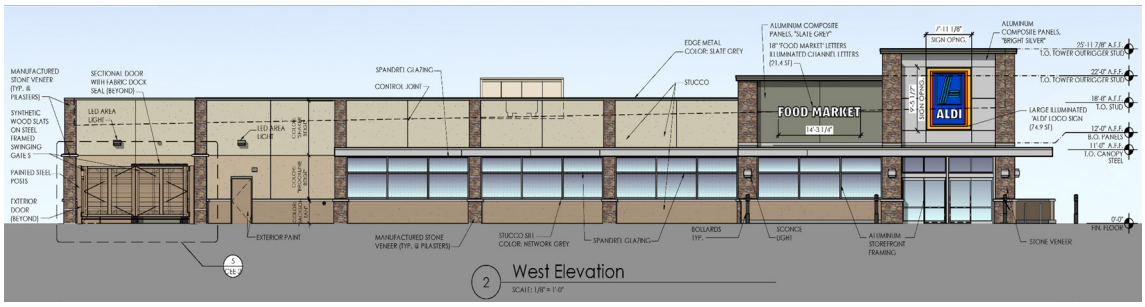
Proposed ALDI Food Market
13900 Goldenwest Street

Initial Study and
Mitigated Negative Declaration

August 2016



Lead Agency:
City of Westminster
Planning Division
8200 Westminster Boulevard
Westminster, CA 92683

Prepared by:
Hodge & Associates
45-300 Portola Avenue #2842
Palm Desert, CA 92261

Contents

Project Location and Surrounding Land Uses 1
Project Description 1
Proposed Actions 1
Statutory Authority 11
Incorporation by Reference 11
Analysis 11
1. Aesthetics 11
2. Agriculture and Forest Resources 13
3. Air Quality 13
4. Biological Resources 29
5. Cultural Resources 30
6. Geology and Soils 31
7. Greenhouse Gas Emissions 33
8. Hazards and Hazardous Materials 36
9. Hydrology and Water Quality 38
10. Land Use and Planning 42
11. Mineral Resources 42
12. Noise 43
13. Population and Housing 54
14. Public Services 55
15. Recreation 56
16. Transportation/Traffic 56
17. Utilities and Service Systems 59
18. Mandatory Findings of Significance 60

Exhibits

Exhibit 1 – Regional Location 2
Exhibit 2 – Project Vicinity 3
Exhibit 3 – Aerial Photograph of Project Site 4
Exhibit 4 – Conceptual Site Plan 5
Exhibit 5 – Proposed Landscape Plan 6
Exhibit 6 – Concept Building Elevations 7
Exhibit 7 – Concept Floor Plan – Sheet 1 8
Exhibit 8 – Concept Floor Plan – Sheet 2 9
Exhibit 9 – Tentative Parcel Map 10
Exhibit 10 – Noise Meter Locations 46
Exhibit 11 – Typical Construction Equipment Noise Generation Levels 47

Tables

Table 1 – Ambient Air Quality Standards 16
Table 2 – Health Effects of Major Criteria Pollutants 18
Table 3 – Air Quality Monitoring Summary (2009-2014) 20
Table 4 – South Coast Air Basin Emissions Forecasts 21
Table 5 – Daily Emissions Thresholds 23
Table 6 – Construction Activity Equipment Fleet 25
Table 7 – Construction Activity Emissions 25
Table 8 – LST and Project Emissions 26
Table 9 – Daily Operational Impacts 27
Table 10 – Construction Emissions 35
Table 11 – Operational Emissions 35
Table 12 – City of Westminster Land Use Compatibility Guidelines for Exterior Community Noise 43
Table 13 – City of Westminster Noise Ordinance Standards 44
Table 14 – Measured Noise Levels (dBA) 45
Table 15 – Human Response To Transient Vibration 48
Table 16 – Estimated Vibration Levels During Project Construction 49
Table 17 – Near Term Traffic Noise Impact Analysis 50
Table 18 – Project Only Impacts 50
Table 19 – Future With Project-Existing No/Project 51
Table 20 – Existing Intersection Levels of Service 57
Table 21 – Project Trip Generation 57
Table 22 – Opening Year (2016) with Project Intersection Levels of Service 58

Appendices

Appendix A – Environmental Checklist
Appendix B – Air Quality and GHG Impact Analyses dated July 25, 2016
Appendix C – Noise Impact Analysis dated July 25, 2016
Appendix D – Traffic Impact Study dated June 6, 2016

City of Westminster
Environmental Analysis Checklist Explanations

Proposed ALDI Food Market
13900 Goldenwest Street

Project Location and Surrounding Land Uses

The project site for the proposed ALDI Food Market Building is located at 13900 Goldenwest Street in Westminster, California. The project covers nine parcels, which does not include the Walgreen's parcel. Parcel 1 of the Tentative Tract Map consolidates 7 parcels for a combined area of 1.34 acres, while Parcel 2 consolidates the 2 parcels that include Weinerschnitzel (.24 acres). The gross area of the combined site is 1.76 acres, and after dedication the net acreage will be 1.58 acres. The site is located within the city block bounded by Westminster Boulevard (south), Wyoming Street (north), Pine Street (west), and Goldenwest Street (east). The site is surrounded by residential neighborhoods to the west, commercial uses to the east, and a mix of commercial uses to the north and south. The site is privately-owned. The project site, including the fast food business that will remain, is 1.58 acres. The Walgreen's site is on a separately owned parcel, but the project proposes some shared parking and access between the ALDI/Weinerschnitzel site and the Walgreen's site.

The subject property is designated as Commercial General per the City's General Plan. The zoning on the existing parcels includes the following Zone District designation: C-2PD, "General Business with a Planned Development Overlay".

Exhibit 1 shows the regional location of the project. Exhibit 2 shows the project site and the project vicinity. Exhibit 3 is an aerial photograph of the project area. Exhibit 4 shows the Conceptual Site Plan. Exhibit 5 shows the proposed landscape plan, Exhibit 6 shows the Concept Building Elevations, and Exhibit 7 and Exhibit 8 show the Concept Floor Plans. The project plans are on file with the City of Westminster, Planning Department.

Project Description

The project is a proposed 17,752-square-foot retail grocery store building located at 13900 Goldenwest Street in the City of Westminster. The building height would be 18 feet 8 inches, with the roof behind the parapet a few feet less. A screen wall is proposed for the roof-mounted equipment that will extend to a height of 22 feet, 8 inches, which is 4 feet above the proposed parapet wall. The project will cover nine parcels located between Goldenwest Street, Wyoming Avenue, Pine Street, and Westminster Boulevard. The total lot area is approximately 1.58 acres. There will be 5 parking spaces provided on the Weinerschnitzel site, 77 parking spaces provided on the ALDI site, and 58 parking spaces provided on the Walgreen's site, for a total of 140 spaces. Based upon the City's parking requirements for shopping centers, 134 spaces are required, but 140 will be provided throughout the three parcels comprising the shopping center.

Proposed Actions

The project will require City approval of a Tentative Parcel Map (Exhibit 9, page 10) to consolidate the parcels and create two new parcels, Development Review, and Conditional Use Permits for beer and wine sales and late night operations. The beer and wine CUP is required for off-site consumption, and the late night operations CUP is required to operate between the hours of 12:00 midnight and 6:00 a.m. The store's hours are proposed from 9:00 a.m. to 9:00 p.m., but loading is proposed early in the morning (in some cases prior to 6:00 a.m.). A possible variance from storefront visibility may be required. The proposed project requires compliance with environmental procedures (CEQA and the CEQA Guidelines).

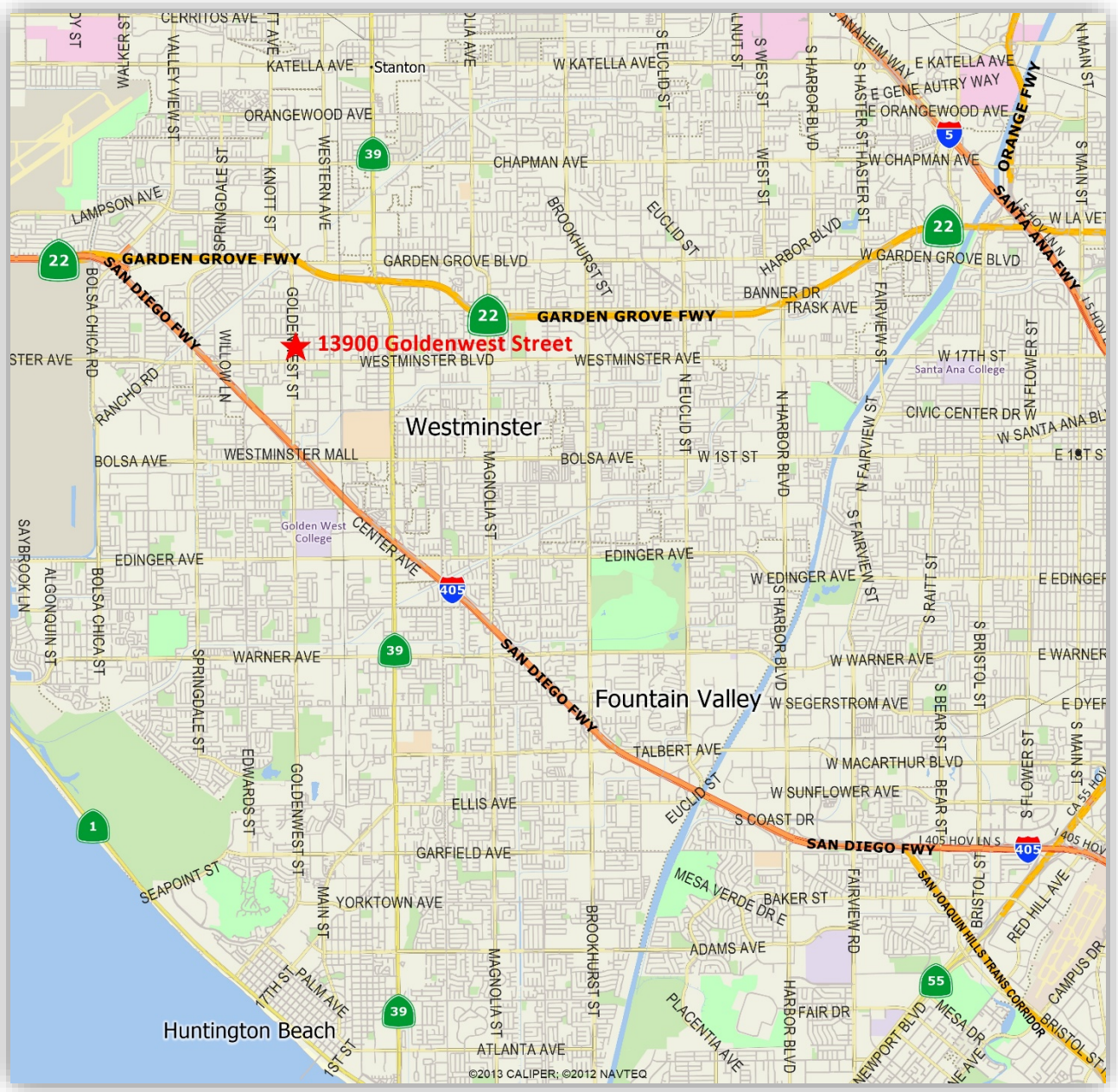


Exhibit 1 – Regional Location

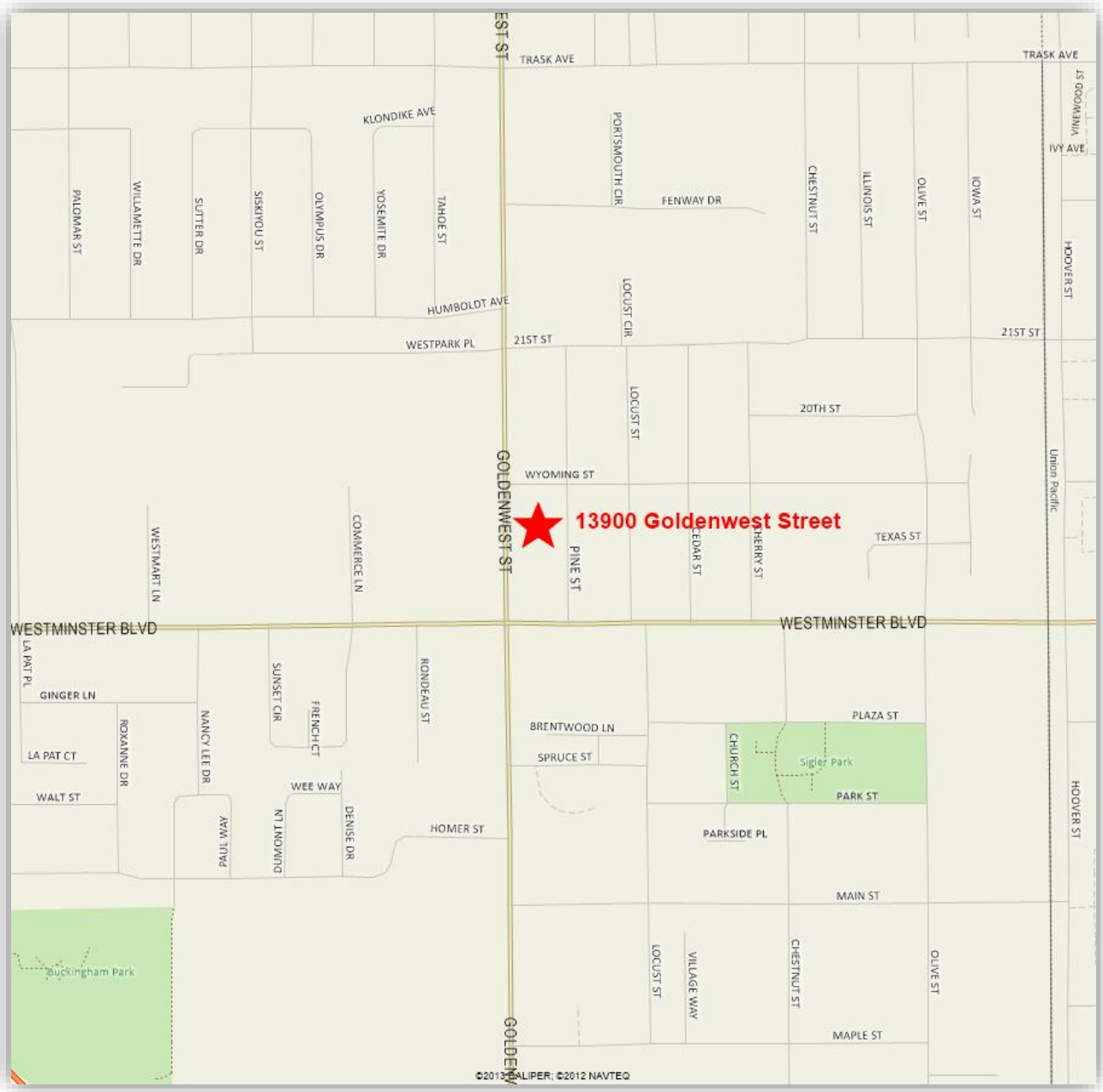


Exhibit 2 – Project Vicinity

Exhibit 3 – Aerial Photograph of Project Site

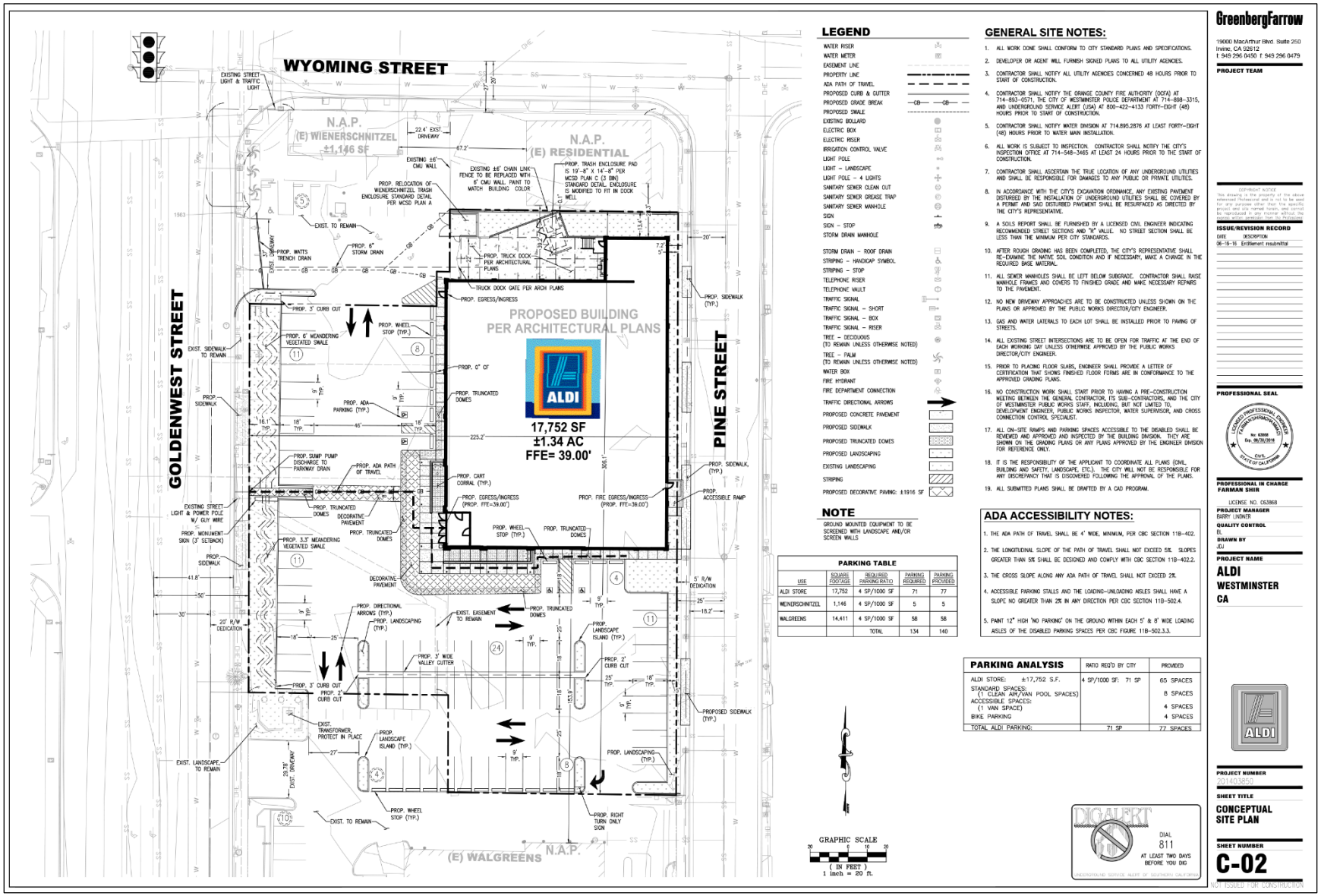


Exhibit 4 – Conceptual Site Plan

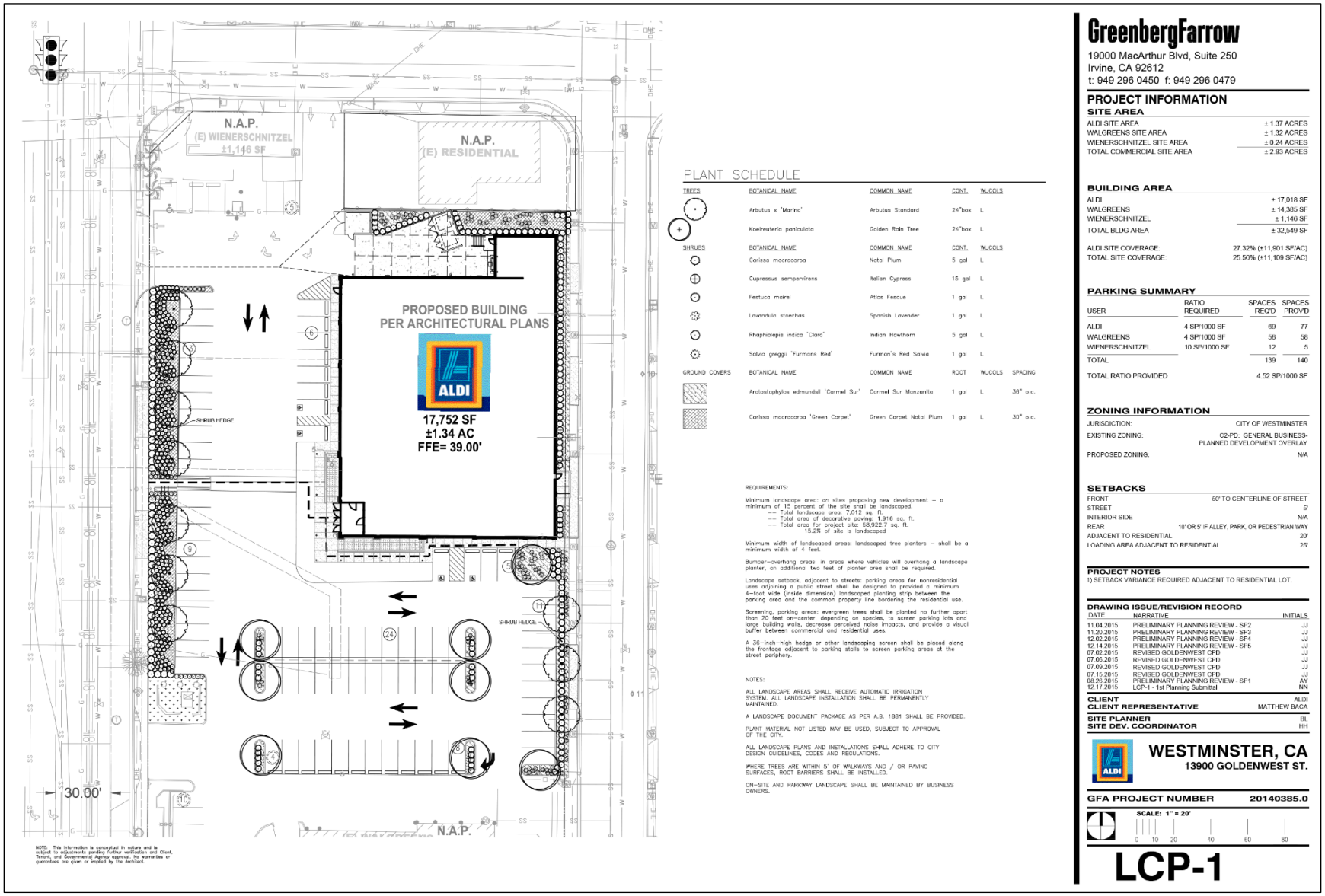


Exhibit 5 – Proposed Landscape Plan

Exhibit 6 – Concept Building Elevations

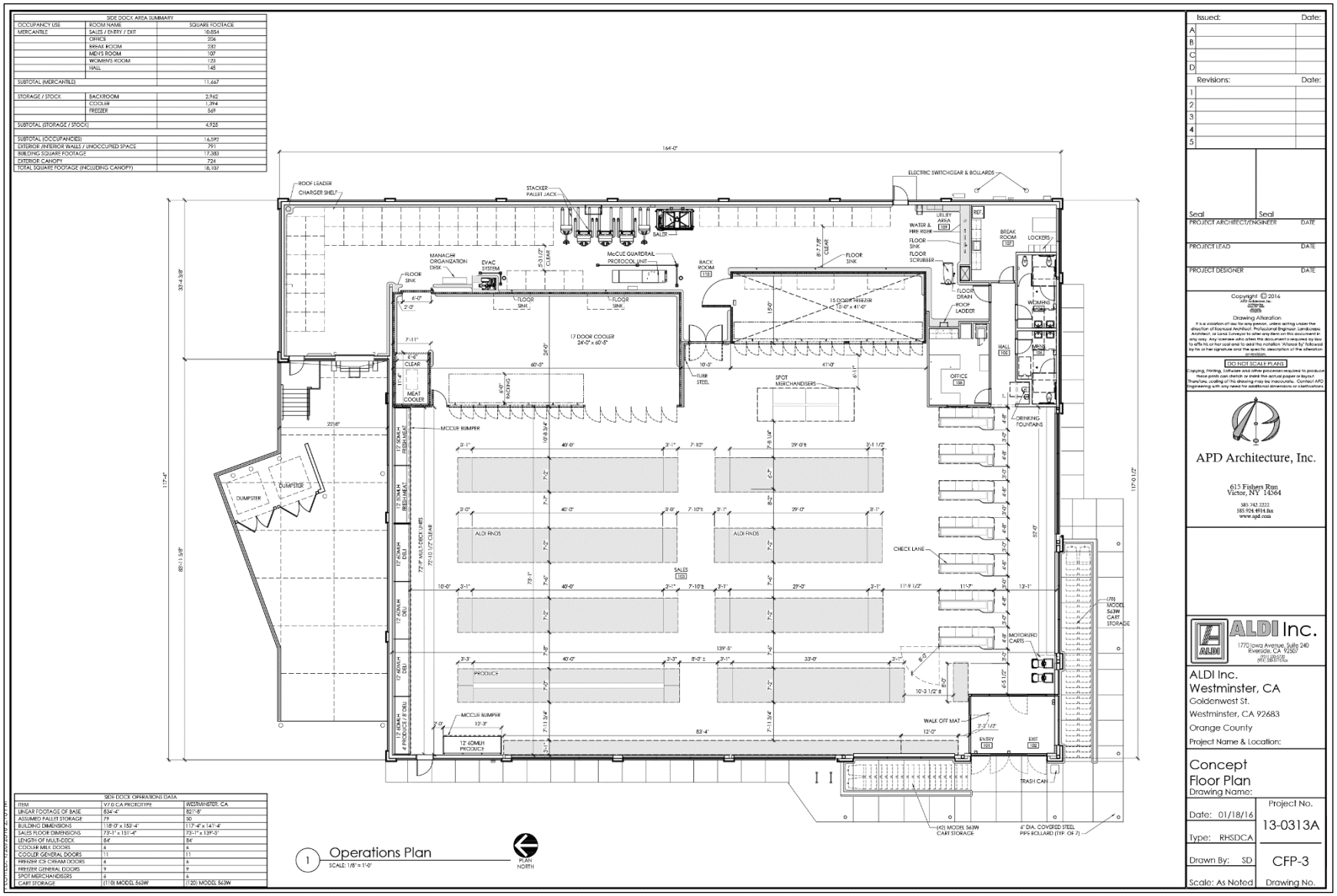


Exhibit 7 – Concept Floor Plan – Sheet 1

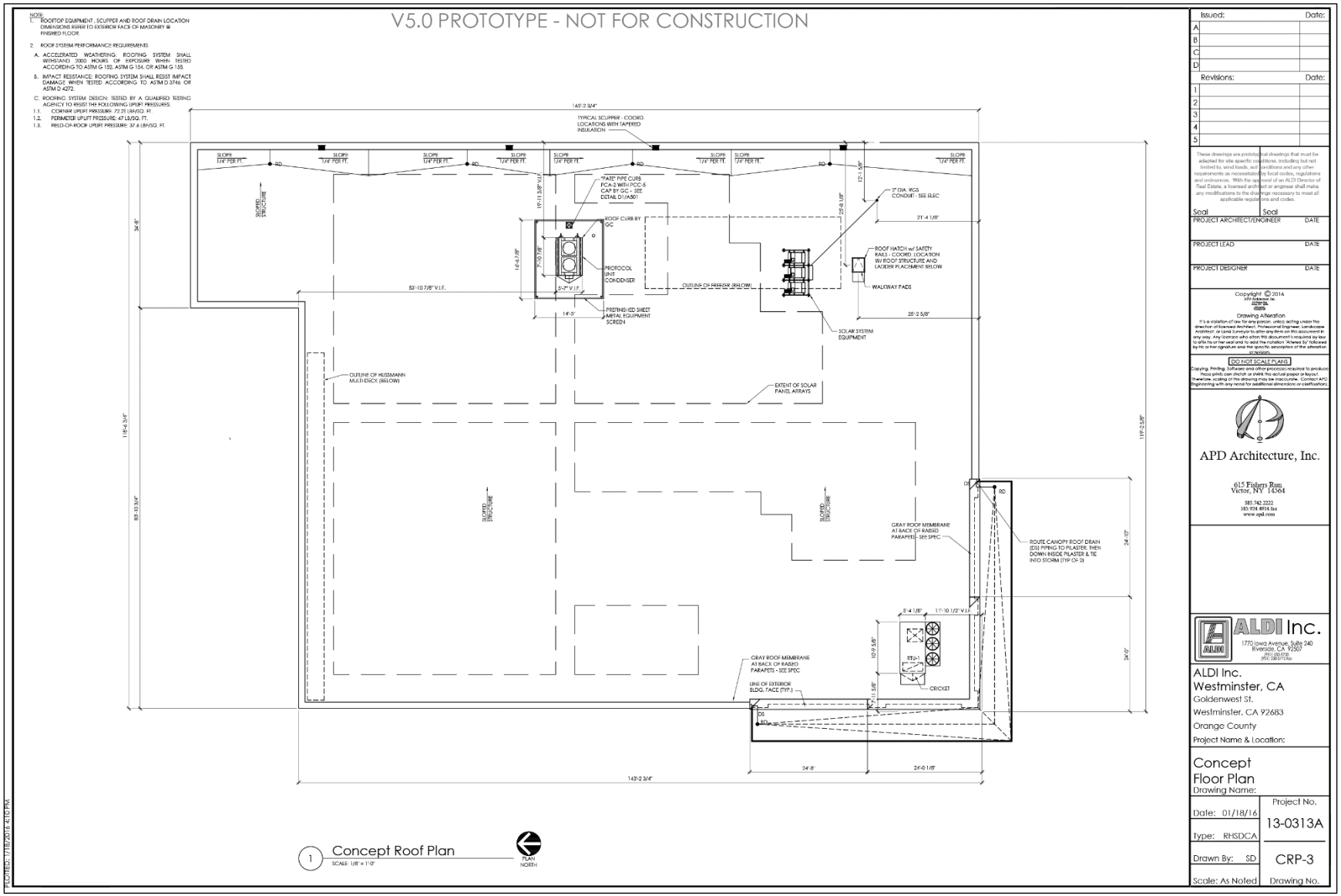


Exhibit 8 – Concept Floor Plan – Sheet 2

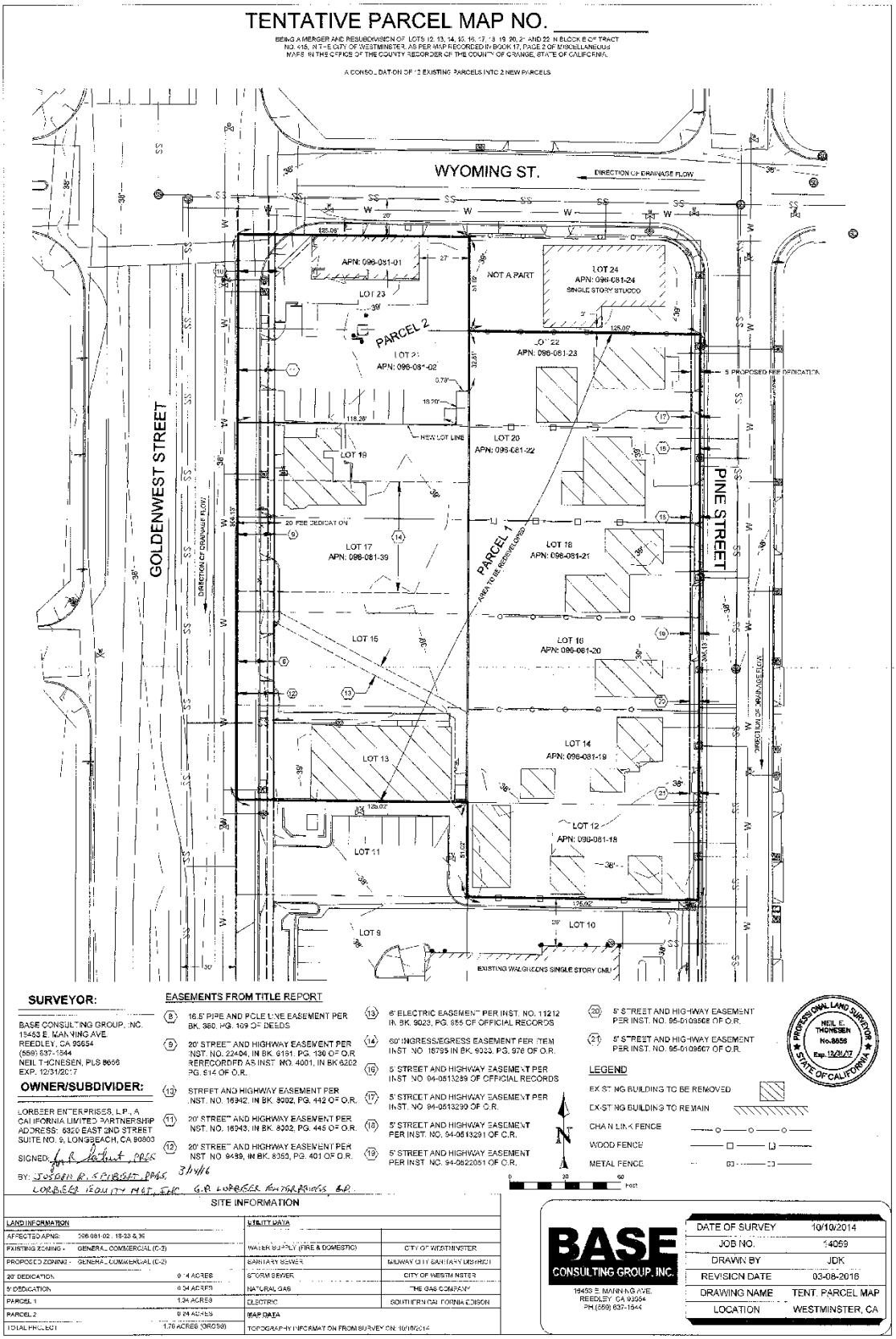


Exhibit 9 – Tentative Parcel Map

Statutory Authority

The preparation of the Initial Study and Mitigated Negative Declaration is governed by two principal sets of documents: The California Environmental Quality Act (hereinafter "CEQA," *California Public Resources Code* §21000, et seq.) and the CEQA Guidelines (*California Code of Regulations* §15000, et seq.). Additionally, City of Westminster procedures and case law provide guidance to this Initial Study and Mitigated Negative Declaration.

In compliance with state law and procedures, the City has determined that the Mitigated Negative Declaration is the appropriate environmental compliance for the proposed project. Therefore, the City will not cause to be prepared an Environmental Impact Report (EIR). In compliance with §15063 of the CEQA Guidelines, the City conducted an Initial Study to determine if the project may have a significant effect on the environment. The Initial Study checklist form and explanation discussion format meets the requirements of the CEQA. Section 15063(d)(3) requires that the entries on the Initial Study checklist identifying environmental effects be briefly explained to indicate that there is some evidence to support the entries. An Initial Study may rely upon expert opinion supported by facts, technical studies or other substantial evidence to document its findings. An Initial Study is not intended nor required to include a level of detail that would be provided in an EIR. Therefore, in compliance with CEQA and the CEQA Guidelines, the IS/MND is not intended to be a lengthy detailed document.

Incorporation by Reference

Certain documents are incorporated by reference into this Initial Study and Mitigated Negative Declaration pursuant to CEQA Guidelines §15150. These documents and the locations where they can be inspected are identified in the Initial Study Checklist (page 65 of this Initial Study and Mitigated Negative Declaration). Where a document is referenced, its pertinent sections will be briefly summarized in the discussions in this environmental document.

Analysis

The initial step in the City's environmental evaluation is the completion of an Environmental Checklist (also known as an "Initial Study") to identify known or potential impacts and eliminate environmentally irrelevant issues. After each issue listed on the checklist, the City has marked "potentially significant impact," "less than significant with mitigation incorporated," "less than significant impact," or "no impact" depending on the potential of the project to have adverse impacts. The Environmental Checklist prepared for the proposed project is presented in the Appendix of this environmental document.

The following discussion provides explanations for the conclusions contained in the Environmental Checklist regarding the proposed project's environmental impacts.

1. Aesthetics

Would the project:

a) Have a substantial adverse effect on a scenic vista? (No Impact)

The project site is not located in an area that provides a scenic vista. Surrounding properties are developed with residences, commercial properties, a major arterial (Westminster Boulevard and Goldenwest Street), and roads. The project site is located in a developed area of the City. The project site is not located in an area that contains a scenic vista. Therefore, the project will not result in a substantial adverse effect on a scenic vista.

b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? (No Impact)

See response to Item 1.a) above. The project will not have a significant impact to any scenic resources such as trees, rock outcroppings, or historic buildings. Additionally, the property is not located along a state scenic highway. Therefore, the project will not result in any significant impacts for this topical area.

c) Substantially degrade the existing visual character or quality of the site and its surroundings? (Less Than Significant Impact)

It is not anticipated that the project will substantially impact the visual character or quality of the site and its surroundings. The project plans were previously presented in the Project Description Section of this document (Exhibit 4 through Exhibit 6). The proposed grocery store building is compatible with the project site. Surrounding and nearby land uses to the project site include commercial and residential uses. The project will include tree and Italian Cypress planting on the east side of the property to screen residences to the east from the building's rear side and parking area. Therefore, the proposed retail/office building on the subject site will not result in any significant impacts relative to visual character or quality of the site and its surroundings.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? (Less Than Significant Impact with Mitigation Incorporated)

The surrounding properties are already developed with existing residential and commercial uses. Exterior lighting is proposed on the project building, which is within 50 feet of the adjacent residences across Pine Street. Final lighting design (fixture locations) should be implemented with attention to the surrounding residential uses. While lighting associated with the project will be visible, a mitigation measure is proposed that requires a lighting plan for the building to be approved by the City, recognizing the urbanized location. All light sources should be designed to eliminate light and glare spillage onto adjacent properties or uses. Therefore, substantial light and/or glare impacts with mitigation incorporated should be less than significant.

Mitigation Measure 1 – Prior to issuance of any building permits, the applicant shall demonstrate to the Planning Department that the lighting system has been designed and directed in such a manner as to minimize the light source and to minimize light spillage and glare to the adjacent properties. Applicant shall provide a lighting plan that identifies light fixture product types and technical specifications, including photometric information to determine the extent of light spillage of glare that can be anticipated. This information shall be made a part of the building set of plans for the issuance of the building permit.

2. Agriculture and Forest Resources

Would the project:

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? (No Impact)

The proposal does not involve conversion of any farmland. The proposed project does not call for rezoning of farmland, nor is it currently zoned for agriculture. Therefore, the proposed project will not have any impacts on agriculture resources.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? (No Impact)

See response to Item 2.a) above. The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. Therefore, no impacts to this topical area would occur as a result of the proposed project.

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))? (No Impact)

The project does not involve land that is considered forest land or timberland zoned for timberland production. Therefore, no impacts to this topical area would occur as a result of the proposed project.

d) Result in the loss of forest land or conversion of forest land to non-forest use? (No Impact)

The project is located on commercially zoned parcels and does not involve conversion of forest land to non-forest use. Therefore, no impacts to this topical area would occur as a result of the proposed project.

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? (No Impact)

The proposed Project will not have any impact on farmland or agricultural uses. Therefore, the project will not have any impact that could result in the conversion of property to non-agricultural use.

3. Air Quality

An Air Quality and Greenhouse Gas Impact Analysis by Giroux & Associates (dated July 25, 2016, Appendix B) was prepared for the ALDI Food Market project. The analysis considered the climatological setting of the Project and examined the Clean Air Act requirements and air quality standards that would be applied to the Project. The analysis modeled the Project and projected the air quality impacts that would be expected with implementation of the project.

The climate of Westminster, technically called a Mediterranean-type climate, is characterized by warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. Temperatures near the Project area average a very comfortable 63°F year-round. Summer afternoons are typically in the middle 80s and winter mornings drop to the low- to mid-40s. About 45 summer days reach 90 degrees F, and 5 days per year may drop to 32 degrees, but significant extremes of temperature are rare in the Project area. Rainfall in the Los Angeles Basin varies considerably in time and space. Rainfall amounts vary from an average of 10 to 18 inches per year as a function of local exposure and topography. Westminster averages 14.6 inches of rain during a normal year. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April

with summers often completely dry. Light rain (0.1" in 24 hours) falls on 20 days during a normal year with 10 days in the moderate (0.5" in 24 hours) category.

Winds blow primarily from southwest to northeast by day and from northeast to southwest at night in response to the regional pattern of onshore flow by day and offshore flow at night. Average wind speeds are 5 mph average in the Westminster area, reaching 6 to 8 mph in the afternoon but dropping to near calm conditions (1 to 3 mph) at night.

The net effect of local airflow in terms of air pollution is that daytime ventilation is good, and any locally generated air pollutants will be rapidly dispersed by the strong daytime turbulence. At night, however, pooling of cool air in low elevations combined with light winds allows for air stagnation in protected areas, especially near area freeways with elevated pollution levels. Because such effects are highly localized, however, the Project area is sufficiently far from any major roadways such that it will be little affected by such air stagnation effects.

