76	48	46
Friday, February 9, 2024	13:00	51	66	50	47
Friday, February 9, 2024	14:00	53	67	52	49
Friday, February 9, 2024	15:00	54	69	53	50
Friday, February 9, 2024	16:00	58	79	53	51
Friday, February 9, 2024	17:00	56	64	55	53
Friday, February 9, 2024	18:00	56	68	55	54
Friday, February 9, 2024	19:00	56	77	55	53
Friday, February 9, 2024	20:00	54	68	53	52
Friday, February 9, 2024	21:00	57	73	56	54
Friday, February 9, 2024	22:00	56	65	56	53
Friday, February 9, 2024	23:00	54	63	54	51



Statistics	Leq	Lmax	L50	L90
Day Average	55	71	52	50
Night Average	51	61	50	48
Day Low	48	64	46	43
Day High	58	83	56	54
Night Low	46	52	46	44
Night High	54	67	56	53
Ldn	58	Day %		81
CNEL	59	Night %		19



**Appendix B1b: Continuous Noise Monitoring Results**

Site: LT-1

Project: Dutch Bros. Freedom Point

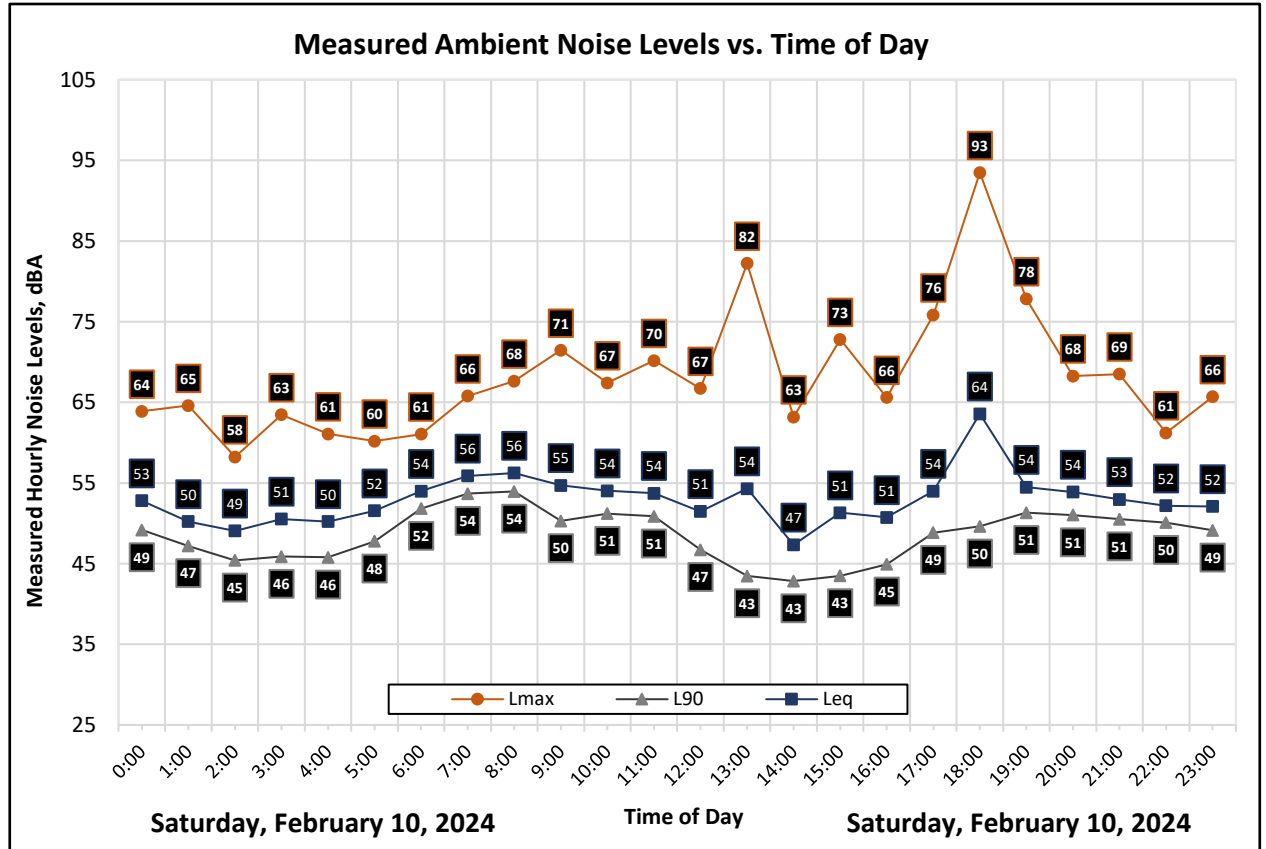
Meter: LDL 820-6

Location: South of the Project Site

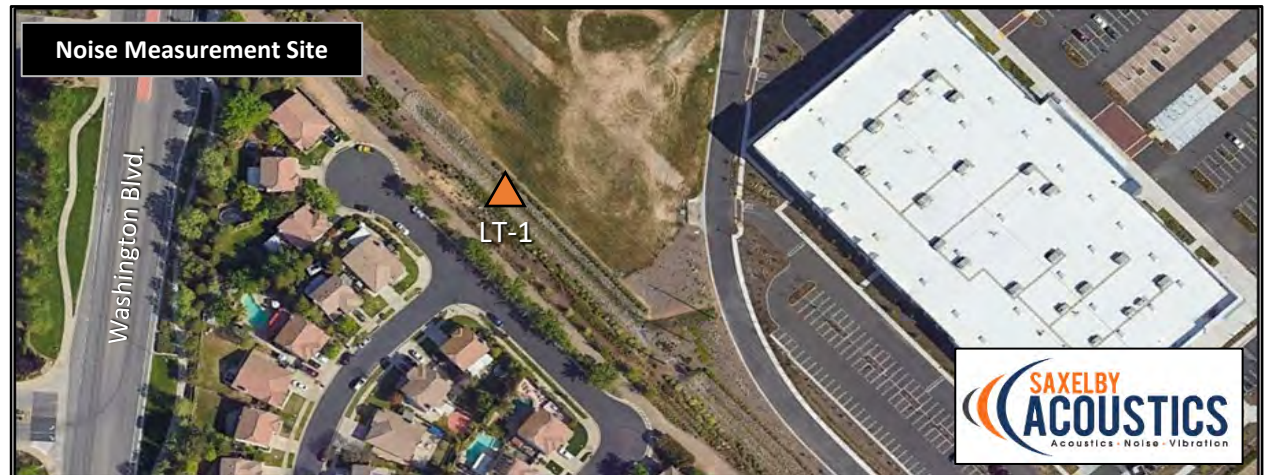
Calibrator: CAL200

Coordinates: 38.791147°,-121.298612°

Date	Time	Measured Level, dBA			
		L <sub>eq</sub>	L <sub>max</sub>	L <sub>50</sub>	L <sub>90</sub>
Saturday, February 10, 2024	0:00	53	64	51	49
Saturday, February 10, 2024	1:00	50	65	50	47
Saturday, February 10, 2024	2:00	49	58	48	45
Saturday, February 10, 2024	3:00	51	63	49	46
Saturday, February 10, 2024	4:00	50	61	49	46
Saturday, February 10, 2024	5:00	52	60	51	48
Saturday, February 10, 2024	6:00	54	61	54	52
Saturday, February 10, 2024	7:00	56	66	56	54
Saturday, February 10, 2024	8:00	56	68	56	54
Saturday, February 10, 2024	9:00	55	71	53	50
Saturday, February 10, 2024	10:00	54	67	53	51
Saturday, February 10, 2024	11:00	54	70	53	51
Saturday, February 10, 2024	12:00	51	67	50	47
Saturday, February 10, 2024	13:00	54	82	48	43
Saturday, February 10, 2024	14:00	47	63	45	43
Saturday, February 10, 2024	15:00	51	73	47	43
Saturday, February 10, 2024	16:00	51	66	48	45
Saturday, February 10, 2024	17:00	54	76	51	49
Saturday, February 10, 2024	18:00	64	93	52	50
Saturday, February 10, 2024	19:00	54	78	53	51
Saturday, February 10, 2024	20:00	54	68	53	51
Saturday, February 10, 2024	21:00	53	69	52	51
Saturday, February 10, 2024	22:00	52	61	52	50
Saturday, February 10, 2024	23:00	52	66	51	49



Statistics	Leq	Lmax	L50	L90
Day Average	56	72	51	49
Night Average	52	62	50	48
Day Low	47	63	45	43
Day High	64	93	56	54
Night Low	49	58	48	45
Night High	54	66	54	52
Ldn	59	Day %		83
CNEL	59	Night %		17