In addition to winds that control the rate and direction of pollution dispersal, Southern California is notorious for strong temperature inversions that limit the vertical depth through which pollution can be mixed. In summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the basin. Air starting onshore at the beach is relatively clean, but becomes progressively more polluted as sources continue to add pollution from below without any dilution from above. Air arriving at Westminster during warm season marine flow conditions has undergone limited photochemical reactions, but not to its fullest extent possible. Summer smog levels in Westminster are much lower than in inland valleys of the basin such as the San Gabriel or the Pomona-Walnut Valleys. Summer air quality is only moderately degraded compared to the severe degradation found farther inland within the air basin.

A second inversion type forms on clear winter nights when cold air off the mountains sinks to the surface while the air aloft remains warm. This process forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as automobile exhaust near their source. During the long nocturnal drainage flow from land to sea, the exhaust pollutants continually accumulate within the shallow, cool layer of air near the ground. Central Orange County thus may experience elevated levels of carbon monoxide and nitrogen oxides because of this winter inversion condition. With ongoing vehicular improvements, clean air standards are generally not exceeded during nocturnal stagnation periods as they were 10 to 20 years ago.

Both types of inversions occur throughout the year to some extent, but the marine inversions are very dominant during the day in summer, and radiation inversions are much stronger on winter nights when nights are long and air is cool. The governing role of these inversions in atmospheric dispersion leads to a substantially different air quality environment in summer near the project area than in winter.

Ambient Air Quality Standards (AAQS)

To gauge the significance of air quality impacts of the proposed Project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called “sensitive receptors.” Healthy adults can tolerate occasional exposure to air pollutant

concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule that extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the EPA review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter ($PM_{2.5}$). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for $PM_{2.5}$ and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to "non-attainment" for the 8-hour ozone standard.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (CARB) to recommend adoption of the statewide $PM_{2.5}$ standard that is more stringent than the federal standard. This standard was adopted in 2002. The California $PM_{2.5}$ standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the CARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the CARB adopted an annual state standard for nitrogen dioxide ($NO_{2)}$ that is more stringent than the corresponding federal standard, and strengthened the state 1-hour NO_2 standard.

Table 1 – Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			
See footnotes on next page …						
For more information please call ARB-PIO at (916) 322-2990				California Air Resources Board (5/4/16)		

Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf (accessed May 12, 2016)

Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

Table 2 – Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Fine Particulate Matter (PM_{10})	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter ($PM_{2.5}$)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for $PM_{2.5}$ were strengthened, a new class of PM in the 2.5- to 10-micron size was created, some PM_{10} standards were revoked, and a distinction between rural and urban air quality was adopted. In December 2012 the federal annual standard for $PM_{2.5}$ was reduced from 15 $\mu g/m^3$ to 12 $\mu g/m^3$, which matches the California AAQS. The severity of the basin's non-attainment status for $PM_{2.5}$ may be increased by this action and thus require accelerated planning for future $PM_{2.5}$ attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm, which matches the current California standard. It will require 3 years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2030.

In 2010 a new federal 1-hour primary standard for nitrogen dioxide (NO_2) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the CARB has requested EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

Baseline Air Quality in Project Area

Existing and probable future levels of air quality around the Project area can best be inferred from ambient air quality measurements conducted by the SCAQMD at the Anaheim monitoring station. This station measures regional pollution levels, such as smog, and primary vehicular pollution levels near busy roadways, such as carbon monoxide and nitrogen oxides. Pollutants such as particulates (PM_{10} and $PM_{2.5}$) are also monitored at Anaheim. Table 3 is a 6-year summary of monitoring data for the major air pollutants compiled from this air monitoring station. From this data the following conclusions regarding air quality trends can be drawn.

1. Photochemical smog (ozone) levels occasionally exceed standards. All state and federal ozone standards have been exceeded 1% or less of all days in the past 6 years. Measurements from more recent years demonstrate progressively improved ozone levels in the area except perhaps for some temporary "backsliding" in 2004. While ozone levels are still occasionally elevated, they are much lower than 10 to 20 years ago.

2. Respirable dust (PM_{10}) levels occasionally exceed the state standard on approximately 2% of measured days. The less stringent federal PM_{10} standard has not been exceeded in the last 6 years.

3. The federal ultra-fine particulate ($PM_{2.5}$) standard of 35 $\mu g/m^3$ has been exceeded on less than 1% of measurement days in the last 6 years.

4. More localized pollutants such as carbon monoxide and nitrogen oxides are very low near the Project site. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NO_X or CO without any threat of violating applicable AAQS. Data from a recent "near roadway" monitoring study directly along the Interstate 5

shoulder (<50 feet) in Anaheim showed noticeably elevated levels of NO_X and CO, but even at this close distance federal clean air standards were not exceeded.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3 – Air Quality Monitoring Summary (2009-2014)

Pollutant/Standard	2009	2010	2011	2012	2013	2014
Ozone						
Days standards were exceeded						
1-hour > 0.09 ppm (S)	0	1	0	0	0	2
8-hour > 0.07 ppm (S)	2	1	1	0	0	6
8- hour > 0.075 ppm (F)	1	1	0	0	0	4
Maximum levels during such violations						
Max. 1-hour concentration (ppm)	0.093	0.104	0.088	0.079	0.084	0.111
Max. 8-hour concentration (ppm)	0.077	0.088	0.072	0.067	0.070	0.081
Carbon Monoxide						
Days standards were exceeded						
8-hour > 9. ppm (S,F)	0	0	0	0	0	0
Maximum levels during such violations						
Max 8-hour concentration (ppm)	2.7	2.0	2.1	2.3	2.6	2.1
Nitrogen Dioxide						
Days standards were exceeded						
1-hour > 0.18 ppm (S)	0	0	0	0	0	0
Maximum levels during such violations						
Max. 1-hour concentration (ppm)	0.068	0.073	0.074	0.067	0.082	0.076
Inhalable Particulates (PM_{10})						
Days standards were exceeded						
24-hour > 50 $\mu g/m^3$ (S)	1/56	0/57	2/57	0/61	1/59	2/61
24-hour > 150 $\mu g/m^3$ (F)	0/56	0/57	0/57	0/61	0/59	0/61
Maximum levels during such violations						
Max. 24-hour concentration ($\mu g/m^3$)	62.	43.	53.	48.	77.	85.
Ultra-Fine Particulates ($PM_{2.5}$)						
Days standards were exceeded						
24-hour > 35 $\mu g/m^3$ (F)	4/334	0/331	2/352	4/347	1/331	6/xx*
Maximum levels during such violations						
Max. 24-hour concentration ($\mu g/m^3$)	64.5	31.7	39.2	50.1	37.8	56.2

*xx = data not yet available
Source: South Coast AQMD Air Monitoring Station Data Summary, Anaheim Station (3176)

Air Quality Planning

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM_{10}. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times, because earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised, and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NO_X) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NO_X and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM_{10} and $PM_{2.5}$ are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM_{10}) by 2006. The 2003 AQMP was based upon the federal 1-hour ozone standard, which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the 1-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal $PM_{2.5}$ standard.

Because projected attainment by 2021 requires control technologies that do not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region if the bump-up request had not been approved. In April 2010, EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification sets a later attainment deadline (2024), but also requires the air basin to adopt even more stringent emissions controls.

Table 4 – South Coast Air Basin Emissions Forecasts

Pollutant	2012[a] (tons/day)	2015[b] (tons/day)	2020[b] (tons/day)	2025[b] (tons/day)	2030 (tons/day)
NO_X	512	451	357	289	266
VOC	466	429	400	393	393
PM_{10}	154	155	161	165	170
$PM_{2.5}$	68	67	67	68	170

[a]2012 base year.
[b]With current emissions reduction programs and adopted growth forecasts.
Source: California Air Resources Board, 2013 Almanac of CEPAM

In other air quality attainment plan reviews, EPA has disapproved part of the SCAB $PM_{2.5}$ attainment plan included in the AQMP. EPA has stated that the current attainment plan relies on $PM_{2.5}$ control regulations that have not yet been approved or implemented. It is expected that a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the ARB submittal to EPA as part of the California State Implementation Plan (SIP) is expected to remedy identified $PM_{2.5}$ planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal 1-hour ozone standard even though that standard was revoked almost 10 years ago. There was no approved attainment plan for the 1-hour federal standard

at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long-since-revoked 1-hour federal ozone standard. Because the 2012 AQMP contains a number of control measures for the 8-hour ozone standard that are equally effective for 1-hour levels, the 2012 AQMP is believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP must therefore be adopted in 2016. Planning for the 2016 AQMP is currently ongoing. The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual $PM_{2.5}$ (12 μg/m^3)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)
24-hour $PM_{2.5}$ (35 μg/m^3)	2019

The key challenge is that NO_X emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional NO_X control measures are adopted and implemented, attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing commercial projects. Conformity with adopted plans, forecasts, and programs relative to population, housing, employment, and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less than significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

Air Quality Impact Standards of Significance

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

a. Conflicts with or obstructs implementation of the applicable air quality plan.

b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.

c. Results in a cumulatively considerable net increase of any criteria pollutants 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. Exposes sensitive receptors to substantial pollutant concentrations.

e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM_{10}, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified amount of emissions (e.g., pounds, tons) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA Guidelines.

Table 5 – Daily Emissions Thresholds

Pollutant	Construction (pounds per day)	Operations (pounds per day)
ROG	75	55
NO_X	100	55
CO	550	550
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.
- Project could generate vehicle trips that cause a CO hot spot.

Therefore, the ALDI Food Market project has been evaluated using the five tests of air quality impact significance enumerated in the CEQA Guidelines.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan? (No Impact)

An Air Quality Study dated July 25, 2016 (Appendix B) prepared by Giroux & Associates analyzed the air quality impacts from the proposed ALDI Food Market project. Projects such as the proposed commercial use do not directly relate to the AQMP in that there are no specific air quality programs or regulations governing general development. Conformity with adopted plans, forecasts and programs relative to population, housing, employment, and land use is the primary yardstick by which impact significance of planned growth is determined. Therefore, the ALDI Food Market project has no impact on the implementation of or is in conflict with the applicable air quality plan for the South Coast Air Basin.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? (Less Than Significant Impact with Mitigation Incorporated)

The project involves construction of a commercial grocery store on Goldenwest Street in the City of Westminster.

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact. Impacts from the proposed project are considered from construction activities as well as future operation of the grocery store.

Construction Activity Impacts

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

Although exhaust emissions will result from on-site and off-site equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. Estimated construction emissions were modeled using CalEEMod 2013.2.2 to identify maximum daily emissions for each pollutant during project construction.

The proposed project entails construction of 17,752-square-foot ALDI Market and 140 total parking spaces in the shopping center. To make space for the proposed market, 18,200 square feet of existing structures will be demolished and the debris trucked off site. Construction was modeled in CalEEMod 2013.2.2 using default construction equipment and schedule for a project of this size as shown in Table 6.

Table 6 – Construction Activity Equipment Fleet

Phase Name and Duration	Equipment
Demo (20 days) 18,200 sf	1 Concrete Saw 1 Dozer 3 Loader/Backhoes
Grading (4 days)	1 Grader 1 Dozer 1 Loader/Backhoe
Construction (200 days)	1 Crane 1 Loader/Backhoe 1 Forklift 1 Gen Set 3 Welders
Paving (10 days)	1 Paver 1 Mixer 1 Loader/Backhoe 1 Roller

Utilizing this indicated equipment fleet and durations shown in Table 6 the following worst case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7 – Construction Activity Emissions

Maximal Construction Emissions	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
	(maximum daily emissions (pounds per day))					
2017						
Unmitigated	43.6	27.7	22.4	0.0	6.1	3.5
Mitigated	43.6	27.7	22.4	0.0	3.1	2.0
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds. The only mitigation measure modeled is as follows:

Mitigation Measure 2 –The contractor shall require that exposed surfaces are watered two times per day during grading activities.

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

Localized Significance Thresholds

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement

Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM_{10} and $PM_{2.5}$). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. LST screening tables are available for 25-, 50-, 100-, 200- and 500-meter source-receptor distances. For this project the most stringent 25-meter distance was used to reflect adjacent residences.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this site, the most stringent thresholds for a 1-acre site were used.

The following thresholds and emissions in Table 8 are therefore determined (pounds per day).

Table 8 – LST and Project Emissions

LST 1 acre/25 meters (Central Orange County)	CO (pounds/day)	NO_X (pounds/day)	PM_{10} (pounds/day)	$PM_{2.5}$ (pounds/day)
LST Thresholds	535	69	4	3
Max On-Site Emissions Unmitigated	22	27	6	3
Max On-Site Emissions Mitigated	22	27	3	2

CalEEMod Output in Appendix B

LSTs were compared to the maximum daily construction activities. As seen above, emissions will meet the LST for construction thresholds with the application of Mitigation Measure 2 above.

LST impacts are less-than-significant with the application of this mitigation measure.

Operational Impacts

Operational emissions were calculated using CalEEMod2013.2.2 for an assumed project build-out year of 2018 as a target. After taking credit for existing trips from current on-site uses, the project would generate 1,104 new daily trips using data provided by the project traffic consultant. In addition to mobile sources from vehicles, general development causes smaller amounts of "area source" air pollution to be generated from on-site energy consumption (primarily landscaping) and from off-site electrical generation (lighting). These sources represent a minimal percentage of the total project NO_X and CO burdens, and a few percent other pollutants. The inclusion of such emissions adds negligibly to the total significant project-related emissions burden as shown in Table 9.

Table 9 – Daily Operational Impacts

Source	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
	(pounds per day)					
Area	1.1	0.0	0.0	0.0	0.0	0.0
Energy	0.0	0.1	0.1	0.0	0.0	0.0
Mobile	3.8	6.7	30.4	0.0	3.2	0.9
Total	**4.9**	**6.8**	**30.5**	**0.0**	**3.2**	**0.9**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod2013.2.2 Output in Appendix

As seen in Table 9, the project would not cause any operational emissions to exceed their respective SCAQMD CEQA significance thresholds. Operational emission impacts are judged to be less than significant. No impact mitigation for operational activity emissions is considered necessary to support this finding.

Sensitive Receptors

Air quality impacts are analyzed relative to those persons with the greatest sensitivity to air pollution exposure. Such persons are called "sensitive receptors." Sensitive population groups include young children, the elderly, and the acutely and chronically ill (especially those with cardio-respiratory disease).

Residential areas are considered to be sensitive to air pollution exposure because they may be occupied for extended periods, and residents may be outdoors when exposure is highest. Schools are similarly considered to be sensitive receptors. The closest existing sensitive uses to the proposed project are the residences east of the site on Pine Avenue and the residence adjacent to the site's property in the northeast corner.

Dust is typically the primary concern during construction of new buildings and infrastructure. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions." Emissions rates vary as a function of many parameters, such as soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation. Because of the inherent uncertainty in the predictive factors for estimating fugitive dust generation, regulatory agencies typically use one universal "default" factor based on the area disturbed, assuming that all other input parameters into emission rate prediction fall into midrange average values.

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, mitigation through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin and the proximity of existing residences. Mitigation measures are recommended to further reduce short-term impacts associated with construction emissions in compliance with the SCAQMD. Therefore, no impacts to this topical area would result from the project with implementation of the following recommended mitigation measures.

Mitigation Measure 3 – During construction activities, the contractor shall ensure that the following measures are complied with to reduce short-term (construction) air quality impacts associated with the project: a) apply soil stabilizers or moisten inactive disturbed areas (such as covering stock piles with tarps) to meet South Coast Air Quality Management District (SCAQMD) Rule 403 (Fugitive Dust); b)stabilize previously disturbed areas if subsequent construction is delayed; c) apply water two times daily, or non-toxic soil stabilizers according to manufacturer's specifications, to all disturbed unpaved surfaces; d) minimize in-out traffic from construction zone; e) cover all trucks hauling dirt, sand, or loose material or require all trucks to maintain a least two feet of freeboard; f) sweep streets daily if visible soil material is carried out from the construction site; g) prepare a high wind dust control plan; h) cover all stock piles with tarps at the end of each day as needed; i) provide water spray during loading and unloading of earthen materials; j) utilize well-tuned off-road construction equipment; k) establish a preference for contractors using Tier 3 or better heavy equipment; and l) enforce five-minute idling limits for both on-road trucks and off-road equipment.

Mitigation Measure 4 – During construction activities, the project contractor shall ensure that the project will comply with SCAQMD Rule 402 (Nuisance) Rule 402 prohibits the discharge from any source quantities of air contaminants or other material which would cause injury, detriment, nuisance, or annoyance to any considerable number of persons, the public, or damage to business or property.

Ongoing operational emissions are not anticipated to exceed their respective SCAQMD significance thresholds. Therefore, there will be no impact from operational activities ongoing with the project.

c) Result in a cumulatively considerable net increase of any criteria pollutant 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)? (Less Than Significant Impact with Mitigation Incorporated)

See response to Item 3.b) above and recommend mitigation in compliance with the SCAQMD for short-term construction related impacts. The project site is located in the South Coast Air Basin that is a designated non-attainment area. The project does not represent significant growth beyond that already previously evaluated and forecasted for air quality cumulative impacts of basin-wide growth and development. Therefore, the project will result in less than significant impacts cumulatively to air quality.

d) Expose sensitive receptors to substantial pollutant concentrations? (Less Than Significant with Mitigation Incorporated)

See response to Item 3.b) above and recommend mitigation in compliance with the SCAQMD for short-term construction related impacts. The food market project will involve minimal grading since the site is already flat. Proposed mitigation measures (previously presented in Section 3.b)) will also significantly reduce impacts from construction activities. Therefore, it is not anticipated that the project will result in any significant impacts to sensitive receptors.

e) Create objectionable odors affecting a substantial number of people? (Less Than Significant Impact)

The proposed grocery store will not create any objectionable odors. A mitigation measure has been presented in Section 3.b) above requiring compliance with SCAQMD Rule 402 (Nuisance).

Therefore, the proposed project will not result in any significant impacts of objectionable odors affecting a substantial number of people.

4. Biological Resources

Would the project:

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? (No Impact)

The City's General Plan EIR describes vegetation in Westminster as primarily a combination of lawn grasses, ground covers, shrubs, and trees planted for their ornamental and functional qualities, and no threatened or endangered species are known to occur in the City.[1] The site has been previously graded in conjunction with the current residential and commercial uses. The site is located in an area developed with urban land uses, including commercial uses, residential uses and roads. The site does not contain any sensitive habitat or wildlife resources. Therefore, the project will not result in any impacts to biological resources.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? (No Impact)

See response to Item 4.a) above. The project sites do not contain any riparian habitat or sensitive natural communities. Therefore, no impacts to riparian or other sensitive natural communities are anticipated.

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? (No Impact)

See response to Item 4.a) above. The site is located in an urbanized area of the City and does not contain wetlands. The project does not propose any activities that would potentially impact wetlands. There are no direct removals, filling, or hydrological interruptions proposed as part of the project. Therefore, no impacts to wetlands will result from the proposed project.

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? (No Impact)

Nothing on the proposed project site would interfere 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. Therefore, the project will not conflict with any policies or ordinance pertaining to biological resources.

e) Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance? (No Impact)

See response to Item 4d) above. The project does not contain any biological resources. Therefore, the project will not conflict with any policies or ordinance pertaining to biological resources.

[1] City of Westminster General Plan/EIR, Volume II – Technical Document, 1996, page IVC-10 through IVC-17

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? (No Impact)

See responses to Items 4.a) and e) above. The site is located in an urbanized area. The project site is not included in an adopted Habitat Conservation Plan or Natural Community Conservation Plan. The development of the property does not involve any activities that would impact biological resources that would be subject to a conservation plan.

5. Cultural Resources

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? (No Impact)

The City's General Plan EIR included a complete evaluation of cultural resources citywide.[2] Additionally, the City mailed notices of the proposed project to two Native American tribes who have requested notification under AB 52. The tribes did not respond to the notices.

The project site is located at 13900 Goldenwest Street in Westminster. The site is also surrounded by urban uses, including commercial uses, residential uses and roads. The site does not contain any historical resources (including historic structures). Therefore, due to the existing condition of the site, it is anticipated that the project will not have any impacts on cultural (including historical) resources.

b) Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5? (No Impact)

See response to Item 5.a) above. The project is proposed at a property that has already been graded and is located in an area completely surrounded by developed residential and commercial properties. The proposed project will require minimal grading due to the existing conditions of the land and the nature of the project. Therefore, it is not anticipated that the project will result in any significant impact to archaeological resources.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (No Impact)

See responses to Items 5.a) and 5.b) above. The General Plan EIR identified that a record search found no recorded paleontological sites within 2 miles of the City boundaries. It is not anticipated that the project will result in any direct or indirect impacts to unique paleontological resources or geologic features due to the type of project and existing developed condition of the adjacent properties.

d) Disturb any human remains, including those interred outside formal cemeteries? (No Impact)

See responses to Items 5.a) and 5.b) above. The site is located in an urbanized area with adjacent developed uses (commercial and residential). Due to the graded condition of the site and minor grading proposed for the project it is not anticipated that the project would result in any impacts relative to disturbance of human remains, including those interred outside formal cemeteries.

[2] City of Westminster General Plan/EIR, Volume II – Technical Document, 1996, page IVC-25 through IVC-36.

6. Geology and Soils

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture 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? (Less Than Significant Impact)

The City's General Plan EIR includes an evaluation of public safety that addresses geology and soils of the City and is herein incorporated by reference.[3]

The City, as well as most of Southern California, is located in a region of historic seismic activity. There are no known active fault systems located within the limits of the City. Therefore, no part of the City has been delineated on the Alquist-Priolo Earthquake Fault Zone. However, there are active or potential active fault systems that can affect the Westminster area. The principal seismic hazard which could affect the site is ground shaking resulting from an earthquake occurring along any of the major active faults in Southern California.

The most significant known active faults include the San Andreas, Newport-Inglewood, Whittier, San Fernando, Sierra Madre and Verdugo faults. The closest known active fault to the project site includes Newport Inglewood (LA Basin) fault which is approximately 5 miles from the Goldenwest Street ALDI Food Market building site. The San Joaquin Hills blind thrust and Elysian Park thrust faults are located in the subsurface with no mapped fault trace at the ground surface, and have been estimated to be approximately 6 miles and 12 miles from the site, respectively.

Surface rupture occurs when there is a break in ground surface during or as a consequence of seismic activity. As indicated previously, the site is not located within an Alquist-Priolo zone nor are there any identified faults near or within the project site property. Therefore, potential for surface rupture on site is considered very low due to the lack of known active faults on-site.

The potential for damage resulting from seismic-related events exists within the City as it does throughout Southern California. Seismic hazards include ground shaking, ground failure, ground displacement, tsunamis and seiches. The site is located in an area of the City that is designated as High Liquefaction Potential per the City's General Plan EIR. The site is also located in a liquefaction hazard area, based on the California Department of Conservation's Official Maps of Seismic Hazard Zones Newport Beach-Quadrangle (1997).

The site is expected to be subject to moderate to severe ground shaking from a regional seismic event within the project life of the food market building. However, the food market building will be constructed according to contemporary seismic building standards and the City of Westminster Building Code. It is a one-story structure that is consistent with other buildings that have occupied the project site. Additionally, the project will involve minimal grading as it is already flat, consistent with a building pad. The site has contained several structures through the years and the fast food restaurant and adjacent drug store will remain.

[3] City of Westminster General Plan/EIR, Volume II – Technical Document, 1996, page VIIA-1 through VIIA-19.

The topography of the site is relatively flat. The site is not located in an area of generally unique geologic or physical features.

ii. Strong seismic ground shaking? (Less Than Significant Impact)

See response to Item 6.a)i) above. Due to the nature of the project, all potential impacts relative to geology and soils are less than significant.

iii. Seismic-related ground failure, including liquefaction? (Less Than Significant Impact)

See response to Item 6.a)i) above. The site is located in an area of the City that is designated as High Liquefaction Potential per the City's General Plan EIR (Figure VIIA-2, page VIIA-9). The site is also located in a liquefaction hazard area, based on the California Department of Conservation's Official Maps of Seismic Hazard Zones Newport Beach-Quadrangle (1997). However, the project will be constructed using current seismic and building standards designed to reduce potential damage from seismic events. Therefore, all potential impacts relative to geology and soils are at a less than significant level.

iv. Landslides? (No Impact)

The property is flat. The site is not subject to potential impacts associated with landslides. Therefore, it is not anticipated that project activities will result in any impacts associated with landslides.

b) Result in substantial soil erosion or the loss of topsoil? (No Impact)

The project will not result in any impacts to soil erosion or loss of topsoil. The site has been previously graded in conjunction with the existing uses. The site is relatively flat in topography and will not require extensive grading. Therefore, there are no impacts from the project in the area of potential loss of topsoil.

c) Be located on a geologic 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? (Less Than Significant Impact)

See response to Item 6.a)i) above. The soil on the project site is not unstable, and the site is relatively flat and will require limited grading to accommodate the food market building. Therefore, the project will not result in on or off-site landslides or lateral spreading and subsidence. Due to the nature of the project, all potential impacts relative to geology and soils are at a less than significant level.

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? (Less Than Significant Impact)

See response to Item 6.a)i), which addresses geology and soils. The project, construction of a new food market building, will involve minimal grading and all potential impacts relative to geology and soils will be at a less than significant level.

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? (No Impact)

The project site will be served by the local sewer and water system; as such, the project does not involve issues pertaining to soils incapable of supporting septic tanks or alternative wastewater disposal systems.

7. Greenhouse Gas Emissions

Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (Less Than Significant Impact)

An Air Quality Study (Appendix B) prepared by Giroux & Associates dated July 25, 2016 included greenhouse gas emissions analysis of the proposed ALDI Food Market.

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately one-half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25% to 40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

Thresholds of Significance

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the *California Code of Regulations* in March 2010. The CEQA Guidelines (Appendix G) were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,
- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/ combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing air quality analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use type projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

Construction Activity GHG Emissions

The build-out timetable for this project is assumed to less than one year. During project construction, the CalEEMod 2013.2.2 computer model predicts that the construction activities will generate the annual CO_2(e) emissions identified in the table below.

Table 10 – Construction Emissions

	CO_2e (metric tons CO_2e)
Year 2017	257.2
Amortized	**8.6**

*CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

Project Operational GHG Emissions

The input assumptions for operational GHG emissions calculations, and the GHG conversion from consumption to annual regional CO_2(e) emissions are summarized in the CalEEMod 2013.2.2 output files found in the appendix of this report.

The total operational and annualized construction emissions are identified in the table below.

Table 11 – Operational Emissions

Consumption Source	MT CO_2(e) (tons per year)
Area Sources	0.0
Energy Utilization	235.4
Mobile Source	699.0
Solid Waste Generation	45.5
Water Consumption	11.1
Construction	8.6
Total	**999.6**
Guideline Threshold	3,000

Total project GHG emissions are substantially below the proposed significance threshold of 3,000 MT suggested by the SCAQMD. Hence, the project will not result in generation of a significant level of greenhouse gases.

Implementation of the proposed project is considered less than significant for construction as well as operational greenhouse gas emissions. Therefore, no significant impacts are anticipated as a result of implementation of the proposed project.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? (Less Than Significant Impact)

The City of Westminster has not yet developed a Greenhouse Gas Reduction Plan. The applicable GHG planning document is AB-32. As discussed above, the project is not expected to result in a significant increase in GHG emissions. As a result, the project results in GHG emissions below the recommended SCAQMD 3,000-ton threshold. Therefore, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

8. Hazards and Hazardous Materials

Would the project:

a) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials? (No Impact)

The proposed ALDI Food Market building project will be built within the properties located at 13900 Goldenwest Street. The project operations do not generate the routine transport, use or disposal of hazardous materials that could create a significant hazard to the public or the environment. The project involves the construction of a one-story 17,752-square-foot building on the property.

Therefore, there is no impact to this issue area.

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? (Less Than Significant Impact with Mitigation Incorporated)

See response to 8.a) above. The Project will not be a generator of hazardous materials. However, the Project includes demolition of several older residential and commercial structures on the site that could contain lead or other hazardous material associated with older development. A mitigation measure is proposed to cover any potential release of hazardous materials through the demolition of these structures. No significant hazardous materials would be stored or handled on-site associated with the operational characteristics of the Project once it is developed.

Mitigation Measure 5 – Prior to demolition of the existing residential and commercial structures on the Project site, the contractor with oversight from the City shall survey the structures to determine the presence of any hazardous substances such as asbestos or lead-based paint. If such materials are present, they will be remediated using mandatory procedures specified by the SCAQMD (Rule 4102, Asbestos Emissions from Demolition/Renovation Activities) and state air toxics agencies.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? (Less Than Significant Impact with Mitigation Incorporated)

There are a number of schools located close to the ALDI Food Market Project. Blessed Sacrament Preschool is located closest at 14146 Olive Street, and Westminster High School is located at 14325 Goldenwest Street. Two other schools near the Project site include Webber School at 14142 Hoover Street and Willmore School at 7112 Maple Street. The presence of sensitive receptors (school children) in proximity to the Project site necessitates mitigation measures. The construction of the Project will include short-term use of construction equipment that will emit emissions, and the use of construction material, such as paint, including hazardous materials. The operations of the proposed Project, however, will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Additionally, in relation to construction activities, the proper use and maintenance of equipment, along with the use of general common sense, greatly reduces the potential for contamination. A mitigation measure is presented below that addresses hazardous materials related to short-term construction activities.

Mitigation Measure 6 – During the Project the applicant shall ensure that grading and building plans include the following measures and that the measures shall be followed by the construction contractor and crew: a) the storage of hazardous materials, chemicals, fuels, and oils and fueling of construction equipment shall be a minimum of 45 meters (150 feet) from any drainage, water supply, or other water features; b) hazardous materials stored on-site shall be stored in a neat, orderly manner in appropriate containers and, if possible, under a roof or other enclosure; c) whenever possible, all of a product shall be used up before disposal of its container; d) if surplus product must be disposed of, the manufacturer's or the local and state recommended methods for disposal shall be followed; e) spills shall be contained and cleaned up immediately after discovery. Manufacturer's methods for spill cleanup of a material shall be followed as described on the Material Safety Data Sheets (MSDS) for each product.

d) Be located on a site which is included on a list of hazardous materials sites which complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? (Less Than Significant Impact)

The proposed Goldenwest Street food market building project site is not on a list of hazardous sites.[4] However, there is a site located at 7001 Westminster Boulevard that has been closed and cleared for leaking underground storage tanks (LUST). The site is a gas station. The facility has been completed for cleanup and the case is closed. Therefore, the site does not present issues to the proposed project, and impacts to this issue area are less than significant.

e) For a project 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 for people residing or working in the project area? (Less Than Significant Impact)

The project site is located on the edge of the Airport Environs Land Use Plan (AELUP) for Joint Forces Training Center Los Alamitos. However, the project is not anticipated to have any impacts associated with a public airport or the safety of people working within the airport environs since the area is basically a height restriction zone that does not impact the proposed food market building in any way. Therefore, the project has less than significant impact.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? (No Impact)

See response to Item 8.e) above. Additionally, the project does not involve any properties located within the vicinity of a private airstrip. Therefore, there are no impacts to this topical area from the project.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Impact)

The project will not result in any impacts to an adopted emergency response plan or emergency evacuation plan.

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? (No Impact)

The project is located in a developed area and is not adjacent to wildland areas. The project itself (or location) will not be a significant risk involving wildland fires.

[4] http://geotracker.swrcb.ca.gov

9. Hydrology and Water Quality

Would the project:

a) Violate any water quality standards or waste discharge requirements? (Less Than Significant Impact with Mitigation Incorporated)

The City of Westminster (and the project site) is located in the Santa Ana River Basin. The project area is under the jurisdiction of the California Regional Water Quality Control Board (RWQCB) Santa Ana Region for issues related to water quality. The Santa Ana Region of the RWQCB is nearly 3,000 square miles in size, with a population of more than 5 million people. The Santa Ana Region includes cities and municipalities in a portion of Orange County (includes Westminster), and Riverside and San Bernardino Counties. Each of the nine Regional Boards within California is required to adopt a Water Quality Control Plan, or Basin Plan. Each Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters. Specifically, the Basin Plan: 1) designates beneficial uses for surface and ground waters; 2) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy; 3) describes implementation programs to meet the objectives and protect the beneficial uses of all waters in the region; and 4) describes surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan.

There is a Drainage Area Management Plan (DAMP) which is implemented by the cities (including Westminster), County of Orange, and Orange County Flood Control District. The DAMP was prepared in compliance with specific requirements of the National Pollutant Discharge Elimination System (NPDES) storm water program. The DAMP includes a wide range of Best Management Practices (BMPs) and control techniques to further reduce the amount of pollutants entering the storm drain system.

There are two primary types of source pollution, Single-point source and Nonpoint Source pollution. Single-point source pollution is water pollutants that originate from a single-point source such as factories. Potential impacts to water quality associated with this type of project (educational facilities) are nonpoint source pollution. Nonpoint source pollution includes materials and/or chemicals (e.g., motor oils/grease, paint, pet wastes, garden chemicals, litter) that may be washed into the storm drain system from various sources. Nonpoint source pollutants are typically washed into the storm drain system by rainwater and other means from streets, parking areas, residential neighborhoods, commercial/retail centers, construction sites. Since storm drains flow directly into the ocean without treatment, potential pollution can have an impact on water quality and wildlife. The project site is currently developed lots at 13900 Goldenwest Street in the City of Westminster. The proposed project involves the construction of a one-story 17,752-square-foot food market building on the property. The proposed construction activities at the site will implement BMPs to reduce any potential impacts to water quality. Post-development activities have the potential to discharge contaminants into the storm water and urban runoff and into the municipal storm drain system of the City of Westminster.

Implementation of the project will include compliance with the adopted Drainage Area Management Plan and adoption of Best Management Practices for handling any runoff from the proposed food market or the parking area. The BMPs are construction devices, procedures and methods that are implemented to reduce (or eliminate) source pollution (runoff). Additionally, the project will disturb more than 1 acre of the property, which requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP). Therefore, potential impacts to water quality will be reduced to less than significant level.

Mitigation Measure 7 – Prior to construction activities, a Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Management Plan (WQMP) will be prepared pursuant to the requirements of the Orange County DAMP and the State Regional Water Quality Control Board.

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)? (Less Than Significant Impact)

See response to Item 9.a) above and mitigation measure. The project proposes to construct a food market building at 13900 Goldenwest Street in the City of Westminster that will be served by the local sewer and water system.

The project implementation at this site does not involve any construction activities (or long-term project operations) that would impact groundwater. The proposed use at the site is also not anticipated to have any significant impacts relative to groundwater. Therefore, it is not anticipated that the project will have any significant impact on groundwater. The project will not impact groundwater supplies or interfere with groundwater recharge.

c) Substantially alter 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? (Less Than Significant Impact)

See response to Item 9.a) above and mitigation measure. The project will not result in a significant change to the drainage pattern of property. The property currently accommodates offsite flows through the property to a storm drain catch basin on Goldenwest Street near Wyoming Avenue. The building plans propose to use the existing storm drain system in place for the property's current uses. Therefore, it is not anticipated that the project will result in any impacts to erosion or siltation on-site or off-site.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of a 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? (Less Than Significant Impact)

See response to Item 9.c) above. The project does not involve alterations to the existing and/or planned drainage system (pattern) of the project site, and does not trigger a substantial increase in the rate or amount of surface runoff. The project proposes a bio-swale improvement to the property that will accommodate filtration of any surface runoff from the site. The project does not involve the alteration of the course of a stream or a river. Therefore, the runoff is not anticipated to significantly increase in a manner that would have impacts relative flooding on or offsite. Therefore, less than significant impacts to this topical area will occur as a result of the project.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? (Less Than Significant Impact)

See responses to Items 9.a) and 9.c) above. The City of Westminster is primarily built-out and contains an existing storm water drainage system. Local drainage facilities are maintained by the City of Westminster and provide for the collection of surface storm water. Surface water is then deposited into regional drainage channels which are owned and maintained by the Orange County Flood Control District (OCFCD). The OCFCD plans its drainage facilities in order to accommodate a 100-year flood. The closest major channel (less than one-quarter mile away from

the site) to the site is the Westminster Channel (OCFCD channel). The City's General Plan identified that the City's storm drain system is operating at approximately 80% of its capacity.

The project is consistent with the capacity of the existing storm drain system in the City of Westminster and will be designed and constructed to comply with storm drain requirements. Additionally, the project proposes the addition of a vegetated swale to filter runoff and reduce pollution. The project will not provide substantial additional sources of polluted runoff since the improvements will filter runoff from the site. Therefore, impacts associated with runoff will be less than significant as a result of the proposed project.

f) Otherwise substantially degrade water quality? (Less Than Significant Impact)

See responses to Items 9.a) and 9.c) above. The project will comply with all existing requirements regarding water quality, and the project proposes no changes to the drainage of the facility. Therefore, it is not anticipated that the project will substantially degrade water quality and impact is less than significant.

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? (No Impact)

The proposed project does not include the construction of any kind of housing. Additionally, the project site is located within Zone X per the Federal Emergency Management Agency (FEMA) and on the Federal Flood Insurance Rate Map Panel No. 06059C-0119J (2009). The site is located outside the 100-year flood plain. Therefore, no impacts relative to the 100-year flood hazard will occur as a result of the proposed project.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows? (No Impact)

See responses to Items 9.a), 9.c) and 9.g) above. The project site is not located within a 100-year flood plan and therefore will not result in any potential impacts associated with a 100-year flood hazard area.

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? (No Impact)

See responses to Items 9.a), 9.c) and 9.g) above. Also, the project does not involve exposing structures or people to potential flooding hazards.

j) Inundation by seiche, tsunami, or mudflow? (No Impact)

See responses to Items 9.a) and 9.c) above. Therefore, impacts associated with inundation by seiche, tsunami, or mudflow would not be associated with the proposed project.

k) Potentially impact storm water runoff from construction activities? (Less Than Significant Impact with Mitigation Incorporated)

See response to Item 9.a) above and mitigation measure. The project will utilize Best Management Practices (BMPs) and will comply with the Drainage Area Management Plan (DAMP). The DAMP is implemented by the cities (including Westminster), the County of Orange, and the Orange County Flood Control District. The DAMP was prepared in compliance with specific requirements of the National Pollutant Discharge Elimination System (NPDES) storm water program to reduce storm water pollution. The DAMP includes a wide range of BMPs and control techniques to further reduce the amount of pollutants entering the storm drain system. Therefore, potential impacts to storm water runoff from construction activity will be less than significant.

l) Potentially impact storm water runoff from Post-construction activities? (Less Than Significant Impact with Mitigation Incorporated)

See response to Item 9.a) above and mitigation measure. The project will construct a new food market building on the project site at 13900 Goldenwest Street in the City of Westminster. The project will not fundamentally change the existing storm water runoff from the facility. Therefore, with mitigation there is a less than significant impact from post-construction activities.

m) Result in a potential for discharge of storm water pollutants (e.g., oil, grease, pesticides, nutrients, sediments, pathogens, etc.) from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (Including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas? (Less Than Significant Impact)

The project is a food market building at 13900 Goldenwest Street. The site will include vehicle parking but will not include equipment fueling and storage, waste handling, hazardous materials handling or storage and delivery areas. Infiltration will be utilized as a means of treating runoff and landscape watering from the project. The project requires a Storm Water Pollution Protection Plan (SWPPP) and a Water Quality Management Plan (WQMP) for the construction activities of the project. Therefore, there is less than significant impact in this area.

n) Result in the potential for discharge of storm water to affect the beneficial uses of the receiving waters? (No Impact)

The project will not result in the potential for discharge of storm water that would affect the beneficial uses of the receiving waters. Therefore, there is no impact in this area.

o) Create the potential for significant changes in the flow velocity for volume of storm water runoff to cause environmental harm? (No Impact)

There will be no increase in the flow velocity of storm water runoff as a result of this project. The project is construction of a new food market building with site improvements designed to filter the storm water runoff. Therefore, there will be no impact in this issue area.

p) Create significant increases in erosion of the project site or surrounding areas? (No Impact)

Storm drain facilities are already in place and designed to handle storm water runoff from the facility. Therefore, this project will not increase erosion of the project site or surrounding areas.

q) Would the project include new or retrofitted stormwater treatment control Best Management Practices (BMPs), (e.g., water quality treatment basin, constructed treatment wetlands), the operation of which could result in significant environment effects? (Less Than Significant Impact)

The project involves the construction of a new food market. The project proposes infiltration to provide water quality treatment. The project will also include best management practices included in the DAMP for Orange County. Therefore, impacts will be less than significant.

r) Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list? If so, could the project result in an increase in any pollutant for which the water body is already impaired? (Less Than Significant Impact)

The project includes BMPs designed to protect storm water runoff during construction activities and will not result in any increase in pollutants to any water body already impaired. Therefore, there is less than significant impact.

10. Land Use and Planning

Would the project:

a) Physically divide an established community? (No Impact)

The project site is a series of parcels that have been used for residential and commercial purposes. Those uses will be demolished and parcels consolidated to create the project site. The project proposes construction of a new 17,752-square-foot food market building on the site. The project will not physically divide an established community. Therefore, no significant impacts relative to this topic will result due to the implementation of the project.

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? (Less Than Significant Impact)

The property is largely zoned C2-PD, which is General Business with a Planned Development Overlay. The General Plan Land Use Designation is Commercial General. The proposed use of a food market is an allowable use under the City Zoning Code and the City of Westminster General Plan. The project meets parking requirements established for the size and scope of the project.

The proposed improvements are compatible with surrounding land uses. The project site is not located within a Specific Plan area or a Local Coastal Program. The project is consistent with the City's Zoning designation. Therefore, it is anticipated that the new food market will result in less than significant impacts relative to land use.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan? (No Impact)

See responses to Items 10.a) and 10.b) above. The project site is located in a developed area and the site has already been graded. The site is not subject to any applicable habitat conservation plan or natural community conservation plan (NCCP). Therefore, no impacts relative to this topic will occur as a result of implementation of the project.

11. Mineral Resources

Would the project:

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? (No Impact)

The project site is not located within a known and/or designated mineral resources area. Therefore, no significant decrease of natural resources is anticipated as a result of the project.

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? (No Impact)

See response to Item 11.a) above. The City's General Plan does not delineate any locally important mineral resource in the project area. Therefore, the proposed project will not result in any significant impacts to a locally important mineral resource.

12. Noise

Would the project result in:

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? (Less Than Significant With Mitigation Incorporated)

A noise assessment of the project was completed by Giroux and Associates on July 25, 2016 to determine noise impacts from the proposed project. The noise study is included as Appendix C to this environmental document. The project itself will not generate noise levels in excess of standards established in the General Plan. The existing noise environment of the site includes noise associated with adjacent and nearby streets, particularly Goldenwest Street and Westminster Boulevard.

City of Westminster Noise Standards

The Noise Element of the City of Westminster General Plan establishes noise quality standards for land use categories based on the State of California Office of Noise Control land use compatibility recommendations. Community noise exposures are recommended as normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable for various classes of land use sensitivity. As shown in Table 12, the City of Westminster guidelines recommend an exterior noise exposure of up to 65 dB CNEL as "normally acceptable" for siting office and commercial. However, CNEL-based standards generally apply to usable exterior outdoor space. All uses at the proposed development are anticipated to be interior activities.

Table 12 – City of Westminster Land Use Compatibility Guidelines for Exterior Community Noise

	Community Noise Exposure CNEL (dB)			
Land Use	**Normally Acceptable**	**Conditionally Acceptable**	**Normally Unacceptable**	**Clearly Unacceptable**
Residential Land Uses	50-60	60-65	65-75	Above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-70	70-80	Above 80
Transient Lodging: Motels, Hotels	50-60	60-75	75-80	Above 80
Auditoriums, Concert Halls, Amphitheaters	-	50-70	-	Above 70
Sports Arena, Outdoor Spectator Sports	50-60	50-75	-	Above 75
Playgrounds, Neighborhood Parks	50-70	60-70	70-75	Above 70
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	-	70-80	Above 80
Office Buildings, Business and Professional Commercial	50-65	-	65-77	Above 75
Industrial, Manufacturing, Utilities, Agriculture	50-75	-	70-80	Above 75

Normally Acceptable: Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Interior exposures of commercial uses such as office or commercial use are controlled through adequate structural attenuation. Structural noise reduction in buildings with limited window space is typically 30 to 35 dB. The interior noise standard for commercial uses is typically 50 dB CNEL. With only moderate structural noise attenuation features, building exterior levels of 80 dB CNEL could be accommodated while still achieving an acceptable interior level.

The Noise Element in the City's municipal code also limits the noise level generated on a property that may cross to a neighboring residential property. The City's noise ordinance limits are stated in terms of a 30-minute limit with allowable deviations from this 50th percentile standard. This noise level describes the noise that is exceeded during a certain percentage of the measurement period. For example, the L_{50} is the level exceeded 50% of the measurement period of 30 minutes in an hour. The larger the deviation, the shorter the allowed duration up to a never-to-exceed 20 dB increase above the 50th percentile standard.

Ordinance limits generally apply to "stationary" sources such as mechanical equipment, or vehicles operating on private property. Any stationary equipment at the proposed project (such as HVAC equipment) must meet the City of Westminster Residential Noise Standards at the nearest residential property line, as shown in Table 13 below. The applicable requirement is a function of the time of day and appropriate zone. The residences closest to the project site are required to meet an L_{50} in Zone 1 and are of 55 dB day time and 50 dB night time. The nearest residence is located north and east of the project site.

Section 8.28.060E of the City's Noise Ordinance also exempts noise generated by construction from Noise Ordinance standards if construction is restricted to the hours of 7:00 a.m. and 8:00 p.m. on weekdays and Saturdays. Construction is not permitted on Sundays or federal holidays.

Table 13 – City of Westminster Noise Ordinance Standards

Exterior Noise Standards		
Noise Zone	**Noise Level**	**Time Period**
1	55 dB(A) 55 dB(A)	7:00 a.m.-10:00 p.m. 10:00 p.m.- 7:00 a.m.
2	60 dB(A) 55 dB(A)	7:00 a.m.-10:00 p.m. 10:00 p.m.- 7:00 a.m.

It is unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise, on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, to exceed:

1. The noise standard for a cumulative period of more than thirty minutes in any hour; or
2. The noise standard plus 5dB(A) for a cumulative period of more than fifteen minutes in any hour; or
3. The noise standard plus 10dB(A) for a cumulative period of more than five minutes in any hour; or
4. The noise standard plus 15dB(A) for a cumulative period of more than one minute in any hour; or
5. The noise standard plus 20dB(A) for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

Baseline Noise Levels

Noise measurements were made to document existing baseline levels in the area. These help to serve as a basis to determine noise exposure from ambient noise activities upon the proposed project. On-site short-term (15-minutes per site) noise measurements were conducted on June 30, 2016. The measurement locations are shown in Exhibit 9, and the monitoring results are summarized below.

Table 14 – Measured Noise Levels (dBA)

Time	Leq	Lmax	Lmin	L10	L33	L50	L90
noon-12:15	61	70	50	64	61	58	52

Monitoring experience shows that 24-hour weighted CNEL's are approximately equal to mid-day Leq plus 2 to 3 dB (Caltrans Technical Noise Supplement, 2009). This would equate to an existing CNEL of 63 to 64 dB near the closest residences.

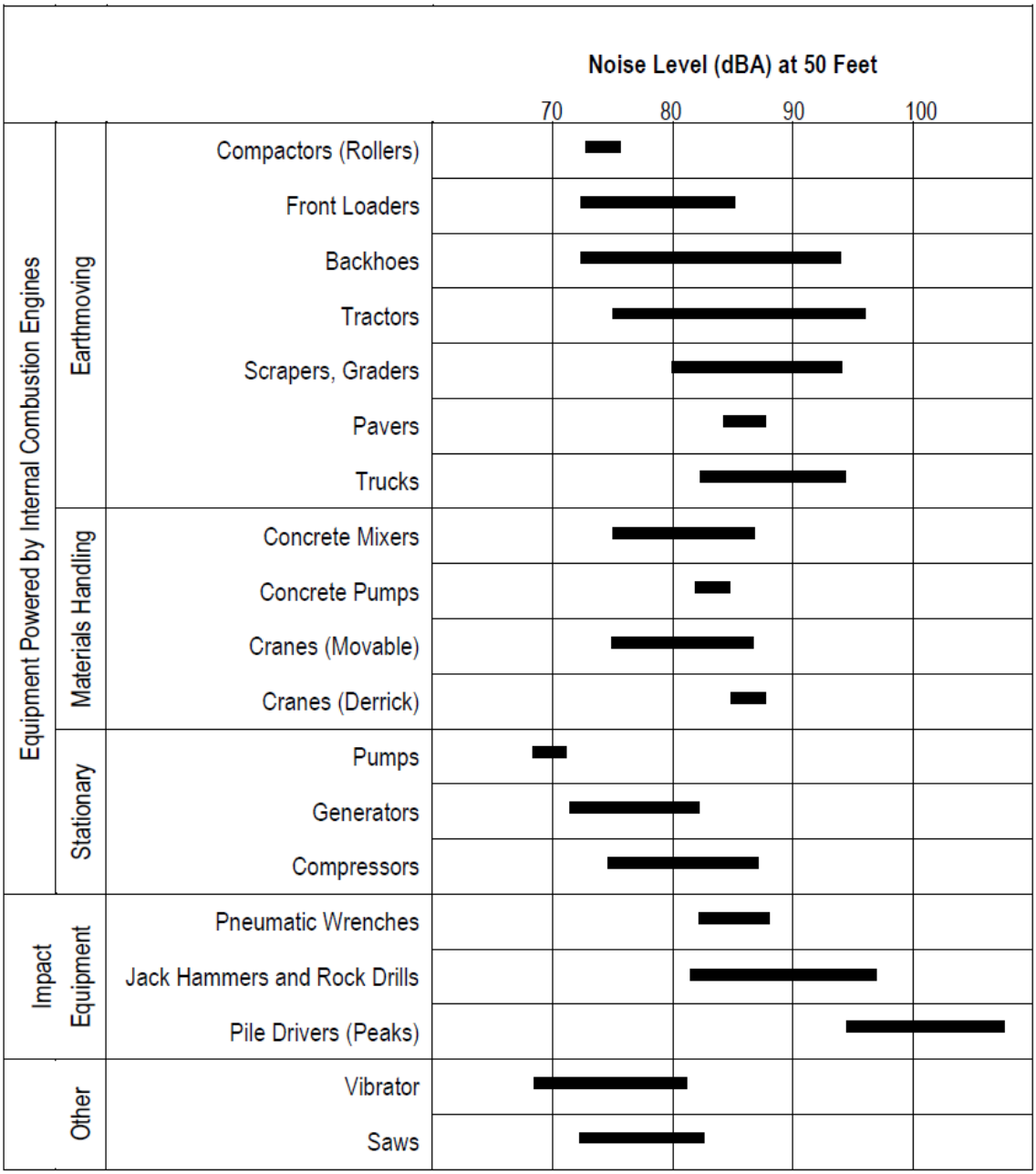
Construction Noise Impacts

The proposed project would entail construction of a 17,752 square foot commercial retail structure. The project site is situated east of Goldenwest Street and south of Wyoming Street in the City of Westminster. Just north of the site, on the southwest corner of the Pine Street/Wyoming Street intersection is an existing two-story residence with a shared property line. Other residential uses are to the east, across Pine Street and are primarily single stories.

Temporary construction noise impacts will vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated initially by demolition of existing structures and large earth-moving sources, then by foundation and parking lot construction, and finally for finish construction. The demolition and earth-moving sources are the noisiest, with equipment noise typically ranging from 75 to 90 dB at 50 feet from the source.

The new building will be built on a level site. Although there will be demolition of existing buildings, no major grading will be performed. Utility connections and foundation preparation will require use of equipment such as backhoes, trenchers and dozers. Peak noise levels from such equipment are seen in Exhibit 11 to be 85 dB at 50 feet. The single story residence just north of the site which could be closer than 50 feet during parking lot paving. Insertion of a sound barrier between the construction equipment and receiver can be used to mitigate noise. It is recommended that an 8-foot block wall be constructed along the northern shared residential property line to minimize construction noise and later operational noise impacts. At the closest homes, exterior equipment noise will be 75 to 85 dB. Such a level could be disturbing if windows facing the construction activity were open. Construction of the recommended 8-foot block wall to shield the northernmost residence will assist in minimizing noise impacts and could reduce noise by up to 8 dB.

Exhibit 10 – Noise Meter Locations



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

Exhibit 11 – Typical Construction Equipment Noise Generation Levels

It would also require temporary window closure to minimize disturbance for quiet activities. However, many people are away from home during the hours from 7:00 a.m. to 3:00 p.m. when temporary construction disturbance would be greatest.

Construction activities are exempt from numerical noise regulations if they occur during the hours allowed by the Municipal Code. However, as noted above, heavy equipment noise may be a nuisance even if generated during allowable hours. Compliance with these hours (7:00 a.m. to 8:00 p.m. Monday-Saturday) will maintain construction activity noise impacts at less-than-significant levels.

Construction Activity Vibration

Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of ground-borne vibration include discernible movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Within the "soft" sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Ground borne vibration is almost never annoying to people who are outdoors (FTA 2006). Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

The vibration descriptor commonly used to determine structural damage is the peak particle velocity (ppv) which is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in in/sec. The range of such vibration is shown in Table 15.

Table 15 – Human Response To Transient Vibration

Average Human Response	PPV (inches per second)
Severe	2.000
Strongly perceptible	0.900
Distinctly perceptible	0.240
Barely perceptible	0.035

Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2013

Over the years, numerous vibration criteria and standards have been suggested by researchers, organizations, and governmental agencies. There are no Caltrans or Federal Highway Administration standards for vibration.

According to Caltrans, the threshold for structural vibration damage for modern structures is 0.5 in/sec for intermittent sources, which include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. The American Association of State Highway and Transportation Officials (AASHTO) (1990) identifies maximum vibration levels for preventing damage to structures from intermittent construction or maintenance activities for residential buildings in good repair with gypsum board walls to be 0.4 to 0.5 in/sec. The damage threshold criterion of 0.2 in/sec is appropriate for fragile buildings. For the purpose of this analysis because area residences can be older, the 0.2 in/sec damage threshold for older fragile buildings is used as the evaluation criteria. Below this level there is virtually no risk of building damage. Table 16 shows the estimated vibration levels generated by construction equipment.

Table 16 – Estimated Vibration Levels During Project Construction

Equipment	PPV at 25 ft (in/sec)	PPV at 40 ft (in/sec)	PPV at 50 ft (in/sec)	PPV at 100 ft (in/sec)	PPV at 150 ft (in/sec)
Large Bulldozer	0.089	0.044	0.031	0.011	0.006
Loaded trucks	0.076	0.038	0.027	0.010	0.005
Jackhammer	0.035	0.017	0.012	0.004	0.002
Small Bulldozer	0.003	0.001	0.001	<0.001	<0.001

Source: FHWA Transit Noise and Vibration Impact Assessment

The calculation to determine PPV at a given distance is:

PPVdistance = PPVref*(25/D)^1.5

Where:

PPVdistance = the peak particle velocity in inches/second of the equipment adjusted for distance,

PPVref = the reference vibration level in inches/second at 25 feet, and

D = the distance from the equipment to the receiver.

The closest home to the proposed project has approximately 40-foot separation to the nearest structural facade. As seen on Table 4, at this setback the vibration levels are well below levels that could create structural damage in fragile buildings (i.e., 0.2 in/sec). Operation of jackhammers as a typical source of construction vibration would generate vibration levels below the threshold for possible cosmetic damage level. All other homes across Pine Street have a much larger separation distance and therefore even lower resultant vibration impact. Vibration would be less than the recommended acceptability threshold of 0.2 inches per second.

Construction activity vibration impacts are judged as less-than-significant.

Vehicular Noise Impacts

Long-term noise concerns from the development of retail commercial uses at the project site center primarily on mobile source emissions on project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the Leq noise level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, roadway speeds, or noise barriers.

The table below summarizes the calculated 24-hour CNEL level at 50 feet from the roadway centerline along 16-project area roadway segments. Existing (2016) and future (2017) conditions, with and without project were evaluated. The noise analysis utilized traffic data obtained from the traffic analysis prepared for this project.

Table 17 presents the calculated project contribution to traffic noise. The project would generate about 1,800 new daily trips, though only 1,104 of those trips are considered "new" as compared to existing site use and credit reduction for pass-by trips. The area is primarily built out, and traffic from small infill projects are diluted along already heavily traveled roadways. The largest project related traffic noise increase occurs on Wyoming Street, east of Goldenwest. This impact is +0.9 dB CNEL at 50 feet from roadway centerline. Because background traffic on Wyoming Street is low, even a small increase in traffic can have a greater impact than on other segments with greater background traffic volumes.

Most roadway segments are not expected to experience any perceivable noise impact (< +0.1 dB). Because all project-related traffic noise impacts are less than the +3.0 dB CNEL significance threshold, traffic noise attributed to the project is considered to be individually less-than-significant.

Table 17 – Near Term Traffic Noise Impact Analysis

Road Segment		Existing No Project	Existing W Project	Future No Project	Future W Project
		(CNEL in dB at 50 feet from Centerline)			
Goldenwest/	N of Trask	71.0	71.1	71.1	71.2
	S of Trask	71.1	71.2	71.3	71.3
	N of Wyoming	71.4	71.5	71.5	71.5
	Wyoming-Westminster	71.1	71.2	71.2	71.3
	S of Westminster	71.2	71.2	71.4	71.4
Westminster/	W of Edwards	70.3	70.3	70.4	70.4
	E of Edwards	70.0	70.0	70.1	70.1
	W of Goldenwest	69.9	70.0	70.0	70.1
	Goldenwest-Hoover	69.5	69.6	69.7	69.7
	E of Hoover	69.5	69.5	69.7	69.7
Wyoming/	W of Goldenwest	64.1	64.1	64.1	64.1
	E of Goldenwest	60.3	61.2	60.3	61.2
Edwards/	N of Westminster	68.2	68.2	68.2	68.3
	S of Westminster	69.4	69.4	69.4	69.4
Hoover/	N of Westminster	67.7	67.7	67.8	67.8
	S of Westminster	67.2	67.2	67.3	67.4

Table 18 – Project Only Impacts

Road Segment		Project Only Existing	Project Only Future	Cumulative Impacts*
		(CNEL in dB at 50 feet from Centerline)		
Goldenwest/	N Trask	0.0	0.0	0.1
	S of Trask	0.0	0.0	0.2
	N of Wyoming	0.0	0.0	0.1
	Wyoming-Westminster	0.1	0.1	0.2
	S of Westminster	0.0	0.0	0.2
Westminster/	W of Edwards	0.0	0.0	0.1
	E of Edwards	0.0	0.0	0.1
	W of Goldenwest	0.0	0.0	0.1
	Goldenwest-Hoover	0.0	0.0	0.2
	E of Hoover	0.0	0.0	0.2
Wyoming/	W of Goldenwest	0.0	0.0	0.0
	E of Goldenwest	0.9	0.9	0.9
Edwards/	N of Westminster	0.0	0.0	0.1
	S of Westminster	0.0	0.0	0.1
Hoover/	N of Westminster	0.0	0.0	0.1
	S of Westminster	0.0	0.0	0.2

Table 19 – Future With Project-Existing No/Project

Road Segment		Project Only Existing	Project Only 2016	Cumulative Impacts
		(CNEL in dB at 50 feet from Centerline)		
Beach Boulevard/	N of 13th St	0.0	0.0	0.1
	13th -11th	0.0	0.0	0.1
	11th -10th	0.0	0.0	0.1
	10th -Hazard	0.0	0.0	0.1
	S of Hazard	0.0	0.0	0.1
13th Street/	W of Beach	0.0	0.0	0.0
	E of Beach	0.0	0.0	0.1
11th Street/	W of Beach	0.0	0.0	0.0
	E of Beach	0.0	0.0	0.0
10th Street/	W of Beach	0.0	0.0	0.0
Hazard Avenue/	W of Beach	0.0	0.0	0.1
	E of Beach	0.0	0.0	0.1

Cumulative impacts are defined as the difference between "future plus project" noise levels and "existing no project" traffic noise levels. As shown in Table 4, the maximum cumulative noise increase is +0.1 dB CNEL at 50 feet from roadway centerline, also along Wyoming Street east of Goldenwest. Therefore, cumulative traffic noise impacts are also considered to be less-than-significant.

On-Site Noise Generation

Operation of the ALDI Food Market project will generate a variety of potential noise sources. Various operations of the proposed project would lead to the introduction of new mobile and stationary sources of noise. On-site vehicular traffic and mechanical ventilation systems (HVAC) are the primary sources of noise. The potential noise impacts anticipated to occur as a result of the proposed project are identified and described below.

- **On Site Vehicular Noise** – Noise generated from customers' vehicles entering or leaving the site was evaluated. Parking lots are sited west of the proposed structure along Goldenwest Street or to the south, along the Pine Street frontage. Parking lots are not immediately adjacent to any sensitive use. The most desirable parking will be closest to the entrance at the southwest of the building. This would mean that unless, extremely crowded, parking will be well away from any sensitive use.

  Project access is provided via Wyoming Street, Westminster Boulevard, and Goldenwest Street. According to the project traffic report, the peak hour traffic would occur in the afternoon and could generate 112 new trips. This represents vehicular movements entering and leaving the site. As a worst case it was assumed that 50% of peak hour traffic would use a single drive aisle. The associated noise level would be 47 dB Leq at 50 feet. This is less than the Westminster noise standard of 55 dB and is below the noise baseline such that people are unlikely to be aware that cars are entering or leaving the lot.

- **Delivery Trucks –** Deliveries will be made via the loading dock at the north of the building. In addition to loading dock noise, truck travel to and from the loading dock would occur along the shared residential property line to the north and is also a potential noise source.

It is recommended that truck deliveries be restricted to daytime hours with one exception so as not to create a noise nuisance for the adjacent residential uses. The daytime noise standard is 55 dB L_{50}. Although it is unlikely that heavy duty trucks will be utilized for deliveries to the proposed small food market, heavy vehicles were evaluated as a worst case condition. It is anticipated that most deliveries will be gasoline powered box car vehicles or medium duty trucks. Postal, UPS, or FedEx type vans were not evaluated, because they generate minimal noise. During loading and unloading of the truck the engine can only idle for 5 minutes in compliance with state air quality requirements.

The location of the loading dock is such that trucks would have to back up to enter and pull forward to leave. Although the beeping warning noise back up alarm can be annoying, it occurs for a very short time and would not exceed any noise standards. However, the recommended 8-foot noise wall along the shared property line would assist in minimizing any nuisance noise.

Modern loading docks for trucks include a foam seal and enhanced bumpers on the deck leveler to reduce dock mating noise. The rubber gasket provides a tight connection between the truck and the building. All unloading can be done directly into the building, and the loading dock is below ground level. In addition, most trucks will be smaller gas-powered vehicles. As the loading dock is on the northern façade of the market, a small wing wall surrounding the dock to shield the residence to the north would ensure that noise levels would remain low.

One heavy duty truck has a noise signature of about 50 dB at 50 feet at a 25 mph travel speed. One medium truck has a noise signature of less than 42 dB at 50 feet for the same travel speed. As a maximum activity condition it was assumed that one heavy duty truck and one medium duty trucks were to access the site during the same hour. The noise signature of these two vehicles would be approximately 51 dB. This is less than the daytime noise standard and provides a worst case operational noise scenario.

Although the recommended 8-foot noise wall along the shared residential property line to the north will reduce loading dock noise at the residence, the following restriction on nocturnal noise deliveries is recommended to ensure that the residential uses closest to the site are not adversely impacted.

- Medium Box Truck and Semi-Truck deliveries may only occur once per day during nighttime hours of 10:00 p.m. and 7:00 a.m.

- **HVAC Noise** – Mechanical equipment typically includes heating, ventilating, air-conditioning, and refrigerating equipment. Noise generated by rooftop-mounted mechanical equipment varies significantly depending upon equipment type and size. However, based on measurements at other similar commercial centers and literature from Trane Industries, noise levels of 54 dBA at 50 feet from external mechanical systems can be anticipated for the project at buildings in proximity to the adjacent residences. Parapet walls are typically required to shield HVAC equipment both visually and acoustically. An additional -5 dBA is taken for the attenuation from parapet walls.

  The closest proposed building to the existing residence is to the north, and has approximately a 50-foot distance separation to the nearest building façade and about 60 feet to the rooftop equipment. HVAC equipment noise at this residence is

expected to be 54 dBA without shielding and 49 dBA with shielding. While this noise level is not expected to exceed the City's nighttime maximum noise level of 50 dB, the applicant will be required to submit engineering and acoustical specifications for project mechanical equipment for review prior to the issuance of building permits which demonstrates that the equipment design combined with distance separation or screen walls will not exceed the noise standards for any adjacent sensitive use.

Mitigation Measure 8 – The general contractor shall be responsible for limiting construction activities to 7:00 a.m. to 8:00 p.m. Monday through Saturday. No noise-generating construction activities shall occur on Sundays and holidays. Prior to issuance of any Grading or Building Permit, the Contractor shall provide evidence that a construction staff member will be designated as a Noise Disturbance Coordinator and will be present on-site during construction activities. The Noise Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall notify the City within 24 hours of the complaint, and determine the cause of the noise complaint (e.g., starting too early, bad muffler) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the Planning Manager. All notices that are sent to residential units immediately surrounding the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator.

Mitigation Measure 9 – All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices. During construction, stationary construction equipment such as air compressors shall be placed such that emitted noise is directed away from sensitive noise receivers as much as possible. The applicant and the contractor shall also provide documentation to the City demonstrating how they will assure compliance with each of the construction-related mitigation measures.

Mitigation Measure 10 - The City and the general contractor shall ensure that all mechanical equipment such as heating, ventilation, and air conditioning will be required to comply with building codes and the City of Westminster noise ordinance. The building manager will also assure that Medium Box Truck and Semi-Truck deliveries may only occur once per day during nighttime hours of 10:00 p.m. and 7:00 a.m. In addition to the delivery time restriction, an 8-foot sound wall at the shared property line of the residence to the north will provide about 8 dB of noise attenuation and reduce nuisance exposure. Although the home is two stories, the wall will cover noise from loading dock activities and re-direct it toward the market building, thereby providing protection to the entire structure.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels? (Less Than Significant Impact).

See 12.a) above and proposed mitigation measures. With mitigation, exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels will be reduced to less than significant levels.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? (Less Than Significant Impact)

See response to Item 12.a) above. The project itself will not result in any substantial permanent increase in ambient noise levels above levels existing without the project. The overall noise is not significant nor does it exceed noise requirements. Mitigation relative to the noise levels associated with construction activities has been presented in responses to Items 12.a above.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? (Less Than Significant Impact)

There will be short-term increases in ambient noise levels above levels existing without the project due to construction activities at the site. However, these temporary increases can be mitigated by limiting the hours of construction in accordance with City regulations. Mitigation is presented in Items 12.a).

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? (No Impact)

The project is located within the airport environs land use plan for Joint Forces Training Facility Los Alamitos. However, there will be no impact and no people working at the project site will be exposed to excessive noise levels from aircraft.

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? (No Impact)

The project is not located within the vicinity of a private airstrip nor would the project expose people to excessive noise levels. Therefore, there are no project impacts associated with a private airstrip.

13. Population and Housing

Would the project:

a) Induce substantial 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)? (No Impact)

The project is a 17,752-square-foot food market that will not induce substantial population growth within the area. Several small residential and commercial structures will be removed from the existing project site to accommodate the new food market. The new building will be constructed toward the rear of the property facing Goldenwest Street.

The property is located in an area that is developed with residential, commercial and roads surrounding the 1.58-acre site. Infrastructure exists that serves the site. No new or unanticipated significant infrastructure will be required for the project. The project is designed to serve the existing area population. Therefore, due to the limited size of the project it is not anticipated that the project will induce substantial population growth in the area, either directly or indirectly.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? (Less Than Significant Impact)

The project proposes a food market building. The site is now developed with existing small housing or commercial uses. The project does not displace existing occupied housing. Therefore, the project will not displace substantial numbers of existing housing.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? (Less Than Significant Impact)

See response to Item 13.b) above. The project will not result in the displacement of substantial numbers of people and/or housing. The project will not displace substantial numbers of people, necessitating the construction of replacement housing.

14. Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government 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 public services: Utilities and service systems are already servicing the City of Westminster. It is not anticipated that the project would result in substantial adverse impacts to public services since it is located in an area already being serviced by utility and service.

i. Fire protection? (Less Than Significant Impact with Mitigation Incorporated)

The Orange County Fire Authority provides fire protection and emergency response services for the City. Response times to the site are dependent on various factors. Response time is generally 5 minutes or less. Emergency calls receive the quickest response times with alarm calls and non-emergency calls having longer response times respectively. The Fire Authority standard is a response time of 7 minutes 20 seconds, 80% of the time. The availability of personnel and extenuating circumstances may further affect response times. The closest fire station to the property is located at 7351 Westminster Boulevard in Westminster, about one-half mile from the project site. The proposed project will not result in any potential significant increase in the number of calls for service to the area beyond that anticipated per the buildout of the City's General Plan. The project development will be subject to compliance with City and OCFA requirement. Therefore, it is not anticipated that the proposed project will result in any significant impacts relative to fire protection services and/or facilities with implementation of the following mitigation measure ensuring compliance with fire protection requirements.

Mitigation Measure 11 – Prior to the start of building construction activities, the general contractor shall submit project plans for review and approval by the Fire Chief. The plans shall demonstrate that the project meets the requirements of the OCFA, Uniform Building Code (UBC) and Titles 19 and 24 of the California Administrative Code.

---

ii. Police protection? (Less Than Significant Impact)

The City of Westminster Police Department provides law enforcement services to the project area. The project involves construction of a new retail/office building to serve the area. The improvements are not anticipated to result in an increase in calls for serve beyond that anticipated in the City of Westminster General Plan. Therefore, impacts are projected to be less than significant.

iii. Schools? (No Impact)

The project involves construction of a food market that would not include facilities that would increase the student population or impact school facilities. Therefore, the project is not anticipated to have an impact on schools.

iv. Parks? (No Impact)

The project involves construction of a new food market building at 13900 Goldenwest Street. The new building will not necessitate new park requirements or impact park facilities in the City. Therefore, the project will have no impact on park facilities.

v. Other public facilities? (No Impact)

See above responses under Public Services. Due to the type of project, it is not anticipated that the project will have any significant impact on public services and/or facilities.

15. Recreation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? (No Impact)

The proposed project consists of construction of a new food market building at 13900 Goldenwest Street in Westminster. It is not anticipated that the project will have any impacts on recreation beyond that already projected for buildout of the City per the General Plan. Additionally, the food market would not be expected to increase usage of existing neighborhood and regional parks. Therefore, no impacts to park facilities will occur as a result of this project.

b) Does the project include recreational facilities or require the construction of or expansion of recreational facilities which might have an adverse physical effect on the environment? (No Impact)

See response to Item 15.a) above. It is not anticipated that the project will result in any impacts to recreational facilities.

16. Transportation/Traffic

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? (Less Than Significant Impact with Mitigation Incorporated)

A Traffic Impact Study dated June 6, 2016 was prepared by KOA Corporation for the ALDI Food Market proposed at 13900 Goldenwest Street in the City of Westminster. The Study is included as Appendix D of this environmental document. The project is designed to provide 17,752 square feet of commercial space for the food market. The project will generate 1,104 daily vehicle trips, 59 of which will occur during the morning peak hours (7:00 a.m. to 9:00 a.m.) and 112 of which will occur during the evening peak hours (4:00 p.m. to 6:00 p.m.).

The traffic study focused on five intersections, including Goldenwest Street and Trask Avenue, Wyoming Street, and Westminster Avenue; and Westminster Avenue and Edwards Street and Hoover Street. All study intersections are signalized. Wyoming Street and Westminster Avenue run east-west while Goldenwest Street, Edwards Street and Hoover Street run north-south. All intersections were analyzed with the Intersection Capacity Utilization (ICU) method. The ICU method is presented as a capacity ratio in decimal form.

Table 20 shows the existing intersection level of service for each intersection. All intersections currently operate at an acceptable level of service.

Table 20 – Existing Intersection Levels of Service

Intersection	Traffic Control[4]	Intersection Approach Lanes[1]												Peak Hour Delay – LOS[2]		Peak Hour V/C- LOS[3]	
		Northbound			Southbound			Eastbound			Westbound						
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening	Morning	Evening
Beach Blvd. (NS) at																	
13th St. (EW) - #3	TS	1	3.5	0.5	1	3.5	0.5	1	1.5	0.5	1	1.5	0.5	7.9-A	11.6-B	0.587-A	0.638-B
11th St. (EW - #4	CSS	1	3.5	0.5	1	3.5	0.5	0	1	0	0	1	0	99.9-F[5]	99.9-F	0.540-A	0.514-A
10th St. (EW) = #6	CSS	0	4	0	0	3.5	0.5	0	0	1	0	0	0	16.2-C	14.3-B	0.521-A	0.498-A
Hazard Ave. (EW) - #7	TS	1	3.5	0.5	1	4	d	1	2	1	1	1.15	0.5	23.4-C	21.0-C	0.711-C	0.695-B

1 When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane
2 Delay and level of service have been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service are shown for the individual movement (or movements sharing a single lane) are shown.
3 Level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008).
4 TS = Traffic Signal; CSS = Cross Street Stop
5 99.9-F = Delay High, Intersection Unstable, Level of Service F

Table 21 shows project trip generation rates from the proposed food market at 13900 Goldenwest Street. The table demonstrates the source of 1,104 daily vehicle trips generated by the project. The calculations also include credit for the existing uses on the property that will be abated by the project. The table also splits the trips into morning and evening and inbound and outbound.

Table 21 – Project Trip Generation

Land Use	Quantity	Peak Hour						Daily Trips
		Inbound Trips			Evening Trips			
		Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates								
Commercial Retail		0.60	0.36	0.96	1.78	1.93	3.71	42.70
Office		1.37	0.19	1.56	0.25	1.24	1.49	11.03
Trips Generated								
Commercial Retail	11,712	7	4	11	21	23	44	500
Office	11,550	16	2	18	3	14	17	127
Total		23	6	29	24	37	61	627

Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 710 and 820.

Table 22 shows future plus project intersection levels of service. Again, utilizing the intersection capacity utilization method, the analysis showed all intersections impacted by the project operate at an acceptable level of service.

Table 22 – Opening Year (2016) with Project Intersection Levels of Service

Intersection	Traffic Control[4]	Intersection Approach Lanes[1]												Peak Hour Delay – LOS[2]		Peak Hour V/C- LOS[3]	
		Northbound			Southbound			Eastbound			Westbound						
		L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening	Morning	Evening
Project Access (NS) at																	
11th St. (EW) - #1	**CSS**	0	***1***	0	0	0	0	0	0.	0.5	0.5	0.5	0	9.1-A	9.3-A	0.0074-A	0.096-A
10th St. (EW - #2	**CSS**	0	0	0	0	***1***	0	0.5	0.5	0	0	0.5	0.5	9.1-A	9.1-A	0.063-A	0.060-A
Beach Blvd. (NS) at																	
13th St. (EW) - #3	TS	1	3.5	0.5	1	3.5	0.5	1	1.5	0.5	1	1.5	0.5	8.1-A	11.9-B	0.599-A	0.652-B
11th St. (EW - #4	CSS	1	3.5	0.5	1	3.5	0.5	0	1	0	0	1	0	99.9-F[5]	99.9-F	0.550-A	0.531-A
Project Access (EW) - #4	**CSS**	0	4	0	0	3.5	0.5	0	0	***1***	0	0	0	15.9-C	14.5-B	0.519-A	0.509-A
10th St. (EW) - #6	CSS	0	4	0	0	3.5	0.5	0	0	1	0	0	0	16.6-C	14.6-B	0.532-A	0.511-A
Hazard Ave. (EW) - #7	TS	1	3.5	0.5	1	4	d	1	2	1	1	1.15	0.5	24.1-C	21.9-C	0.726-C	0.715-B

1 When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane
2 Delay and level of service have been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service are shown for the individual movement (or movements sharing a single lane) are shown.
3 Level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008).
4 TS = Traffic Signal; CSS = Cross Street Stop
5 99.9-F = Delay High, Intersection Unstable, Level of Service F

The project will increase traffic in the area from the food market, but it is not expected to conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system under the intersection capacity utilization method. The traffic study does not recommend mitigation measures because the project traffic does not meet impact thresholds designed to trigger mitigation.

Therefore, less than significant impacts are anticipated from this project affecting the circulation system or any modes of transportation.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? (Less Than Significant Impact)

See response to Item 16.a) above. None of the streets or intersections evaluated for the project are on the Orange County Congestion Management Program Road Network. Therefore, the project will not conflict with an applicable congestion management program (CMP). Therefore, less than significant impacts would result due to the implementation of the project.

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? (No Impact)

See response to Item 16.a) above for analysis. Additionally, the Project does not have any impact on existing and/or planned air traffic (or safety risks) because it is under the height limit restriction imposed by its proximity to Los Alamitos Joint Forces Training Facility. Therefore, there are no impacts that would trigger a change in air traffic patterns.

d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? (No Impact)

See response to Item 16.a) above. The project does not propose any design features relative to curves, intersections, or incompatible uses.

e) Result in inadequate emergency access? (No Impact)

See response to Item 16.a) above. The project does not propose to change the existing emergency access. The project will be required to meet emergency access design requirements

of the Orange County Fire Authority (OCFA). Therefore, no significant impacts regarding emergency access are anticipated as a result of the project.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? (No Impact)

See response to Item 16.a) above. The proposed project 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.

The Orange County Transportation Authority (OCTA) provides public transportation services in Orange County, including Westminster. Bus routes operate along Goldenwest Street (OCTA Bus Route 25) and Westminster Avenue (Route 60). The project is not expected to negatively impact any current facility, service or service expansion plans for the project area and/or site. Therefore, the project will not conflict with adopted policies, plans, or programs supporting alternative transportation.

17. Utilities and Service Systems

Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? (Less Than Significant Impact)

It is anticipated that all wastewater treatment generated by the project can be accommodated and treated by existing facilities or those planned by the Orange County Sanitation District (OCSD). The project does not propose an increase in sanitation capacity that could result in an increase in wastewater treatment requirements beyond those which exist today. The proposed project involves the construction of a new ALDI Food Market building that is designed to eliminate patchwork uses on the property and serve the existing population of the City. Therefore, it is not anticipated that the proposal will result in any significant impact relative to wastewater or treatment requirements beyond that contemplated in the General Plan.

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? (No Impact)

The project will not result in the significant alteration or expansion of existing utility and service systems since the site will be developed with an allowable retail use. The project does not create any additional burden on these facilities that would require construction or new or expanded facilities. Therefore, the project will have no impact on existing wastewater treatment facilities.

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? (Less Than Significant Impact)

See response to Item 17.b) above. The project involves construction of a new food market building. Plans utilize the existing storm drain system that currently serves the property. Therefore, the project will not result in any impacts to the storm water drainage facilities that would cause significant impacts.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? (No Impact)

See response to Item 17.b) above. Water is supplied to the City of Westminster by imported water sources purchased from the Metropolitan Water District. The City also has water production wells, which pump imported groundwater and provide approximately 70% of the

City's water supply.[5] The City's General Plan EIR (page VIB-24) identified that the approximately 16 mgd of water use would occur at buildout (2010) for peak day demand. The General Plan EIR also noted that although it is anticipated that there will be adequate available water to serve development planned per the General Plan, supplies of imported water to Southern California could be constrained in the future. Therefore, the General Plan EIR emphasized the importance of water conservation and adhering to State and municipal laws requiring water-efficient plumbing fixtures in new structures. The project proposes a new food market building. The project does not represent any development beyond that anticipated in the General Plan that would involve water supply. The project will comply with all applicable city, state and municipal laws pertaining to water conservation as required through City standard conditions of approval. Therefore, no impacts to this topical area will occur.

e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? (No Impact)

See response to Item 17.b) above. The project will not result in any significant impacts to wastewater treatment.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? (No Impact)

The project site is located in the Midway City Sanitary District. The City's General Plan EIR (page VIC-42) indicates that at build-out solid waste generation could increase by an estimated 25,677 tons per year (based on a 1.2 tons per capita per year). The estimate does not take into account increases in recycling that will and have been occurring under the California Integrated Waste Management Act (AB 939). The General Plan EIR concluded that build-out of the City would not result in a significant impact to solid waste with implementation of the City's Source Reduction and Recycling Element (SRRE). The project will also be required to comply with SRRE adopted by the City of Westminster to achieve mandated reductions of generated waste. Therefore, the project itself will not have any significant impact on solid waste disposal.

g) Comply with federal, state, and local statutes and regulations related to solid waste? (No Impact)

See response to Item 17.b) above. The project itself will comply with federal, state and local statutes on solid waste disposal.

18. Mandatory Findings of Significance

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 species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? (No Impact)

On the basis of the foregoing analysis, the proposed project does not have the potential to significantly degrade the quality of the environment. The project site does not contain any habitat of fish or wildlife species that would be impacted by the project. The site is located in an urbanized setting. The proposed project consists of construction of a new ALDI Food Market building located at 13900 Goldenwest Street in the City of Westminster. The project is

[5] City of Westminster General Plan/EIR, Volume II – Technical Document, 1996, page VIB-2

compatible with the surrounding land uses and zoning on the property. The project will not impact any sensitive nor special status habitat and/or wildlife species.

b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals? (No Impact)

The site is located in a developed area that already provides infrastructure to support the proposed project. There are no long-term environmental goals that would be compromised by the project. The project does not have the potential to achieve short-term goals to the disadvantage of long-term goals.

c) Does the project have impacts that 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)? (No Impact)

No cumulative impacts are anticipated in connection with this or other projects. The project is consistent with the City's General Plan land use designation. The project will not result in environmental effects which are cumulatively considerable since the proposal is consistent with the goals and policies of the City's General Plan. The project does not have any impact on projected growth and planned projects for the City of Westminster as of the date of this analysis. Recommended mitigation measures as well as the project design will reduce all potential impacts to a level of less than significant. Therefore, it is not anticipated that the project will result in significant cumulative impacts.

d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? (No Impact)

There are no known substantial adverse effects on human beings that would be caused by the proposed project. The project is consistent with the land uses in the project area and the environmental evaluation has concluded that no adverse significant environmental impacts will result from the project.

Source List

The following enumerated documents are available at the offices of the City of Westminster, Planning Department, 8200 Westminster Boulevard, Westminster, California 92683.