**Appendix B1c: Continuous Noise Monitoring Results**

Site: LT-1

Project: Dutch Bros. Freedom Point

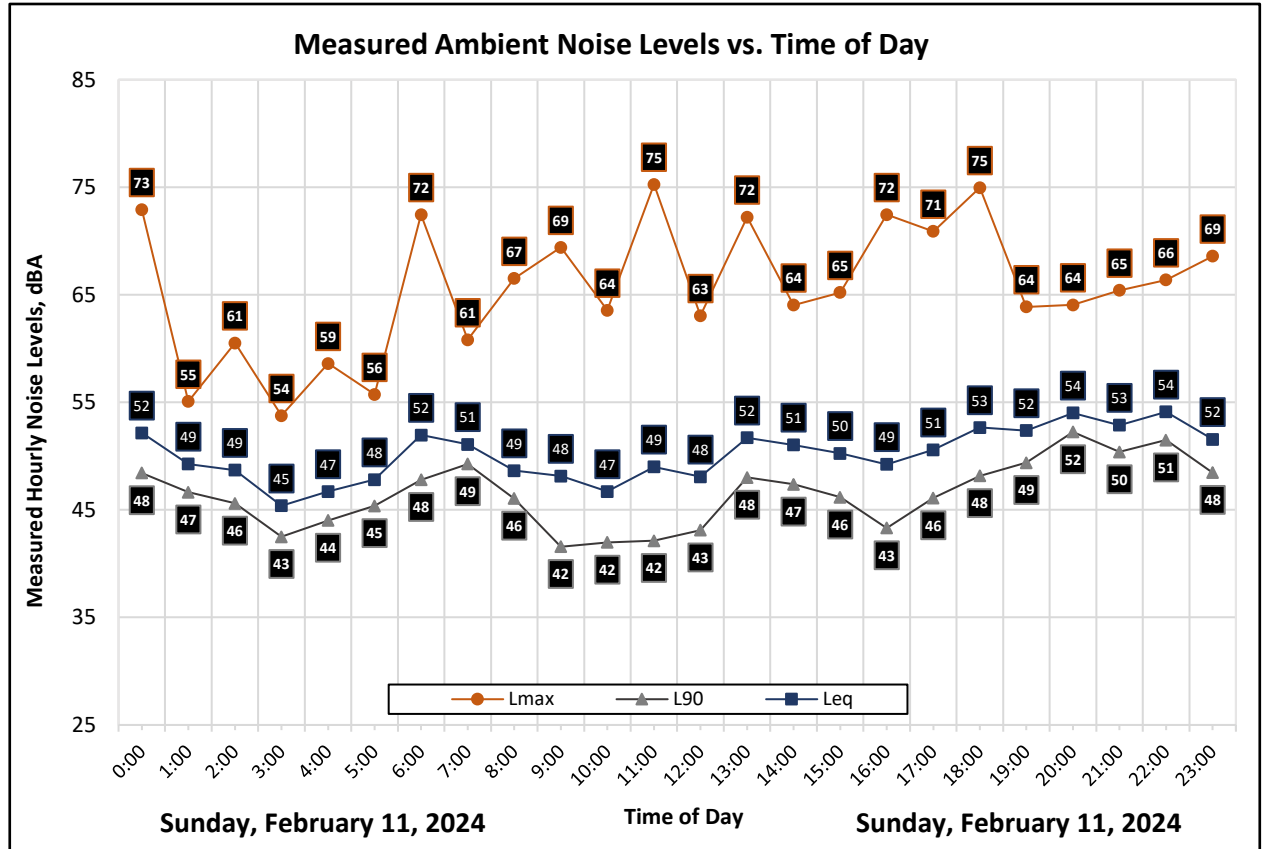
Meter: LDL 820-6

Location: South of the Project Site

Calibrator: CAL200

Coordinates: 38.791147°,-121.298612°

Date	Time	Measured Level, dBA			
		L <sub>eq</sub>	L <sub>max</sub>	L <sub>50</sub>	L <sub>90</sub>
Sunday, February 11, 2024	0:00	52	73	51	48
Sunday, February 11, 2024	1:00	49	55	49	47
Sunday, February 11, 2024	2:00	49	61	48	46
Sunday, February 11, 2024	3:00	45	54	45	43
Sunday, February 11, 2024	4:00	47	59	46	44
Sunday, February 11, 2024	5:00	48	56	47	45
Sunday, February 11, 2024	6:00	52	72	50	48
Sunday, February 11, 2024	7:00	51	61	51	49
Sunday, February 11, 2024	8:00	49	67	48	46
Sunday, February 11, 2024	9:00	48	69	44	42
Sunday, February 11, 2024	10:00	47	64	44	42
Sunday, February 11, 2024	11:00	49	75	44	42
Sunday, February 11, 2024	12:00	48	63	46	43
Sunday, February 11, 2024	13:00	52	72	50	48
Sunday, February 11, 2024	14:00	51	64	50	47
Sunday, February 11, 2024	15:00	50	65	49	46
Sunday, February 11, 2024	16:00	49	72	46	43
Sunday, February 11, 2024	17:00	51	71	49	46
Sunday, February 11, 2024	18:00	53	75	51	48
Sunday, February 11, 2024	19:00	52	64	51	49
Sunday, February 11, 2024	20:00	54	64	52	50
Sunday, February 11, 2024	21:00	53	65	52	50
Sunday, February 11, 2024	22:00	54	66	53	51
Sunday, February 11, 2024	23:00	52	69	51	48



Statistics	Leq	Lmax	L50	L90
Day Average	51	67	49	46
Night Average	50	63	49	47
Day Low	47	61	44	42
Day High	54	75	54	52
Night Low	45	54	45	43
Night High	52	73	53	51
Ldn	56	Day %		71
CNEL	57	Night %		29

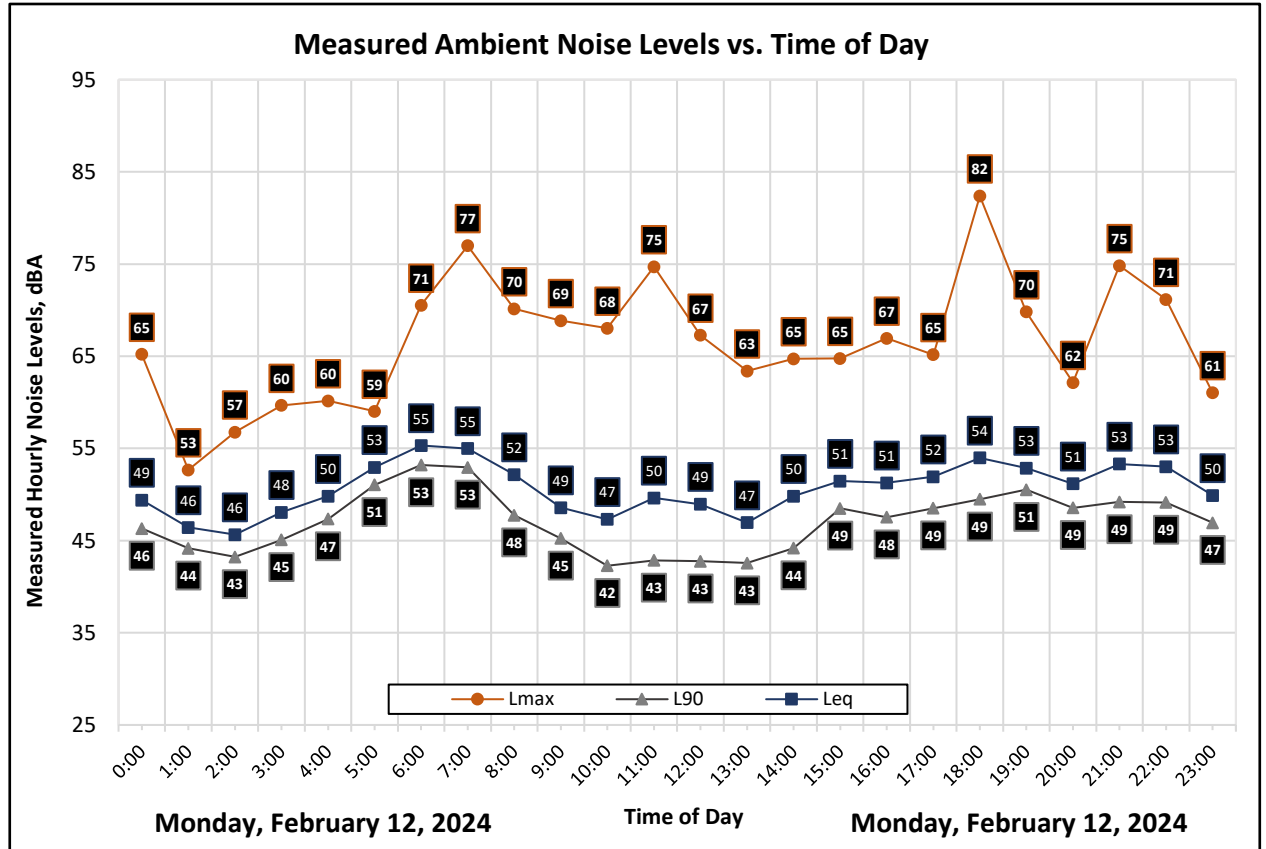


**Appendix B1d: Continuous Noise Monitoring Results**

Date	Time	Measured Level, dBA			
		L <sub>eq</sub>	L <sub>max</sub>	L <sub>50</sub>	L <sub>90</sub>
Monday, February 12, 2024	0:00	49	65	48	46
Monday, February 12, 2024	1:00	46	53	46	44
Monday, February 12, 2024	2:00	46	57	45	43
Monday, February 12, 2024	3:00	48	60	47	45
Monday, February 12, 2024	4:00	50	60	49	47
Monday, February 12, 2024	5:00	53	59	53	51
Monday, February 12, 2024	6:00	55	71	55	53
Monday, February 12, 2024	7:00	55	77	54	53
Monday, February 12, 2024	8:00	52	70	51	48
Monday, February 12, 2024	9:00	49	69	47	45
Monday, February 12, 2024	10:00	47	68	44	42
Monday, February 12, 2024	11:00	50	75	45	43
Monday, February 12, 2024	12:00	49	67	45	43
Monday, February 12, 2024	13:00	47	63	45	43
Monday, February 12, 2024	14:00	50	65	49	44
Monday, February 12, 2024	15:00	51	65	51	49
Monday, February 12, 2024	16:00	51	67	50	48
Monday, February 12, 2024	17:00	52	65	51	49
Monday, February 12, 2024	18:00	54	82	51	49
Monday, February 12, 2024	19:00	53	70	52	51
Monday, February 12, 2024	20:00	51	62	50	49
Monday, February 12, 2024	21:00	53	75	51	49
Monday, February 12, 2024	22:00	53	71	51	49
Monday, February 12, 2024	23:00	50	61	49	47

Statistics	Leq	Lmax	L50	L90
Day Average	52	69	49	47
Night Average	51	62	49	47
Day Low	47	62	44	42
Day High	55	82	54	53
Night Low	46	53	45	43
Night High	55	71	55	53
Ldn	57	Day %		69
CNEL	57	Night %		31

Site: LT-1  
 Project: Dutch Bros. Freedom Point  
 Location: South of the Project Site  
 Coordinates: 38.791147°,-121.298612°  
 Meter: LDL 820-6  
 Calibrator: CAL200



## Memorandum

**To:** Jack Varozza, P.E., QSD/P  
Senior Engineer, City of Roseville

**From:** Stephen Dillon, P.E.  
Matt Weir, P.E.

**Re:** *Traffic Evaluation*  
Freedom Point Dutch Bros  
Roseville, California

**Date:** December 5, 2023

The purpose of this memorandum is to document the transportation analysis completed for the Dutch Bros store proposed to be located near the Freedom Way intersection with Washington Boulevard in Roseville, California (the “proposed project” or “project”). This memorandum evaluates the weekday AM and PM peak-hours under Existing plus Project conditions.

### Project Understanding

Kimley-Horn understands that a Dutch Bros store is proposed as Lot 9/Parcel 3A of Parcel 49/Freedom Point within the North Central Roseville Specific Plan (NCRSP). The site is located along Freedom Way, just east of Washington Boulevard (**Exhibit 1**). The project proposes to construct an approximately 950-square foot (sf) restaurant/coffee kiosk with drive-through<sup>1</sup> (**Exhibit 2**). The project is understood to replace 12,000-sf of Medical Office land use and reduce the amount of previously proposed Medical Office land use on the adjacent Lot 9/Parcel 3B from 12,000-sf to 8,000-sf. Access to the project site would be provided via a driveway extending from Freedom Way to the project site, a segment of which has already been constructed. The analysis completed was based on the following primary assumptions:

- This analysis includes data previously compiled as part of a trip generation study in a manner consistent with the *Trip Generation Manual, 11<sup>th</sup> Edition*, published by the Institute of Transportation Engineers (ITE) to develop a unique trip rate for local Dutch Bros application<sup>2</sup>. Similarly, this analysis includes data previously compiled as part of a drive-through queuing evaluation for local Dutch Bros application<sup>3</sup>.

Based on this information, a “Short-Term Traffic Impact Study<sup>4</sup>” has been prepared, as supplemented by additional Scope of Services aspects you have specifically noted. The primary purposes of this analysis are to evaluate the proposed project’s access points, anticipated on-site operations, and localized traffic conditions to ensure safe and efficient operations.

### Data Collection

We collected the following data from the City to aid in the completion of this evaluation:

- Weekday, AM (6-9) and PM (4-7) peak-period intersection turning movement traffic volumes from the City’s Intelligent Transportation System (ITS) for three (3) weekdays (Tuesday, Wednesday, and Thursday) from May 16-18, 2022, at the Washington Boulevard intersection

<sup>1</sup> NCRSP – Parcel 49 Dutch Bros & Building T Modified Preliminary Site Plan – West, TSD Engineering, Inc., August 21, 2023.

<sup>2</sup> Douglas Boulevard Coffee Kiosk Traffic Evaluation, Kimley-Horn, July 19, 2018.

<sup>3</sup> Blue Oaks Shopping Center Traffic Evaluation, Kimley-Horn, October 10, 2022.

<sup>4</sup> Section 4 Traffic Impact Studies, City of Roseville Design Standards, City of Roseville, January 2023.

with Freedom Way. As the City’s ITS systems are in the process of being upgraded, recent turning movements from 2023 were not available at the intersection for use in this study. In order to most closely replicate baseline conditions, available turning movements from Spring 2022 were utilized.