1. City of Westminster, 1996 General Plan Volume I – Policy Document, 1996, all amendments
2. City of Westminster, 1996 General Plan, Volume II – Technical Document/EIR, 1996
3. Zoning Map, City of Westminster
4. Westminster Municipal Code
5. City of Westminster, CEQA Handbook, Adopted by Resolution 3577 of the City Council
6. California Environmental Quality Act as amended January 1, 2016. §§21000-21178 of the Public Resources Code, State of California
7. Guidelines for California Environmental Quality Act as amended January 1, 2016. §15000-15387 of the California Code of Regulations, Title 14, Chapter 3, State of California
8. California Department of Conservation, Official Maps of Seismic Hazard Zones Newport Quadrangle, 1997
9. Federal Flood Insurance Rate Map, Panel No. 06059C-0119J, 2009
10. Air Quality and GHG Impact Analysis for ALDI Food Market dated July 25, 2016 prepared by Giroux and Associates
11. Noise Impact Analysis for ALDI Food Market dated July 25, 2016 prepared by Giroux and Associates
12. Traffic Impact Study for 13900 Goldenwest Street ALDI Food Market dated June 6, 2016 prepared by KOA Corporation
13. http://geotracker.swrcb.ca.gov

Appendix A –
Environmental Checklist

Initial Study Checklist

1. Background

1.	**Project Title:** Proposed ALDI Food Market
2.	**Lead Agency Name and Address:** City of Westminster Planning Division 8200 Westminster Boulevard Westminster, CA 92683
3.	**Contact Person and Phone Number:** Steve Ratkay Tel. 714.548.3486 Fax 714.899.9660
4.	**Project Location:** 13900 Goldenwest Street Westminster, CA 92683-3546
5.	**Project Sponsor's Name and Address:** ALDI, Inc. – Moreno Valley Division ATTN: Matthew Baca 1170 Iowa Avenue Riverside, CA 92507
6.	**General Plan Designation:** Commercial General
7.	**Zoning:** C2-PD General Business with a Planned Development Overlay
8.	**Description of the Project:** (Describe the whole action involved, including but not limited to, later phases of the Project, and any secondary support or off-site features necessary for its implementation.)

The project consists of the construction of a 17,752-square-foot ALDI Food Market at 13900 Goldenwest Street in the City of Westminster. The project will cover nine parcels and require the demolition of six single-family residential homes and two commercial buildings. The site is zoned C2-PD, which is General Business with a Planned Development Overlay. The General Plan Land Use designation is Commercial General. The project is designed with a total of 140 parking spaces for the ALDI Food Market, Weinerschnitzel, and Walgreen's, which exceeds the required 134 spaces required for the shopping center. The project plans contemplate a shared parking lot and access arrangement with Wienerschnitzel to the north and Walgreen's to the south. Access would be taken off Goldenwest Street between the ALDI Food Market and Wienerschnitzel and through the Walgreen's parking lot. The project parcels total 1.58 acres and are located along Goldenwest Street and Pine Street between the existing fast food restaurant and the single-family residence to the north adjacent to Wyoming Street and Walgreen's to the south along Westminster Boulevard.

The project will require a Tentative Parcel Map to consolidate the parcels and create two new parcels, Development Review, and Conditional Use Permits for beer and wines sales and late night operations. A possible variance from storefront visibility requirements may be required.

9.	**Surrounding Land Uses and Setting**: (This includes any tributaries to already impaired water bodies, as listed on the Clean Water Act Section 303(d) list.) The project site for the proposed ALDI Food Market is located at 13900 Goldenwest Street in Westminster, California. The site is on Goldenwest Street between Westminster Boulevard and Wyoming Street. The east side it is bordered by Pine Street. The site is bordered by other commercial facilities to the north and south and residential neighborhoods to the east. The site is privately-owned.
10.	**Other public agencies whose approval is required (e.g., permits, financing approval or participation agreement).** Orange County Fire Authority

2. Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by this Project, involving at least one impact that is a "Potentially Significant Impact" or "Less Than Significant With Mitigation Incorporated," as indicated by the checklist on the following pages.

X	Aesthetics		Land Use and Planning
	Agriculture and Forestry Resources		Mineral Resources
X	Air Quality	X	Noise
	Biological Resources		Population and Housing
	Cultural Resources	X	Public Services
	Geology and Soils		Recreation
	Green House Gas Emissions		Transportation/Traffic
X	Hazards and Hazardous Materials		Utilities and Service Systems
X	Hydrology and Water Quality		Mandatory Findings of Significance

3. Evaluation of Environmental Impacts

This section analyzes potential environmental impacts associated with the proposed Project. The issue areas evaluated in this Initial Study include:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by the CEQA Guidelines and used by the City of Westminster in its environmental review process. For the preliminary environmental assessment undertaken as part of this Initial Study's preparation, a determination that there is a potential for significant effects indicates the need to more fully analyze the development's impacts and identify mitigation.

For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and an answer is provided according to the analysis undertaken as part of the Initial Study. The analysis considers the long-term, direct, indirect, and cumulative impacts of the development. To each question, there are four possible responses:

- **No Impact.** The development will not have any measurable environmental impact on the environment.
- **Less Than Significant Impact.** The development will have the potential for impacting the environment, although this impact will be below established thresholds that are considered to be significant.
- **Less Than Significant With Mitigation Incorporated.** The development will have the potential to generate impacts, which may be considered as a significant effect on the environment, although mitigation measures or changes to the development's physical or operational characteristics can reduce these impacts to levels that are less than significant.
- **Potentially Significant Impact**. The development will have impacts, which are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

Where potential impacts are anticipated to be significant, mitigation measures will be required to avoid or reduce impacts to less than significant levels.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the Project:				
a. Have a substantial adverse effect on a scenic vista?				✗
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✗
c. Substantially degrade the existing visual character or quality of the site and its surroundings?			✗	
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?		✗		
2. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are 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. Project Would the Project:				
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?				✗
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✗
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))?				✗
d. Result in the loss of forest land or conversion of forest land to non-forest use?				✗

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?				✗
3. AIR QUALITY. 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:				
a. Conflict with or obstruct implementation of the applicable air quality plan?				✗
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		✗		
c. Result in a cumulatively considerable net increase of any criteria pollutant 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?		✗		
e. Create objectionable odors affecting a substantial number of people?			✗	
4. BIOLOGICAL RESOURCES. *Would the Project:*				
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?				✗
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				✗
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?				✗
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?				✗
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✗
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?				✗
5. CULTURAL RESOURCES. *Would the Project:*				
a. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?				✗
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?				✗
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✗
d. Disturb any human remains, including those interred outside of formal cemeteries?				✗
6. GEOLOGY AND SOILS. *Would the Project:*				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture 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.			✗	

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?			✗	
iii) Seismic-related ground failure, including liquefaction?			✗	
iv) Landslides?				✗
b. Result in substantial soil erosion or the loss of topsoil?				✗
c. Be located on a geologic 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?			✗	
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?			✗	
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✗
7. GREENHOUSE GAS EMISSIONS: Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✗	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✗	
8. HAZARDS AND HAZARDOUS MATERIALS: *Would the Project:*				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✗
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?		✗		
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?		✗		
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?			✗	
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 for people residing or working in the Plan area?			✗	
f. For a project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Plan area?				✗
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✗
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?				✗
9. HYDROLOGY AND WATER QUALITY. *Would the Project:*				
a. Violate any water quality standards or waste discharge requirements?		✗		
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)?			✗	
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✗	

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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?			✗	
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			✗	
f. Otherwise substantially degrade water quality?			✗	
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?				✗
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✗
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?				✗
j. Inundation by seiche, tsunami, or mudflow?				✗
k. Potentially impact storm water runoff from construction activities?		✗		
l. Potentially impact storm water runoff from post-construction activities?		✗		
m. Result in a potential for discharge of storm water pollutants(e.g., oil, grease, pesticides, nutrients, sediments, pathogens, etc.) from areas of material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas, loading docks or other outdoor work areas?			✗	
n. Result in the potential for discharge of storm water to affect the beneficial uses of the receiving waters?				✗
o. Create the potential for significant changes in the flow velocity for volume of storm water runoff to cause environmental harm?				✗
p. Create significant increases in erosion of the project site or surrounding areas?				✗
q. Would the project include new or retrofitted stormwater treatment control Best Management Practices (BMPs), (e.g. water quality treatment basin, constructed treatment wetlands), the operation of which could result in significant environment effects?			✗	
r. Is the project tributary to an already impaired water body, as listed on the Clean Water Act Section 303(d) list? If so, cold the project result in an increase in any pollutant for which the water body is already impaired?			✗	
10. LAND USE AND PLANNING. *Would the Project:*				
a. Physically divide an established community?				✗
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?			✗	
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				✗
11. MINERAL RESOURCES. *Would the Project:*				
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?				✗
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?				✗

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
12. NOISE. Would the Project result in:				
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?		✗		
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			✗	
c. A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?			✗	
d. A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?			✗	
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 Plan area to excessive noise levels?				✗
f. For a project within the vicinity of a private airstrip, would the Project expose people residing or working in the Plan area to excessive noise levels?				✗
13. POPULATION AND HOUSING. *Would the Project:*				
a. Induce substantial 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)?				✗
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			✗	
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			✗	
14. PUBLIC SERVICES				
a. 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 public services:				
i) Fire protection?		✗		
ii) Police protection?			✗	
iii) Schools?				✗
iv) Parks?				✗
v) Other public facilities?				✗
15. RECREATION				
a. Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✗
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?				✗
16. TRANSPORTATION/TRAFFIC. *Would the Project:*				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?		✗		

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			✗	
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?				✗
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✗
e. Result in inadequate emergency access?				✗
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				✗
17. UTILITIES AND SERVICE SYSTEMS. *Would the Project:*				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✗	
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?				✗
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?			✗	
d. Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?				✗
e. Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?				✗
f. Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?				✗
g. Comply with federal, state, and local statutes and regulations related to solid waste?				✗
18. MANDATORY FINDINGS OF SIGNIFICANCE.				
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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				✗
b. Does the project have the potential to achieve short-term environmental goals to the disadvantage of long term environmental goals?				✗
c. Does the Project have impacts that 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)?				✗
d. Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✗

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	❑
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	☑
I find that the proposed project MAY have a significant effect on the environment, and ENVIRONMENTAL IMPACT REPORT is required.	❑
I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	❑
I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	❑

Submitted by: City of Westminster, Planning Division

Prepared by: William E. Hodge
Hodge & Associates

_____ _____
Signature Date

Appendix B –
Air Quality and GHG Impact Analyses dated July 25, 2016

AIR QUALITY and GHG IMPACT ANALYSES

ALDI MARKET
13900 GOLDENWEST STREET

WESTMINSTER, CALIFORNIA

Prepared for:

Hodge & Associates
Attn: Bill Hodge
P. O. Box 2842
Palm Desert, CA 92261

Date:

July 25, 2016

Project No.: P16-019 AQ

ATMOSPHERIC SETTING

The climate of Westminster, technically called a Mediterranean-type climate, is characterized by warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. Temperatures near the project area average a very comfortable 63°F year-round. Summer afternoons are typically in the middle 80s and winter mornings drop to the low- to mid-40s. About 45 summer days reach 90 degrees F, and five days per year may drop to 32 degrees, but significant extremes of temperature are rare in the project area. Rainfall in the Los Angeles Basin varies considerably in both time and space. Rainfall amounts vary from an average of 10 to 18 inches as a function of local exposure and topography. Westminster averages 14.6 inches of rain during a normal year. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April with summers often completely dry. Light rain (0.1" in 24 hours) falls on 20 days during a normal year with 10 days in the moderate (0.5" in 24 hours category).

Winds blow primarily from southwest to northeast by day and from northeast to the southwest at night in response to the regional pattern of onshore flow by day and offshore flow at night. Average wind speeds are 5 mph average in the Westminster area, reaching 6-8 mph in the afternoon but dropping to near calm conditions (1-3 mph) at night.

The net effect of local airflow in terms of air pollution is that daytime ventilation is good and any locally generated air pollutants will be rapidly dispersed by the strong daytime turbulence. At night, however, pooling of cool air in low elevations combined with light winds does allow for air stagnation in protected areas, especially near area freeways with elevated pollution levels. Because such effects are highly localized, however, the project area is sufficiently far from any major roadways such that it will be little affected by such air stagnation effects.

In addition to winds that control the rate and direction of pollution dispersal, Southern California is notorious for strong temperature inversions that limit the vertical depth through which pollution can be mixed. In summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the basin. Air starting onshore at the beach is relatively clean, but becomes progressively more polluted as sources continue to add pollution from below without any dilution from above. Air arriving at Westminster during warm season marine flow conditions has undergone limited photochemical reactions, but not to its fullest extent possible. Summer smog levels in Westminster are much lower than in inland valleys of the basin such as the San Gabriel or the Pomona-Walnut Valleys. Summer air quality is only moderately degraded compared to the severe degradation found farther inland within the air basin.

A second inversion type forms on clear, winter nights when cold air off the mountains sinks to the surface while the air aloft remains warm. This process forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as automobile exhaust near their source. During the long nocturnal drainage flow from land to sea, the exhaust pollutants continually accumulate within the shallow, cool layer of air near the ground. Central Orange County thus may experience elevated levels of carbon monoxide and nitrogen oxides because of

this winter inversion condition. With ongoing vehicular improvements, clean air standards are generally not exceeded during nocturnal stagnation periods as they were 10-20 years ago.

Both types of inversions occur throughout the year to some extent, but the marine inversions are very dominant during the day in summer, and radiation inversions are much stronger on winter nights when nights are long and air is cool. The governing role of these inversions in atmospheric dispersion leads to a substantially different air quality environment in summer near the project area than in winter.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

Table 1

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

For more information please call ARB-PIO at (916) 322-2990 California Air Resources Board (10/1/15)

Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (10/1/15)**

Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide (NO_2) that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5 to 10 micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December, 2012, the federal annual standard for PM-2.5 was reduced from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2030.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO_2) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

BASELINE AIR QUALITY

Existing and probable future levels of air quality around the project area can be best inferred from ambient air quality measurements conducted by the SCAQMD at the Anaheim monitoring station. This station measures both regional pollution levels such as smog, as well as primary vehicular pollution levels near busy roadways such as carbon monoxide and nitrogen oxides. Pollutants such as particulates (PM-10 and PM-2.5) are also monitored at Anaheim. Table 3 is a 6-year summary of monitoring data for the major air pollutants compiled from this air monitoring station. From this data the following conclusions regarding air quality trends can be drawn:

a. Photochemical smog (ozone) levels occasionally exceed standards. All state and federal ozone standards have been exceeded 1 percent or less of all days in the past six years. Measurements from more recent years demonstrate progressively improved ozone levels in the area except perhaps for some temporary "backsliding" in 2014. While ozone levels are still occasionally elevated, they are much lower than 10 to 20 years ago.

b. Respirable dust (PM-10) levels occasionally exceed the state standard on approximately two percent of measured days. The less stringent federal PM-10 standard has not been exceeded in the last six years.

c. The federal ultra-fine particulate (PM-2.5) standard of 35 $\mu g/m^3$ has been exceeded on less than one percent of measurement days in the last six years.

d. More localized pollutants such as carbon monoxide, nitrogen oxides, etc. are very low near the project site. There is substantial excess dispersive capacity to accommodate localized vehicular air pollutants such as NOx or CO without any threat of violating applicable AAQS. Data from a recent "near roadway" monitoring study directly along the I-5 shoulder (<50 feet) in Anaheim showed noticeably elevated levels of NOx and CO, but even at this close distance federal clean air standards were not exceeded.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3
Air Quality Monitoring Summary (2009-2014)
(Number of Days Standards Were Exceeded, and
Maximum Levels During Such Violations)
(Entries shown as ratios = samples exceeding standard/samples taken)

Pollutant/Standard	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Ozone						
1-Hour > 0.09 ppm (S)	0	1	0	0	0	2
8-Hour > 0.07 ppm (S)	2	1	1	0	0	6
8- Hour > 0.075 ppm (F)	1	1	0	0	0	4
Max. 1-Hour Conc. (ppm)	0.093	0.104	0.088	0.079	0.084	0.111
Max. 8-Hour Conc. (ppm)	0.077	0.088	0.072	0.067	0.070	0.081
Carbon Monoxide						
8- Hour > 9. ppm (S,F)	0	0	0	0	0	0
Max 8-hour Conc. (ppm)	2.7	2.0	2.1	2.3	2.6	2.1
Nitrogen Dioxide						
1-Hour > 0.18 ppm (S)	0	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.068	0.073	0.074	0.067	0.082	0.076
Inhalable Particulates (PM-10)						
24-hour > 50 $\mu g/m^3$ (S)	1/56	0/57	2/57	0/61	1/59	2/61
24-hour > 150 $\mu g/m^3$ (F)	0/56	0/57	0/57	0/61	0/59	0/61
Max. 24-Hr. Conc. ($\mu g/m^3$)	62.	43.	53.	48.	77.	85.
Ultra-Fine Particulates (PM-2.5)						
24-Hour > 35 $\mu g/m^3$ (F)	4/334	0/331	2/352	4/347	1/331	6/334
Max. 24-Hr. Conc. ($\mu g/m^3$)	64.5	31.7	39.2	50.1	37.8	56.2

Source: South Coast AQMD Air Monitoring Station Data Summary, Anaheim Station (3176)

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The most current regional attainment emissions forecast for ozone precursors (ROG and NOx) and for carbon monoxide (CO) and for particulate matter are shown in Table 4. Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 requires control technologies that do not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation will allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification sets a later attainment deadline (2024), but also requires the air basin to adopt even more stringent emissions controls.

Table 4

South Coast Air Basin Emissions Forecasts (Emissions in tons/day)

Pollutant	2012[a]	2015[b]	2020[b]	2025[b]	2030
NOx	512	451	357	289	266
VOC	466	429	400	393	393
PM-10	154	155	161	165	170
PM-2.5	68	67	67	68	170

[a]2012 Base Year.
[b]With current emissions reduction programs and adopted growth forecasts.
Source: California Air Resources Board, 2013 Almanac of CEPAM

In other air quality attainment plan reviews, EPA has disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA has stated that the current attainment plan relies on PM-2.5 control regulations that have not yet been approved or implemented. It is expected that a number of rules that are pending approval will remove the identified deficiencies. If these issues are not resolved within the next several years, federal funding sanctions for transportation projects could result. The 2012 AQMP included in the ARB submittal to EPA as part of the California State Implementation Plan (SIP) is expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the 2012 AQMP contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP is believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated every three years. The 2012 AQMP was adopted in early 2013. An updated AQMP must therefore be adopted in 2016. Planning for the 2016 AQMP is currently on-going. The current attainment deadlines for all federal non-attainment pollutants are now as follows:

8-hour ozone (70 ppb)	2032
Annual PM-2.5 (12 $\mu g/m^3$)	2025
8-hour ozone (75 ppb)	2024 (old standard)
1-hour ozone (120 ppb)	2023 (rescinded standard)

24-hour PM-2.5 (35 $\mu g/m^3$) 2019

The key challenge is that NOx emission levels, as a critical ozone precursor pollutant, are forecast to continue to exceed the levels that would allow the above deadlines to be met. Unless additional NOx control measures are adopted and implemented, attainment goals may not be met.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing commercial projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following five tests of air quality impact significance. A project would have a potentially significant impact if it:

a. Conflicts with or obstructs implementation of the applicable air quality plan.

b. Violates any air quality standard or contributes substantially to an existing or projected air quality violation.

c. Results in a cumulatively considerable net increase of any criteria pollutants 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. Exposes sensitive receptors to substantial pollutant concentrations.

e. Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based

upon a specified amount of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

Additional Indicators

In its CEQA Handbook, the SCAQMD also states that additional indicators should be used as screening criteria to determine the need for further analysis with respect to air quality. The additional indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation

- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP and in other than planned locations for the project's build-out year.

- Project could generate vehicle trips that cause a CO hot spot.

CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

Although exhaust emissions will result from on and off-site equipment, the exact types and numbers of equipment will vary among contractors such that such emissions cannot be quantified with certainty. Estimated construction emissions were modeled using CalEEMod2013.2.2 to identify maximum daily emissions for each pollutant during project construction.

The proposed project entails construction of 17,752 square foot ALDI Market and 77 parking spaces. To make space for the proposed market, approximately 18,200 square feet of existing structures will be demolished and the debris trucked off site. Construction was modeled in CalEEMod2013.2.2 using default construction equipment and schedule for a project of this size as shown in Table 6.

Table 6

Construction Activity Equipment Fleet

Phase Name and Duration	**Equipment**
Demolition (20 days) 18,200 sf	1 Concrete Saw
	1 Dozer
	3 Loader/Backhoes
Grading (4 days)	1 Grader
	1 Dozer
	1 Loader/Backhoe
Construction (200 days)	1 Crane
	1 Loader/Backhoe
	1 Gen Set
	3 Welders
	1 Forklift
Paving (10 days)	1 Paver
	1 Loader/Backhoe
	1 Mixer
	1 Roller

Utilizing this indicated equipment fleet and durations shown in Table 6 the following worst case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2017						
Unmitigated	43.6	27.7	22.4	0.0	6.1	3.5
Mitigated	43.6	27.7	22.4	0.0	3.1	2.0
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated to be below SCAQMD CEQA thresholds even without the application of any mitigation measures. The only mitigation measure modeled is as follows:

- Exposed surfaces will be watered three times per day during grading activities

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based

on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. LSTs are only applicable to on-site emissions.

LST screening tables are available for 25, 50, 100, 200 and 500 meter source-receptor distances. For this project the most stringent 25 meter distance was used to reflect adjacent residences.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2 and 5 acre sites for varying distances. For this site the most stringent thresholds for a 1 acre site were used.

The following thresholds and emissions in Table 8 are therefore determined (pounds per day):

Table 8
LST and Project Emissions (pounds/day)

LST 1 acre/25 meters Central Orange County	**CO**	**NOx**	**PM-10**	**PM-2.5**
LST Thresholds	535	69	4	3
Max On-Site Emissions Unmitigated	22	27	6	3
Max On-Site Emissions Mitigated	22	27	3	2

CalEEMod Output in Appendix

LSTs were compared to the maximum daily construction activities. As seen above, emissions will meet the LST for construction with recommended dust control. The only mitigation measure modeled was:

- Exposed surfaces will be watered three times per day during grading activities

OPERATIONAL IMPACTS

Operational emissions were calculated using CalEEMod2013.2.2 for an assumed project build-out year of 2018 as a target. After taking credit for existing trips from current on-site uses, the project would generate 1,104 new daily trips using data provided by the project traffic consultant. In addition to mobile sources from vehicles, general development causes smaller amounts of "area source" air pollution to be generated from on-site energy consumption (primarily landscaping) and from off-site electrical generation (lighting). These sources represent a minimal percentage of the total project NOx and CO burdens, and a few percent other pollutants. The inclusion of such emissions adds negligibly to the total significant project-related emissions burden as shown in Table 9.

Table 9
Daily Operational Impacts

	Operational Emissions (lbs/day)					
Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
Area	1.1	0.0	0.0	0.0	0.0	0.0
Energy	0.0	0.1	0.1	0.0	0.0	0.0
Mobile	3.8	6.7	30.4	0.0	3.2	0.9
Total	**4.9**	**6.8**	**30.5**	**0.0**	**3.2**	**0.9**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod2013.2.2 Output in Appendix

As seen in Table 9, the project would not cause any operational emissions to exceed their respective SCAQMD CEQA significance thresholds. Operational emission impacts are judged to be less than significant. No impact mitigation for operational activity emissions is considered necessary to support this finding.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin and proximity to existing residential uses. Recommended measures include:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Address previously disturbed areas if subsequent construction is delayed.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementing regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been

developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

THRESHOLDS OF SIGNIFICANCE

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,

- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project-related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency with substantial flexibility.

Emissions identification may be quantitative, qualitative or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

PROJECT RELATED GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

The project is assumed to require less than one year for construction. During project construction, the CalEEMod2013.2.2 computer model predicts that the construction activities will generate the annual CO_2e emissions identified in Table 10.

Table 10
Construction Emissions (Metric Tons CO_2e)

	CO_2e
Year 2017	257.2
Amortized	**8.6**

CalEEMod Output provided in appendix

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

Project Operational GHG Emissions

The input assumptions for operational GHG emissions calculations, and the GHG conversion from consumption to annual regional CO_2e emissions are summarized in the CalEEMod2013.2.2 output files found in the appendix of this report.

The total operational and annualized construction emissions for the proposed project are identified in Table 11.

Table 11
Proposed Uses Operational Emissions

Consumption Source	MT CO_2e
Area Sources	0.0
Energy Utilization	235.4
Mobile Source	699.0
Solid Waste Generation	45.5
Water Consumption	11.1
Construction	8.6
Total	**999.6**
Guideline Threshold	3,000
Exceeds Threshold?	No

Total project GHG emissions are substantially below the proposed significance threshold of 3,000 MT suggested by the SCAQMD. Hence, the project will not result in generation of a significant level of greenhouse gases.

CONSISTENCY WITH GHG PLANS, PROGRAMS AND POLICIES

The City of Westminster has not yet developed a Greenhouse Gas Reduction Plan. The applicable GHG planning document is AB-32. As discussed above, the project is not expected to result in a significant increase in GHG emissions. As a result, the project results in GHG emissions below the recommended SCAQMD 3,000 ton threshold. Therefore, the project would not conflict with any applicable plan, policy, or regulation to reduce GHG emissions.

CALEEMOD2013.2.2 COMPUTER MODEL OUTPUT

- **DAILY EMISISONS**
- **ANNUAL EMISSIONS**

Westminster Aldi

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Supermarket	17.75	1000sqft	0.41	17,752.00	0
Parking Lot	77.00	Space	0.69	30,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Demo: 20 days, Grading: 4 days, Construction: 200 days, Paving: 10 days

Off-road Equipment - Demo: 1 concrete saw, 1 dozer, 3 loader/backhoes

Off-road Equipment - Grading: 1 grader, 1 dozer, 1 loader/backhoe

Off-road Equipment - Construction: 1 crane, 1 forklift, 1 gen set, 1 loader/backhoe, 3 welders

Off-road Equipment - Paving: 1 mixer, 1 paver, 1 paving equipment, 1 roller, 1 loader/backhoe

Demolition - 18,200 sf demo

Vehicle Trips - trip gen per traffic report

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	2/2/2017	2/6/2017
tblConstructionPhase	PhaseStartDate	1/28/2017	2/1/2017
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	177.59	62.19
tblVehicleTrips	SU_TR	166.44	62.19
tblVehicleTrips	WD_TR	102.24	62.19

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	43.6289	27.7006	22.4089	0.0294	5.0037	1.6236	6.0705	2.5493	1.5183	3.5308	0.0000	2,909.9163	2,909.9163	0.6330	0.0000	2,923.2093
Total	**43.6289**	**27.7006**	**22.4089**	**0.0294**	**5.0037**	**1.6236**	**6.0705**	**2.5493**	**1.5183**	**3.5308**	**0.0000**	**2,909.9163**	**2,909.9163**	**0.6330**	**0.0000**	**2,923.2093**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	43.6289	27.7006	22.4089	0.0294	2.0060	1.6236	3.0728	1.0087	1.5183	1.9902	0.0000	2,909.9163	2,909.9163	0.6330	0.0000	2,923.2093
Total	**43.6289**	**27.7006**	**22.4089**	**0.0294**	**2.0060**	**1.6236**	**3.0728**	**1.0087**	**1.5183**	**1.9902**	**0.0000**	**2,909.9163**	**2,909.9163**	**0.6330**	**0.0000**	**2,923.2093**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**59.91**	**0.00**	**49.38**	**60.43**	**0.00**	**43.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0809	9.0000e-005	9.8100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0207	0.0207	6.0000e-005		0.0219
Energy	0.0111	0.1005	0.0844	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003		120.5591	120.5591	2.3100e-003	2.2100e-003	121.2928
Mobile	3.8493	6.7269	30.3942	0.0475	3.0865	0.0959	3.1824	0.8245	0.0880	0.9125		4,395.3968	4,395.3968	0.2138		4,399.8867
Total	**4.9412**	**6.8275**	**30.4884**	**0.0481**	**3.0865**	**0.1036**	**3.1901**	**0.8245**	**0.0957**	**0.9202**		**4,515.9767**	**4,515.9767**	**0.2162**	**2.2100e-003**	**4,521.2015**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0809	9.0000e-005	9.8100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0207	0.0207	6.0000e-005		0.0219
Energy	0.0111	0.1005	0.0844	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003		120.5591	120.5591	2.3100e-003	2.2100e-003	121.2928
Mobile	3.8493	6.7269	30.3942	0.0475	3.0865	0.0959	3.1824	0.8245	0.0880	0.9125		4,395.3968	4,395.3968	0.2138		4,399.8867
Total	**4.9412**	**6.8275**	**30.4884**	**0.0481**	**3.0865**	**0.1036**	**3.1901**	**0.8245**	**0.0957**	**0.9202**		**4,515.9767**	**4,515.9767**	**0.2162**	**2.2100e-003**	**4,521.2015**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	2/1/2017	2/6/2017	5	4	
3	Building Construction	Building Construction	2/7/2017	11/13/2017	5	200	
4	Paving	Paving	11/14/2017	11/27/2017	5	10	
5	Architectural Coating	Architectural Coating	11/28/2017	12/11/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 28,014; Non-Residential Outdoor: 9,338 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	83.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	19.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8958	0.0000	0.8958	0.1356	0.0000	0.1356			0.0000			0.0000
Off-Road	2.7216	26.5855	20.8712	0.0245		1.6062	1.6062		1.5022	1.5022		2,457.4682	2,457.4682	0.6235		2,470.5620
Total	**2.7216**	**26.5855**	**20.8712**	**0.0245**	**0.8958**	**1.6062**	**2.5020**	**0.1356**	**1.5022**	**1.6379**		**2,457.4682**	**2,457.4682**	**0.6235**		**2,470.5620**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0676	1.0540	0.7746	3.0600e-003	0.0723	0.0163	0.0886	0.0198	0.0150	0.0348		303.7206	303.7206	2.1700e-003		303.7662
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.1163**	**1.1152**	**1.5377**	**4.9000e-003**	**0.2176**	**0.0174**	**0.2351**	**0.0583**	**0.0160**	**0.0744**		**452.4481**	**452.4481**	**9.4900e-003**		**452.6473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3494	0.0000	0.3494	0.0529	0.0000	0.0529			0.0000			0.0000
Off-Road	2.7216	26.5855	20.8712	0.0245		1.6062	1.6062		1.5022	1.5022	0.0000	2,457.4682	2,457.4682	0.6235		2,470.5620
Total	**2.7216**	**26.5855**	**20.8712**	**0.0245**	**0.3494**	**1.6062**	**1.9556**	**0.0529**	**1.5022**	**1.5551**	**0.0000**	**2,457.4682**	**2,457.4682**	**0.6235**		**2,470.5620**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0676	1.0540	0.7746	3.0600e-003	0.0723	0.0163	0.0886	0.0198	0.0150	0.0348		303.7206	303.7206	2.1700e-003		303.7662
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.1163**	**1.1152**	**1.5377**	**4.9000e-003**	**0.2176**	**0.0174**	**0.2351**	**0.0583**	**0.0160**	**0.0744**		**452.4481**	**452.4481**	**9.4900e-003**		**452.6473**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808		1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**4.9143**	**1.0661**	**5.9804**	**2.5256**	**0.9808**	**3.5064**		**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	**0.0299**	**0.0376**	**0.4696**	**1.1300e-003**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.6000e-004**	**0.0244**		**91.5246**	**91.5246**	**4.5000e-003**		**91.6192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9166	0.0000	1.9166	0.9850	0.0000	0.9850			0.0000			0.0000
Off-Road	1.8844	19.7889	13.1786	0.0141		1.0661	1.0661		0.9808	0.9808	0.0000	1,439.1894	1,439.1894	0.4410		1,448.4496
Total	**1.8844**	**19.7889**	**13.1786**	**0.0141**	**1.9166**	**1.0661**	**2.9827**	**0.9850**	**0.9808**	**1.9658**	**0.0000**	**1,439.1894**	**1,439.1894**	**0.4410**		**1,448.4496**

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0299	0.0376	0.4696	1.1300e-003	0.0894	7.2000e-004	0.0901	0.0237	6.6000e-004	0.0244		91.5246	91.5246	4.5000e-003		91.6192
Total	**0.0299**	**0.0376**	**0.4696**	**1.1300e-003**	**0.0894**	**7.2000e-004**	**0.0901**	**0.0237**	**6.6000e-004**	**0.0244**		**91.5246**	**91.5246**	**4.5000e-003**		**91.6192**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0613	0.6326	0.7505	1.7400e-003	0.0500	0.0101	0.0601	0.0142	9.2600e-003	0.0235		171.7337	171.7337	1.2100e-003		171.7592
Worker	0.0711	0.0893	1.1154	2.6900e-003	0.2124	1.7100e-003	0.2141	0.0563	1.5800e-003	0.0579		217.3709	217.3709	0.0107		217.5955
Total	**0.1324**	**0.7219**	**1.8659**	**4.4300e-003**	**0.2624**	**0.0118**	**0.2742**	**0.0706**	**0.0108**	**0.0814**		**389.1047**	**389.1047**	**0.0119**		**389.3547**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823	0.0000	2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**	**0.0000**	**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0613	0.6326	0.7505	1.7400e-003	0.0500	0.0101	0.0601	0.0142	9.2600e-003	0.0235		171.7337	171.7337	1.2100e-003		171.7592
Worker	0.0711	0.0893	1.1154	2.6900e-003	0.2124	1.7100e-003	0.2141	0.0563	1.5800e-003	0.0579		217.3709	217.3709	0.0107		217.5955
Total	**0.1324**	**0.7219**	**1.8659**	**4.4300e-003**	**0.2624**	**0.0118**	**0.2742**	**0.0706**	**0.0108**	**0.0814**		**389.1047**	**389.1047**	**0.0119**		**389.3547**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755		1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.1808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3664**	**12.0981**	**9.0308**	**0.0133**		**0.7333**	**0.7333**		**0.6755**	**0.6755**		**1,347.6575**	**1,347.6575**	**0.4052**		**1,356.1677**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.0487**	**0.0611**	**0.7632**	**1.8400e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.7275**	**148.7275**	**7.3200e-003**		**148.8811**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1857	12.0981	9.0308	0.0133		0.7333	0.7333		0.6755	0.6755	0.0000	1,347.6575	1,347.6575	0.4052		1,356.1677
Paving	0.1808					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3664**	**12.0981**	**9.0308**	**0.0133**		**0.7333**	**0.7333**		**0.6755**	**0.6755**	**0.0000**	**1,347.6575**	**1,347.6575**	**0.4052**		**1,356.1677**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0487	0.0611	0.7632	1.8400e-003	0.1453	1.1700e-003	0.1465	0.0385	1.0800e-003	0.0396		148.7275	148.7275	7.3200e-003		148.8811
Total	**0.0487**	**0.0611**	**0.7632**	**1.8400e-003**	**0.1453**	**1.1700e-003**	**0.1465**	**0.0385**	**1.0800e-003**	**0.0396**		**148.7275**	**148.7275**	**7.3200e-003**		**148.8811**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	43.2816					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**43.6139**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0150	0.0188	0.2348	5.7000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.7623	45.7623	2.2500e-003		45.8096
Total	**0.0150**	**0.0188**	**0.2348**	**5.7000e-004**	**0.0447**	**3.6000e-004**	**0.0451**	**0.0119**	**3.3000e-004**	**0.0122**		**45.7623**	**45.7623**	**2.2500e-003**		**45.8096**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	43.2816					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**43.6139**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0150	0.0188	0.2348	5.7000e-004	0.0447	3.6000e-004	0.0451	0.0119	3.3000e-004	0.0122		45.7623	45.7623	2.2500e-003		45.8096
Total	**0.0150**	**0.0188**	**0.2348**	**5.7000e-004**	**0.0447**	**3.6000e-004**	**0.0451**	**0.0119**	**3.3000e-004**	**0.0122**		**45.7623**	**45.7623**	**2.2500e-003**		**45.8096**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.8493	6.7269	30.3942	0.0475	3.0865	0.0959	3.1824	0.8245	0.0880	0.9125		4,395.3968	4,395.3968	0.2138		4,399.8867
Unmitigated	3.8493	6.7269	30.3942	0.0475	3.0865	0.0959	3.1824	0.8245	0.0880	0.9125		4,395.3968	4,395.3968	0.2138		4,399.8867

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Supermarket	1,103.87	1,103.87	1103.87	1,456,528	1,456,528
Total	1,103.87	1,103.87	1,103.87	1,456,528	1,456,528

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.516610	0.060517	0.179979	0.140587	0.041566	0.006616	0.015092	0.027587	0.001923	0.002530	0.004314	0.000602	0.002075

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0111	0.1005	0.0844	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003		120.5591	120.5591	2.3100e-003	2.2100e-003	121.2928
NaturalGas Unmitigated	0.0111	0.1005	0.0844	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003		120.5591	120.5591	2.3100e-003	2.2100e-003	121.2928

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	1024.75	0.0111	0.1005	0.0844	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003		120.5591	120.5591	2.3100e-003	2.2100e-003	121.2928
Total		**0.0111**	**0.1005**	**0.0844**	**6.0000e-004**		**7.6400e-003**	**7.6400e-003**		**7.6400e-003**	**7.6400e-003**		**120.5591**	**120.5591**	**2.3100e-003**	**2.2100e-003**	**121.2928**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Supermarket	1.02475	0.0111	0.1005	0.0844	6.0000e-004		7.6400e-003	7.6400e-003		7.6400e-003	7.6400e-003		120.5591	120.5591	2.3100e-003	2.2100e-003	121.2928
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0111**	**0.1005**	**0.0844**	**6.0000e-004**		**7.6400e-003**	**7.6400e-003**		**7.6400e-003**	**7.6400e-003**		**120.5591**	**120.5591**	**2.3100e-003**	**2.2100e-003**	**121.2928**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0809	9.0000e-005	9.8100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0207	0.0207	6.0000e-005		0.0219
Unmitigated	1.0809	9.0000e-005	9.8100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0207	0.0207	6.0000e-005		0.0219

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1186					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	9.8100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0207	0.0207	6.0000e-005		0.0219
Total	**1.0809**	**9.0000e-005**	**9.8100e-003**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0207**	**0.0207**	**6.0000e-005**		**0.0219**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1186					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9613					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	9.4000e-004	9.0000e-005	9.8100e-003	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0207	0.0207	6.0000e-005		0.0219
Total	**1.0809**	**9.0000e-005**	**9.8100e-003**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0207**	**0.0207**	**6.0000e-005**		**0.0219**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Westminster Aldi

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Supermarket	17.75	1000sqft	0.41	17,752.00	0
Parking Lot	77.00	Space	0.69	30,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Demo: 20 days, Grading: 4 days, Construction: 200 days, Paving: 10 days

Off-road Equipment - Demo: 1 concrete saw, 1 dozer, 3 loader/backhoes

Off-road Equipment - Grading: 1 grader, 1 dozer, 1 loader/backhoe

Off-road Equipment - Construction: 1 crane, 1 forklift, 1 gen set, 1 loader/backhoe, 3 welders

Off-road Equipment - Paving: 1 mixer, 1 paver, 1 paving equipment, 1 roller, 1 loader/backhoe

Demolition - 18,200 sf demo

Vehicle Trips - trip gen per traffic report

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	2/2/2017	2/6/2017
tblConstructionPhase	PhaseStartDate	1/28/2017	2/1/2017
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	177.59	62.19
tblVehicleTrips	SU_TR	166.44	62.19
tblVehicleTrips	WD_TR	102.24	62.19

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.5662	2.3763	1.9356	3.0400e-003	0.0478	0.1467	0.1945	0.0142	0.1407	0.1549	0.0000	256.1824	256.1824	0.0484	0.0000	257.1982
Total	**0.5662**	**2.3763**	**1.9356**	**3.0400e-003**	**0.0478**	**0.1467**	**0.1945**	**0.0142**	**0.1407**	**0.1549**	**0.0000**	**256.1824**	**256.1824**	**0.0484**	**0.0000**	**257.1982**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.5662	2.3763	1.9356	3.0400e-003	0.0363	0.1467	0.1830	0.0103	0.1407	0.1510	0.0000	256.1822	256.1822	0.0484	0.0000	257.1980
Total	**0.5662**	**2.3763**	**1.9356**	**3.0400e-003**	**0.0363**	**0.1467**	**0.1830**	**0.0103**	**0.1407**	**0.1510**	**0.0000**	**256.1822**	**256.1822**	**0.0484**	**0.0000**	**257.1980**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**23.97**	**0.00**	**5.89**	**27.50**	**0.00**	**2.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1972	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3500e-003	2.3500e-003	1.0000e-005	0.0000	2.4900e-003
Energy	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	234.4228	234.4228	0.0102	2.4100e-003	235.3836
Mobile	0.6915	1.3048	5.7795	8.3200e-003	0.5515	0.0176	0.5691	0.1476	0.0161	0.1637	0.0000	698.2515	698.2515	0.0353	0.0000	698.9924
Waste						0.0000	0.0000		0.0000	0.0000	20.3214	0.0000	20.3214	1.2010	0.0000	45.5416
Water						0.0000	0.0000		0.0000	0.0000	0.6942	8.3681	9.0622	0.0717	1.7600e-003	11.1141
Total	**0.8907**	**1.3231**	**5.7962**	**8.4300e-003**	**0.5515**	**0.0189**	**0.5705**	**0.1476**	**0.0175**	**0.1650**	**21.0156**	**941.0448**	**962.0603**	**1.3182**	**4.1700e-003**	**991.0341**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1972	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3500e-003	2.3500e-003	1.0000e-005	0.0000	2.4900e-003
Energy	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	234.4228	234.4228	0.0102	2.4100e-003	235.3836
Mobile	0.6915	1.3048	5.7795	8.3200e-003	0.5515	0.0176	0.5691	0.1476	0.0161	0.1637	0.0000	698.2515	698.2515	0.0353	0.0000	698.9924
Waste						0.0000	0.0000		0.0000	0.0000	20.3214	0.0000	20.3214	1.2010	0.0000	45.5416
Water						0.0000	0.0000		0.0000	0.0000	0.6942	8.3681	9.0622	0.0717	1.7600e-003	11.1130
Total	**0.8907**	**1.3231**	**5.7962**	**8.4300e-003**	**0.5515**	**0.0189**	**0.5705**	**0.1476**	**0.0175**	**0.1650**	**21.0156**	**941.0448**	**962.0603**	**1.3182**	**4.1700e-003**	**991.0330**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2017	1/27/2017	5	20	
2	Grading	Grading	2/1/2017	2/6/2017	5	4	
3	Building Construction	Building Construction	2/7/2017	11/13/2017	5	200	
4	Paving	Paving	11/14/2017	11/27/2017	5	10	
5	Architectural Coating	Architectural Coating	11/28/2017	12/11/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 28,014; Non-Residential Outdoor: 9,338 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Paving	Pavers	1	6.00	125	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Paving	Paving Equipment	1	8.00	130	0.36
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	83.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	19.00	8.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	4.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.9600e-003	0.0000	8.9600e-003	1.3600e-003	0.0000	1.3600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2659	0.2087	2.4000e-004		0.0161	0.0161		0.0150	0.0150	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4126
Total	**0.0272**	**0.2659**	**0.2087**	**2.4000e-004**	**8.9600e-003**	**0.0161**	**0.0250**	**1.3600e-003**	**0.0150**	**0.0164**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4126**

3.2 Demolition - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-004	0.0111	8.7700e-003	3.0000e-005	7.1000e-004	1.6000e-004	8.7000e-004	2.0000e-004	1.5000e-004	3.4000e-004	0.0000	2.7526	2.7526	2.0000e-005	0.0000	2.7530
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	6.9000e-004	7.1800e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2850	1.2850	7.0000e-005	0.0000	1.2864
Total	**1.1700e-003**	**0.0118**	**0.0160**	**5.0000e-005**	**2.1400e-003**	**1.7000e-004**	**2.3100e-003**	**5.8000e-004**	**1.6000e-004**	**7.3000e-004**	**0.0000**	**4.0375**	**4.0375**	**9.0000e-005**	**0.0000**	**4.0393**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.4900e-003	0.0000	3.4900e-003	5.3000e-004	0.0000	5.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0272	0.2659	0.2087	2.4000e-004		0.0161	0.0161		0.0150	0.0150	0.0000	22.2938	22.2938	5.6600e-003	0.0000	22.4125
Total	**0.0272**	**0.2659**	**0.2087**	**2.4000e-004**	**3.4900e-003**	**0.0161**	**0.0196**	**5.3000e-004**	**0.0150**	**0.0156**	**0.0000**	**22.2938**	**22.2938**	**5.6600e-003**	**0.0000**	**22.4125**

3.2 Demolition - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-004	0.0111	8.7700e-003	3.0000e-005	7.1000e-004	1.6000e-004	8.7000e-004	2.0000e-004	1.5000e-004	3.4000e-004	0.0000	2.7526	2.7526	2.0000e-005	0.0000	2.7530
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	6.9000e-004	7.1800e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.2850	1.2850	7.0000e-005	0.0000	1.2864
Total	**1.1700e-003**	**0.0118**	**0.0160**	**5.0000e-005**	**2.1400e-003**	**1.7000e-004**	**2.3100e-003**	**5.8000e-004**	**1.6000e-004**	**7.3000e-004**	**0.0000**	**4.0375**	**4.0375**	**9.0000e-005**	**0.0000**	**4.0393**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8300e-003	0.0000	9.8300e-003	5.0500e-003	0.0000	5.0500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7700e-003	0.0396	0.0264	3.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.7700e-003**	**0.0396**	**0.0264**	**3.0000e-005**	**9.8300e-003**	**2.1300e-003**	**0.0120**	**5.0500e-003**	**1.9600e-003**	**7.0100e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	8.8000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	1.0000e-005	0.0000	0.1583
Total	**6.0000e-005**	**9.0000e-005**	**8.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**1.0000e-005**	**0.0000**	**0.1583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8300e-003	0.0000	3.8300e-003	1.9700e-003	0.0000	1.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7700e-003	0.0396	0.0264	3.0000e-005		2.1300e-003	2.1300e-003		1.9600e-003	1.9600e-003	0.0000	2.6112	2.6112	8.0000e-004	0.0000	2.6280
Total	**3.7700e-003**	**0.0396**	**0.0264**	**3.0000e-005**	**3.8300e-003**	**2.1300e-003**	**5.9600e-003**	**1.9700e-003**	**1.9600e-003**	**3.9300e-003**	**0.0000**	**2.6112**	**2.6112**	**8.0000e-004**	**0.0000**	**2.6280**

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	9.0000e-005	8.8000e-004	0.0000	1.8000e-004	0.0000	1.8000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1582	0.1582	1.0000e-005	0.0000	0.1583
Total	**6.0000e-005**	**9.0000e-005**	**8.8000e-004**	**0.0000**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1582**	**0.1582**	**1.0000e-005**	**0.0000**	**0.1583**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2955	1.9109	1.4311	2.2000e-003		0.1226	0.1226		0.1182	0.1182	0.0000	184.5473	184.5473	0.0387	0.0000	185.3605
Total	**0.2955**	**1.9109**	**1.4311**	**2.2000e-003**		**0.1226**	**0.1226**		**0.1182**	**0.1182**	**0.0000**	**184.5473**	**184.5473**	**0.0387**	**0.0000**	**185.3605**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5100e-003	0.0661	0.0884	1.7000e-004	4.9200e-003	1.0100e-003	5.9300e-003	1.4100e-003	9.3000e-004	2.3400e-003	0.0000	15.5245	15.5245	1.1000e-004	0.0000	15.5268
Worker	6.8300e-003	0.0101	0.1050	2.6000e-004	0.0209	1.7000e-004	0.0210	5.5400e-003	1.6000e-004	5.6900e-003	0.0000	18.7803	18.7803	9.7000e-004	0.0000	18.8007
Total	**0.0133**	**0.0762**	**0.1934**	**4.3000e-004**	**0.0258**	**1.1800e-003**	**0.0270**	**6.9500e-003**	**1.0900e-003**	**8.0300e-003**	**0.0000**	**34.3048**	**34.3048**	**1.0800e-003**	**0.0000**	**34.3275**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2955	1.9109	1.4311	2.2000e-003		0.1226	0.1226		0.1182	0.1182	0.0000	184.5471	184.5471	0.0387	0.0000	185.3603
Total	**0.2955**	**1.9109**	**1.4311**	**2.2000e-003**		**0.1226**	**0.1226**		**0.1182**	**0.1182**	**0.0000**	**184.5471**	**184.5471**	**0.0387**	**0.0000**	**185.3603**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.5100e-003	0.0661	0.0884	1.7000e-004	4.9200e-003	1.0100e-003	5.9300e-003	1.4100e-003	9.3000e-004	2.3400e-003	0.0000	15.5245	15.5245	1.1000e-004	0.0000	15.5268
Worker	6.8300e-003	0.0101	0.1050	2.6000e-004	0.0209	1.7000e-004	0.0210	5.5400e-003	1.6000e-004	5.6900e-003	0.0000	18.7803	18.7803	9.7000e-004	0.0000	18.8007
Total	**0.0133**	**0.0762**	**0.1934**	**4.3000e-004**	**0.0258**	**1.1800e-003**	**0.0270**	**6.9500e-003**	**1.0900e-003**	**8.0300e-003**	**0.0000**	**34.3048**	**34.3048**	**1.0800e-003**	**0.0000**	**34.3275**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.9300e-003	0.0605	0.0452	7.0000e-005		3.6700e-003	3.6700e-003		3.3800e-003	3.3800e-003	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
Paving	9.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.8300e-003**	**0.0605**	**0.0452**	**7.0000e-005**		**3.6700e-003**	**3.6700e-003**		**3.3800e-003**	**3.3800e-003**	**0.0000**	**6.1129**	**6.1129**	**1.8400e-003**	**0.0000**	**6.1515**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	3.5000e-004	3.5900e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6425	0.6425	3.0000e-005	0.0000	0.6432
Total	**2.3000e-004**	**3.5000e-004**	**3.5900e-003**	**1.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**0.6425**	**0.6425**	**3.0000e-005**	**0.0000**	**0.6432**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.9300e-003	0.0605	0.0452	7.0000e-005		3.6700e-003	3.6700e-003		3.3800e-003	3.3800e-003	0.0000	6.1129	6.1129	1.8400e-003	0.0000	6.1515
Paving	9.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.8300e-003**	**0.0605**	**0.0452**	**7.0000e-005**		**3.6700e-003**	**3.6700e-003**		**3.3800e-003**	**3.3800e-003**	**0.0000**	**6.1129**	**6.1129**	**1.8400e-003**	**0.0000**	**6.1515**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	3.5000e-004	3.5900e-003	1.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	1.9000e-004	0.0000	0.6425	0.6425	3.0000e-005	0.0000	0.6432
Total	**2.3000e-004**	**3.5000e-004**	**3.5900e-003**	**1.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**0.6425**	**0.6425**	**3.0000e-005**	**0.0000**	**0.6432**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	**0.2181**	**0.0109**	**9.3400e-003**	**1.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.7000e-004**	**8.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.3000e-004**	**0.0000**	**1.2795**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	1.1000e-004	1.1100e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1977	0.1977	1.0000e-005	0.0000	0.1979
Total	**7.0000e-005**	**1.1000e-004**	**1.1100e-003**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1977**	**0.1977**	**1.0000e-005**	**0.0000**	**0.1979**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6600e-003	0.0109	9.3400e-003	1.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004	0.0000	1.2766	1.2766	1.3000e-004	0.0000	1.2795
Total	**0.2181**	**0.0109**	**9.3400e-003**	**1.0000e-005**		**8.7000e-004**	**8.7000e-004**		**8.7000e-004**	**8.7000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.3000e-004**	**0.0000**	**1.2795**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	1.1000e-004	1.1100e-003	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1977	0.1977	1.0000e-005	0.0000	0.1979
Total	**7.0000e-005**	**1.1000e-004**	**1.1100e-003**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1977**	**0.1977**	**1.0000e-005**	**0.0000**	**0.1979**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6915	1.3048	5.7795	8.3200e-003	0.5515	0.0176	0.5691	0.1476	0.0161	0.1637	0.0000	698.2515	698.2515	0.0353	0.0000	698.9924
Unmitigated	0.6915	1.3048	5.7795	8.3200e-003	0.5515	0.0176	0.5691	0.1476	0.0161	0.1637	0.0000	698.2515	698.2515	0.0353	0.0000	698.9924

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Supermarket	1,103.87	1,103.87	1103.87	1,456,528	1,456,528
Total	1,103.87	1,103.87	1,103.87	1,456,528	1,456,528

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Supermarket	16.60	8.40	6.90	6.50	74.50	19.00	34	30	36

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.516610	0.060517	0.179979	0.140587	0.041566	0.006616	0.015092	0.027587	0.001923	0.002530	0.004314	0.000602	0.002075

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	214.4629	214.4629	9.8600e-003	2.0400e-003	215.3022
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	214.4629	214.4629	9.8600e-003	2.0400e-003	215.3022
NaturalGas Mitigated	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9599	19.9599	3.8000e-004	3.7000e-004	20.0814
NaturalGas Unmitigated	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9599	19.9599	3.8000e-004	3.7000e-004	20.0814

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Supermarket	374035	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9599	19.9599	3.8000e-004	3.7000e-004	20.0814
Total		**2.0200e-003**	**0.0183**	**0.0154**	**1.1000e-004**		**1.3900e-003**	**1.3900e-003**		**1.3900e-003**	**1.3900e-003**	**0.0000**	**19.9599**	**19.9599**	**3.8000e-004**	**3.7000e-004**	**20.0814**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Supermarket	374035	2.0200e-003	0.0183	0.0154	1.1000e-004		1.3900e-003	1.3900e-003		1.3900e-003	1.3900e-003	0.0000	19.9599	19.9599	3.8000e-004	3.7000e-004	20.0814
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0200e-003**	**0.0183**	**0.0154**	**1.1000e-004**		**1.3900e-003**	**1.3900e-003**		**1.3900e-003**	**1.3900e-003**	**0.0000**	**19.9599**	**19.9599**	**3.8000e-004**	**3.7000e-004**	**20.0814**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	27104	7.7563	3.6000e-004	7.0000e-005	7.7866
Supermarket	722329	206.7066	9.5000e-003	1.9700e-003	207.5156
Total		**214.4629**	**9.8600e-003**	**2.0400e-003**	**215.3022**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	27104	7.7563	3.6000e-004	7.0000e-005	7.7866
Supermarket	722329	206.7066	9.5000e-003	1.9700e-003	207.5156
Total		**214.4629**	**9.8600e-003**	**2.0400e-003**	**215.3022**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1972	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3500e-003	2.3500e-003	1.0000e-005	0.0000	2.4900e-003
Unmitigated	0.1972	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3500e-003	2.3500e-003	1.0000e-005	0.0000	2.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0216					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1754					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3500e-003	2.3500e-003	1.0000e-005	0.0000	2.4900e-003
Total	**0.1972**	**1.0000e-005**	**1.2300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.3500e-003**	**2.3500e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0216					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1754					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2300e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.3500e-003	2.3500e-003	1.0000e-005	0.0000	2.4900e-003
Total	**0.1972**	**1.0000e-005**	**1.2300e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.3500e-003**	**2.3500e-003**	**1.0000e-005**	**0.0000**	**2.4900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	9.0622	0.0717	1.7600e-003	11.1130
Unmitigated	9.0622	0.0717	1.7600e-003	11.1141

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Supermarket	2.18801 / 0.0676704	9.0622	0.0717	1.7600e-003	11.1141
Total		**9.0622**	**0.0717**	**1.7600e-003**	**11.1141**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Supermarket	2.18801 / 0.0676704	9.0622	0.0717	1.7600e-003	11.1130
Total		**9.0622**	**0.0717**	**1.7600e-003**	**11.1130**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.3214	1.2010	0.0000	45.5416
Unmitigated	20.3214	1.2010	0.0000	45.5416

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Supermarket	100.11	20.3214	1.2010	0.0000	45.5416
Total		**20.3214**	**1.2010**	**0.0000**	**45.5416**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Supermarket	100.11	20.3214	1.2010	0.0000	45.5416
Total		**20.3214**	**1.2010**	**0.0000**	**45.5416**

9.0 Operational Offroad

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

10.0 Vegetation

Appendix C –
Noise Impact Analysis dated July 25, 2016

NOISE IMPACT ANALYSIS

ALDI MARKET
13900 GOLDENWEST STREET

WESTMINSTER, CALIFORNIA

Prepared for:

Hodge & Associates
Attn: Bill Hodge
P. O. Box 2842
Palm Desert, CA 92261

Date:

July 25, 2016

Project No.: P16-019 N

NOISE SETTING

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally considered to be unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The decibel (dB) scale is used to quantify sound pressure levels. Although decibels are most commonly associated with sound, "dB" is a generic descriptor that is equal to ten times the logarithmic ratio of any physical parameter versus some reference quantity. For sound, the reference level is the faintest sound detectable by a young person with good auditory acuity.

Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called "A-weighting," written as dB(A). Any further reference in this discussion to decibels written as "dB" should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called LEQ), or alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Ldn (day-night) or the Community Noise Equivalent Level (CNEL). The CNEL metric has gradually replaced the Ldn factor, but the two descriptors are essentially identical.

CNEL-based standards are generally applied to transportation-related sources because local jurisdictions are pre-empted from exercising direct noise control over vehicles on public streets, aircraft, trains, etc. The City of Westminster therefore regulates the noise exposure of the receiving property through land use controls.

For "stationary" noise sources such as a temple, the City has established noise performance standards designed to not adversely impact adjoining uses. These standards are articulated in the jurisdictional Municipal Code. These standards recognize the varying noise sensitivity of both transmitting and receiving land uses. The property line noise performance standards are normally structured according to land use and time-of-day.

CITY OF WESTMINSTER NOISE STANDARDS

The Noise Element of the City of Westminster General Plan establishes noise quality standards for land use categories based on the State of California Office of Noise Control land use compatibility recommendations. Community noise exposures are recommended as normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable for various classes of land use sensitivity. As shown in Table 1, the City of Westminster guidelines recommend an exterior noise exposure of up to 65 dB CNEL as "normally acceptable" for siting office and commercial. However, CNEL-based standards generally apply to usable exterior outdoor space. All uses at the proposed development are anticipated to be interior activities.

Interior exposures of commercial uses such as office or commercial use are controlled through adequate structural attenuation. Structural noise reduction in buildings with limited window space is typically 30-35 dB. The interior noise standard for commercial uses is typically 50 dB CNEL. With only moderate structural noise attenuation features, building exterior levels of 80 dB CNEL could be accommodated while still achieving an acceptable interior level.

The Noise Element in the City's municipal code also limits the noise level generated on a property that may cross to a neighboring residential property. The City's noise ordinance limits are stated in terms of a 30-minute limit with allowable deviations from this 50th percentile standard. This noise level describes the noise that is exceeded during a certain percentage of the measurement period. For example, the L_{50} is the level exceeded 50% of the measurement period of thirty minutes in an hour. The larger the deviation, the shorter the allowed duration up to a never-to-exceed 20 dB increase above the 50th percentile standard.

Ordinance limits generally apply to "stationary" sources such as mechanical equipment, or vehicles operating on private property. Any stationary equipment at the proposed project (such as HVAC equipment) must meet the City of Westminster Residential Noise Standards at the nearest residential property line, as shown in Table 2. The applicable requirement is a function of the time of day and appropriate zone. The residences closest to the project site in Zone 1are required to meet an L_{50} of 55 dB day time and 50 dB night time. The nearest residence is located north and east of the project site.

Section 8.28.060E of the City's Noise Ordinance also exempts noise generated by construction from Noise Ordinance standards if construction is restricted to the hours of 7 a.m. and 8 p.m. on weekdays and Saturdays. Construction is not permitted on Sundays or federal holidays.

Table 1

City of Westminster Land Use Compatibility Guidelines for Exterior Community Noise

Land Use	Normally Acceptable	Community Noise Exposure CNEL, dB		Clearly Unacceptable
		Conditionally Acceptable	Normally Unacceptable	
Residential Land Uses	50-60	60-65	65-75	Above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-70	70-80	Above 80
Transient Lodging: Motels, Hotels	50-60	60-75	75-80	Above 80
Auditoriums, Concert Halls, Amphitheaters	-	50-70	-	Above 70
Sports Arena, Outdoor Spectator Sports	50-60	50-75	-	Above 75
Playgrounds, Neighborhood Parks	50-70	60-70	70-75	Above 70
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-75	-	70-80	Above 80
Office Buildings, Business and Professional Commercial	50-65	-	65-77	Above 75
Industrial, Manufacturing, Utilities, Agriculture	50-75	-	70-80	Above 75

Normally Acceptable: Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Table 2
City of Westminster Noise Ordinance Standards

EXTERIOR NOISE STANDARDS

Noise Zone	Noise Level	Time Period
1	55 dB(A)	7:00 a.m.-10:00 p.m.
	55 dB(A)	10:00 p.m.- 7:00 a.m.
2	60 dB(A)	7:00 a.m.-10:00 p.m.
	55 dB(A)	10:00 p.m.- 7:00 a.m.

It is unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise, on property owned, leased, occupied, or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, to exceed:

1. The noise standard for a cumulative period of more than thirty minutes in any hour; or

2. The noise standard plus 5dB(A) for a cumulative period of more than fifteen minutes in any hour; or

3. The noise standard plus 10dB(A) for a cumulative period of more than five minutes in any hour; or

4. The noise standard plus 15dB(A) for a cumulative period of more than one minute in any hour; or

5. The noise standard plus 20dB(A) for any period of time.

6. In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

BASELINE NOISE LEVELS

Noise measurements were made in order to document existing baseline levels in the area. These help to serve as a basis to determine noise exposure from ambient noise activities upon the proposed project. An on-site short term (15-minute) noise measurement was conducted on June 30, 2016. The measurement location is shown in Figure 1 and the monitoring results are summarized below.

Measured Noise Levels (dBA)

Time	Leq	Lmax	Lmin	L10	L33	L50	L90
noon-12:15	61	70	50	64	61	58	52

Monitoring experience shows that 24-hour weighted CNEL's are approximately equal to mid-day Leq plus 2-3 dB (Caltrans Technical Noise Supplement, 2009). This would equate to an existing CNEL of 63-64 near the closest residences.

Figure 1

Noise Meter Location

NOISE IMPACTS

NOISE SIGNIFICANCE CRITERIA

Noise impacts are considered significant if they result in:

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.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

"Substantially" is not defined in any guidelines. The accuracy of sound level meters and of sound propagation computer models is no better than ±1 dB. This is also the human loudness difference discrimination level under ideal laboratory conditions. Most people cannot distinguish a change in the noise environment that differs by less than 3 dB between the pre- and post-project exposure if the change occurs under ambient conditions. For the purposes of this analysis, a traffic noise increase of more than +3 dB that creates or worsens an area of noise/land use incompatibility would be considered a significant degradation of noise quality.

SOURCES OF IMPACT

Three characteristic noise sources are typically identified with general development such as the proposed retail development. Construction activities, especially heavy equipment, will create short-term noise increases near the project site. Upon completion, vehicular traffic on streets around the proposed project area may create a higher noise exposure. Traffic noise impacts are generally analyzed both to insure that the project does not adversely impact the acoustic environment of the surrounding community, as well as to insure that the project site is not exposed to an unacceptable level of noise resulting from the ambient noise environment acting on the project. In already-developed areas, the added land use intensity associated with a single project only increases traffic incrementally on existing roadways. These noise impacts are often masked by the baseline, and often preclude perception of any substantial noise level increase. Finally, the project analysis needs to examine noise from the proposed commercial uses upon adjacent sensitive uses.

CONSTRUCTION NOISE IMPACTS

The proposed project would entail construction of a 17,752 square foot retail structure. The project site is situated east of Goldenwest Street and south of Wyoming Street in the City of Westminster. Just north of the site, on the southwest corner of the Pine Street/Wyoming St, is an existing single story residence with a shared property line. Other residential uses are to the east, across Pine Street and are primarily single stories.

Temporary construction noise impacts will vary markedly because the noise strength of construction equipment ranges widely as a function of the equipment used and its activity level. Short-term construction noise impacts tend to occur in discrete phases dominated initially by demolition of existing structures and large earth-moving sources, then by foundation and parking lot construction, and finally for finish construction. The demolition and earth-moving sources are the noisiest, with equipment noise typically ranging from 75 to 90 dB at 50 feet from the source.

The new building will be built on a level site. Although there will be demolition of existing buildings, no major grading will be performed. Utility connections and foundation preparation will require use of equipment such as backhoes, trenchers and dozers. Peak noise levels from such equipment is seen in Figure 2 to be 85 dB at 50 feet. The single story residence just north of the site which could be closer than 50 feet during parking lot paving. Insertion of a sound barrier between the construction equipment and receiver can be used to mitigate noise. It is recommended that an 8 foot block wall be constructed along the northern shared residential property line to minimize construction noise and later operational noise impacts.

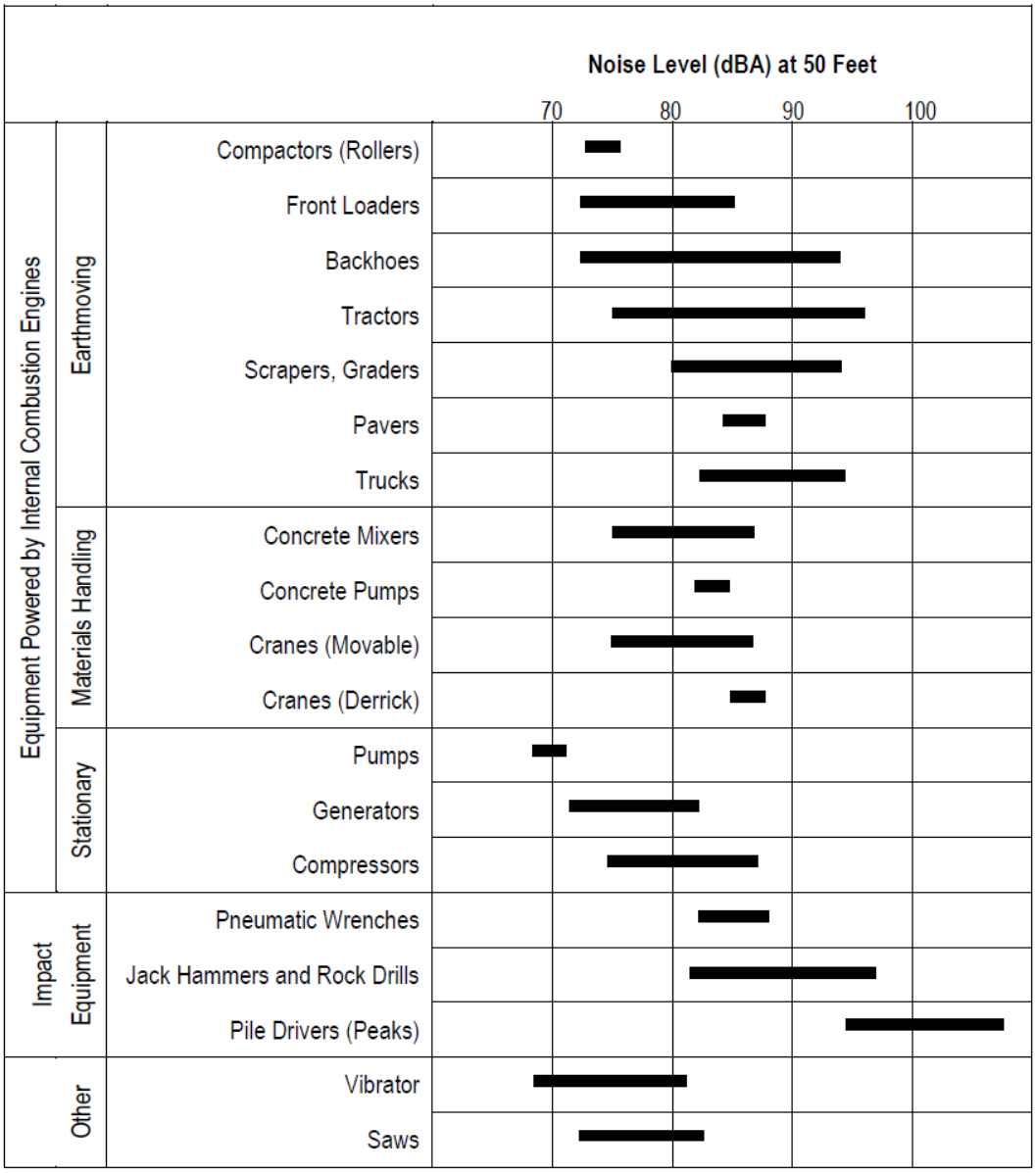
At the closest home, exterior equipment noise will be 75-85 dB. Such a level could be disturbing particularly if windows facing the construction activity were open. Construction of the recommended 8-foot block wall to shield the northernmost residence will assist in minimizing noise impacts and could reduce noise by up to 8 dB.

It would also require temporary window closure to minimize disturbance for quiet activities. However, many people are away from home during the hours from 7 a.m. to 3 p.m. when temporary construction disturbance would be greatest.

Construction activities are exempt from numerical noise regulations if they occur during the hours allowed by the Municipal Code. However, as noted above, heavy equipment noise may be a nuisance even if generated during allowable hours. Compliance with these hours (7 a.m. to 8 p.m. Monday-Saturday) will maintain construction activity noise impacts at less-than-significant levels.

Figure 2

Typical Construction Equipment Noise Generation Levels



Source: EPA PB 206717, Environmental Protection Agency, December 31, 1971, "Noise from Construction Equipment and Operations."

CONSTRUCTION ACTIVITY VIBRATION

Ground-borne vibration occurs when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of ground-borne vibration include discernable movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Vibration related problems generally occur due to resonances in the structural components of a building because structures amplify groundborne vibration. Within the "soft" sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Groundborne vibration is almost never annoying to people who are outdoors (FTA 2006).

Groundborne vibrations from construction activities rarely reach levels that can damage structures. Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

The vibration descriptor commonly used to determine structural damage is the peak particle velocity (ppv) which is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in in/sec. The range of such vibration is shown in Table 3:

Table 3
Human Response To Transient Vibration

Average Human Response	ppv (in/sec)
Severe	2.00
Strongly perceptible	0.90
Distinctly perceptible	0.24
Barely perceptible	0.03

Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2013.

Over the years, numerous vibration criteria and standards have been suggested by researchers, organizations, and governmental agencies. There are no Caltrans or Federal Highway Administration standards for vibration.

According to Caltrans, the threshold for structural vibration damage for modern structures is 0.5 in/sec for intermittent sources, which include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. The American Association of State Highway and Transportation Officials (AASHTO) (1990) identifies maximum vibration levels for preventing damage to structures from intermittent construction or maintenance activities for residential buildings in good repair with gypsum board walls to be 0.4–0.5 in/sec. The damage threshold criterion of 0.2 in/sec is appropriate for fragile buildings. For the purpose of this analysis because area residences can be older, the 0.2 in/sec damage threshold for older fragile buildings is used as the evaluation criteria. Below this

level there is virtually no risk of building damage. Table 4 shows the predicted vibration levels generated by construction equipment.

Table 4
Estimated Vibration Levels During Project Construction

Equipment	PPV at 25 ft (in/sec)	PPV at 40 ft (in/sec)	PPV at 50 ft (in/sec)	PPV at 100 ft (in/sec)	PPV at 150 ft (in/sec)
Large Bulldozer	0.089	0.044	0.031	0.011	0.006
Loaded trucks	0.076	0.038	0.027	0.010	0.005
Jackhammer	0.035	0.017	0.012	0.004	0.002
Small Bulldozer	0.003	0.001	0.001	<0.001	<0.001

Source: FHWA Transit Noise and Vibration Impact Assessment

The calculation to determine PPV at a given distance is:

PPVdistance = PPVref*(25/D)^1.5

Where:

PPVdistance = the peak particle velocity in inches/second of the equipment adjusted for distance,

PPVref = the reference vibration level in inches/second at 25 feet, and

D = the distance from the equipment to the receiver.

The closest home to the proposed project has approximately 40 foot separation to the nearest structural facade. As seen on Table 4, at this setback the vibration levels are well below levels that could create structural damage in fragile buildings (i.e., 0.2 in/sec). Operation of jackhammers as a typical source of construction vibration would generate vibration levels below the threshold for possible cosmetic damage level. All other homes across Pine Street have a much larger separation distance and therefore even lower resultant vibration impact. Vibration would be less than the recommended acceptability threshold of 0.2 inches per second.

VEHICULAR NOISE IMPACTS

Long-term noise concerns from the development of retail commercial uses at the project site center primarily on mobile source emissions on project area roadways. These concerns were addressed using the California specific vehicle noise curves (CALVENO) in the federal roadway noise model (the FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108). The model calculates the Leq noise level for a particular reference set of input conditions, and then makes a series of adjustments for site-specific traffic volumes, distances, roadway speeds, or noise barriers.

Table 3 summarizes the calculated 24-hour CNEL level at 50 feet from the roadway centerline along 16 project area roadway segments. Existing (2016) and Future (2017) conditions, with and without project were evaluated. The noise analysis utilized traffic data obtained from the traffic analysis prepared for this project.

Table 4 presents the calculated project contribution to traffic noise. The project would generate about 1,800 new trips per day, though only 1,104 of those trips are considered "new" as compared to existing site use and credit reduction for pass-by trips. The area is primarily built out, and traffic from small infill projects are diluted along already heavily traveled roadways. The largest project related traffic noise increase occurs on Wyoming Street, east of Goldenwest. This impact is +0.9 dB CNEL at 50 feet from roadway centerline. Because background traffic on Wyoming Street is low, even a small increase in traffic can have a greater impact than on other segments with greater background traffic volumes. Most roadway segments are not expected to experience any perceivable noise impact (< +0.1 dB). Because all project related traffic noise impacts are less than the +3.0 dB CNEL significance threshold, traffic noise attributed to the project is considered to be individually less-than-significant.

Cumulative impacts are defined as the difference between "Future Plus Project" noise levels and "Existing no Project" traffic noise levels. As shown in Table 4, the maximum cumulative noise increase is +0.9 dB CNEL at 50 feet from roadway centerline, also along Wyoming Street east of Goldenwest. Therefore cumulative traffic noise impacts are also considered to be less-than-significant.

Table 3
Near Term Traffic Noise Impact Analysis
(CNEL in dB at 50 feet from Centerline)

Road Segment		***Existing No Project***	***Existing W Project***	***Future No Project***	***Future W Project***
Goldenwest/	N Trask	71.0	71.1	71.1	71.2
	S of Trask	71.1	71.2	71.3	71.3
	N of Wyoming	71.4	71.5	71.5	71.5
	Wyoming-Westminster	71.1	71.2	71.2	71.3
	S of Westminster	71.2	71.2	71.4	71.4
Westminster/	W of Edwards	70.3	70.3	70.4	70.4
	E of Edwards	70.0	70.0	70.1	70.1
	W of Goldenwest	69.9	70.0	70.0	70.1
	Goldenwest-Hoover	69.5	69.6	69.7	69.7
	E of Hoover	69.5	69.5	69.7	69.7
Wyoming/	W of Goldenwest	64.1	64.1	64.1	64.1
	E of Goldenwest	60.3	61.2	60.3	61.2
Edwards/	N of Westminster	68.2	68.2	68.2	68.3
	S of Westminster	69.4	69.4	69.4	69.4
Hoover/	N of Westminster	67.7	67.7	67.8	67.8
	S of Westminster	67.2	67.2	67.3	67.4

Table 4
Project Only Impacts
(CNEL in dB at 50 feet from Centerline)

Road Segment		***Project Only Existing***	***Project Only Future***	***Cumulative Impacts****
Goldenwest/	N Trask	0.0	0.0	0.1
	S of Trask	0.0	0.0	0.2
	N of Wyoming	0.0	0.0	0.1
	Wyoming-Westminster	0.1	0.1	0.2
	S of Westminster	0.0	0.0	0.2
Westminster/	W of Edwards	0.0	0.0	0.1
	E of Edwards	0.0	0.0	0.1
	W of Goldenwest	0.0	0.0	0.1
	Goldenwest-Hoover	0.0	0.0	0.2
	E of Hoover	0.0	0.0	0.2
Wyoming/	W of Goldenwest	0.0	0.0	0.0
	E of Goldenwest	0.9	0.9	0.9
Edwards/	N of Westminster	0.0	0.0	0.1
	S of Westminster	0.0	0.0	0.1
Hoover/	N of Westminster	0.0	0.0	0.1
	S of Westminster	0.0	0.0	0.2

*Future w/Project-Exising no/Project

SITE OPERATIONAL NOISE

Operation of the ALDI Market will generate a variety of potential noise sources. Various operations of the proposed project would lead to the introduction of new mobile and stationary sources of noise. On-site vehicular traffic and mechanical ventilation systems (HVAC) are the primary sources of noise. The potential noise impacts anticipated to occur as a result of the proposed project are identified and described below.

On Site Vehicular Noise

Noise generated from customer's vehicles entering or leaving the site was evaluated. Parking lots are sited west of the proposed structure along Goldenwest Street or to the south, along the Pine Street frontage. Parking lots are not immediately adjacent to any sensitive use. The most desirable parking will be closest to the entrance at the southwest of the building. This would mean that unless, extremely crowded, parking will be well away from any sensitive use.

Project access is provided via Wyoming Street, Westminster Boulevard and Goldenwest Street. According to the project traffic report, the peak hour traffic would occur in the afternoon and could generate 112 new trips. This represents vehicular movements entering and leaving the site. As a worst case it was assumed that 50% of peak hour traffic would use a single drive aisle. The associated noise level would be 47 dB Leq at 50 feet. This is less than the Westminster noise standard of 55 dB and is below the noise baseline such that people are unlikely to be aware that cars are entering or leaving the lot.

Delivery Trucks

Deliveries will be made via the loading dock at the north of the building. In addition to loading dock noise, truck travel to and from the loading dock would occur along the shared residential property line to the north and is also a potential noise source.

It is recommended that truck deliveries be restricted to daytime hours so as not to create a noise nuisance for the adjacent residential uses. The daytime noise standard is 55 dB L_{50}. Although it is unlikely that heavy duty trucks will be utilized for deliveries to the proposed small market, heavy vehicles were evaluated as a worst case condition. It is anticipated that most deliveries will be gasoline powered box car vehicles or medium duty trucks. Postal, UPS or Fed Ex type vans were not evaluated because they generate minimal noise. During loading and unloading of the truck the engine can only idle for five minutes in compliance with State air quality requirements.

The location of the loading dock is such that trucks would have to back up to enter and pull forward to leave. Although the beeping warning noise back up alarm can be annoying, it only occurs for a very short time and would not exceed any noise standards. However, the recommended 8-foot noise wall along the shared property line would assist in minimizing any nuisance noise.

Modern loading docks for trucks include a foam seal and enhanced bumpers on the deck leveler to reduce dock mating noise. The rubber gasket provides a tight connection between the truck

and the building. All unloading can be done directly into the building and the loading dock is below ground level. In addition, most trucks will be smaller gas powered vehicles. As the loading dock is on the northern façade of the market, a small wing wall surrounding the dock to shield the residence to the north would ensure noise levels would remain low.

One heavy duty truck has a noise signature of about 50 dB at 50 feet at a 25 mph travel speed. One medium truck has a noise signature of less than 42 dB at 50 feet for the same travel speed. As a maximum activity condition it was assumed that one heavy duty truck and one medium duty trucks were to access the site during the same hour. The noise signature of these two vehicles would be approximately 51 dB. This is less than the daytime noise standard and provides a worst case operational noise scenario.

Although the recommended 8-foot noise wall along the shared residential property line to the north will reduce loading dock noise at the residence, the following restriction on nocturnal noise deliveries is recommended to ensure that the residential uses closest to the site are not adversely impacted.

- Medium Box Truck and Semi-Truck deliveries may not occur during nighttime hours of 10 p.m. and 7 a.m.

<u>HVAC Noise</u>

Mechanical equipment typically includes heating, ventilating, air-conditioning, and refrigerating equipment. Noise generated by rooftop-mounted mechanical equipment varies significantly depending upon the equipment type and size. However, based on measurements at other similar commercial centers and literature from Trane Industries, noise levels of 54 dBA at 50 feet from external mechanical systems can be anticipated for the project at buildings in proximity to the adjacent residences. Parapet walls are typically required to shield HVAC equipment both visually and acoustically. An additionally -5 dBA is taken for the attenuation from parapet walls.

The closest proposed building to the existing residence is to the north, and has approximately a 50 foot distance separation to the nearest building façade and about 60 feet to the rooftop equipment. HVAC equipment noise at this residence is expected to be 54 dBA without shielding and 49 dBA with shielding. While this noise level is not expected to exceed the City's nighttime maximum noise level of 50 dB, the applicant will be required to submit engineering and acoustical specifications for project mechanical equipment for review prior to the issuance of building permits which demonstrates that the equipment design combined with distance separation or screen walls will not exceed the noise standards for any adjacent sensitive use.

SUMMARY

Traffic noise resulting from project implementation on area roadways will be less-than-significant.

Short-term construction noise intrusion and vibration impacts will be limited by conditions on construction permits requiring compliance with the City of Westminster Noise Ordinance. The allowed hours of construction are 7 a.m. and 8 p.m. on weekdays and on Saturdays. Construction is not permitted on any national holiday or on any Sunday. In addition the following construction practices are recommended:

- Stockpiling and staging activities must be located as far as practicable from dwellings.
- All mobile equipment shall have properly operating and maintained mufflers.

Maximum on-site traffic and parking activities during peak hour use will not exceed significance criteria at the nearest residential property line.

Operational noise will normally be low at any noise-sensitive uses. Project drive aisle entry points and parking areas are typically away from the adjacent sensitive uses and can be acoustically shielded by the proposed structure. Additionally, noise from HVAC equipment is not expected to exceed even the most stringent nocturnal noise thresholds and utilization of parapet screening will add an extra measure of protection.

Trucks accessing the site for deliveries via the northern drive aisle have the ability to create a sleep disturbance for the adjacent residential use. Therefore, the following noise restriction is recommended:

- Medium Box Truck and Semi-Truck deliveries may not occur during nighttime hours of 10 p.m. and 7 a.m.