- Existing signal timing parameters for the Washington Boulevard intersection with Freedom Way.

Using the above data, Kimley-Horn developed a weekday, AM and PM peak-hour intersection analysis (delay and queuing) using Synchro®/Sidra® traffic analysis software as appropriate. The volumes used for the analysis were the average of the three weekday counts (from May 16-18, 2022) noted above.

Data collected from previous traffic evaluations involving Dutch Bros stores<sup>2,3</sup> was utilized to establish weekday, AM and PM peak-period trip generation rates and queueing conditions contained in this evaluation.

## Assessment of Proposed Project

### Trip Generation

As previously mentioned, the number of trips anticipated to be generated by the proposed project was derived using client specific data collected as part of a prior study<sup>2</sup>, which was consistent with the methodology contained in the *Trip Generation Manual, 11<sup>th</sup> Edition*, published by ITE. The unique local trip generation rate utilized “per thousand square feet” for the independent variable. As the data previously collected was limited to the AM peak-hour, the PM peak-hour project trip generation was developed via a ratio dividing the PM Adjacent Street peak-hour rate (38.99) by the AM Adjacent Street peak-hour rate (85.88) from ITE Land Use 937 (Coffee/Donut Shop with Drive-Through). This ratio was then multiplied against the AM peak-hour previously developed from local site data to develop the PM peak-hour. Land Use 937 (Coffee/Donut Shop with Drive-Through Window) was used to calculate the ratio as it provides rates based on the “per thousand square feet” independent variable while Land Use 938 (Coffee/Donut Shop with Drive-Through Window and No Indoor Seating) only provides “drive-through lanes” as an independent variable. The anticipated trip generation characteristics for the proposed project are depicted in **Table 1**.

**Table 1 – Proposed Project Trip Generation**

Land Use (ITE Code)	Size (KSF)	AM Peak-Hour				PM Peak-Hour					
		Total Trips	In		Out		Total Trips	In		Out	
			%	Trips	%	Trips		%	Trips	%	Trips
<b>Proposed Land Uses</b>											
<i>Lot 9/Parcel 3A</i>											
Dutch Bros Coffee <sup>1</sup>	0.95	316	50%	158	50%	158	143	50%	72	50%	71
<i>Lot 9/Parcel 3B</i>											
Medical Office Building (720)	8	25	79%	20	21%	5	29	30%	9	70%	20
<b>Subtotal (Driveway) Trips:</b>		<b>341</b>		<b>178</b>		<b>163</b>	<b>172</b>		<b>81</b>		<b>91</b>
<i>Dutch Bros Coffee Pass-by (89%)<sup>2</sup></i>		-281		-140		-141	-127		-63		-64
<b>Net New (External) Trips:</b>		<b>60</b>		<b>38</b>		<b>22</b>	<b>45</b>		<b>18</b>		<b>27</b>
<b>Original Land Uses</b>											
<i>Lot 9 Parcel 3A/Parcel 3B</i>											
Medical Office Building (720)	24	67	79%	53	21%	14	95	30%	29	70%	66
<b>Net New (External) Trips:</b>		<b>67</b>		<b>53</b>		<b>14</b>	<b>95</b>		<b>29</b>		<b>66</b>
<b>Net New Difference (Proposed - Original):</b>		<b>-7</b>		<b>-15</b>		<b>8</b>	<b>-50</b>		<b>-11</b>		<b>-39</b>

KSF = 1,000-square feet

Sources: <sup>1</sup>Trip Generation based on data collected for Douglas Boulevard Coffee Kiosk Traffic Evaluation, July 19, 2018

<sup>2</sup>Pass-by reduction is per ITE 11<sup>th</sup> Edition, Land Use 938

As shown in **Table 1**, the revised project is anticipated to generate 60 and 45 net new external trips during the AM and PM peak-hours, respectively. It is also anticipated to attract 281 and 127 Pass-by trips during the AM and PM peak-hours, respectively. Pass-by trips are trips going into the project that are already present on the roadway network adjacent to the project site and are, therefore, not included in the number of net new external trips (but are considered driveway trips). The increased number of project-related Pass-by trips also introduces a different dynamic to the Freedom Way and Pride Way roundabout, primarily by notably increasing the number of northbound left movements at the intersection. While the number of net new External trips produced by the Proposed project is less than the original land uses, the Proposed development results in a significantly higher number of driveway trips.

### *Project Trip Distribution and Assignment*

The project trips were distributed and assigned to the adjacent transportation networks based on existing traffic patterns and engineering judgement (see **Exhibit 3**).

### **Evaluation Parameters and Study Facilities**

A peak-hour intersection operations analysis (delay and queuing) was conducted for the weekday, AM and PM peak-hours for the following scenarios:

- A. Existing plus Project Conditions

The peak-hour operations analysis was completed for the following intersections:

1. Washington Boulevard @ Freedom Way (signalized)
2. Freedom Way @ Pride Way/Shared Driveway (roundabout)

Peak-hour operations analyses were determined for the signalized intersection (Intersection #1) during the weekday AM and PM peak-hours for the scenario listed above. Operations were determined using methods defined in the *Highway Capacity Manual* (using Synchro® traffic analysis software). Queuing for the unsignalized roundabout (Intersection #2) during the weekday AM and PM peak-hours was determined using Sidra® traffic analysis software. **Exhibit 4** details the study intersection’s geometry and the weekday AM and PM peak-hour volumes with the addition of the project (Existing plus Project Conditions). City ITS traffic count data sheets are provided in **Attachment A**.

### **Access Evaluation**

As previously noted, the purpose of this analysis was to evaluate the proposed project’s access points and adjacent primary intersection to quantify the amount of vehicular delay and queuing that is anticipated to result with the addition of the project.

### *Signalized Intersection Delay*

Synchro® traffic analysis software was used to quantify the vehicular delay at the signalized study intersection. **Table 2** summarizes anticipated delay with the addition of the project (Existing plus Project Conditions). All technical analysis worksheets are provided in **Attachment B**.

**Table 2 – Signalized Intersection Delay**

ID	Intersection	Control	Peak Hour	Existing plus Project
				Delay (sec)
1	Washington Blvd @ Freedom Way	Signal	AM	49.9
			PM	36.7

Notes: **Bold** represents unacceptable operations.

A closer examination of the technical analysis worksheets for the signalized intersection (provided in **Attachment B**) reveals that the eastbound right-turn experiences the highest levels of delay. The proposed project would not result in additional trips on this movement at the intersection.

### Intersection Queuing

Synchro® traffic analysis software was used to quantify queuing at the signalized study intersection (Intersection #1). Sidra® traffic analysis software was used to quantify queuing at the unsignalized roundabout (Intersection #2). **Table 3** summarizes select movements' queuing at both study intersections. All technical analysis worksheets are provided in **Attachment B**.

**Table 3 – Intersection Queuing**

Intersection / Analysis Scenario	Movement	Available Storage (ft)	95th % Queue (ft)	
			AM Peak-Hour	PM Peak-Hour
<b>#1 Washington Blvd @ Freedom Way</b>	<b>WBL</b>			
	Existing plus Project	210	125	95
	<b>WBR</b>			
	Existing plus Project	225	5	30
	<b>SBL</b>			
	Existing plus Project	235	195	175
<b>#2 Freedom Way @ Pride Way/Driveway</b>	<b>NBR</b>			
	Existing plus Project	255	35	65
	<b>NBLTR</b>			
	Existing plus Project	190	20	20
	<b>EBLT</b>			
	Existing plus Project	250	20	30
<b>EBR</b>				
	Existing plus Project	260	20	15

Notes: For approaches with dual lanes, the longest queue length is reported.

The queuing results presented in **Table 3** show that all queues at signalized Intersection #1 are projected to be contained within their provided storage pockets. **Table 3** also shows that queuing at the northbound and eastbound approaches to the roundabout at Intersection #2 remains clear of adjacent intersections and driveways.

### Internal Circulation Review

Dutch Bros drive-through queuing data collected as part of a prior effort<sup>3</sup> was used to evaluate the project's proposed drive-through capacity. This evaluation assumes that drivers will utilize both available drive-through lanes evenly under typical operations.

**Table 4** presents summary information of the drive-through queuing data and available capacity. As shown in **Table 4**, the observed maximum drive-through queue is contained within the project's proposed drive-through capacity of 23 vehicles. Should drive-through queues extend beyond the available capacity, the site configuration offers flexibility to restrict parking lot access from the proposed medical office building and provide room for an additional three queuing vehicles. Queuing vehicles for the Dutch Bros are not anticipated to extend beyond the immediate drive-through vicinity and interfere with the adjacent medical office parking or Pride Way.

**Table 4 – Maximum Observed Drive-Through Vehicle Queues**

Restaurant (Location)	Maximum Observed Vehicle Queue				Project Restaurant Drive-Through Capacity <sup>1</sup>
	7/23/2022	7/27/2022	7/30/2022	Overall Max	
Dutch Bros (715 Sunrise Avenue)	19	16	18	19	23

<sup>1</sup>Modified Preliminary Site Plan, TSD Engineering, Inc., August 21, 2023

The maximum vehicle queues observed from 2022 data for the Sunrise Avenue Dutch Bros location are consistent with historical vehicle queues in 2020 at additional local Dutch Bros locations<sup>5</sup>.

In order to ensure orderly interaction between egressing drive-through vehicles and vehicles utilizing the existing park and ride facility, it is recommended that a stop sign and appropriate pavement markings be included on the drive-through approach to the internal circulation roadway at the park and ride.

The number and mixture of parking spaces provided on the site plan for both the Dutch Bros and medical office building are consistent with the current City code requirements<sup>6</sup> for both development types.

*Minimum Required Throat Depth (MRTD)*

The MRTD was calculated for the primary unsignalized site access driveway location along south Pride Way (see **Exhibit 1**). **Table 5** summarizes the findings of the MRTD evaluation based on the City’s guidelines<sup>4</sup>.

**Table 5 – MRTD for Site Access Driveway**

ID	Driveway	Peak Hour	Approach Volume	ConflVol (Left)	ConflVol (Right)	LT Out	Minimum Required Throat Depth (MRTD)	Available Storage
3	Parcel 3A/3B Driveway @ Pride Way	AM	177	39	23	177	100	90
		PM	99	199	120	99	75	

The proposed available throat depth for the driveway (Intersection #3) is observed to be approximately 90-feet, as measured from back of walk to nearest parking stall along the southern edge of curb. As shown in **Table 5**, the MRTD during the AM and PM peak-hours for the driveway is calculated to be 100-feet. As the calculated MRTD does not exceed the available storage by more than one vehicle length (20-feet), the throat depth provided is deemed sufficient to accommodate the anticipated site operations.

*Emergency Vehicle and Refuse Service Access*

The site plan (**Exhibit 2**) was qualitatively reviewed for emergency vehicle and refuse service access. The project site appears to include adequate access to buildings to accommodate emergency vehicles. Adequate access and circulation are provided for refuse services to access the onsite refuse locations depicted in **Exhibit 2**.

<sup>5</sup> Fairway Drive Coffee Kiosk Traffic Evaluation, Kimley-Horn, January 20, 2021.

<sup>6</sup> [Chapter 19.26 Off-Street Parking and Loading](#), Municipal Code, City of Roseville, August 2023.

## Conclusions

The following are the primary conclusions based on the analyses discussed herein:

- *The addition of project trips using the Washington Boulevard intersection with Freedom Way (Intersection #1) will not adversely affect the delay or queueing* – the reported delay and queueing at Intersection #1 with the addition of the project is not expected to result in discernable deteriorations in operations. All queueing on project-related movements is contained within the existing storage provided at the intersection.
- *The addition of project trips using the Freedom Way intersection with Pride Way (Intersection #2) will not adversely affect the queueing* – the addition of project trips to the eastbound and northbound legs of Intersection #2 does not result in extended queueing conditions which would obstruct adjacent intersections and driveways.
- *The maximum observed local Dutch Bros vehicle queue is contained within the provided project drive-through lane* – as sufficient capacity is being provided to contain the maximum reported queue from local Dutch Bros data, any occurrence of a drive-through queue extending beyond the provided drive-through capacity is expected to be an infrequent occurrence and of short duration. Queueing vehicles exceeding the provided drive-through capacity will be contained within the project site and are not anticipated to interfere with operations of the proximate medical office parking lot.
- *The site plan provides adequate MRTD for egressing vehicles* – the current site plan provides adequate throat depth to accommodate the MRTD for the combination of on-site egressing traffic and background volumes along Pride Way.

## Attachments

**Exhibit 1** – Project Vicinity Map

**Exhibit 2** – Proposed Site Plan

**Exhibit 3** – Project Trip Distribution and Assignment

**Exhibit 4** – Existing plus Project Peak-Hour Volumes, Traffic Control, and Lane Geometry

**Attachment A** – Traffic Count Data Sheets

**Attachment B** – Analysis Worksheets

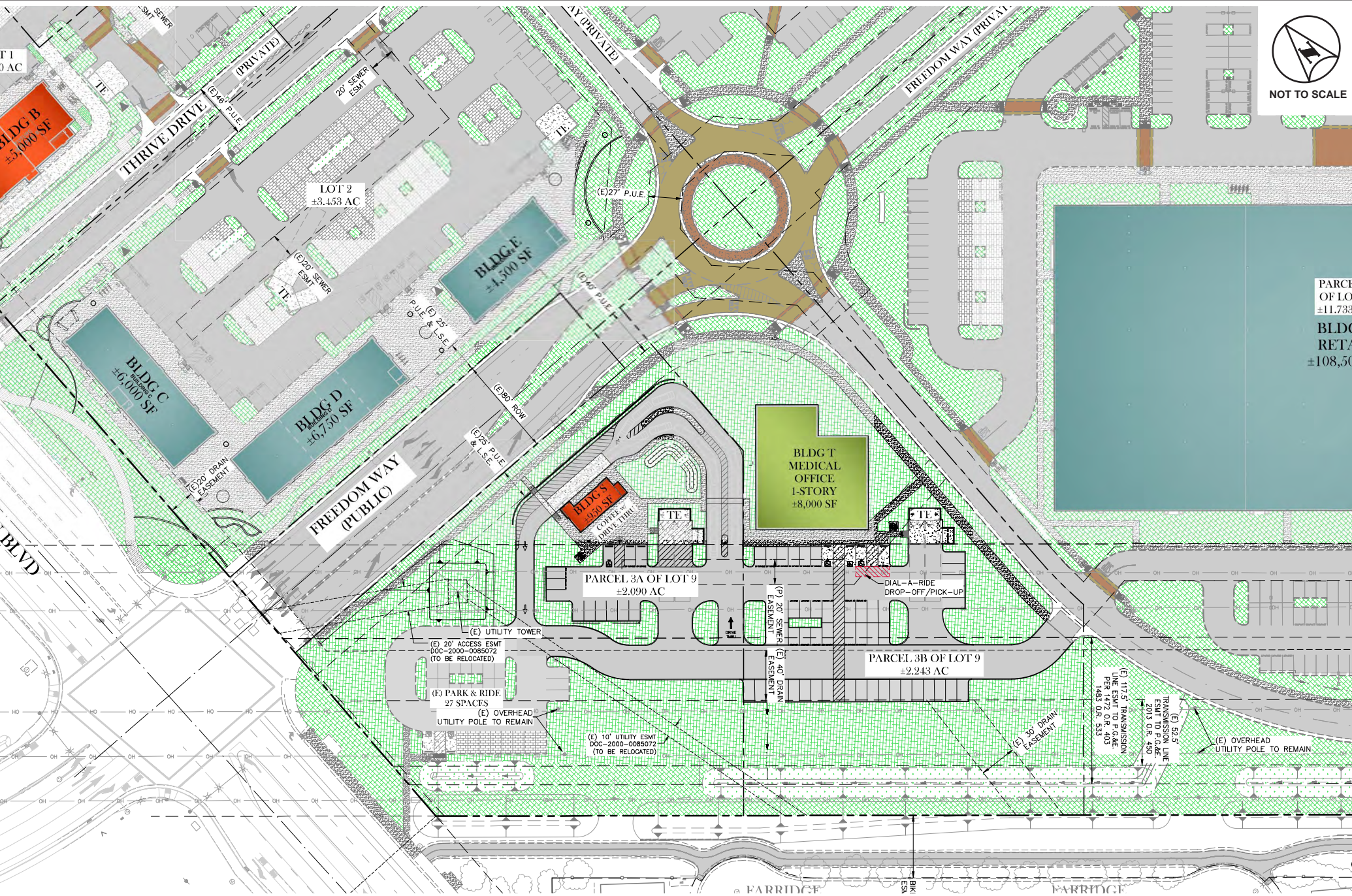


NOT TO SCALE



LEGEND	
	Project Location
	Study Intersection
	Proposed Project Driveways

Freedom Point Dutch Bros

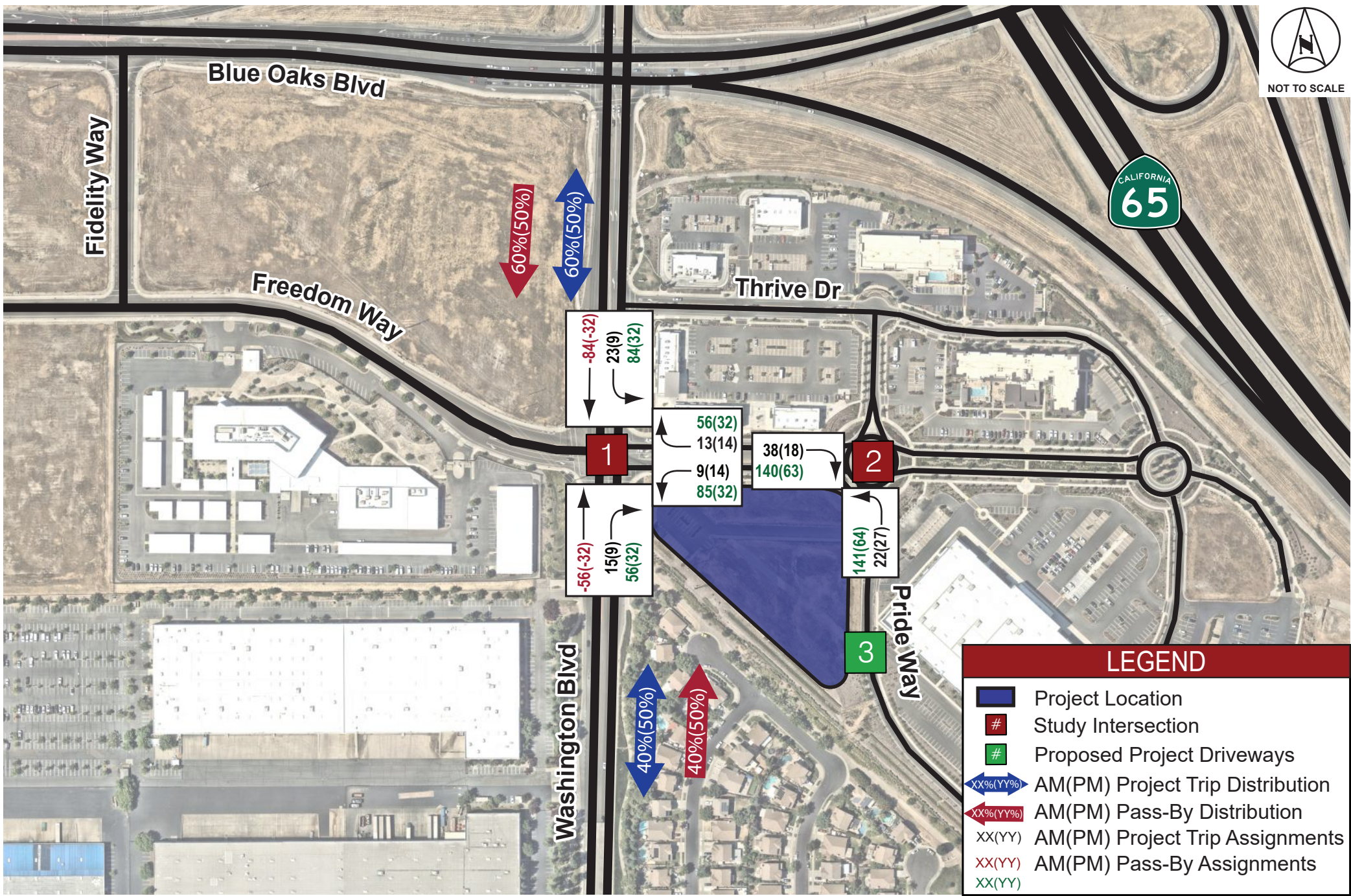


PARCEL OF LOT 9 ±11.733  
 BLDG RETAIL ±108,500

Site Plan Date: 08/21/2023

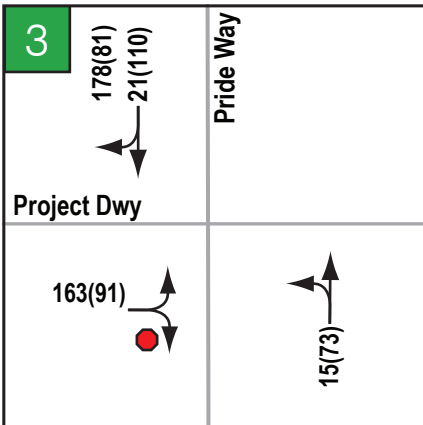
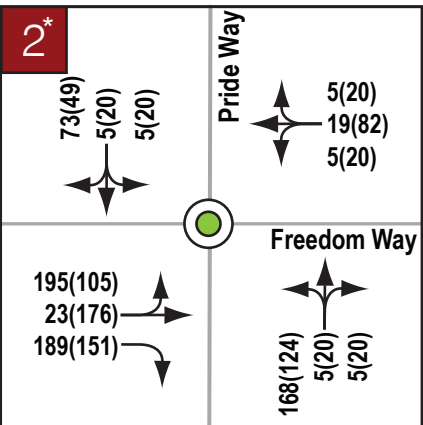
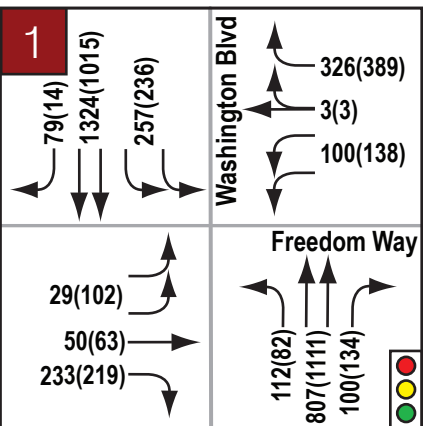


NOT TO SCALE









### LEGEND

- Project Location
- # Study Intersection
- # Proposed Project Driveways
- XX%(YY%) AM(PM) Project Trip Distribution
- XX%(YY%) AM(PM) Pass-By Distribution
- XX(YY) AM(PM) Project Trip Assignments
- XX(YY) AM(PM) Pass-By Assignments



LEGEND

-  Project Location
-  Study Intersection
-  Proposed Project Driveways
- xx(xx) AM(PM) Peak-Hour Traffic Volumes
-  Signalized Control
-  Stop Control
-  Roundabout Control

\*Intersection #2 volumes developed using relevant Intersection #1 TMC, project trip assignment, and engineering judgment.