In addition to the delivery time restriction, an 8-foot sound wall at the shared property line with the residence to the north will provide about 8 dB of noise attenuation and reduce nuisance noise exposure. Because the home is single story, the wall will provide protection to the entire structure.

Appendix D –
Traffic Impact Study dated June 6, 2016

Traffic Impact Study
ALDI Market at 13900 Goldenwest Street
Westminster, California

June 6, 2016

REGISTERED PROFESSIONAL ENGINEER
GIUSEPPE S. CANZONIERI
No. C79006
Exp. 3/31/18
CIVIL
STATE OF CALIFORNIA

Prepared for:
ALDI Inc.
12661 Aldi Pl
Moreno Valley, CA92555

Prepared by:

KOA CORPORATION
PLANNING & ENGINEERING

1100 Corporate Center Drive, Suite 201
Monterey Park, California 91754
(323) 260-4703

JB61057

Table of Contents

1. INTRODUCTION **2**

A. PROJECT DETAILS 2
B. PROJECT STUDY AREA 2
C. ANALYSIS METHODOLOGY 5

2. EXISTING CONDITIONS **8**

A. EXISTING ROADWAY SYSTEM 8
B. EXISTING TRANSIT SERVICE 8
C. EXISTING INTERSECTION LEVELS OF SERVICE 11

3. PROJECT TRIP GENERATION **14**

A. PROJECT TRIP GENERATION 14
B. PROJECT TRIP DISTRIBUTION 15
C. PROJECT TRIP ASSIGNMENT 15

4. FUTURE 2017 PRE-PROJECT CONDITIONS **19**

A. AMBIENT GROWTH 19
B. CUMULATIVE PROJECTS IN THE AREA 22
C. PEAK HOUR INTERSECTION LEVEL OF SERVICE 26

5. FUTURE 2017 POST-PROJECT CONDITIONS **29**

6. PROJECT TRAFFIC IMPACTS **32**

A. DETERMINATION OF TRAFFIC IMPACTS 32
B. PROJECT TRAFFIC IMPACTS 32

7. PARKING ANALYSIS **33**

8. SUMMARY AND PROJECT RECOMMENDATIONS8 ..... **34**

A. ANALYSIS CONCLUSIONS 34
B. PROJECT-ONLY AND CUMULATIVE TRAFFIC IMPACTS 34

List of Figures

FIGURE 1 – PROJECT SITE PLAN 3
FIGURE 2 – STUDY INTERSECTION LOCATIONS 4
FIGURE 3 – EXISTING LANE CONFIGURATIONS AND CONTROLS 9
FIGURE 4 – EXISTING TRANSIT SERVICE 10
FIGURE 5 – EXISTING WEEKDAY AM PEAK HOUR TRAFFIC VOLUMES 12
FIGURE 6 – EXISTING WEEKDAY PM PEAK HOUR TRAFFIC VOLUMES 13
FIGURE 7 – PROJECT TRIP DISTRIBUTION 16
FIGURE 8 – PROJECT TRIP ASSIGNMENT – AM PEAK HOUR 17
FIGURE 9 – PROJECT TRIP ASSIGNMENT – PM PEAK HOUR 18
FIGURE 10 – FUTURE YEAR WITH AMBIENT GROWTH AM PEAK HOUR TURN VOLUMES 20
FIGURE 11 – FUTURE YEAR WITH AMBIENT GROWTH AM PEAK HOUR TURN VOLUMES 21
FIGURE 12 – LOCATIONS OF RELATED PROJECTS 23
FIGURE 13 – RELATED PROJECTS TRIP ASSIGNMENT – AM PEAK HOUR 24
FIGURE 14 – RELATED PROJECTS TRIP ASSIGNMENT – PM PEAK HOUR 25
FIGURE 15 – FUTURE 2017 PRE- PROJECT – WEEKDAY AM PEAK HOUR TURN VOLUMES 27
FIGURE 16 – FUTURE 2017 PRE- PROJECT – WEEKDAY PM PEAK HOUR TURN VOLUMES 28
FIGURE 17 – FUTURE 2017 POST- PROJECT – WEEKDAY AM PEAK HOUR TURN VOLUMES 30
FIGURE 18 – FUTURE 2017 POST- PROJECT – WEEKDAY PM PEAK HOUR TURN VOLUMES 31

List of Tables

TABLE 1 – LEVEL OF SERVICE DEFINITIONS, SIGNALIZED INTERSECTIONS 7
TABLE 2 – TRAFFIC IMPACT THRESHOLD 7
TABLE 3 - SUMMARY OF INTERSECTION PERFORMANCE EXISTING CONDITIONS 11
TABLE 4 – PROJECT TRIP GENERATION CALCULATIONS 15
TABLE 5 – TRIP GENERATION OF RELATED PROJECTS 22
TABLE 6 – INTERSECTION PERFORMANCE – FUTURE (YEAR 2017) PRE-PROJECT CONDITIONS 26
TABLE 7 – INTERSECTION PERFORMANCE – FUTURE (YEAR 2017) POST-PROJECT CONDITIONS 29
TABLE 8 – DETERMINATION OF CUMULATIVE IMPACTS 32

Appendices

APPENDIX A – MEMORANDUM OF UNDERSTANDING
APPENDIX B – TRAFFIC COUNT DATA
APPENDIX C – ANALYSIS WORKSHEETS FOR EXISTING CONDITIONS
APPENDIX D – ANALYSIS WORKSHEETS FOR FUTURE PRE- PROJECT CONDITIONS
APPENDIX E – ANALYSIS WORKSHEETS FOR FUTURE POST- PROJECT CONDITIONS

1. Introduction

This document summarizes a traffic impact study that was conducted for a proposed ALDI Market (Project), to be located at 13900 Goldenwest Street in the City of Westminster. The traffic study was conducted based on the traffic impact study preparation guidelines of the City of Westminster.

A. Project Details

The proposed project would provide 17,752 square-foot retail space for a supermarket (ALDI). The project site would be accessed through three driveways: two at Goldenwest Street and one at Wyoming Street. A total of 77 parking stalls would be provided for the ALDI market.

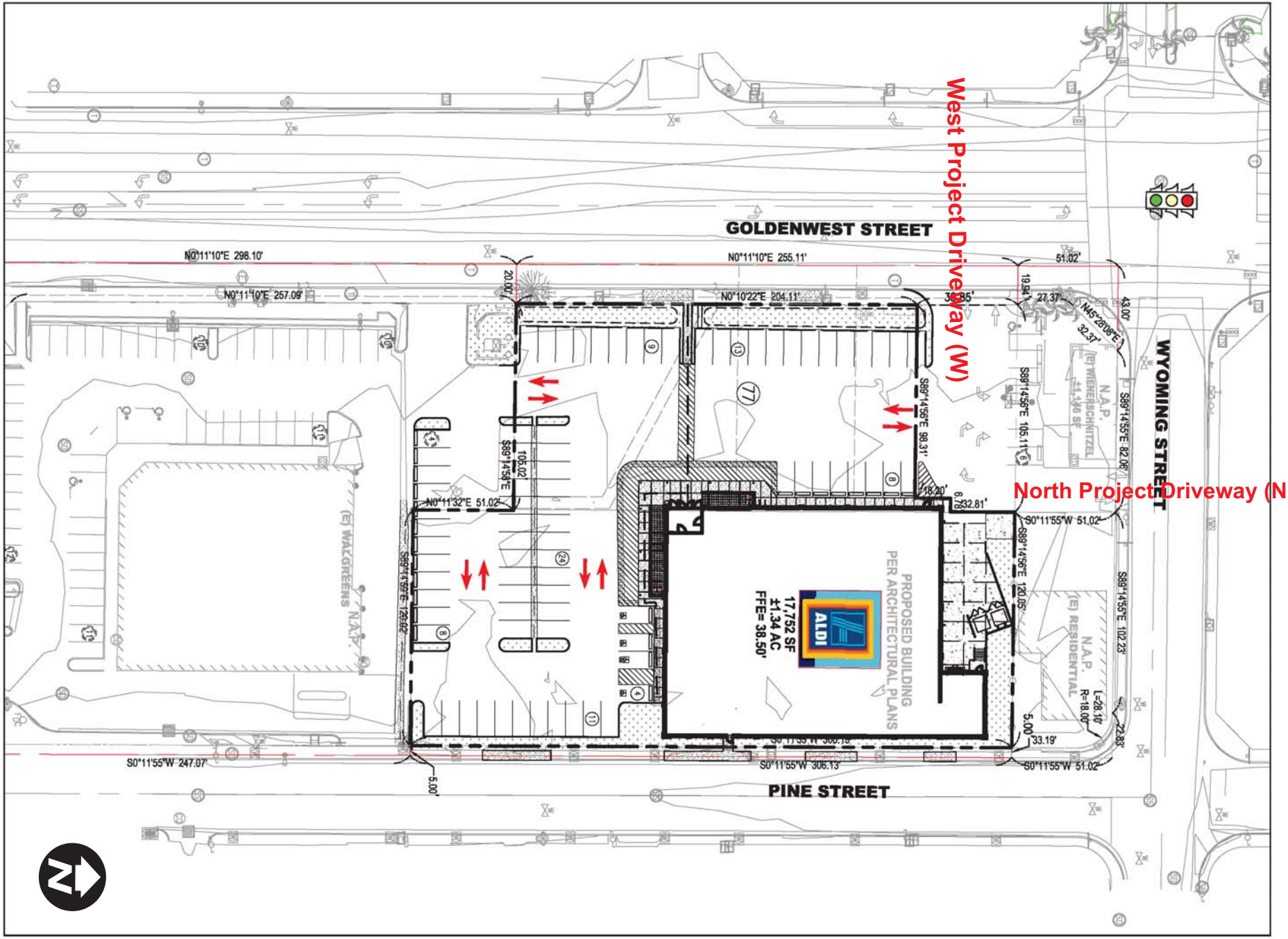
The proposed Project is anticipated to be completed by 2017. The conceptual site plan is illustrated in Figure 1.

B. Project Study Area

The Project study area, as defined through consultation with the City of Westminster, encompasses five study intersections. Traffic impacts were analyzed utilizing weekday a.m. and p.m. peak periods at the study intersections. The list of intersections is as follows:

1. Goldenwest Street & Trask Avenue
2. Goldenwest Street & Wyoming Street
3. Edwards Street & Westminster Avenue
4. Goldenwest Street & Westminster Avenue
5. Hoover Street & Westminster Avenue

The locations of the Project site and study intersections within the surrounding roadway system are illustrated in Figure 2.

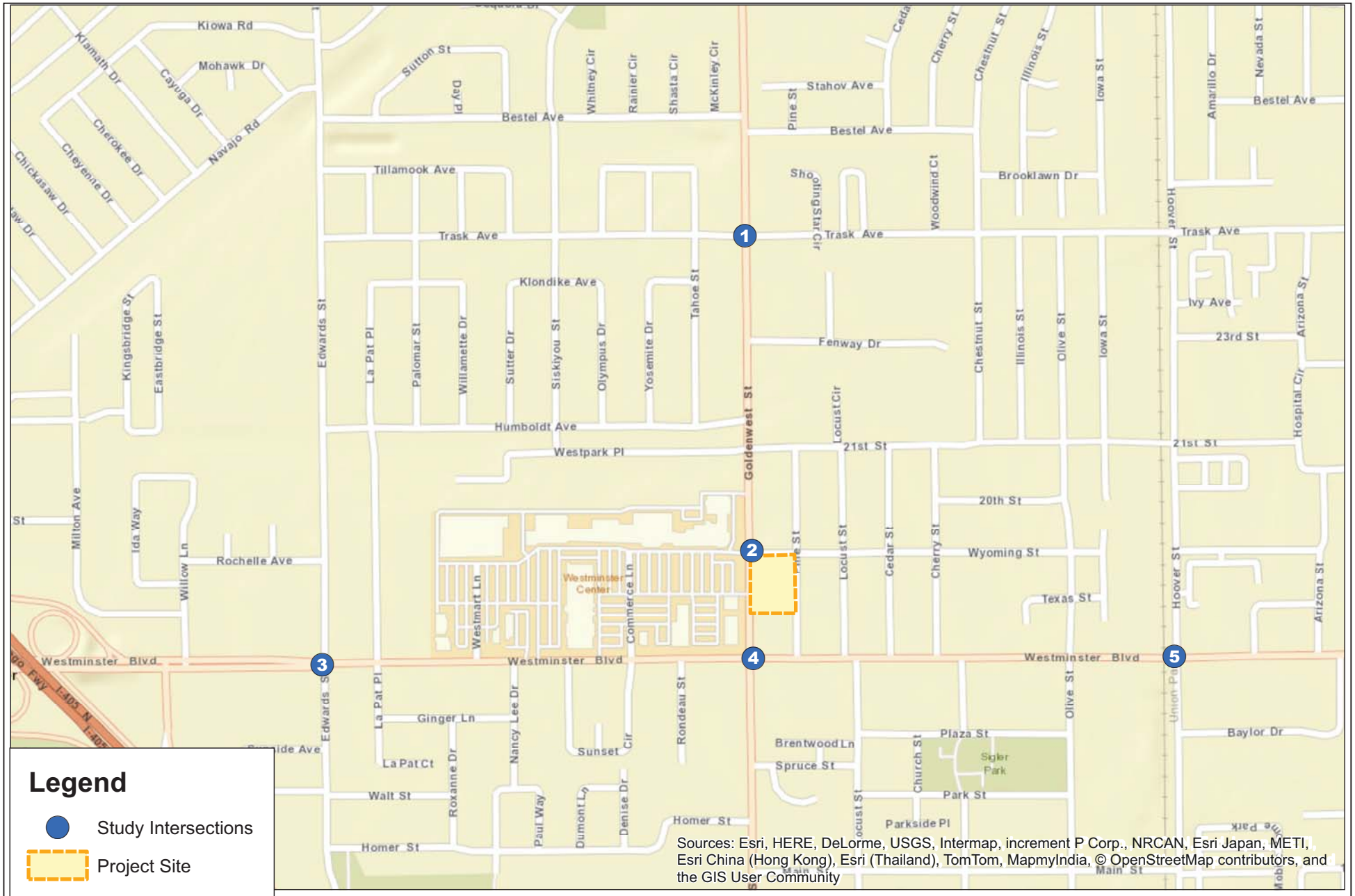


KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 1

Project Site Plan



KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 2

Study Intersection Locations

C. Analysis Methodology

Key tasks undertaken for this traffic analysis include: 1) definition of study approach, 2) determination of existing traffic conditions, 3) trip generation forecasts of the planned Project land use, 4) assignment of Project-generated trips to the study area roadway system, 5) determination of future pre-Project and post-Project conditions and 6) evaluation of the impact of Project traffic at the study intersections. This report follows guidelines within the City of Westminster document entitled *Traffic Impact Study Preparation Guidelines.*

KOA coordinated with the City of Westminster Public Works Department Traffic Engineering Division staff at the start of this study to achieve consensus on assumptions such as study intersections, area/related projects, trip generation calculations and trip distribution.

In order to document these assumptions, a scoping document was prepared for this report. The finalized scoping document is included in Appendix A of this report.

The following text describes the methodology applied to the report analysis.

Study Scenarios

Weekday a.m. and p.m. peak-hour traffic operations were evaluated at the study intersections for the following traffic scenarios. Significant traffic impacts are determined in the last two scenarios:

1. Existing Conditions
2. Future without Project Conditions
3. Future with Project Conditions

Existing Period Conditions

In order to define existing traffic conditions at the study intersections, new peak-hour turning movement counts were collected at the study intersections on a weekday during the timeframes of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

Fieldwork within the Project study area was undertaken to identify the condition of major roadways, to identify traffic control and approach lane configuration at each study intersection, and to identify the locations of on-street parking and transit stops. KOA compiled new manual weekday intersection turn movement counts that were conducted at the study intersections on Tuesday, April 12, 2016.

These counts were utilized to determine existing weekday a.m. and p.m. peak-period levels of service. The count summary sheets are contained in Appendix B. Existing levels of service at the study intersections are discussed in Section 2 of this report.

Project Trip Generation

The estimated trip generation of the proposed Project was based on the *ITE Trip Generation, 9th edition*, published by Institute of Transportation Engineers (ITE). Trip rate for the Supermarket (ITE Land Use Code 850) was utilized to calculate the trip generation for the proposed Project use.

Trip rates for the Single Family Residence, Multi-family Dwelling and General Office Building categories

were utilized to calculate the existing land use credit. Also, pass-by credits were applied to the Supermarket category.

The detailed methodology utilized for the Project trip generation and distribution calculations is discussed in Section 3 of this report.

Project Trip Distribution

Trip distribution is the process of assigning the directions from which traffic access a project site. Trip distribution is dependent upon the land use characteristics of the project, the local roadway network, and the general locations of other uses to which project trips would likely originate or terminate. Project trip distribution calculations are discussed in Section 3 of this report.

Future Pre-Project Conditions

Typically, regional traffic growth that would affect operations at the study intersections by the anticipated project opening year is added to the study area roadways by applying an ambient/background traffic growth rate to the existing traffic volumes. The planned opening date of the proposed Project is 2017. Therefore, an annual traffic growth rate of one percent per year was utilized for the analysis of future conditions.

In addition, traffic from area/cumulative projects (approved and pending developments) was included as part of the analysis for future Year 2017 conditions. A search for area/cumulative projects based on information provided by City of Westminster Planning staff yielded 16 area projects.

The levels of service for the future pre-Project conditions scenario are discussed in Section 4 of this report.

Future Post-Project Conditions

Based on the future pre-Project traffic volumes, plus traffic from the proposed project, the future post-Project conditions were determined and analyzed. The levels of service for the future post-Project conditions scenario are discussed in Section 5 of this report.

Level of Service Methodology

The analysis of peak hour intersection Level of Service (LOS) is the primary indicator of circulation system performance. For the analysis of the selected study area intersections, the City of Westminster requires that the Intersection Capacity Utilization (ICU) Method be used.

The concept of intersection level of service is calculated as the volume of vehicles that pass through the facility divided by the capacity of that facility. A facility is "at capacity" (v/c of 1.00 or greater) when extreme congestion occurs. This volume/capacity ratio value is based upon volumes by lane, lane capacity, and approach lane configurations.

Level of service (LOS) values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating "capacity" of a roadway. Table 1 provides descriptions of general roadway operations for each LOS value, as defined within the *Highway Capacity*

Manual (published by the Transportation Research Board).

Table 1 – Level of Service Definitions, Signalized Intersections

Level of Service Value	Volume-to-Capacity Ratio	Description
A	0-0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601-0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701-0.800	GOOD. Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801-0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups
E	0.901-1.000	POOR. Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.
Per Intersection Capacity Utilization (ICU) Methodology		

Traffic Impact Threshold

The City of Westminster uses a sliding scale to assess intersection impacts. The sliding scale method requires mitigation of project traffic impacts whenever the traffic generated by the proposed development causes the future base level of service of the identified intersection to increase by an amount equal to or greater than the amount listed in Table 2.

Table 2 – Traffic Impact Threshold

Future Base Conditions Level of Service	Project Related Increase in V/C*
E	0.010
F	0.010

**Volume-to-Capacity Ratio*

The assessment of project traffic impacts is discussed in Section 6 of this report.

2. Existing Conditions

This section documents the existing roadway and traffic conditions within the study area.

A. Existing Roadway System

Fieldwork within the Project study area was undertaken to identify traffic control and approach lane configuration at each study intersection, and to identify the locations of on-street parking availability and the locations of transit stops. The discussion presented here is limited to specific roadways that traverse the study intersections and serve the Project site.

Goldenwest Street is a north-south roadway that borders the project site on the west. In the study area, this roadway provides three travel lanes in each direction with striped median. On-street parking is generally prohibited.

Wyoming Street is an east-west roadway north of the Project site. In the study area, this roadway provides one travel lane in each direction with double yellow center line. On-street parking is generally permitted.

Westminster Avenue is an east-west roadway south of the Project site. In the study area, this roadway provides two travel lanes in each direction with painted striped median in some segments. On-street parking is generally prohibited.

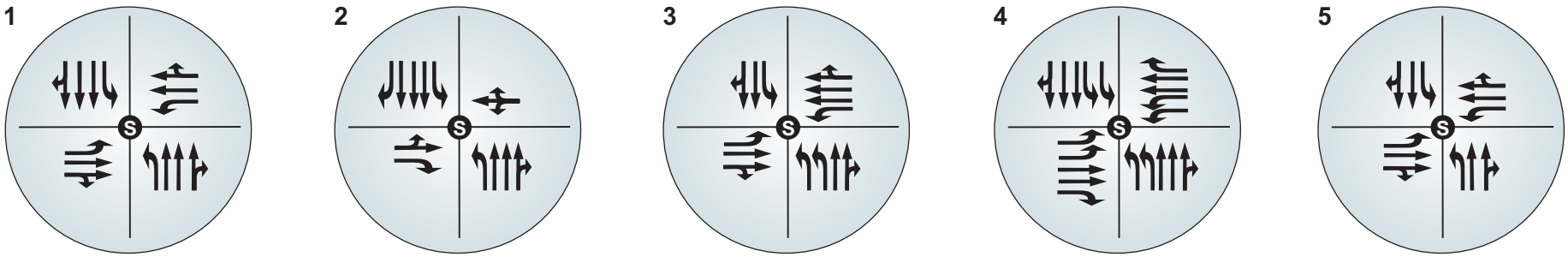
Figure 3 illustrates the existing approach lane and signalized control configurations of the study intersections.

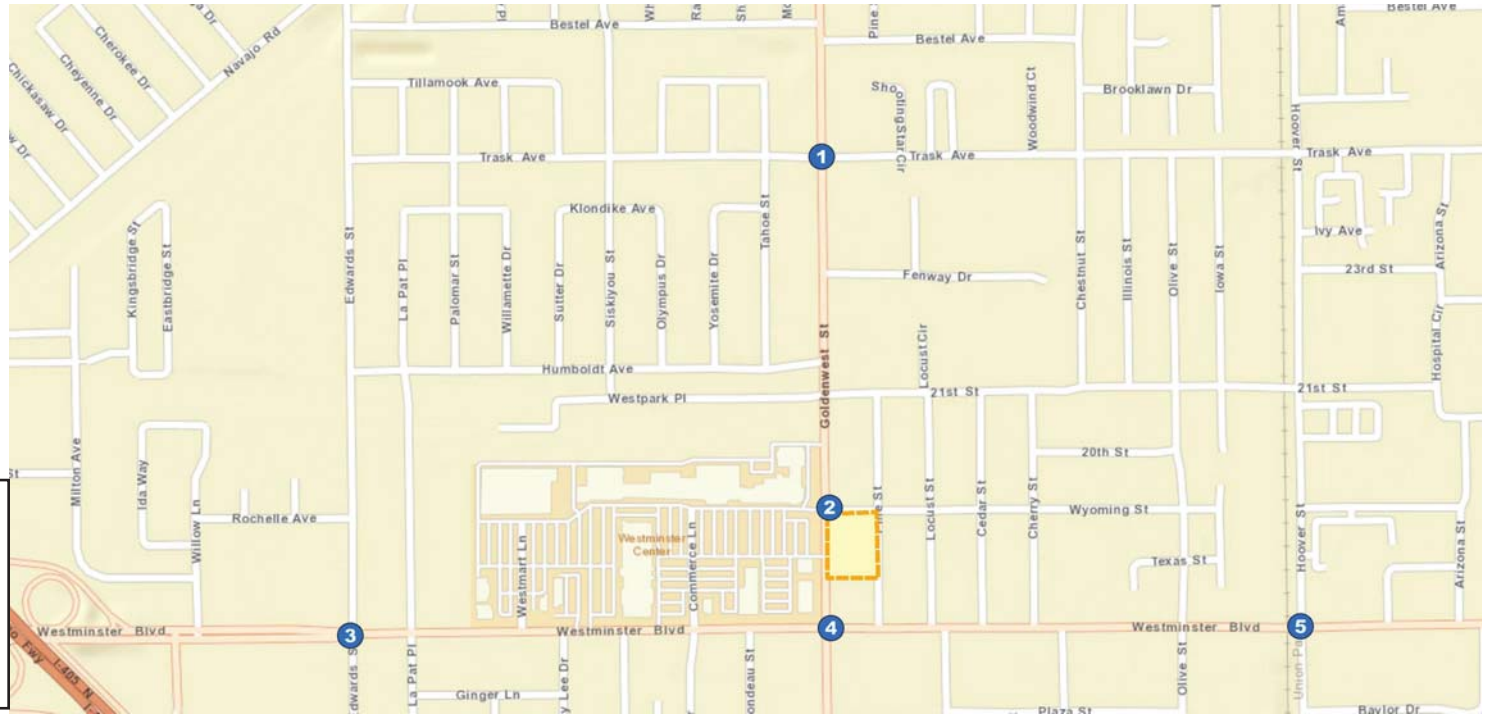
B. Existing Transit Service

The proposed Project site is served by bus transit lines operated by the Orange County Transportation Authority (OCTA). OCTA Bus Route 25 serves the Goldenwest Street in the study area. The route operates between the City of Fullerton and the City of Huntington Beach with approximately 50 minutes headway during the weekday peak periods.

OCTA Bus Route 60 serves the Westminster Avenue in the study area. The route runs between the City of Long Beach and the City of Tustin with approximately 10-20 minutes headway during the weekday peak periods.

Figure 4 illustrates the existing transit routes serving the study area.





LEGEND

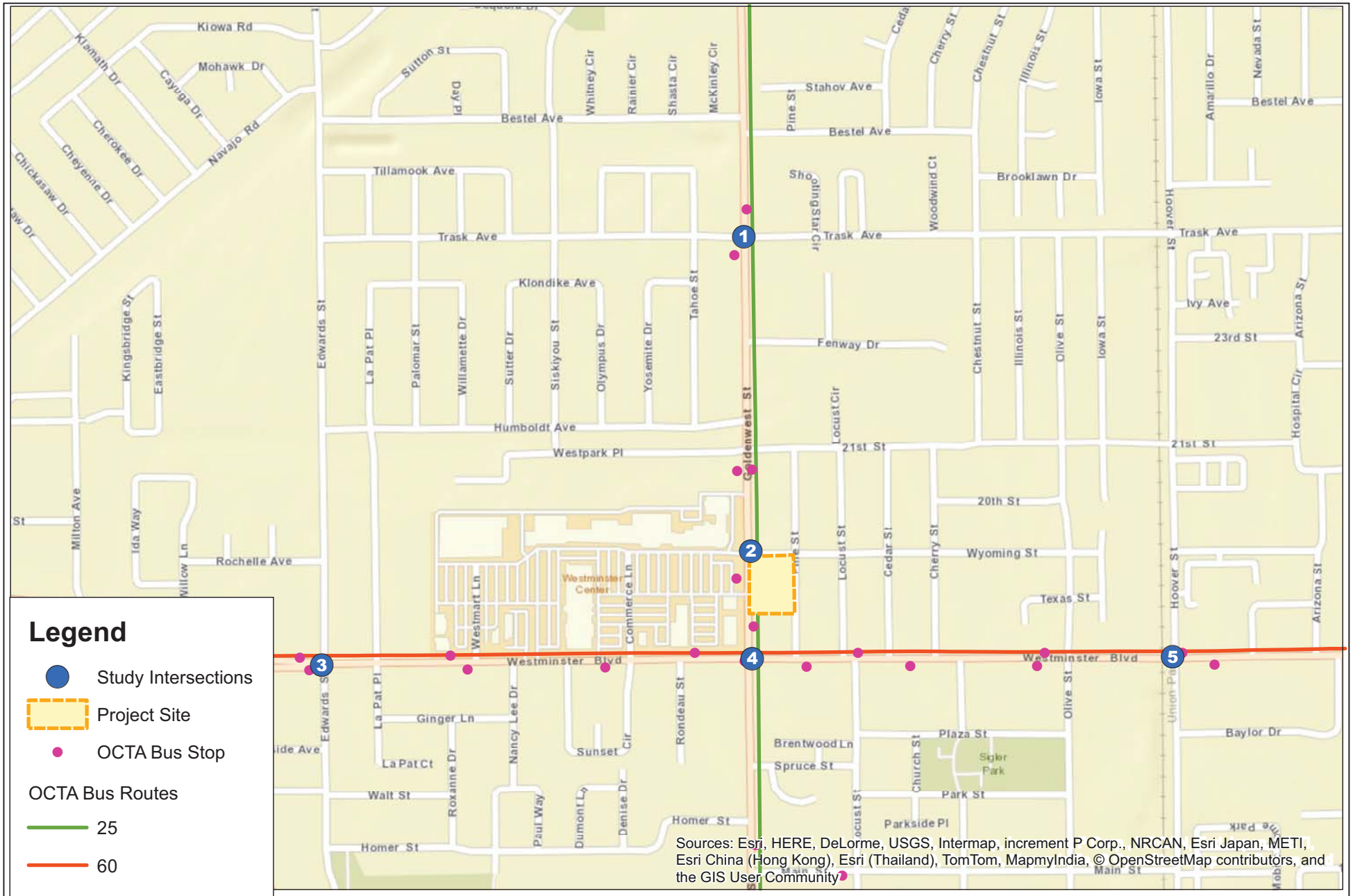
- Project Site
- Study Intersection
- Signalized Intersection
- Intersection Lane Configuration

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 3

Existing Lane Configurations and Controls



KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 4

Existing Transit Service

C. Existing Intersection Levels of Service

From the traffic counts at the study area intersections, existing volume-to-capacity ratios and corresponding level of service (LOS) values were calculated for the study area intersections. Table 3 provides the LOS at each study intersection for existing (year 2016) conditions.

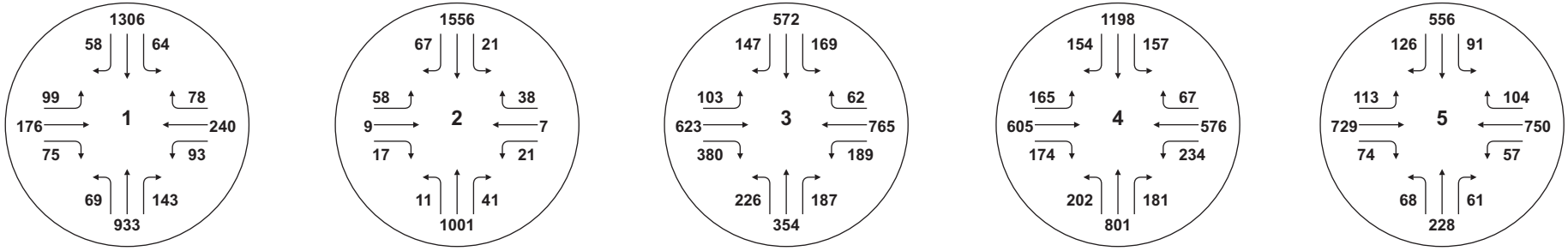
Table 3 - Summary of Intersection Performance
Existing Conditions

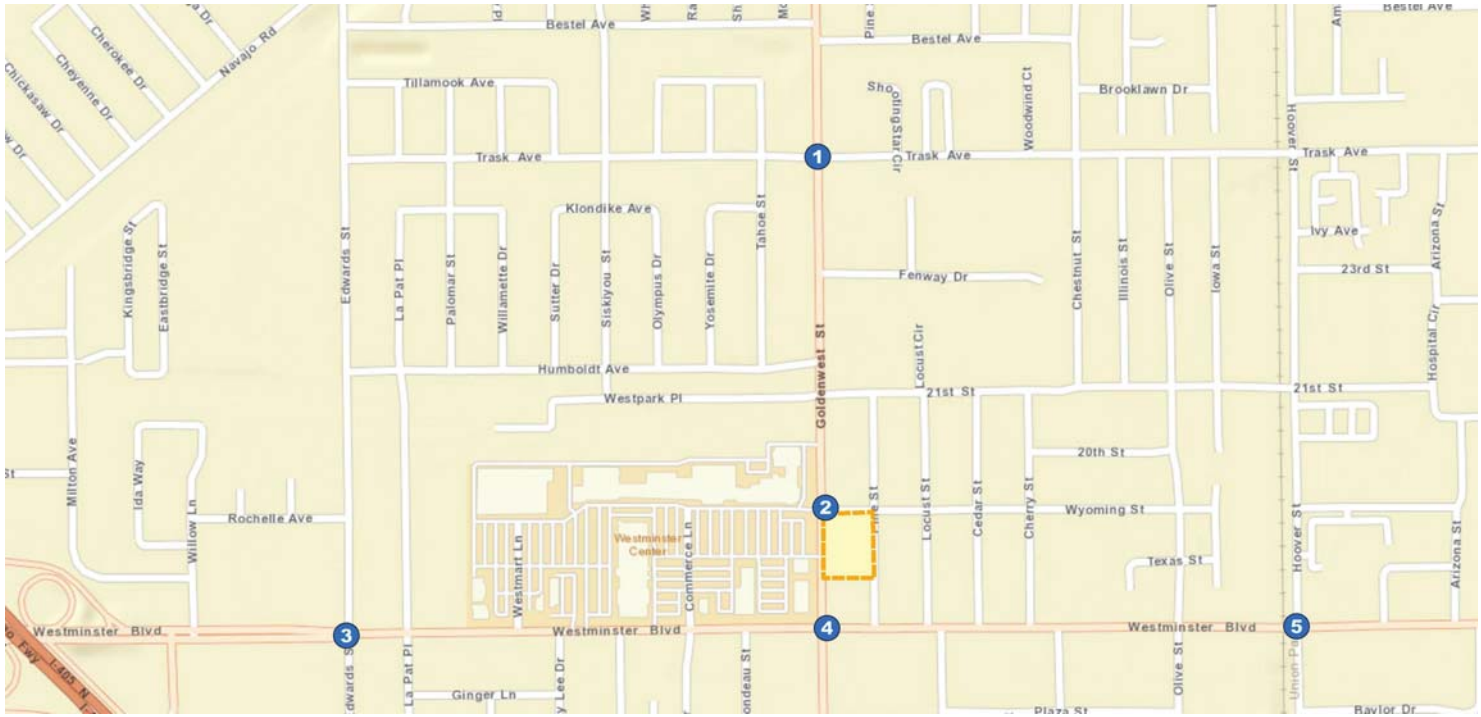
Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Goldenwest Street & Trask Avenue	0.589	A	0.586	A
2	Goldenwest Street & Wyoming Street	0.514	A	0.634	B
3	Edwards Street & Westminster Avenue	0.835	D	0.819	D
4	Goldenwest Street & Westminster Avenue	0.722	C	0.738	C
5	Hoover Street & Westminster Avenue	0.693	B	0.681	B

LOS = Level of Service; V/C = Volume-to-Capacity Ratio

Table 3 indicates that all of the study intersections operate at acceptable LOS D or better under existing conditions.

The traffic analysis worksheets for existing conditions are provided in Appendix C of this report. The existing a.m. and p.m. peak-hour turn movement volumes at the study intersections are provided on Figure 5 and Figure 6, respectively.





LEGEND

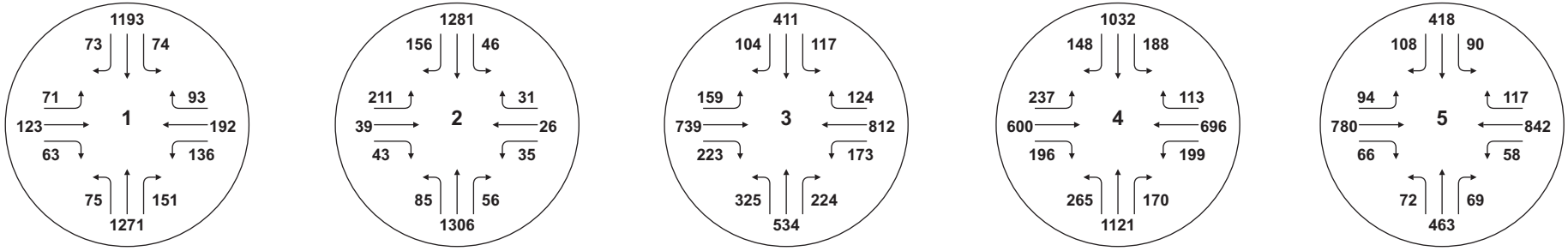
- Project Site
- Study Intersection
- XX Intersection Turn Volumes

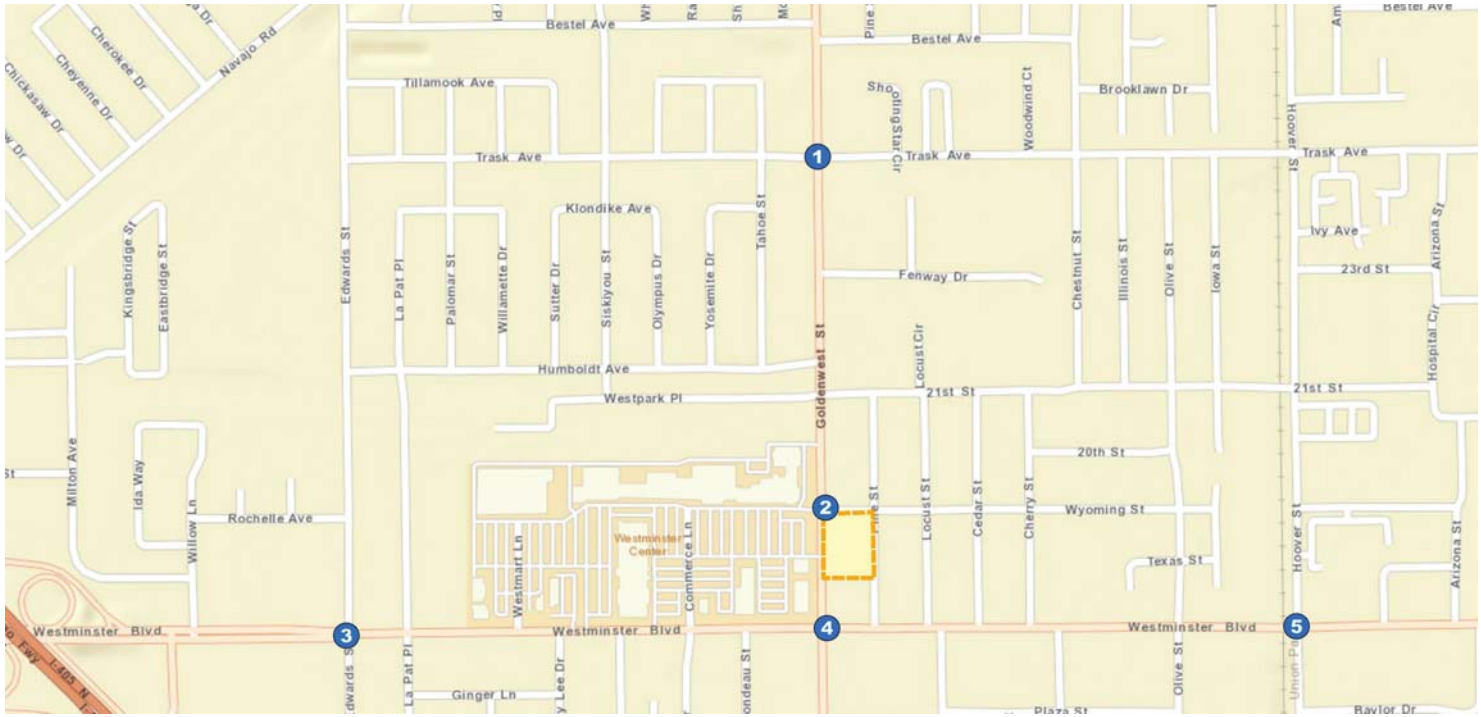
KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 5

Existing Weekday AM Peak Hour Traffic Volumes





LEGEND

- Project Site
- Study Intersection
- XX Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 6

Existing Weekday PM Peak Hour Traffic Volumes

3. Project Trip Generation

This section defines the traffic that would be generated by the proposed Project in a three-step process including trip generation, trip distribution and trip assignment.

A. Project Trip Generation

The proposed project would provide 17,752 square-foot retail space for a supermarket (ALDI). The project site would be accessed through three driveways: two at Goldenwest Street and one at Wyoming Street. The existing four single family dwelling units, one multifamily dwelling unit, one general office building and a vacant restaurant facility will be removed.

The estimated trip generation of the proposed Project was based on the *ITE Trip Generation, 9th edition*, published by Institute of Transportation Engineers (ITE). Trip rate for the Supermarket (ITE Land Use Code 850) category was utilized to calculate the trip generation for the proposed Project use.

Trip rates for the Single Family Residence, Multi-family Dwelling and General office Building categories were utilized to calculate the existing land use credit. Also, pass-by credits were applied to the Supermarket category.

It is estimated that the proposed Project with the existing land use and pass-by credits would generate a net total of 59 vehicle trips during a typical weekday a.m. peak hour (36 vehicles entering, 23 vehicles exiting), and 112 vehicle trips during a typical weekday p.m. peak hour (57 vehicles entering, 55 vehicles exiting). Daily net volumes would total 1,104 trips.

The trip generation basis for the proposed Project is provided in Table 4.