**Attachment A**

Traffic Count Data Sheets

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
16/05/23 00:00-00:15	1	18	0	19	1	9	1	11	1	0	2	3	6	0	8	14	47
16/05/23 00:15-00:30	1	5	0	6	0	4	0	4	0	0	1	1	0	0	0	0	11
16/05/23 00:30-00:45	0	5	1	6	1	7	0	8	0	0	1	1	0	0	0	0	15
16/05/23 00:45-01:00	2	22	2	26	4	14	0	18	2	0	2	4	0	0	0	0	48
16/05/23 01:00-01:15	0	8	1	9	3	7	0	10	0	1	1	2	1	0	2	3	24
16/05/23 01:15-01:30	0	5	0	5	2	1	0	3	1	0	0	1	1	0	2	3	12
16/05/23 01:30-01:45	3	18	0	21	0	15	0	15	0	3	3	6	0	0	0	0	42
16/05/23 01:45-02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16/05/23 02:00-02:15	0	5	0	5	0	3	0	3	0	0	1	1	0	0	0	0	9
16/05/23 02:15-02:30	0	5	0	5	0	2	0	2	0	0	0	0	0	0	0	0	7
16/05/23 02:30-02:45	0	8	0	8	2	2	0	4	0	0	0	0	0	0	0	0	12
16/05/23 02:45-03:00	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0	10
16/05/23 03:00-03:15	0	6	0	6	2	2	0	4	0	0	0	0	0	0	0	0	10
16/05/23 03:15-03:30	0	4	0	4	1	2	0	3	2	0	1	3	0	0	0	0	10
16/05/23 03:30-03:45	0	2	0	2	0	5	2	7	0	1	3	4	0	0	0	0	13
16/05/23 03:45-04:00	1	6	0	7	0	3	5	8	1	0	0	1	0	0	0	0	16
16/05/23 04:00-	0	9	0	9	0	13	6	19	1	0	1	2	0	0	1	1	31

# Turning Movement Volume Report

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From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
04:15																	
16/05/23 04:15-04:30	2	6	0	8	1	9	3	13	1	0	0	1	0	0	0	0	22
16/05/23 04:30-04:45	0	14	0	14	6	26	2	34	0	2	4	6	0	0	4	4	58
16/05/23 04:45-05:00	2	12	0	14	0	18	0	18	0	0	0	0	0	0	0	0	32
16/05/23 05:00-05:15	2	10	0	12	2	42	2	46	0	0	0	0	0	0	0	0	58
16/05/23 05:15-05:30	1	13	1	15	4	25	1	30	2	2	2	6	0	0	1	1	52
16/05/23 05:30-05:45	2	23	2	27	4	45	0	49	1	0	0	1	2	0	0	2	79
16/05/23 05:45-06:00	10	44	4	58	10	134	8	152	4	4	4	12	4	0	0	4	226
16/05/23 06:00-06:15	4	68	0	72	14	164	6	184	0	2	6	8	4	0	0	4	268
16/05/23 06:15-06:30	5	36	2	43	17	70	4	91	1	3	1	5	5	0	1	6	145
16/05/23 06:30-06:45	24	94	4	122	26	144	10	180	2	2	4	8	6	0	2	8	318
16/05/23 06:45-07:00	5	45	2	52	19	103	6	128	1	1	3	5	5	0	2	7	192
16/05/23 07:00-07:15	10	90	6	106	18	145	8	171	4	4	7	15	5	0	0	5	297
16/05/23 07:15-07:30	11	85	4	100	13	134	10	157	3	4	8	15	4	0	10	14	286
16/05/23 07:30-07:45	19	98	2	119	18	204	9	231	3	5	16	24	3	0	2	5	379
16/05/23 07:45-08:00	12	134	6	152	17	208	12	237	2	9	33	44	8	0	9	17	450
16/05/23 08:00-08:15	50	376	10	436	36	492	28	556	6	14	96	116	18	1	3	22	1130

# Turning Movement Volume Report

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Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
16/05/23 08:15-08:30	46	244	6	296	62	430	26	518	14	28	120	162	14	2	8	24	1000
16/05/23 08:30-08:45	36	218	6	260	64	470	34	568	4	12	70	86	16	1	11	28	942
16/05/23 08:45-09:00	17	106	4	127	26	188	8	222	7	17	26	50	8	0	6	14	413
16/05/23 09:00-09:15	14	102	7	123	27	193	13	233	3	6	16	25	10	1	7	18	399
16/05/23 09:15-09:30	9	80	8	97	30	132	10	172	8	2	20	30	2	0	6	8	307
16/05/23 09:30-09:45	33	306	33	372	60	417	21	498	24	15	51	90	18	2	28	48	1008
16/05/23 09:45-10:00	16	192	20	228	50	224	16	290	34	16	48	98	4	0	4	8	624
16/05/23 10:00-10:15	11	106	8	125	37	122	9	168	5	5	24	34	10	1	8	19	346
16/05/23 10:15-10:30	10	92	8	110	34	109	4	147	9	8	18	35	7	0	4	11	303
16/05/23 10:30-10:45	5	108	8	121	27	118	6	151	11	7	20	38	11	1	6	18	328
16/05/23 10:45-11:00	3	109	10	122	32	131	1	164	13	7	23	43	12	0	4	16	345
16/05/23 11:00-11:15	12	113	14	139	34	121	4	159	13	10	10	33	6	0	9	15	346
16/05/23 11:15-11:30	36	345	9	390	108	396	3	507	51	39	72	162	27	1	47	75	1134
16/05/23 11:30-11:45	9	126	15	150	42	129	2	173	21	13	22	56	10	1	18	29	408
16/05/23 11:45-12:00	10	102	9	121	63	116	5	184	18	14	29	61	13	1	10	24	390
16/05/23 12:00-12:15	10	136	8	154	42	118	4	164	19	13	30	62	6	2	17	25	405
16/05/23 12:15-	12	138	15	165	53	119	4	176	24	10	28	62	7	1	16	24	427

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Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
12:30																	
16/05/23 12:30-12:45	8	129	11	148	32	149	1	182	23	14	33	70	17	2	15	34	434
16/05/23 12:45-13:00	19	122	11	152	40	123	7	170	19	9	26	54	13	2	10	25	401
16/05/23 13:00-13:15	19	134	9	162	34	148	8	190	15	10	19	44	12	2	21	35	431
16/05/23 13:15-13:30	14	117	13	144	36	156	6	198	26	14	16	56	11	1	24	36	434
16/05/23 13:30-13:45	10	112	10	132	27	114	4	145	13	7	18	38	15	1	25	41	356
16/05/23 13:45-14:00	13	165	10	188	39	125	11	175	13	4	26	43	10	1	19	30	436
16/05/23 14:00-14:15	11	123	5	139	38	147	6	191	10	9	29	48	9	1	18	28	406
16/05/23 14:15-14:30	13	152	14	179	24	137	4	165	12	11	28	51	11	1	17	29	424
16/05/23 14:30-14:45	19	175	13	207	25	134	5	164	12	9	31	52	5	0	12	17	440
16/05/23 14:45-15:00	15	570	21	606	69	408	6	483	36	18	114	168	27	2	64	93	1350
16/05/23 15:00-15:15	7	155	19	181	41	195	2	238	10	11	19	40	7	1	14	22	481
16/05/23 15:15-15:30	14	204	6	224	20	198	1	219	14	5	33	52	13	0	15	28	523
16/05/23 15:30-15:45	17	195	6	218	24	175	5	204	10	4	16	30	5	1	19	25	477
16/05/23 15:45-16:00	9	213	7	229	34	196	6	236	19	6	34	59	9	0	22	31	555
16/05/23 16:00-16:15	15	185	17	217	33	224	1	258	18	8	35	61	18	0	6	24	560
16/05/23 16:15-16:30	11	203	16	230	30	221	2	253	18	9	48	75	12	0	20	32	590

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From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
16/05/23 16:30-16:45	14	224	17	255	37	213	1	251	10	11	44	65	3	0	13	16	587
16/05/23 16:45-17:00	18	193	32	243	37	173	2	212	22	16	52	90	18	1	18	37	582
16/05/23 17:00-17:15	11	187	14	212	44	209	1	254	20	12	44	76	12	0	15	27	569
16/05/23 17:15-17:30	8	247	17	272	34	159	0	193	29	21	45	95	14	0	21	35	595
16/05/23 17:30-17:45	9	206	23	238	40	202	4	246	20	7	31	58	10	0	18	28	570
16/05/23 17:45-18:00	11	227	31	269	41	154	4	199	18	5	36	59	10	1	19	30	557
16/05/23 18:00-18:15	21	196	25	242	58	171	2	231	10	8	17	35	15	1	26	42	550
16/05/23 18:15-18:30	9	172	30	211	47	140	2	189	15	9	19	43	12	1	18	31	474
16/05/23 18:30-18:45	4	156	12	172	35	140	1	176	7	3	11	21	14	0	23	37	406
16/05/23 18:45-19:00	6	154	25	185	45	144	2	191	9	12	14	35	13	0	14	27	438
16/05/23 19:00-19:15	9	160	15	184	40	102	1	143	6	5	3	14	9	0	19	28	369
16/05/23 19:15-19:30	9	414	66	489	153	261	6	420	36	18	24	78	36	2	82	120	1107
16/05/23 19:30-19:45	7	101	13	121	32	91	0	123	8	2	7	17	13	0	33	46	307
16/05/23 19:45-20:00	8	115	10	133	33	81	0	114	4	5	7	16	13	0	48	61	324
16/05/23 20:00-20:15	6	224	28	258	102	122	2	226	6	12	18	36	8	1	45	54	574
16/05/23 20:15-20:30	6	214	30	250	68	124	4	196	14	12	16	42	24	1	79	104	592
16/05/23 20:30-	5	114	8	127	30	68	1	99	4	3	3	10	11	0	23	34	270

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Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
20:45																	
16/05/23 20:45-21:00	5	100	8	113	20	63	0	83	2	2	8	12	7	0	29	36	244
16/05/23 21:00-21:15	4	80	9	93	29	66	1	96	1	1	2	4	8	0	21	29	222
16/05/23 21:15-21:30	10	158	16	184	46	86	2	134	10	14	14	38	20	1	77	98	454
16/05/23 21:30-21:45	0	65	6	71	17	37	0	54	3	2	3	8	10	0	25	35	168
16/05/23 21:45-22:00	1	52	6	59	15	34	1	50	3	3	0	6	7	0	24	31	146
16/05/23 22:00-22:15	0	49	1	50	10	41	0	51	1	0	0	1	12	0	25	37	139
16/05/23 22:15-22:30	4	88	2	94	6	68	0	74	2	2	10	14	8	1	43	52	234
16/05/23 22:30-22:45	4	76	8	88	2	54	0	56	0	0	2	2	8	1	47	56	202
16/05/23 22:45-23:00	2	44	0	46	20	40	0	60	2	4	8	14	14	0	42	56	176
16/05/23 23:00-23:15	2	21	3	26	4	19	0	23	0	0	0	0	4	0	22	26	75
16/05/23 23:15-23:30	0	15	2	17	1	12	0	13	1	0	2	3	11	0	31	42	75
16/05/23 23:30-23:45	2	23	1	26	0	14	0	14	0	0	4	4	4	0	16	20	64
16/05/23 23:45-00:00	1	21	1	23	4	8	0	12	0	0	0	0	10	0	9	19	54
17/05/23 00:00-00:15	1	20	0	21	2	9	1	12	1	0	0	1	7	0	6	13	47
17/05/23 00:15-00:30	0	13	0	13	0	12	0	12	1	0	2	3	5	0	4	9	37
17/05/23 00:30-00:45	0	42	3	45	3	39	0	42	0	0	0	0	3	1	11	15	102

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Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
17/05/23 00:45-01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/05/23 01:00-01:15	0	12	0	12	2	10	0	12	1	0	0	1	2	0	3	5	30
17/05/23 01:15-01:30	0	4	0	4	2	4	0	6	0	0	1	1	0	0	1	1	12
17/05/23 01:30-01:45	0	5	0	5	1	2	0	3	1	0	0	1	0	0	2	2	11
17/05/23 01:45-02:00	2	1	0	3	0	3	0	3	1	0	0	1	0	0	0	0	7
17/05/23 02:00-02:15	0	3	0	3	1	2	0	3	0	0	1	1	0	0	0	0	7
17/05/23 02:15-02:30	0	4	0	4	0	4	0	4	1	2	0	3	0	0	0	0	11
17/05/23 02:30-02:45	0	3	0	3	2	4	0	6	0	0	0	0	1	0	0	1	10
17/05/23 02:45-03:00	0	6	0	6	2	4	0	6	0	2	2	4	0	0	0	0	16
17/05/23 03:00-03:15	0	3	0	3	0	3	0	3	0	1	1	2	0	0	0	0	8
17/05/23 03:15-03:30	0	0	1	1	1	2	0	3	0	0	0	0	0	0	0	0	4
17/05/23 03:30-03:45	0	3	0	3	0	3	1	4	0	0	1	1	0	0	0	0	8
17/05/23 03:45-04:00	1	6	0	7	0	4	7	11	0	0	0	0	0	0	0	0	18
17/05/23 04:00-04:15	0	6	0	6	2	14	12	28	0	0	0	0	0	0	0	0	34
17/05/23 04:15-04:30	4	12	2	18	2	22	4	28	0	2	2	4	0	0	0	0	50
17/05/23 04:30-04:45	0	22	0	22	8	22	0	30	0	0	2	2	4	0	4	8	62
17/05/23 04:45-	2	10	1	13	0	22	0	22	0	0	1	1	1	0	2	3	39

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Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
05:00																	
17/05/23 05:00-05:15	1	15	1	17	1	35	1	37	0	2	2	4	0	0	0	0	58
17/05/23 05:15-05:30	2	15	1	18	6	28	1	35	1	0	1	2	2	0	0	2	57
17/05/23 05:30-05:45	2	60	0	62	4	88	0	92	0	0	2	2	0	0	0	0	156
17/05/23 05:45-06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/05/23 06:00-06:15	4	33	0	37	7	92	2	101	1	4	5	10	0	0	1	1	149
17/05/23 06:15-06:30	3	32	1	36	20	59	5	84	2	2	3	7	1	0	2	3	130
17/05/23 06:30-06:45	16	86	2	104	34	142	6	182	10	8	10	28	6	0	0	6	320
17/05/23 06:45-07:00	6	69	5	80	15	85	6	106	6	4	1	11	4	0	2	6	203
17/05/23 07:00-07:15	8	78	3	89	23	134	7	164	1	2	6	9	4	0	5	9	271
17/05/23 07:15-07:30	8	81	4	93	20	128	11	159	8	6	9	23	6	0	6	12	287
17/05/23 07:30-07:45	15	115	4	134	23	219	6	248	2	3	19	24	10	0	7	17	423
17/05/23 07:45-08:00	12	158	7	177	16	215	12	243	2	4	23	29	9	1	8	18	467
17/05/23 08:00-08:15	62	396	14	472	60	490	28	578	8	10	84	102	38	1	11	50	1202
17/05/23 08:15-08:30	16	110	4	130	29	209	6	244	7	7	42	56	10	0	5	15	445
17/05/23 08:30-08:45	15	114	6	135	30	236	15	281	10	11	28	49	11	1	6	18	483
17/05/23 08:45-09:00	16	87	4	107	30	216	11	257	6	9	30	45	12	1	9	22	431

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Washington & Freedom  
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Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
17/05/23 09:00-09:15	30	309	18	357	87	744	15	846	18	15	111	144	36	2	22	60	1407
17/05/23 09:15-09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/05/23 09:30-09:45	11	89	6	106	31	140	9	180	12	12	20	44	4	0	2	6	336
17/05/23 09:45-10:00	14	176	12	202	64	314	14	392	24	10	44	78	8	1	9	18	690
17/05/23 10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/05/23 10:15-10:30	2	103	5	110	25	113	2	140	12	12	16	40	7	0	3	10	300
17/05/23 10:30-10:45	26	194	12	232	50	240	4	294	24	24	36	84	12	0	12	24	634
17/05/23 10:45-11:00	20	202	12	234	48	250	8	306	22	16	26	64	12	0	8	20	624
17/05/23 11:00-11:15	10	234	32	276	58	288	10	356	24	22	42	88	14	0	8	22	742
17/05/23 11:15-11:30	7	135	13	155	40	124	1	165	21	11	22	54	6	1	14	21	395
17/05/23 11:30-11:45	22	242	12	276	64	238	8	310	16	8	30	54	26	3	25	54	694
17/05/23 11:45-12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17/05/23 12:00-12:15	11	129	7	147	51	140	4	195	16	14	21	51	7	1	19	27	420
17/05/23 12:15-12:30	8	141	18	167	46	99	5	150	19	11	30	60	13	0	17	30	407
17/05/23 12:30-12:45	24	260	26	310	70	252	12	334	40	24	48	112	22	6	60	88	844
17/05/23 12:45-13:00	19	123	10	152	40	148	9	197	29	27	26	82	12	1	11	24	455
17/05/23 13:00-	16	152	14	182	36	136	6	178	15	10	12	37	28	2	19	49	446

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Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
13:15																	
17/05/23 13:15-13:30	16	169	16	201	37	124	8	169	12	4	26	42	13	1	10	24	436
17/05/23 13:30-13:45	17	124	6	147	40	112	9	161	17	11	29	57	5	2	16	23	388
17/05/23 13:45-14:00	9	146	5	160	34	148	7	189	9	13	20	42	10	0	12	22	413
17/05/23 14:00-14:15	15	122	10	147	30	134	5	169	12	11	19	42	10	0	13	23	381
17/05/23 14:15-14:30	7	116	7	130	20	144	2	166	11	15	20	46	11	1	14	26	368
17/05/23 14:30-14:45	16	151	9	176	23	140	4	167	8	5	31	44	14	1	13	28	415
17/05/23 14:45-15:00	16	171	12	199	25	187	6	218	9	9	35	53	9	0	19	28	498
17/05/23 15:00-15:15	52	660	48	760	108	732	16	856	72	44	84	200	44	0	36	80	1896
17/05/23 15:15-15:30	30	471	30	531	69	522	9	600	33	33	132	198	42	1	26	69	1398
17/05/23 15:30-15:45	16	372	18	406	64	426	8	498	34	12	68	114	24	2	20	46	1064
17/05/23 15:45-16:00	32	514	42	588	56	476	8	540	38	12	62	112	32	2	28	62	1302
17/05/23 16:00-16:15	20	221	25	266	27	223	2	252	11	8	31	50	10	0	8	18	586
17/05/23 16:15-16:30	15	211	15	241	41	198	3	242	20	10	62	92	11	0	10	21	596
17/05/23 16:30-16:45	36	444	26	506	84	410	8	502	24	20	88	132	26	2	28	56	1196
17/05/23 16:45-17:00	22	394	44	460	68	382	2	452	44	24	66	134	26	2	36	64	1110
17/05/23 17:00-17:15	15	214	14	243	38	196	3	237	21	12	31	64	10	0	6	16	560

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
17/05/23 17:15-17:30	17	271	17	305	40	176	3	219	34	20	54	108	14	0	17	31	663
17/05/23 17:30-17:45	14	223	15	252	39	218	3	260	14	11	35	60	14	0	14	28	600
17/05/23 17:45-18:00	6	209	19	234	34	196	0	230	13	4	31	48	14	0	6	20	532
17/05/23 18:00-18:15	13	198	25	236	39	172	1	212	16	15	26	57	19	1	21	41	546
17/05/23 18:15-18:30	9	177	23	209	47	130	0	177	14	6	28	48	13	1	24	38	472
17/05/23 18:30-18:45	28	280	52	360	90	262	2	354	8	18	24	50	40	1	67	108	872
17/05/23 18:45-19:00	18	310	30	358	76	278	4	358	32	14	30	76	10	0	56	66	858
17/05/23 19:00-19:15	8	161	26	195	38	121	4	163	7	1	6	14	14	0	17	31	403
17/05/23 19:15-19:30	11	135	14	160	24	93	0	117	9	5	11	25	7	0	27	34	336
17/05/23 19:30-19:45	5	134	11	150	21	87	1	109	6	4	9	19	7	0	31	38	316
17/05/23 19:45-20:00	5	119	13	137	37	76	1	114	4	4	5	13	10	0	22	32	296
17/05/23 20:00-20:15	10	198	16	224	52	142	0	194	4	8	14	26	20	0	44	64	508
17/05/23 20:15-20:30	4	85	5	94	25	73	0	98	6	6	6	18	11	0	22	33	243
17/05/23 20:30-20:45	5	118	10	133	31	67	1	99	5	1	1	7	15	0	26	41	280
17/05/23 20:45-21:00	6	93	9	108	26	52	2	80	4	4	9	17	18	2	38	58	263
17/05/23 21:00-21:15	3	95	13	111	29	81	3	113	4	4	4	12	13	0	17	30	266
17/05/23 21:15-	5	93	4	102	14	66	1	81	3	3	3	9	15	0	34	49	241

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
21:30																	
17/05/23 21:30-21:45	1	92	9	102	16	59	1	76	7	1	5	13	9	0	7	16	207
17/05/23 21:45-22:00	2	44	1	47	16	39	0	55	1	0	1	2	20	0	12	32	136
17/05/23 22:00-22:15	2	42	3	47	5	38	0	43	0	0	1	1	5	0	11	16	107
17/05/23 22:15-22:30	2	50	1	53	6	31	0	37	4	1	4	9	5	0	13	18	117
17/05/23 22:30-22:45	1	33	2	36	5	20	0	25	1	0	1	2	5	0	14	19	82
17/05/23 22:45-23:00	1	25	4	30	6	19	0	25	0	1	3	4	2	0	15	17	76
17/05/23 23:00-23:15	1	14	1	16	1	21	1	23	0	0	1	1	14	0	13	27	67
17/05/23 23:15-23:30	0	18	0	18	2	15	1	18	3	0	2	5	5	0	13	18	59
17/05/23 23:30-23:45	2	24	0	26	0	13	0	13	3	0	3	6	4	0	12	16	61
17/05/23 23:45-00:00	0	32	0	32	0	11	0	11	0	0	2	2	2	0	5	7	52
18/05/23 00:00-00:15	0	19	0	19	1	6	1	8	1	1	3	5	6	0	2	8	40
18/05/23 00:15-00:30	0	27	0	27	3	21	0	24	3	3	15	21	12	0	24	36	108
18/05/23 00:30-00:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/05/23 00:45-01:00	1	8	0	9	2	5	0	7	0	0	0	0	0	0	0	0	16
18/05/23 01:00-01:15	0	20	6	26	4	10	0	14	0	2	0	2	2	0	2	4	46
18/05/23 01:15-01:30	0	3	0	3	0	2	0	2	0	0	0	0	3	0	3	6	11