Table 4 – Project Trip Generation Calculations

Land Use	ITE Code	Intensity		Average Weekday	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Trip Generation Rates *										
Supermarket	850	-	k.s.f.	102.24	61%	39%	3.59	51%	49%	10.50
Single Family Residence	210	-	d.u	9.52	25%	75%	0.75	63%	37%	1.00
Multi-family Dwelling	230	-	d.u	5.81	17%	83%	0.44	67%	33%	0.52
General Office Building	710	-	k.s.f.	11.03	88%	12%	1.56	17%	83%	1.49
Proposed Project										
ALDI Market	850	17.752	k.s.f.	1,815	39	25	64	95	91	186
Existing Land Use Credit										
Single Family Residence	210	4	d.u	-38	-1	-2	-3	-3	-1	-4
Multi-family Dwelling	230	1	d.u	-6	0	0	0	-1	0	-1
General Office Building	710	1	k.s.f.	-14	-2	0	-2	0	-2	-2
Existing Land Use Credit Subtotal				**-58**	**-3**	**-2**	**-5**	**-4**	**-3**	**-7**
Pass-By Credit										
Supermarket (PM-36%)				-653	-	-	-	-34	-33	-67
Net New Project Trips										
Total Net New Project Trips				**1,104**	**36**	**23**	**59**	**57**	**55**	**112**

Source: ITE Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, 2012

**Note: k.s.f. - 1,000 Sq. Feet Gross Floor Area*

B. Project Trip Distribution

Trip distribution is the process of assigning the primary routes used by the vehicle trips that would be generated by a project. Trip distribution is dependent upon the land use characteristics of a project and the general locations of other land uses to which project trips would originate or terminate.

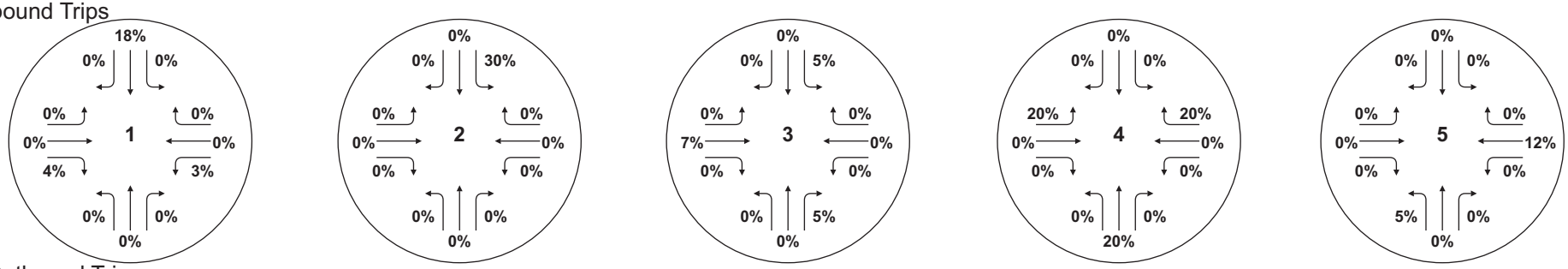
The inbound and outbound distribution percentages that were utilized for the analysis of trips from the proposed Project are illustrated in Figure 7.

C. Project Trip Assignment

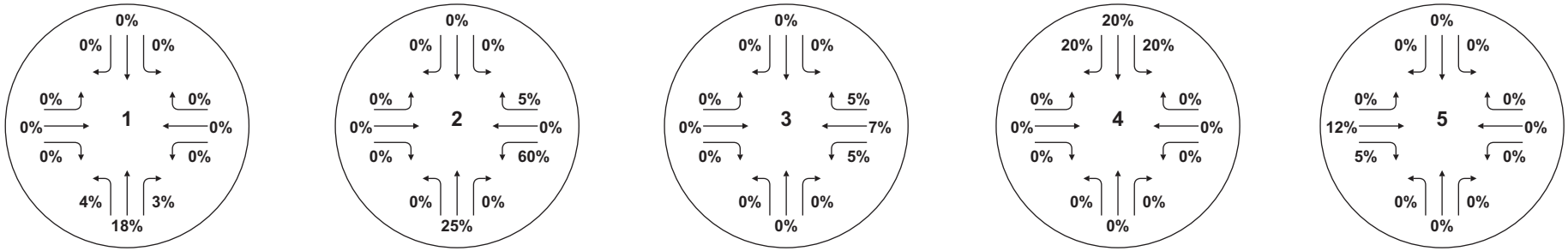
The final product of the trip assignment process is a full accounting of Project trips by direction and turning movement at the study intersections. Trips were assigned based on distribution inputs to the traffic analysis calculations.

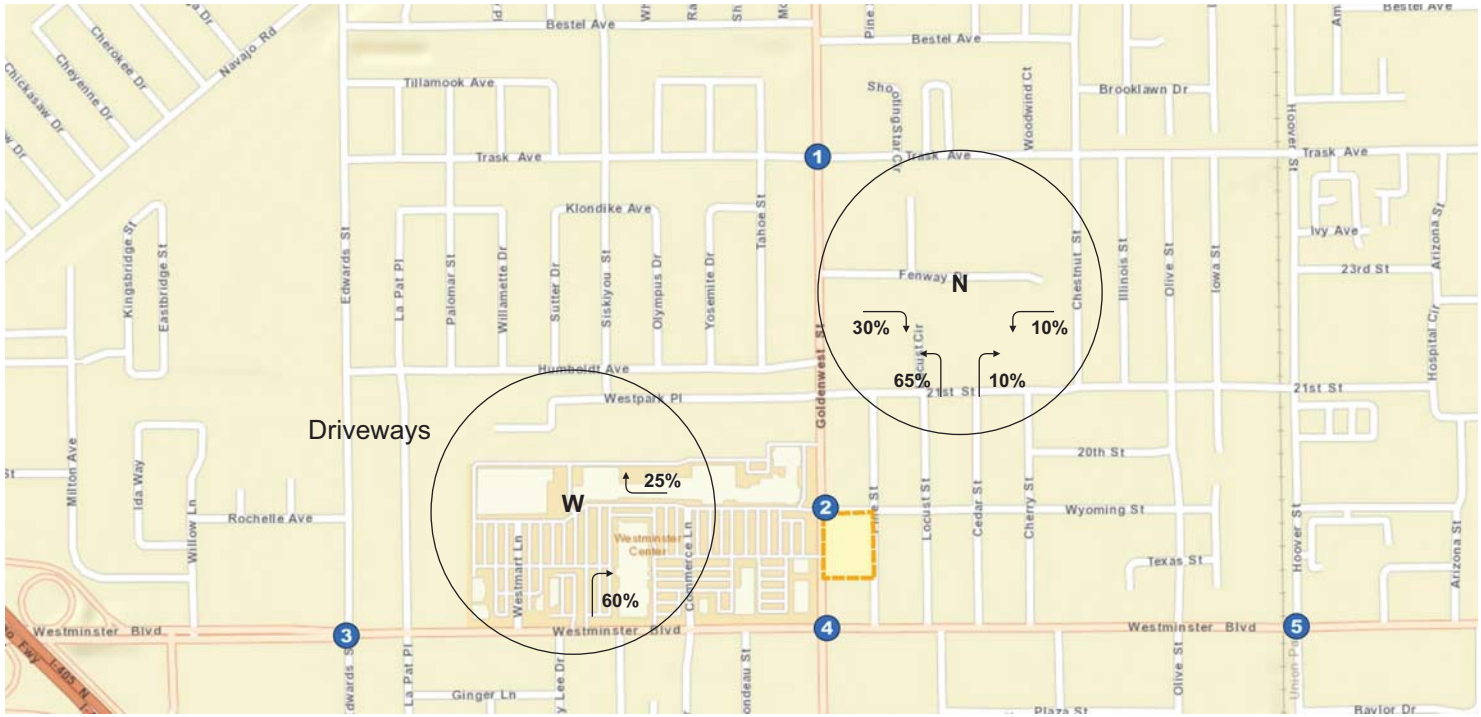
Figures 8 and Figure 9 illustrate the trip assignment of the proposed Project for the a.m. and p.m. peak hour, respectively.

Inbound Trips



Outbound Trips





LEGEND

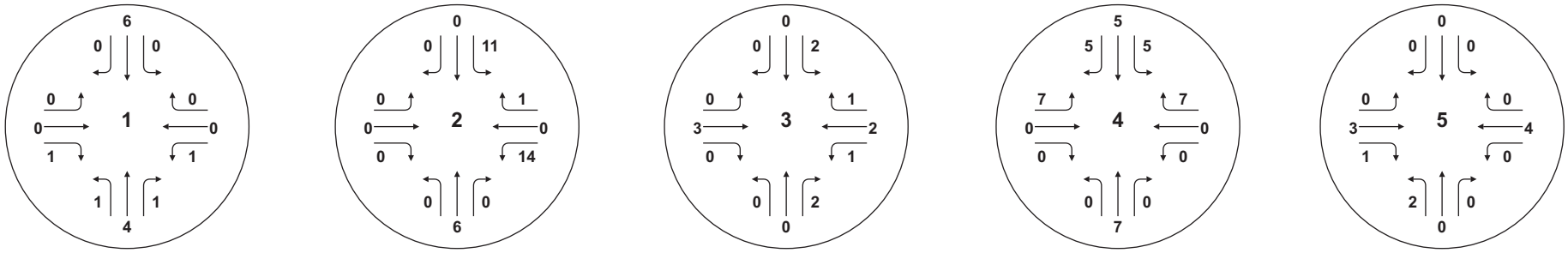
- Project Site
- Study Intersection
- XX% Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 7

Project Trips Distribution



LEGEND

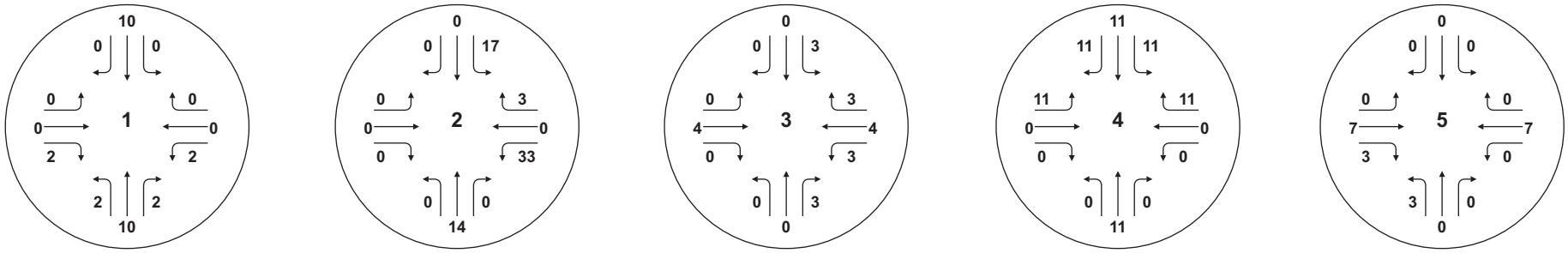
- Project Site
- Study Intersection
- xx Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 8

Project Trips Assignment AM Peak Hour



LEGEND

- Project Site
- Study Intersection
- xx Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 9

Project Trips Assignment PM Peak Hour

4. Future 2017 Pre-Project Conditions

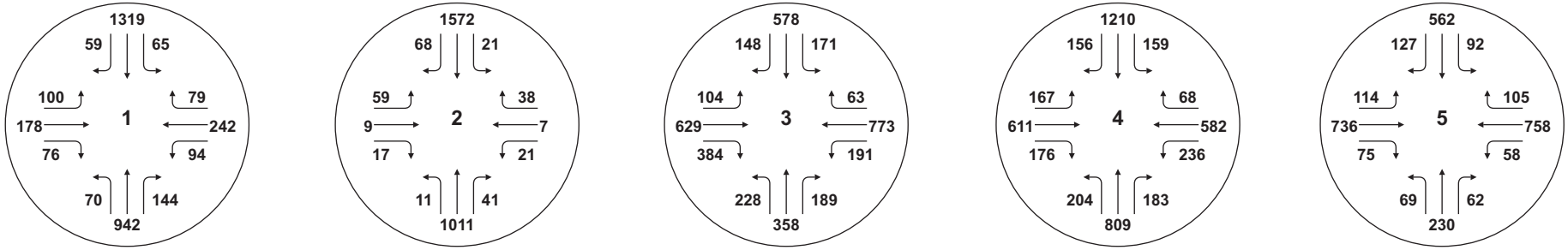
This section provides an analysis of future traffic conditions in the study area with ambient growth added but without the proposed Project. The year 2017 was selected for analysis based on the anticipated completion date of the Project.

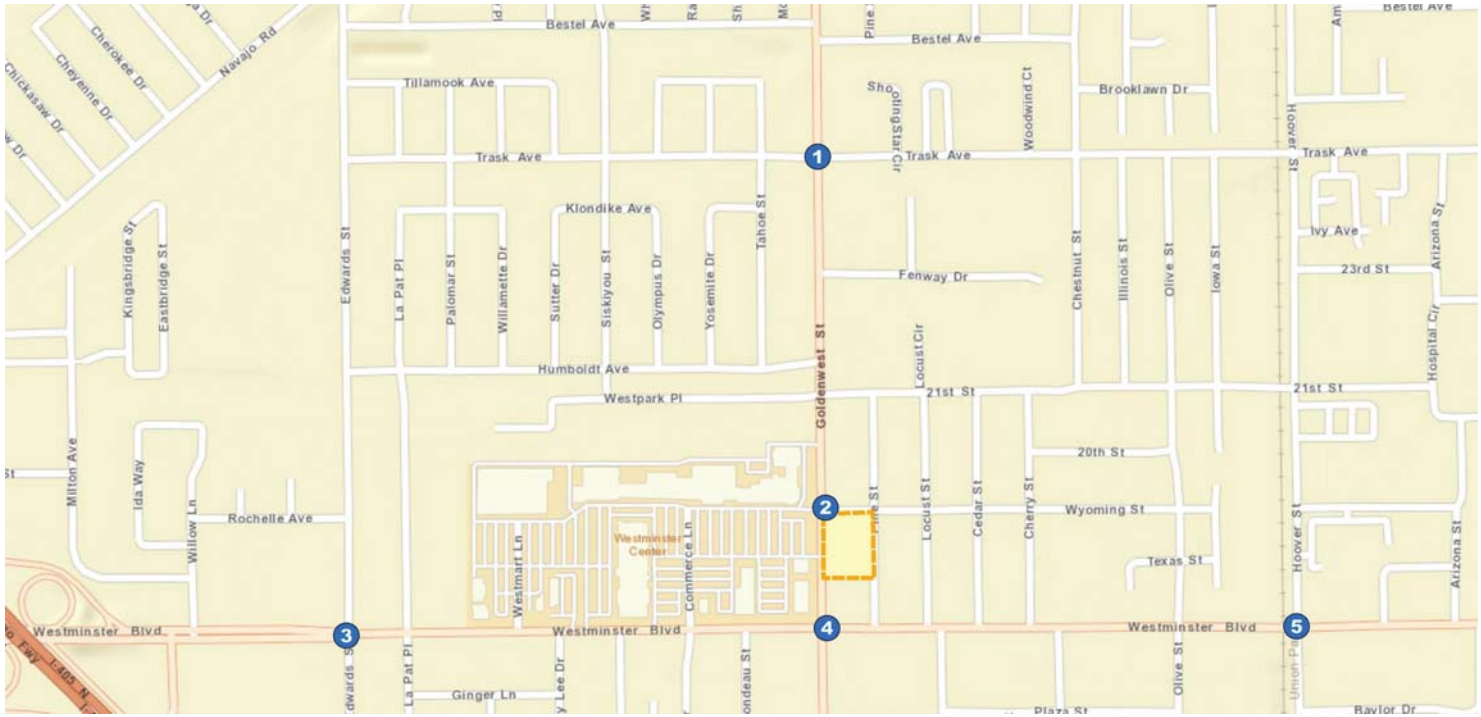
A. Ambient Growth

For the analysis of background traffic growth to the year 2017, a traffic growth factor of one percent per year was utilized to provide for increases in traffic from the existing (2016) traffic volumes. This growth rate was included in the approved scoping document.

To apply this ambient growth rate to the existing traffic volumes, a factor of 1.01 was utilized. This factor simulates a one percent increase over a one-year period between existing (2016) and future (2017) conditions.

Figures 10 and 11 illustrate the future year traffic volumes with ambient growth at the study intersections, for the a.m. and p.m. peak hour, respectively.





LEGEND

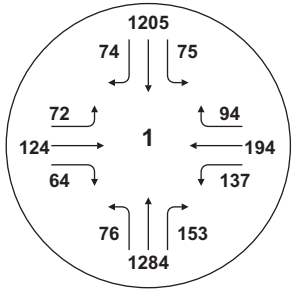
- Project Site
- Study Intersection
- xx Intersection Turn Volumes

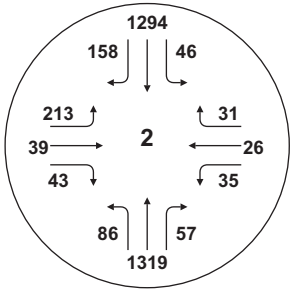
KOA CORPORATION
PLANNING & ENGINEERING

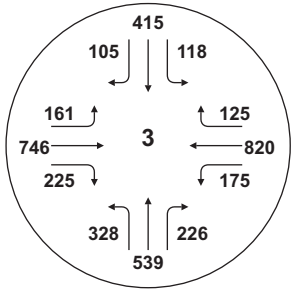
Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

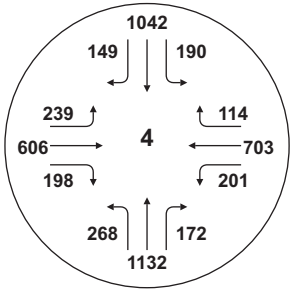
Figure 10

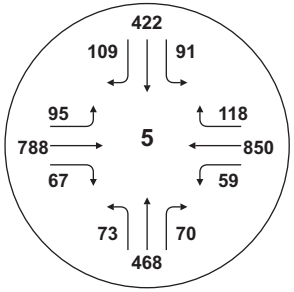
Future with Ambient Growth Weekday AM Peak Hour Traffic Volumes

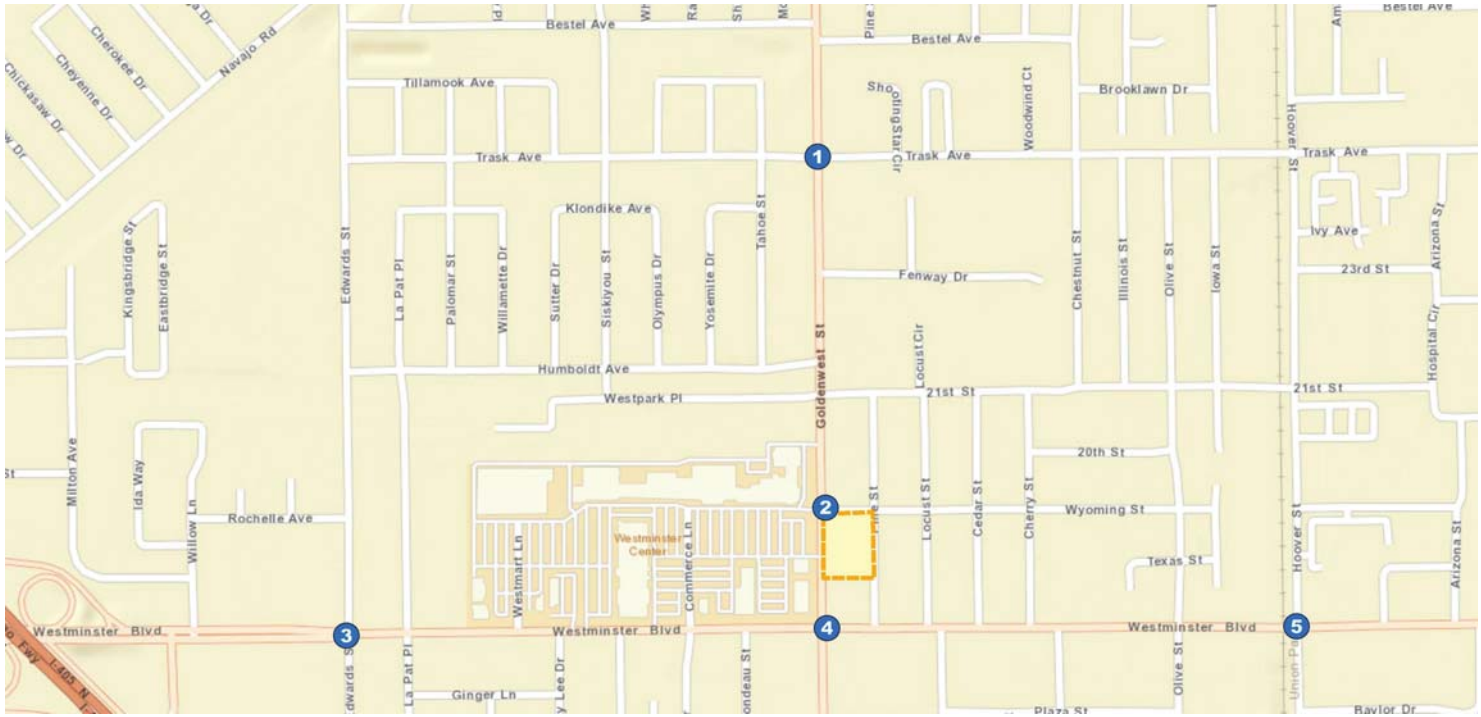












LEGEND

- Project Site
- Study Intersection
- XX Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 11

Future with Ambient Growth Weekday PM Peak Hour Traffic Volumes

B. Cumulative Projects in the Area

Related projects were researched within the City limits due to the Project location and adjacent land uses. KOA contacted planning staff at the City of Westminster to define a list of planned/pending area projects. These sixteen projects were considered to potentially contribute measurable traffic volumes to the study area during the future analysis period.

Figure 12 illustrates the locations of the related projects.

Trip generation calculations were based on the project land use intensities and trip generation rates defined by *ITE Trip Generation Manual (9th Edition)*. Table 5 summarizes the trip generation of the included area projects. This traffic was added to the study intersections using a distribution pattern based on the hierarchy of the local street system.

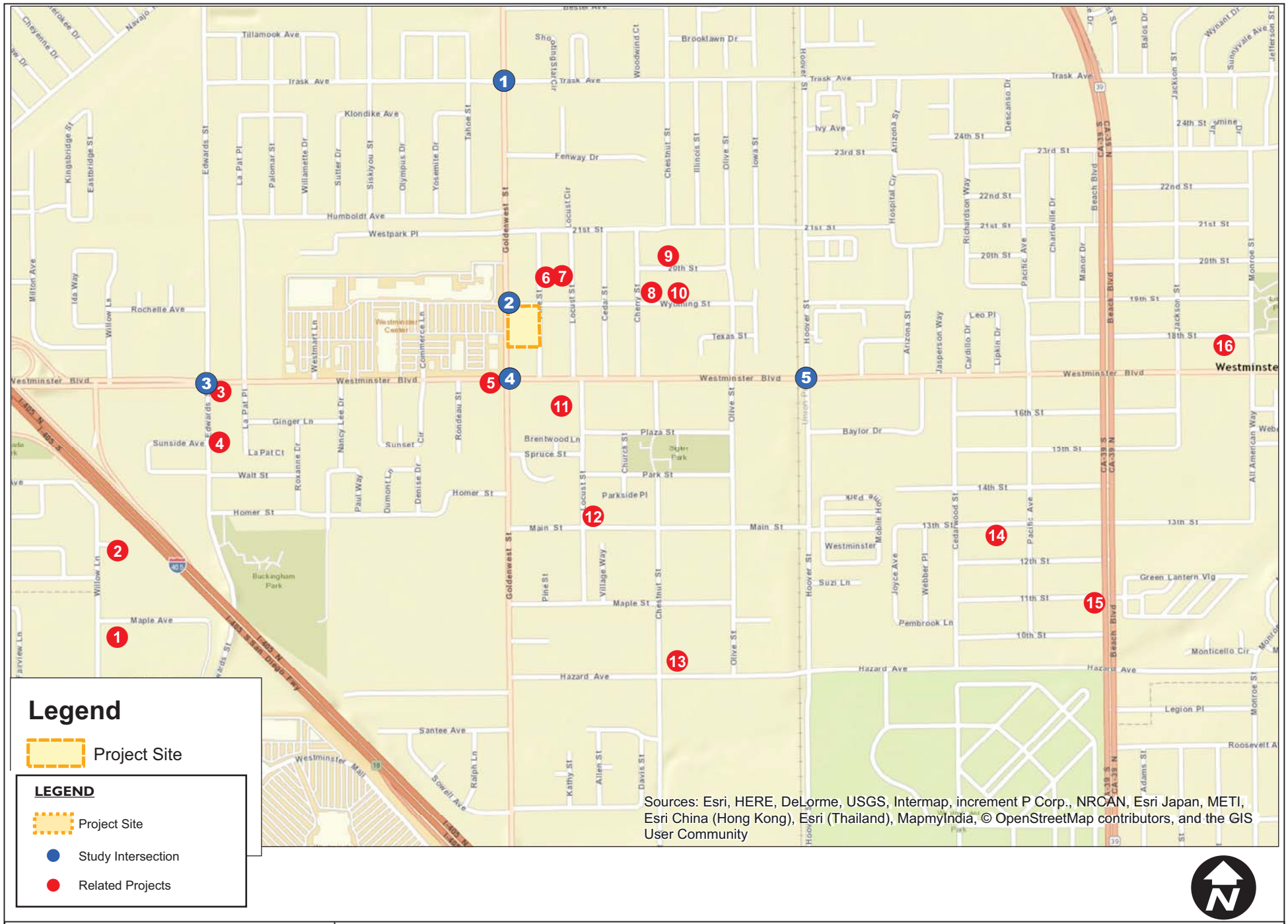
Table 5 – Trip Generation of Related Projects

ID	Project	Location	Land Use	Intensity	Units	Daily	AM Peak Hour			PM Peak Hour		
						Total	In	Out	Total	In	Out	Total
1	Live/Work	6302 Maple Ave.	Townhouse/Condo	37	d.u.	215	3	13	16	13	6	19
2	Condominium	14260 Willow Ln.	Townhouse/Condo	79	d.u.	459	6	29	35	27	14	41
3	Animal Hospital	6512 Westminster Blvd.	Animal Hospital	0.8	k.s.f.	0	2	1	3	2	2	4
4	Condominium	14092 Edwards St.	Townhouse/Condo	12	d.u.	70	1	4	5	4	2	6
5	R&D Building	6952 Garden Grove Blvd.	Office	6.168	k.s.f.	68	9	1	10	2	7	9
6	Apartment	13811 Locust St.	Apartment	3	d.u.	20	0	2	2	1	1	2
7	Apartment	13812-13822 Pine St.	Apartment	8	d.u.	53	1	3	4	3	2	5
8	Apartment	7211 Wyoming St.	Apartment	3	d.u.	20	0	2	2	1	1	2
9	Apartment	7241-7251 20th St.	Apartment	11	d.u.	73	1	5	6	5	2	7
10	Apartment	7261 Wyoming St.	Apartment	4	d.u.	27	0	2	2	1	1	2
11	Apartment	14041-14061 Locust St.	Apartment	50	d.u.	333	5	21	26	20	11	31
12	Condominium	7121 Main St.	Townhouse/Condo	4	d.u.	23	0	2	2	1	1	2
13	Religious building	14472 Chestnut St.	Church	14.3	k.s.f.	130	5	3	8	4	4	8
14	Apartment	7792 13th St.	Apartment	6	d.u.	40	1	2	3	3	1	4
15	General Retail & Commerical Building	14361 Beach Blvd.	Retail	23.262	k.s.f.	993	14	8	22	41	45	86
16	Residential	8192 18th St.	Townhouse/Condo	3	d.u.	17	0	1	1	1	1	2
					Total	2,541	48	99	147	129	101	230

d.u. = dwelling units, k.s.f. = 1,000 square feet of floor area

Trip Generation Rates Source: Institute of Transportation Engineers (ITE) "Trip Generation - 9th Edition".

Figures 13 and Figure 14 illustrate the trip assignment of the related projects for the a.m. and p.m. peak hour, respectively.

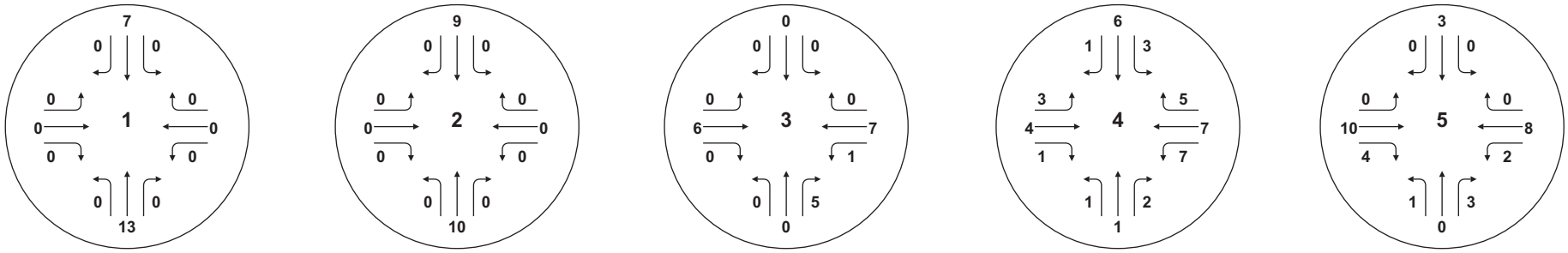


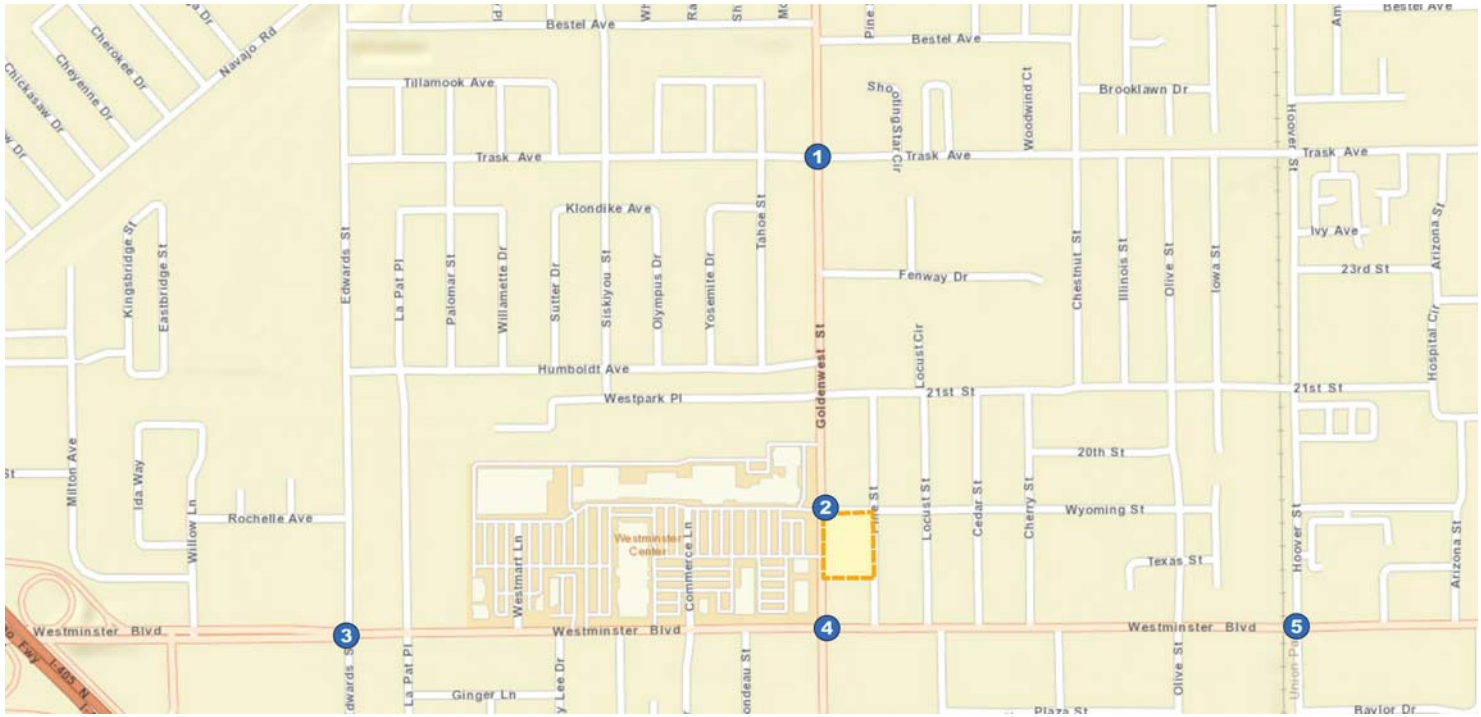
KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 12

Location of Related Projects





LEGEND

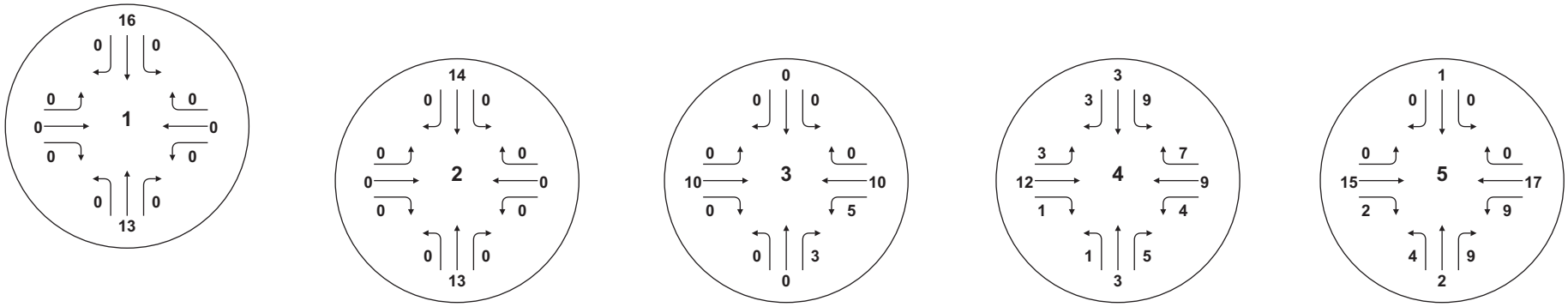
- Project Site
- Study Intersection
- XX Intersection Turn Volumes

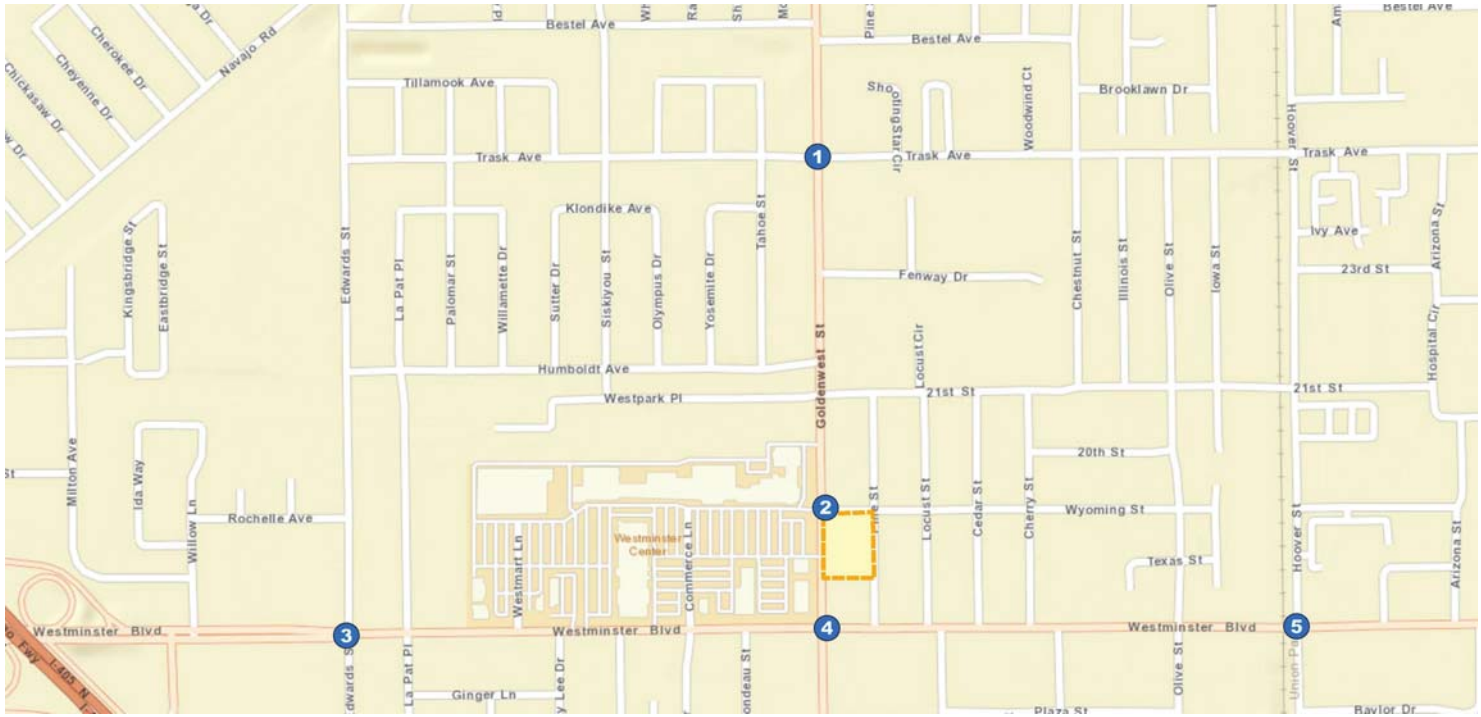
KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 13

Related Project Trips Assignment AM Peak Hour





LEGEND

- Project Site
- Study Intersection
- XX Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 14

Related Project Trips Assignment PM Peak Hour

C. Peak Hour Intersection Level of Service

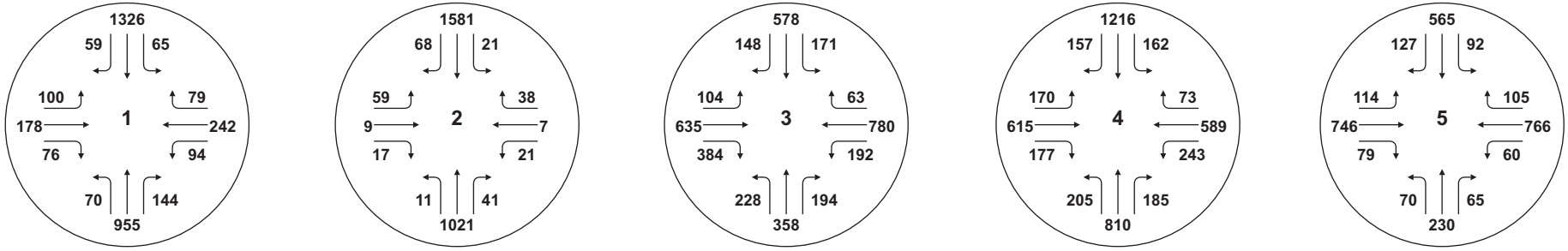
Table 6 provides a level of service summary for the future pre-Project conditions. All of the study intersections would continue operation at LOS D or better with the addition of cumulative traffic.

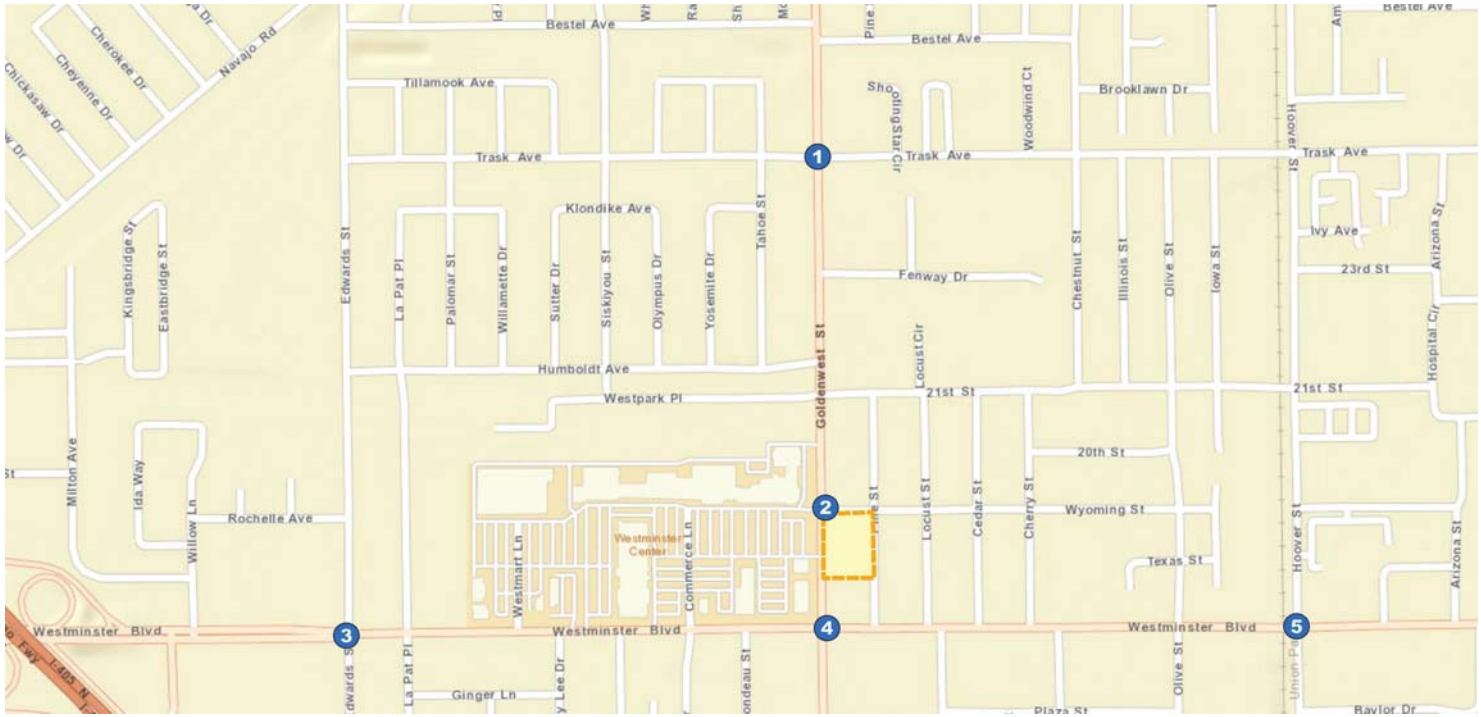
Table 6 – Intersection Performance – Future (Year 2017) Pre-Project Conditions

Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Goldenwest Street & Trask Avenue	0.595	A	0.593	A
2	Goldenwest Street & Wyoming Street	0.520	A	0.642	B
3	Edwards Street & Westminster Avenue	0.845	D	0.833	D
4	Goldenwest Street & Westminster Avenue	0.734	C	0.749	C
5	Hoover Street & Westminster Avenue	0.604	B	0.595	A

LOS = Level of Service; V/C = Volume-to-Capacity Ratio

Figure 15 and Figure 16 illustrate the a.m. and p.m. peak-hour turn movement volumes at the study intersections for this scenario. The traffic analysis worksheets for this scenario are included in Appendix D of this report.