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
18/05/23 01:30-01:45	0	7	0	7	0	0	0	0	0	0	0	0	0	0	1	1	8
18/05/23 01:45-02:00	2	5	0	7	0	4	0	4	1	0	1	2	0	0	1	1	14
18/05/23 02:00-02:15	0	4	0	4	0	6	0	6	0	0	2	2	0	0	0	0	12
18/05/23 02:15-02:30	1	7	0	8	2	2	1	5	1	3	1	5	0	0	0	0	18
18/05/23 02:30-02:45	3	21	0	24	0	0	0	0	0	0	3	3	0	0	0	0	27
18/05/23 02:45-03:00	0	6	0	6	0	10	0	10	2	2	4	8	0	0	0	0	24
18/05/23 03:00-03:15	0	1	0	1	0	2	1	3	1	2	1	4	0	0	0	0	8
18/05/23 03:15-03:30	0	2	0	2	0	7	0	7	0	0	2	2	0	0	0	0	11
18/05/23 03:30-03:45	1	4	0	5	0	1	1	2	0	0	1	1	0	0	0	0	8
18/05/23 03:45-04:00	1	7	0	8	0	4	4	8	2	0	1	3	0	0	0	0	19
18/05/23 04:00-04:15	2	14	0	16	4	26	14	44	0	2	0	2	0	0	0	0	62
18/05/23 04:15-04:30	2	5	1	8	1	15	1	17	0	0	0	0	0	0	0	0	25
18/05/23 04:30-04:45	0	10	0	10	3	14	0	17	0	0	1	1	0	0	1	1	29
18/05/23 04:45-05:00	1	15	0	16	1	24	1	26	1	0	2	3	0	0	1	1	46
18/05/23 05:00-05:15	6	60	0	66	9	99	3	111	0	0	0	0	0	0	0	0	177
18/05/23 05:15-05:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/05/23 05:30-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
05:45																	
18/05/23 05:45-06:00	19	101	6	126	43	249	4	296	10	11	8	29	4	0	4	8	459
18/05/23 06:00-06:15	21	81	3	105	27	219	12	258	3	0	9	12	3	0	0	3	378
18/05/23 06:15-06:30	6	90	6	102	38	126	8	172	0	2	4	6	4	0	4	8	288
18/05/23 06:30-06:45	6	32	0	38	18	79	4	101	2	2	3	7	5	0	1	6	152
18/05/23 06:45-07:00	3	57	3	63	18	106	2	126	5	1	3	9	5	0	3	8	206
18/05/23 07:00-07:15	18	174	6	198	38	252	20	310	4	8	10	22	2	0	4	6	536
18/05/23 07:15-07:30	9	93	4	106	19	138	8	165	6	7	12	25	6	0	10	16	312
18/05/23 07:30-07:45	16	97	7	120	20	220	8	248	3	1	11	15	9	0	5	14	397
18/05/23 07:45-08:00	11	123	7	141	26	227	11	264	6	7	41	54	12	1	4	17	476
18/05/23 08:00-08:15	21	161	5	187	25	260	11	296	6	12	55	73	14	1	6	21	577
18/05/23 08:15-08:30	25	133	5	163	27	218	14	259	6	10	50	66	13	1	7	21	509
18/05/23 08:30-08:45	12	120	2	134	21	205	16	242	7	5	23	35	7	0	6	13	424
18/05/23 08:45-09:00	28	424	16	468	64	792	36	892	16	28	76	120	32	0	12	44	1524
18/05/23 09:00-09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/05/23 09:15-09:30	26	216	14	256	64	320	6	390	28	16	36	80	12	0	14	26	752
18/05/23 09:30-09:45	11	87	8	106	24	125	10	159	7	5	14	26	8	0	9	17	308

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
18/05/23 09:45-10:00	8	85	9	102	30	125	2	157	8	7	24	39	6	1	11	18	316
18/05/23 10:00-10:15	5	100	6	111	32	139	5	176	12	6	12	30	10	0	7	17	334
18/05/23 10:15-10:30	7	85	3	95	31	108	7	146	13	4	10	27	4	0	6	10	278
18/05/23 10:30-10:45	9	96	11	116	37	110	6	153	6	5	15	26	6	0	7	13	308
18/05/23 10:45-11:00	11	96	3	110	38	123	5	166	12	8	17	37	12	0	7	19	332
18/05/23 11:00-11:15	16	228	20	264	58	296	2	356	26	12	58	96	30	2	16	48	764
18/05/23 11:15-11:30	24	315	27	366	108	420	15	543	57	24	72	153	27	2	16	45	1107
18/05/23 11:30-11:45	21	339	24	384	120	426	12	558	57	42	81	180	21	3	36	60	1182
18/05/23 11:45-12:00	18	242	26	286	92	262	8	362	36	24	46	106	34	2	14	50	804
18/05/23 12:00-12:15	27	414	42	483	162	369	6	537	63	33	69	165	18	5	55	78	1263
18/05/23 12:15-12:30	18	226	20	264	102	250	0	352	38	30	68	136	26	1	37	64	816
18/05/23 12:30-12:45	34	288	16	338	116	234	6	356	46	16	38	100	24	3	33	60	854
18/05/23 12:45-13:00	15	138	11	164	44	152	4	200	25	18	24	67	11	2	11	24	455
18/05/23 13:00-13:15	15	130	11	156	51	149	6	206	14	7	13	34	12	1	13	26	422
18/05/23 13:15-13:30	9	134	17	160	35	124	10	169	13	5	17	35	15	2	20	37	401
18/05/23 13:30-13:45	16	119	6	141	26	116	3	145	8	3	18	29	15	0	13	28	343
18/05/23 13:45-	11	146	7	164	22	158	5	185	10	4	13	27	5	0	13	18	394

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
14:00																	
18/05/23 14:00-14:15	13	132	8	153	43	155	0	198	14	5	23	42	10	0	15	25	418
18/05/23 14:15-14:30	14	284	14	312	68	348	12	428	20	14	40	74	30	1	55	86	900
18/05/23 14:30-14:45	30	380	20	430	34	288	18	340	26	16	60	102	10	0	44	54	926
18/05/23 14:45-15:00	7	181	13	201	21	154	4	179	14	11	47	72	9	0	12	21	473
18/05/23 15:00-15:15	13	167	26	206	24	187	9	220	13	6	34	53	16	1	19	36	515
18/05/23 15:15-15:30	22	374	96	492	86	366	6	458	32	14	50	96	36	2	64	102	1148
18/05/23 15:30-15:45	13	167	26	206	34	221	1	256	13	8	20	41	13	0	15	28	531
18/05/23 15:45-16:00	12	250	20	282	43	245	4	292	15	5	31	51	13	0	15	28	653
18/05/23 16:00-16:15	42	440	26	508	66	406	10	482	24	22	60	106	32	1	35	68	1164
18/05/23 16:15-16:30	18	214	13	245	30	181	2	213	24	12	49	85	11	1	27	39	582
18/05/23 16:30-16:45	16	208	11	235	27	217	1	245	20	7	41	68	10	0	10	20	568
18/05/23 16:45-17:00	28	394	48	470	80	420	8	508	34	12	82	128	32	1	49	82	1188
18/05/23 17:00-17:15	15	172	21	208	35	203	2	240	21	9	31	61	21	1	23	45	554
18/05/23 17:15-17:30	11	218	15	244	34	183	1	218	27	19	62	108	20	0	42	62	632
18/05/23 17:30-17:45	13	250	15	278	36	243	2	281	20	12	44	76	20	1	27	48	683
18/05/23 17:45-18:00	13	191	14	218	38	178	2	218	13	7	18	38	20	0	14	34	508

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
18/05/23 18:00-18:15	15	185	22	222	45	156	2	203	14	8	22	44	15	0	10	25	494
18/05/23 18:15-18:30	12	170	15	197	31	116	0	147	14	6	13	33	15	0	23	38	415
18/05/23 18:30-18:45	13	131	12	156	29	119	1	149	8	2	13	23	7	0	9	16	344
18/05/23 18:45-19:00	3	157	5	165	32	126	0	158	13	5	9	27	12	1	37	50	400
18/05/23 19:00-19:15	9	125	7	141	29	119	2	150	11	6	13	30	8	0	23	31	352
18/05/23 19:15-19:30	9	127	10	146	36	83	1	120	12	6	12	30	6	0	15	21	317
18/05/23 19:30-19:45	3	102	9	114	37	77	0	114	5	2	3	10	15	1	16	32	270
18/05/23 19:45-20:00	6	131	12	149	31	85	0	116	2	5	5	12	9	0	20	29	306
18/05/23 20:00-20:15	24	460	24	508	116	268	4	388	4	8	28	40	44	1	103	148	1084
18/05/23 20:15-20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/05/23 20:30-20:45	12	315	21	348	45	201	3	249	12	6	9	27	36	4	56	96	720
18/05/23 20:45-21:00	18	324	18	360	69	207	3	279	12	0	15	27	36	2	55	93	759
18/05/23 21:00-21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18/05/23 21:15-21:30	5	96	3	104	21	50	1	72	1	3	4	8	8	0	13	21	205
18/05/23 21:30-21:45	2	164	4	170	44	84	0	128	4	2	16	22	6	0	30	36	356
18/05/23 21:45-22:00	1	69	1	71	11	33	0	44	5	1	4	10	6	0	20	26	151
18/05/23 22:00-	2	46	2	50	7	42	0	49	2	2	2	6	5	0	14	19	124

# Turning Movement Volume Report

Report Date: 6/22/2023 3:45:59 PM

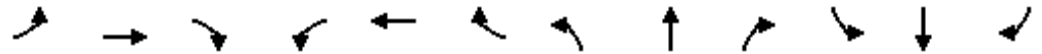
From 5/16/2023 to 5/18/2023

Washington & Freedom  
Way

Intersection: 180

Time	N				S				E				W				Int Total
	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	Left	Thru	Right	Total	
22:15																	
18/05/23 22:15-22:30	1	46	1	48	1	33	0	34	1	2	9	12	5	0	8	13	107
18/05/23 22:30-22:45	0	44	0	44	5	30	0	35	1	1	4	6	4	1	16	21	106
18/05/23 22:45-23:00	3	33	3	39	3	24	0	27	0	1	2	3	7	0	10	17	86
18/05/23 23:00-23:15	2	22	1	25	4	28	0	32	1	0	3	4	4	0	10	14	75
18/05/23 23:15-23:30	0	25	3	28	3	18	0	21	1	1	3	5	4	0	16	20	74
18/05/23 23:30-23:45	6	46	0	52	0	44	0	44	0	2	6	8	12	0	32	44	148
18/05/23 23:45-00:00	3	22	0	25	2	21	0	23	0	1	3	4	2	0	10	12	64
Summary	2740	35115	2709	40564	8053	37747	1181	46981	2804	1912	5558	10274	2774	128	4170	7072	104891

**Attachment B**  
Analysis Worksheets
































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	41	71	333	212	70	69	160	1153	143	317	1635	98
v/c Ratio	0.09	0.29	0.77	0.62	0.33	0.29	0.76	0.67	0.17	0.75	0.95	0.12
Control Delay	46.7	50.8	25.4	63.7	19.4	7.4	77.8	30.0	7.1	66.0	44.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	50.8	25.4	63.7	19.4	7.4	77.8	30.0	7.1	66.0	44.2	8.0
Queue Length 50th (ft)	14	51	56	80	3	0	118	330	9	120	583	6
Queue Length 95th (ft)	25	78	62	123	34	2	184	468	31	195	#1034	42
Internal Link Dist (ft)		518			327			521			364	
Turn Bay Length (ft)	210		200	210		225	235		255	235		255
Base Capacity (vph)	659	357	510	568	306	329	292	1729	834	568	1727	813
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.20	0.65	0.37	0.23	0.21	0.55	0.67	0.17	0.56	0.95	0.12

**Intersection Summary**

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Freedom Pt Dutch Bros  
 HCM 6th Signalized Intersection Summary

Existing plus Project  
 Timing Plan: AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 		 	 	
Traffic Volume (veh/h)	29	50	233	157	3	100	112	807	100	257	1324	79
Future Volume (veh/h)	29	50	233	157	3	100	112	807	100	257	1324	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	71	333	212	0	138	160	1153	143	317	1635	98
Peak Hour Factor	0.70	0.70	0.70	0.74	0.74	0.74	0.70	0.70	0.70	0.81	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	577	312	264	283	0	252	188	1717	766	379	1732	773
Arrive On Green	0.17	0.17	0.17	0.08	0.00	0.08	0.11	0.48	0.48	0.11	0.49	0.49
Sat Flow, veh/h	3456	1870	1585	3563	0	3170	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	41	71	333	212	0	138	160	1153	143	317	1635	98
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	0	1585	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.2	3.9	20.0	7.0	0.0	5.0	10.6	29.8	6.1	10.8	52.4	4.0
Cycle Q Clear(g_c), s	1.2	3.9	20.0	7.0	0.0	5.0	10.6	29.8	6.1	10.8	52.4	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	577	312	264	283	0	252	188	1717	766	379	1732	773
V/C Ratio(X)	0.07	0.23	1.26	0.75	0.00	0.55	0.85	0.67	0.19	0.84	0.94	0.13
Avail Cap(c_a), veh/h	577	312	264	594	0	529	297	1717	766	577	1749	780
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.1	43.2	49.9	54.0	0.0	53.1	52.7	23.7	17.6	52.3	29.2	16.8
Incr Delay (d2), s/veh	0.1	0.4	143.5	1.5	0.0	0.7	7.5	1.1	0.2	4.0	11.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.8	18.3	3.1	0.0	2.0	5.0	11.9	2.2	4.8	23.1	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.2	43.6	193.5	55.5	0.0	53.8	60.2	24.8	17.8	56.3	40.2	16.9
LnGrp LOS	D	D	F	E	A	D	E	C	B	E	D	B
Approach Vol, veh/h		445			350			1456			2050	
Approach Delay, s/veh		155.6			54.8			28.0			41.6	
Approach LOS		F			D			C			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.1	63.9		25.3	16.6	64.4		13.5				
Change Period (Y+Rc), s	4.0	6.0		5.3	4.0	6.0		4.0				
Max Green Setting (Gmax), s	20.0	47.0		20.0	20.0	59.0		20.0				
Max Q Clear Time (g_c+I1), s	12.8	31.8		22.0	12.6	54.4		9.0				
Green Ext Time (p_c), s	0.4	9.0		0.0	0.1	4.1		0.5				

Intersection Summary

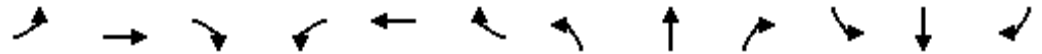
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

Freedom Pt Dutch Bros  
Queues

Existing plus Project  
Timing Plan: PM Peak Hour
































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	126	78	270	158	97	96	104	1406	170	306	1318	18
v/c Ratio	0.28	0.32	0.61	0.48	0.42	0.41	0.54	0.86	0.21	0.69	0.77	0.02
Control Delay	44.9	47.6	11.3	56.1	18.5	16.8	61.9	35.1	8.9	57.2	29.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.9	47.6	11.3	56.1	18.5	16.8	61.9	35.1	8.9	57.2	29.7	0.1
Queue Length 50th (ft)	39	47	0	50	2	0	64	401	18	96	336	0
Queue Length 95th (ft)	70	95	42	94	34	29	142	#716	65	173	613	0
Internal Link Dist (ft)		518			327			521			364	
Turn Bay Length (ft)	210		200	210		225	235		255	235		255
Base Capacity (vph)	740	401	553	646	360	362	333	1966	931	646	1966	915
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.19	0.49	0.24	0.27	0.27	0.31	0.72	0.18	0.47	0.67	0.02

Intersection Summary

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Freedom Pt Dutch Bros  
 HCM 6th Signalized Intersection Summary

Existing plus Project  
 Timing Plan: PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 		 	 	
Traffic Volume (veh/h)	102	63	219	115	3	138	82	1111	134	236	1015	14
Future Volume (veh/h)	102	63	219	115	3	138	82	1111	134	236	1015	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	126	78	270	158	0	192	104	1406	170	306	1318	18
Peak Hour Factor	0.81	0.81	0.81	0.73	0.73	0.73	0.79	0.79	0.79	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	646	350	296	304	0	271	145	1547	690	377	1646	734
Arrive On Green	0.19	0.19	0.19	0.09	0.00	0.09	0.08	0.44	0.44	0.11	0.46	0.46
Sat Flow, veh/h	3456	1870	1585	3563	0	3170	1781	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	126	78	270	158	0	192	104	1406	170	306	1318	18
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1781	0	1585	1781	1777	1585	1728	1777	1585
Q Serve(g_s), s	3.2	3.7	17.6	4.5	0.0	6.2	6.0	38.9	7.1	9.1	33.3	0.6
Cycle Q Clear(g_c), s	3.2	3.7	17.6	4.5	0.0	6.2	6.0	38.9	7.1	9.1	33.3	0.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	646	350	296	304	0	271	145	1547	690	377	1646	734
V/C Ratio(X)	0.20	0.22	0.91	0.52	0.00	0.71	0.72	0.91	0.25	0.81	0.80	0.02
Avail Cap(c_a), veh/h	656	355	301	676	0	602	338	1586	707	656	1990	888
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	36.3	42.0	46.1	0.0	46.9	47.2	27.8	18.8	45.9	24.1	15.4
Incr Delay (d2), s/veh	0.2	0.3	30.1	0.5	0.0	1.3	2.5	8.1	0.3	1.6	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	1.7	9.1	2.0	0.0	2.4	2.7	16.8	2.5	3.9	13.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	36.7	72.0	46.6	0.0	48.2	49.7	35.9	19.1	47.5	26.4	15.4
LnGrp LOS	D	D	E	D	A	D	D	D	B	D	C	B
Approach Vol, veh/h		474			350			1680			1642	
Approach Delay, s/veh		56.7			47.5			35.1			30.2	
Approach LOS		E			D			D			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.5	51.9		25.0	12.6	54.8		13.0				
Change Period (Y+Rc), s	4.0	6.0		5.3	4.0	6.0		4.0				
Max Green Setting (Gmax), s	20.0	47.0		20.0	20.0	59.0		20.0				
Max Q Clear Time (g_c+I1), s	11.1	40.9		19.6	8.0	35.3		8.2				
Green Ext Time (p_c), s	0.4	4.9		0.1	0.1	13.0		0.6				

Intersection Summary

HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

# LANE SUMMARY

 Site: 2 [INT\_2\_PP\_AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site  
 Site Category: (None)  
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue		Lane Config	Lane Length ft	Cap. Adj.	Prob. Block. %
	[ Total veh/h ]	HV %	[ Total veh/h ]	HV %						[ Veh ]	[ Dist ] ft				
South: NB_Pride															
Lane 1 <sup>d</sup>	193	2.0	193	2.0	1100	0.176	100	4.8	LOS A	0.7	17.2	Full	800	0.0	0.0
Approach	193	2.0	193	2.0		0.176		4.8	LOS A	0.7	17.2				
East: WB_Freedom															
Lane 1 <sup>d</sup>	32	2.0	32	2.0	926	0.034	100	4.2	LOS A	0.1	3.1	Full	50	0.0	0.0
Approach	32	2.0	32	2.0		0.034		4.2	LOS A	0.1	3.1				
North: SB_Pride															
Lane 1 <sup>d</sup>	90	2.0	90	2.0	1086	0.083	100	4.0	LOS A	0.4	9.0	Full	225	0.0	0.0
Approach	90	2.0	90	2.0		0.083		4.0	LOS A	0.4	9.0				
West: EB_Freedom															
Lane 1 <sup>d</sup>	237	2.0	237	2.0	1371	0.173	100	3.8	LOS A	0.8	20.0	Full	450	0.0	0.0
Lane 2	205	2.0	205	2.0	1340	0.153	100	3.6	LOS A	0.7	18.9	Full	450	0.0	0.0
Approach	442	2.0	442	2.0		0.173		3.7	LOS A	0.8	20.0				
All Vehicles	758	2.0	758	2.0		0.176		4.1	LOS A	0.8	20.0				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
 Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Sieglösch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

<sup>d</sup> Dominant lane on roundabout approach

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Project: Not Saved

# LANE SUMMARY

Site: 2 [INT\_2\_PP\_PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.1.200

New Site  
 Site Category: (None)  
 Roundabout

Lane Use and Performance															
	Demand Flows		Arrival Flows		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	[ Total veh/h ]	HV %	[ Total veh/h ]	HV %						[ Veh ]	[ Dist ] ft				
South: NB_Pride															
Lane 1 <sup>d</sup>	178	2.0	178	2.0	1016	0.175	100	5.1	LOS A	0.7	17.4	Full	800	0.0	0.0
Approach	178	2.0	178	2.0		0.175		5.1	LOS A	0.7	17.4				
East: WB_Freedom															
Lane 1 <sup>d</sup>	133	2.0	133	2.0	1039	0.128	100	4.6	LOS A	0.5	13.3	Full	50	0.0	0.0
Approach	133	2.0	133	2.0		0.128		4.6	LOS A	0.5	13.3				
North: SB_Pride															
Lane 1 <sup>d</sup>	97	2.0	97	2.0	1044	0.093	100	4.2	LOS A	0.4	10.0	Full	225	0.0	0.0
Approach	97	2.0	97	2.0		0.093		4.2	LOS A	0.4	10.0				
West: EB_Freedom															
Lane 1 <sup>d</sup>	305	2.0	305	2.0	1309	0.233	100	4.6	LOS A	1.1	28.5	Full	450	0.0	0.0
Lane 2	164	2.0	164	2.0	1294	0.127	100	3.7	LOS A	0.6	15.0	Full	450	0.0	0.0
Approach	470	2.0	470	2.0		0.233		4.3	LOS A	1.1	28.5				
All Vehicles	877	2.0	877	2.0		0.233		4.5	LOS A	1.1	28.5				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Options tab).  
 Roundabout LOS Method: Same as Sign Control.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).

Roundabout Capacity Model: US HCM 6.

Delay Model: HCM Delay Formula (Stopline Delay: Geometric Delay is not included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: Sieglösch M1 implied by US HCM 6 Roundabout Capacity Model.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

<sup>d</sup> Dominant lane on roundabout approach

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Project: Not Saved