LEGEND

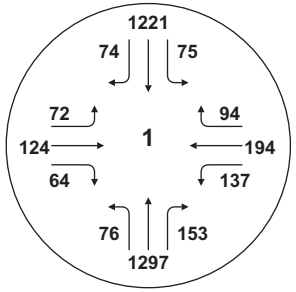
- Project Site
- Study Intersection
- XX Intersection Turn Volumes

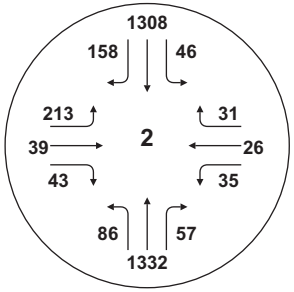
KOA CORPORATION
PLANNING & ENGINEERING

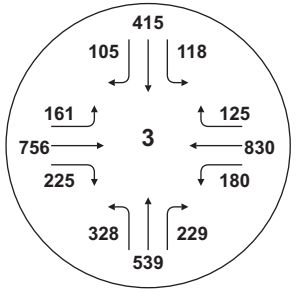
Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

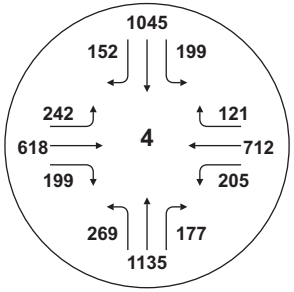
Figure 15

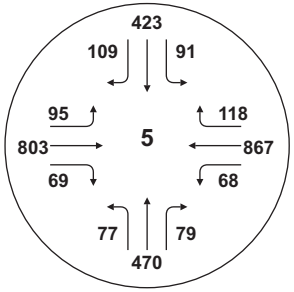
Future Year 2017 Pre-Project - Weekday AM Peak Hour Turn Volumes

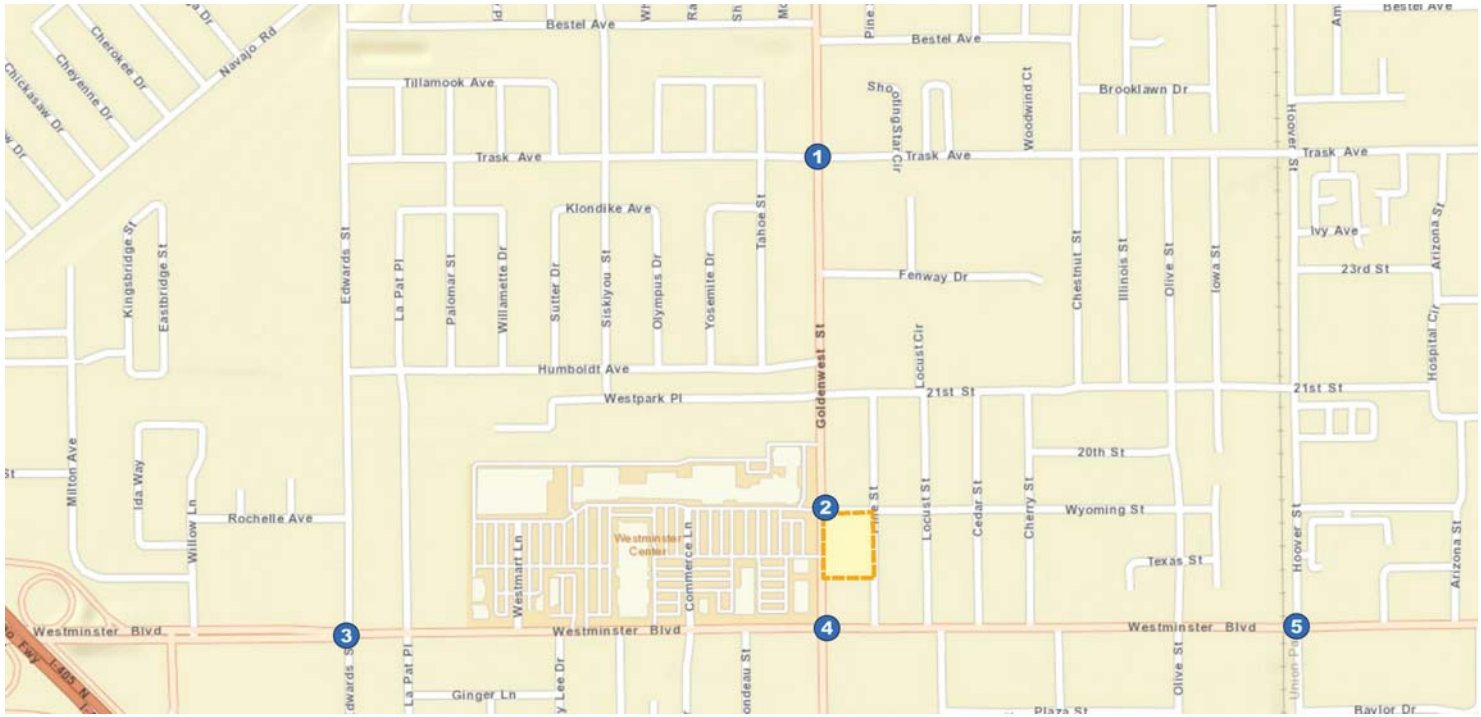












LEGEND

- Project Site
- Study Intersection
- XX Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 16

Future Year 2017 Pre-Project - Weekday PM Peak Hour Turn Volumes

5. Future 2017 Post-Project Conditions

This section documents future traffic conditions at the study intersections with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding the net Project trips to the future pre-Project scenario volumes.

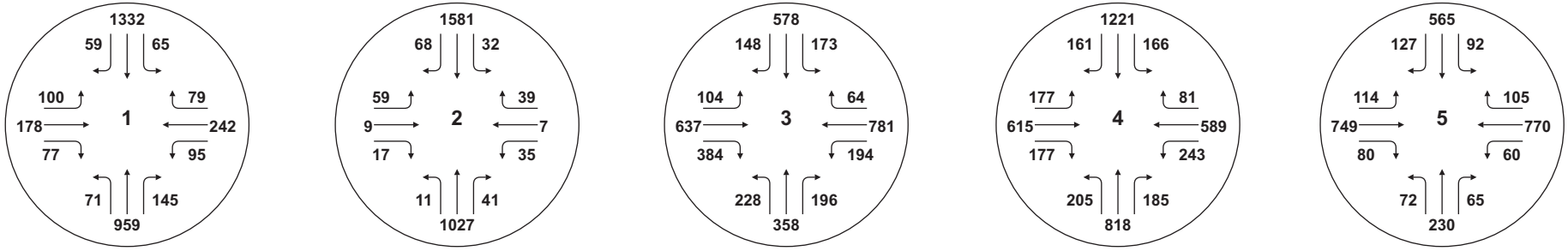
Table 7 summarizes the resulting average volume-to-capacity (v/c) ratios and LOS values at the study intersections. As indicated by the data within this table, all of the study intersections would continue operation at LOS D or better with the addition of cumulative and project traffic.

Table 7 – Intersection Performance – Future (Year 2017) Post-Project Conditions

Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Goldenwest Street & Trask Avenue	0.597	A	0.598	A
2	Goldenwest Street & Wyoming Street	0.530	A	0.670	B
3	Edwards Street & Westminster Avenue	0.846	D	0.838	D
4	Goldenwest Street & Westminster Avenue	0.736	C	0.760	C
5	Hoover Street & Westminster Avenue	0.606	B	0.597	A

LOS = Level of Service; V/C = Volume-to-Capacity Ratio

Figure 17 and Figure 18 illustrate the a.m. and p.m. peak-hour turn movement volumes at the study intersections for this scenario. The traffic analysis worksheets for this scenario are included in Appendix E of this report.



LEGEND

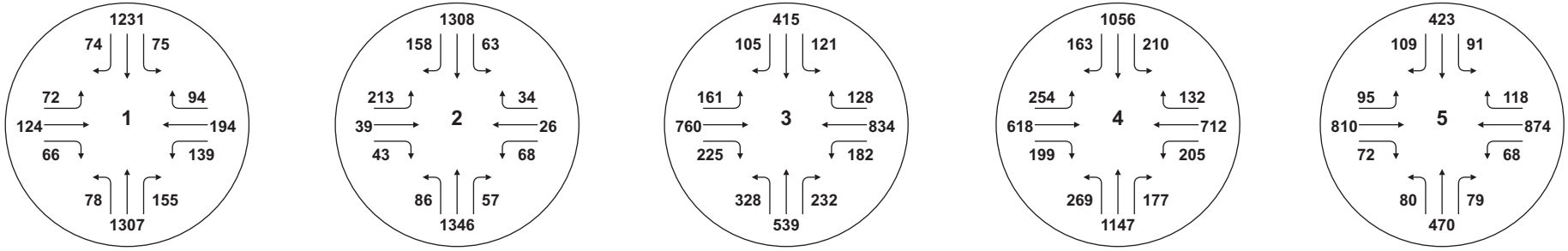
- Project Site
- Study Intersection
- XX Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 17

Future Year 2017 Post-Project - Weekday AM Peak Hour Turn Volumes



LEGEND

- Project Site
- Study Intersection
- XX Intersection Turn Volumes

KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure 18

Future Year 2017 Post-Project - Weekday PM Peak Hour Turn Volumes

6. Project Traffic Impacts

A. Determination of Traffic Impacts

Traffic impacts are identified if future post-project conditions will result in a significant change in traffic conditions at a study intersection. A significant impact is identified if Project traffic will cause service levels to deteriorate beyond the defined thresholds.

Future Base Conditions Level of Service	Project Related Increase in V/C*
E	0.010
F	0.010

**Volume-to-Capacity Ratio*

B. Project Traffic Impacts

Table 8 provides a summary of the future 2017 vehicle-to-capacity ratios and LOS values. Traffic impacts created by the Project are determined by comparing the future pre-Project conditions to the future post-Project conditions.

The proposed Project is not anticipated to have a significant traffic impact at any of the study intersections under analyzed future conditions. All of the study intersections would continue operation at LOS D or better under the future post-Project conditions.

Table 8 – Determination of Cumulative Impacts

Study Intersections		Peak Hour	Future pre-Project		Future post-Project		Change in ICU	Sig Impact?
			V/C	LOS	V/C	LOS		
1	Goldenwest Street & Trask Avenue	AM	0.595	A	0.597	A	0.002	No
		PM	0.593	A	0.598	A	0.005	No
2	Goldenwest Street & Wyoming Street	AM	0.520	A	0.530	A	0.010	No
		PM	0.642	B	0.670	B	0.028	No
3	Edwards Street & Westminster Avenue	AM	0.845	D	0.846	D	0.001	No
		PM	0.833	D	0.838	D	0.005	No
4	Goldenwest Street & Westminster Avenue	AM	0.734	C	0.736	C	0.002	No
		PM	0.749	C	0.760	C	0.011	No
5	Hoover Street & Westminster Avenue	AM	0.604	B	0.606	B	0.002	No
		PM	0.595	A	0.597	A	0.002	No

LOS = Level of Service, V/C = Volume-to-Capacity Ratio

7. Parking Analysis

The proposed project would provide 17,752 square-foot retail space for a supermarket (ALDI). According to Preliminary Plan Review (PPR) of the Project by the City's planning department dated October 22, 2015, four parking spaces are required for every 1,000 square-foot of the retail space for this Project. It is estimated that 71 parking spaces are requested for this Project.

The estimated parking demand generation of the proposed Project was also calculated based on the *ITE Parking Generation, 4th edition*, published by Institute of Transportation Engineers (ITE). The average peak period parking demand rate for the Supermarket (ITE Land Use Code 850) category was 2.22 vehicles per 1,000 square-feet of retail floor area. It is estimated that the average peak period parking demand for this Project is 40 vehicles using this resource.

A total of 77 parking stalls would be provided for the ALDI market. Therefore, the proposed number of stalls would comply with the City's parking provisions regarding the minimum number of stalls, as well as satisfies the estimated average peak period parking demand of the supermarket based on ITE rates.

8. Summary and Project Recommendations8

A. Analysis Conclusions

The following are the conclusions made from the analysis within this report. Project and cumulative significant impacts were calculated by volume-to-capacity V/C thresholds at pre-Project level of service (LOS) values established by the City of Westminster document entitled *Traffic Impact Study Preparation Guidelines* for signalized intersections.

- During the existing conditions scenario, all of the four study intersections operate at acceptable LOS (D or better).
- The proposed Project would generate a net total of 59 vehicle trips during the weekday a.m. peak period (36 vehicles entering, 23 vehicles exiting), and 112 vehicle trips during the weekday p.m. peak period (57 vehicles entering, 55 vehicles exiting). These totals include trip credits for the existing and pass-by vehicles.
- Under both the future pre-Project and post-Project conditions, operations at the study intersections would continue to operate at acceptable LOS (D or better). The proposed Project would not cause significant traffic impacts at the study intersections.
- A total of 77 parking stalls would be provided for the ALDI market, which complies with the City's parking provisions regarding the minimum number of stalls, as well as satisfies the estimated average peak period parking demand of the supermarket based on ITE rates.

B. Project-Only and Cumulative Traffic Impacts

No Project-only or cumulative significant traffic impacts would be created at the study intersections based on analyzed intersection operations and the estimated Project trip generation. Mitigation measures are not recommended due to the lack of identified significant impacts.

APPENDIX A
Memorandum of Understanding (MOU) with City of Westminster

TRAFFIC STUDY - MEMORANDUM OF UNDERSTANDING (MOU)
March 10, 2016

This MOU acknowledges that the traffic study for the following project will be prepared in accordance with the latest version of City of Westminster Traffic Impact Study Preparation Guidelines:

Project Name: Traffic Analysis – Westminster Aldi Market at 13900 Goldenwest Street

Project Address: 13900 Goldenwest Street, Westminster, CA 92683

Project Description:

The project site would be located at 13900 Goldenwest Street within the City of Westminster. The proposed project would provide 17,752 square-foot retail space for a supermarket (ALDI). A site plan is provided in Attachment A. The project site would be accessed through three driveways, two on Goldenwest Street on the west, one on Wyoming Street on the north.

Geographic Distribution: N 25 % S 25 % E 25 % W 25 %

The proposed study intersections and overall project trip distribution are both illustrated on the figure in Attachment B.

Trip Generation Rate(s):
ITE 9th Edition – Supermarket (ITE 850) were used.

The trip generation table in Attachment C provides a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. The total net trips would be as follows:

	IN	OUT	TOTAL
AM Trips	36	23	59
PM Trips	57	55	112

Project Buildout Year: 2017 Ambient or CMP Growth Rate: 1.00 % Per Yr.
Related Projects: The cumulative project list will be obtained from the City of Westminster by KOA

CITY OF WESTMINSTER
TRAFFIC ENGINEERING DIVISION
ACCEPTED (WITH COMMENTS)
Date 3/29/16

Trip Credits to be Applied

	Yes	No
Transit Usage		X
Transportation Demand Management		X
Existing Active Land Use	X	
Previous Land Use		X
Internal Trip		X
Pass-By Trip	X	

Study Intersections

1. Goldenwest Street & Trask Avenue
2. Goldenwest Street & Wyoming Street
3. Edwards Street & Westminster Avenue
4. Goldenwest Street & Westminster Avenue
5. ~~Goldenwest Street~~ & Hoover Street

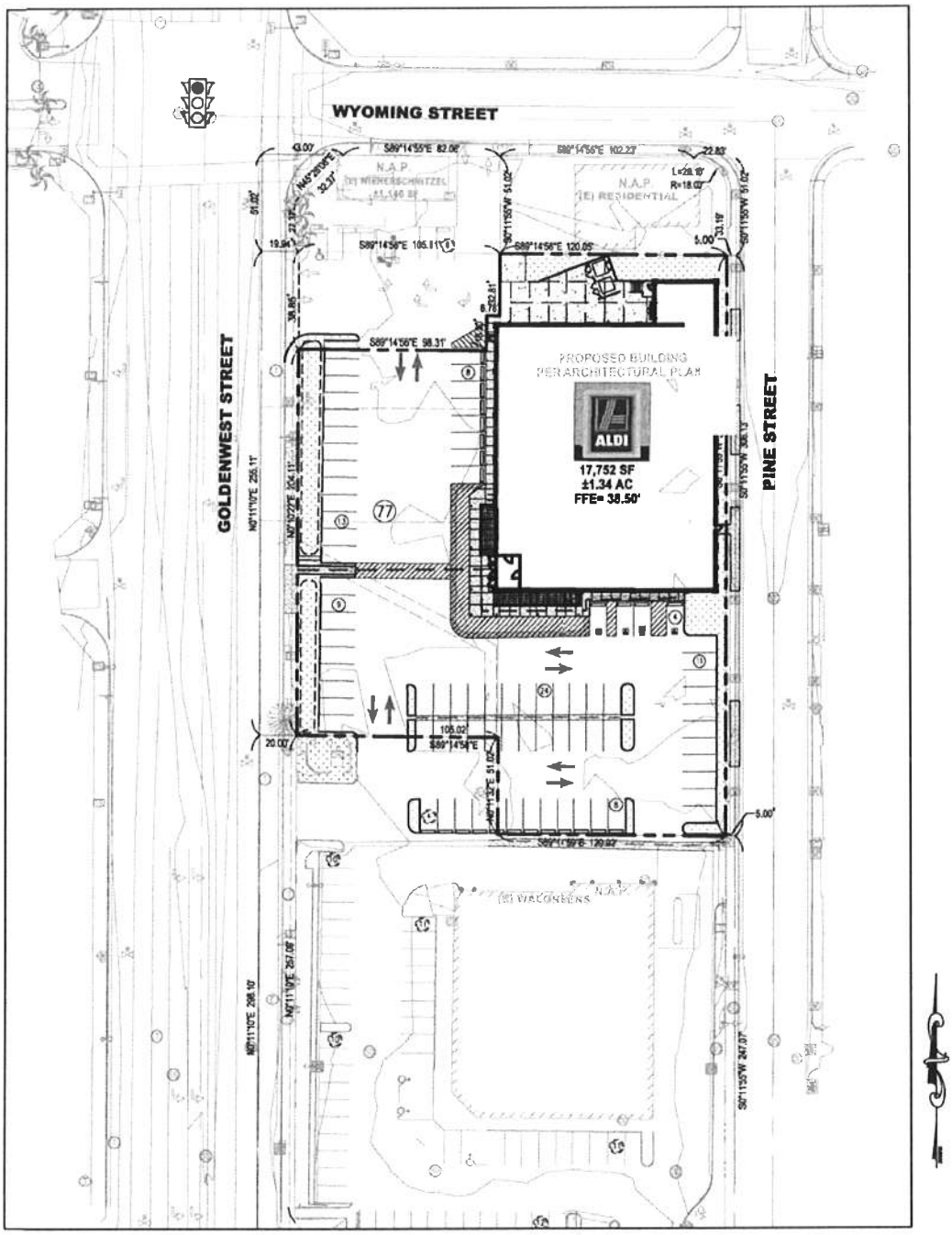
WESTMINSTER

Project Contacts

	Consultant	Developer
Name	Brian Marchetti, KOA Corporation	ALDI Inc.
Address	1100 Corporate Ctr. Dr., Ste. 201, Monterey Park, CA 91754	12661 Aldi Pl, Moreno Valley, CA92555
Phone No.	(323) 260-4703	951- 530-5750
E-Mail	bmarchetti@koacorp.com	Matthew.Baca@aldi.us

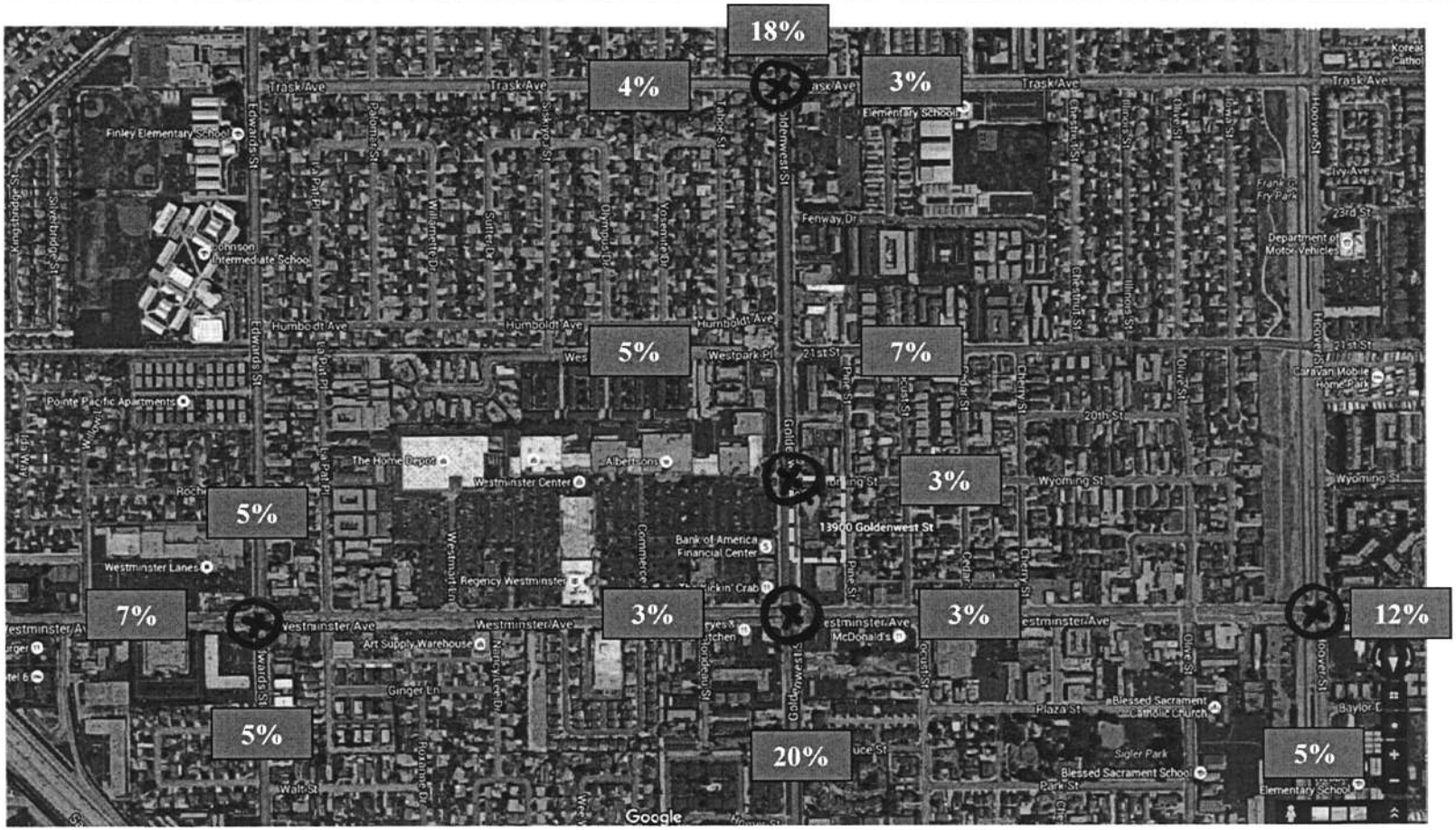
ATTACHMENT A

PROJECT SITE DIAGRAM



ATTACHMENT B

PROJECT STUDY AREA AND PROJECT TRIP DISTRIBUTION



Study Intersection (X) Project Site

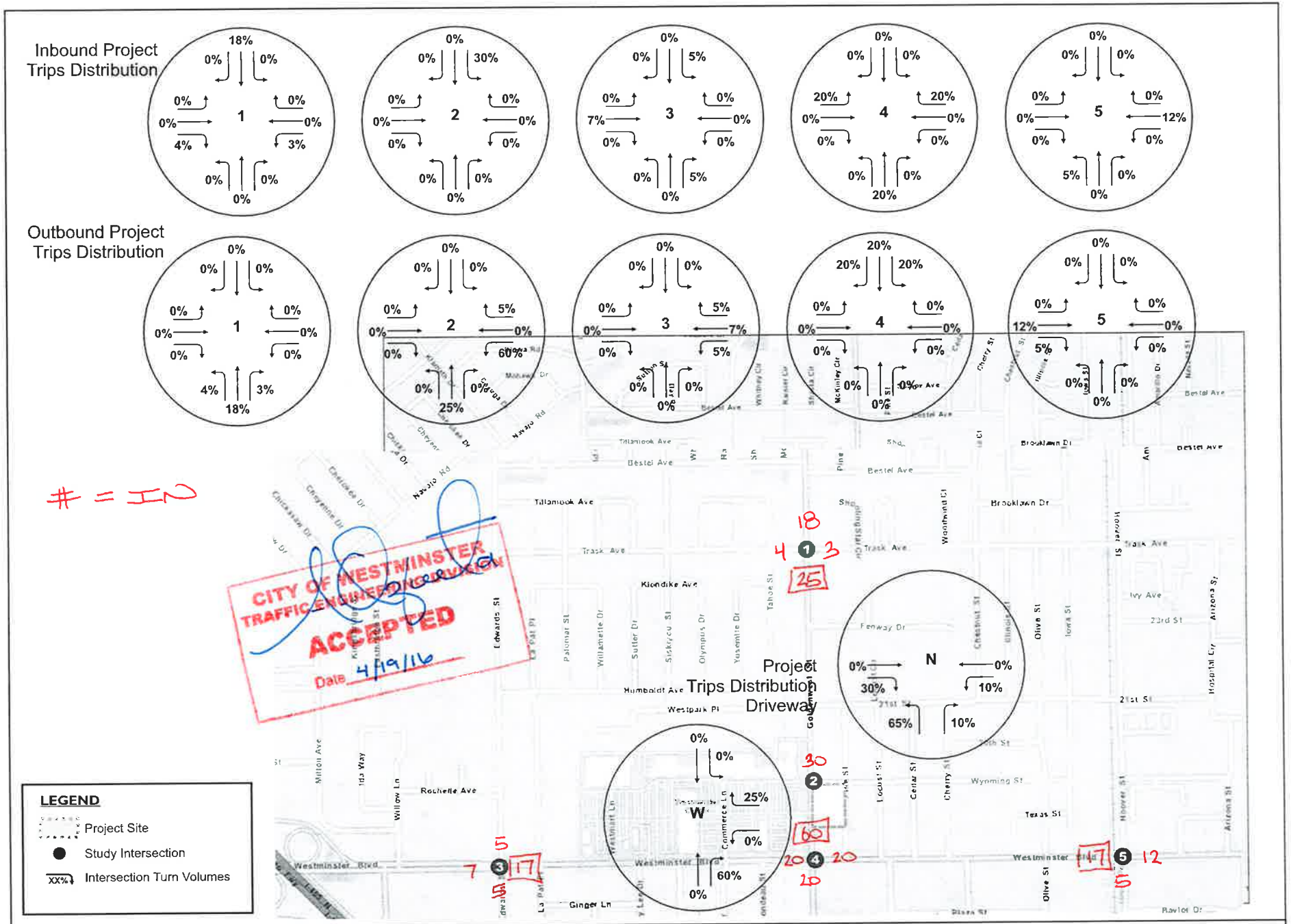
ATTACHMENT C

PROJECT TRIP GENERATION TABLE

Land Use	ITE Code	Intensity		Average Weekday	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Trip Generation Rates *										
Super Market	850	-	k.s.f.	102.24	61%	39%	3.59	51%	49%	10.50
Single Family Residence	210	-	d.u	9.52	25%	75%	0.75	63%	37%	1.00
Multifamily Dwelling	230	-	d.u	5.81	17%	83%	0.44	67%	33%	0.52
General Office Building	710	-	k.s.f.	11.03	88%	12%	1.56	17%	83%	1.49
Proposed Project										
ALDI Market	850	17.752	k.s.f.	1,815	39	25	64	95	91	186
Existing Land Use Credit										
Single Family Residence	210	4	d.u	-38	-1	-2	-3	-3	-1	-4
Multifamily Dwelling	230	1	d.u	-6	0	0	0	-1	0	-1
General Office Building	710	1	k.s.f.	-14	-2	0	-2	0	-2	-2
Existing Land Use Credit Subtotal				**-58**	**-3**	**-2**	**-5**	**-4**	**-3**	**-7**
Pass-By Credit										
Super Market (PM-36%)				-653	-	-	-	-34	-33	-67
Net New Project Trips										
Total Net New Project Trips				**1,104**	**36**	**23**	**59**	**57**	**55**	**112**

Source: ITE Trip Generation Manual, 9th Edition, Institute of Transportation Engineers, 2012

**Note: k.s.f. - 1,000 Sq. Feet Gross Floor Area*

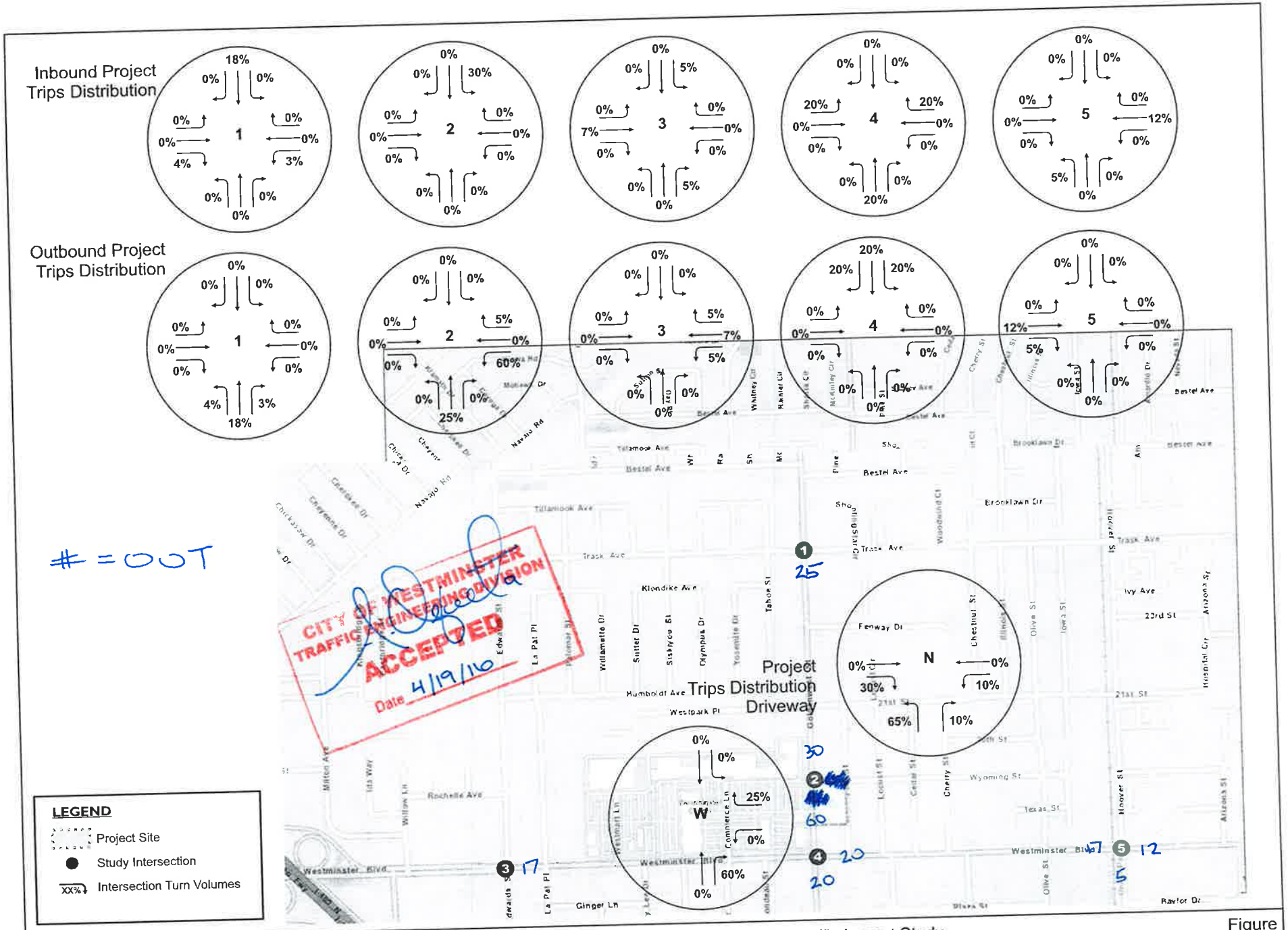


KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure

Project Trips Distribution



KOA CORPORATION
PLANNING & ENGINEERING

Westminster ALDI Market at 13900 Goldenwest Street - Traffic Impact Study

Figure
Project Trips Distribution

APPENDIX B
Traffic Count Data

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-001

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Trask Ave			Trask Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
7:00 AM	6	205	22	12	261	10	21	22	10	21	33	7	630
7:15 AM	13	195	28	14	306	13	29	31	16	13	58	19	735
7:30 AM	23	247	36	18	364	12	25	44	21	37	69	30	926
7:45 AM	22	236	58	15	332	18	24	61	26	27	78	20	917
8:00 AM	11	255	21	17	304	15	21	40	12	16	35	9	756
8:15 AM	6	199	22	7	258	9	12	16	11	23	27	22	612
8:30 AM	2	198	17	10	288	7	16	21	12	24	21	14	630
8:45 AM	5	199	14	12	278	7	24	16	14	21	17	12	619
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	88	1734	218	105	2391	91	172	251	122	182	338	133	5825
APPROACH %'s :	4.31%	85.00%	10.69%	4.06%	92.42%	3.52%	31.56%	46.06%	22.39%	27.87%	51.76%	20.37%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	69	933	143	64	1306	58	99	176	75	93	240	78	3334
PEAK HR FACTOR :		0.906			0.906			0.788			0.756		0.900

UTURNS

	NB	SB	EB	WB
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	1	0	0
7:45 AM	0	2	0	0
8:00 AM	0	2	0	0
8:15 AM	0	0	0	0
8:30 AM	0	1	0	0
8:45 AM	0	0	0	0
	NB	SB	EB	WB
TOTAL VOLUMES :	0	6	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-001

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Trask Ave			Trask Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
4:00 PM	13	294	36	15	290	14	10	42	9	26	41	19	809
4:15 PM	15	294	34	20	294	14	12	26	4	37	29	23	802
4:30 PM	11	317	27	16	295	21	22	17	14	26	40	15	821
4:45 PM	13	323	37	23	311	19	14	27	11	41	30	15	864
5:00 PM	16	298	34	19	266	16	15	35	12	32	43	24	810
5:15 PM	15	330	40	22	328	17	11	23	21	27	40	21	895
5:30 PM	19	321	35	14	308	15	20	35	16	34	56	23	896
5:45 PM	25	322	42	19	291	25	25	30	14	43	53	25	914
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	127	2499	285	148	2383	141	129	235	101	266	332	165	6811
APPROACH %'s :	4.36%	85.85%	9.79%	5.54%	89.18%	5.28%	27.74%	50.54%	21.72%	34.86%	43.51%	21.63%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	75	1271	151	74	1193	73	71	123	63	136	192	93	3515
PEAK HR FACTOR :		0.962			0.913			0.905			0.870		0.961

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	2	0	0
0	1	0	0
0	1	0	0
0	3	0	0
0	1	0	0
0	1	0	0
4	2	0	0
NB	SB	EB	WB
4	11	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Goldenwest St and Trask Ave , Westminster

Date: 4/12/2016

Day: Tuesday

Project #: 16-1087-001

City: Westminster

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Goldenwest St)

Lanes	0	3	1		
AM	58	1306	64	1110	AM
NOON	0	0	0	0	NOON
PM	73	1193	74	1435	PM

Eastbound Approach (Trask Ave)

Lanes	AM	NOON	PM
	367	0	340
1	99	0	71
2	176	0	123
0	75	0	63

Westbound Approach

AM	NOON	PM	Lanes
78	0	93	0
240	0	192	2
93	0	136	1
383	0	348	

Northbound Approach

AM	1474	69	933	143	AM
NOON	0	0	0	0	NOON
PM	1392	75	1271	151	PM
		1	3	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	1428	1110	
	0	0	
	1340	1435	
West Leg	367	0	340
	350	0	257
East Leg	411	0	421
	383	0	348
South Leg	1474	1145	
	0	0	
	1392	1497	

Total Volume Per Leg

	AM	NOON	PM
North Leg	2538	0	2775
West Leg	717	0	597
East Leg	794	0	769
South Leg	2619	0	2889

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-001

Day: Tuesday

City: Westminster

Cars

Date: 4/12/2016

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Trask Ave			Trask Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	3	0	1	3	0	1	2	0	1	2	0					
7:00 AM	6	201	22	11	249	8	20	22	9	21	31	7	607	0	0	0	0
7:15 AM	13	191	28	13	295	13	29	29	16	13	58	18	716	0	0	0	0
7:30 AM	23	246	36	18	358	12	25	44	21	37	67	29	916	0	1	0	0
7:45 AM	22	231	56	15	320	17	24	59	26	27	78	20	895	0	2	0	0
8:00 AM	11	250	21	16	300	14	21	40	12	16	33	9	743	0	2	0	0
8:15 AM	6	194	20	7	248	9	12	15	11	22	26	22	592	0	0	0	0
8:30 AM	2	194	16	10	284	7	16	21	12	24	21	14	621	0	1	0	0
8:45 AM	4	195	14	12	272	7	24	16	14	21	17	11	607	0	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	87	1702	213	102	2326	87	171	246	121	181	331	130	5697	0	6	0	0
APPROACH %'s :	4.35%	85.01%	10.64%	4.06%	92.49%	3.46%	31.78%	45.72%	22.49%	28.19%	51.56%	20.25%					

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	69	918	141	62	1273	56	99	172	75	93	236	76	3270
PEAK HR FACTOR :		0.913			0.896			0.794			0.761		0.892

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-001

Day: Tuesday

City: Westminster

Cars

Date: 4/12/2016

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Trask Ave			Trask Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	3	0	1	3	0	1	2	0	1	2	0					
4:00 PM	13	287	36	15	285	14	9	42	8	26	41	19	795	0	0	0	0
4:15 PM	15	286	34	20	290	14	12	26	4	37	29	22	789	0	2	0	0
4:30 PM	11	307	27	16	293	21	22	17	13	26	40	15	808	0	1	0	0
4:45 PM	13	315	37	23	307	19	14	27	11	41	30	15	852	0	1	0	0
5:00 PM	16	293	34	19	266	16	15	35	12	32	43	24	805	0	3	0	0
5:15 PM	15	320	40	22	327	17	11	23	21	27	40	21	884	0	1	0	0
5:30 PM	19	315	35	14	308	15	20	35	16	34	56	23	890	0	1	0	0
5:45 PM	25	317	42	19	289	25	25	30	14	43	53	24	906	4	2	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	127	2440	285	148	2365	141	128	235	99	266	332	163	6729	4	11	0	0
APPROACH %'s :	4.45%	85.55%	9.99%	5.58%	89.11%	5.31%	27.71%	50.87%	21.43%	34.95%	43.63%	21.42%					

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	75	1245	151	74	1190	73	71	123	63	136	192	92	3485
PEAK HR FACTOR :		0.958			0.913			0.905			0.875		0.962

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-001 | **Day:** Tuesday

City: Westminster | **Date:** 4/12/2016

HT

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Trask Ave			Trask Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
7:00 AM	0	4	0	1	12	2	1	0	1	0	2	0	23
7:15 AM	0	4	0	1	11	0	0	2	0	0	0	1	19
7:30 AM	0	1	0	0	6	0	0	0	0	0	2	1	10
7:45 AM	0	5	2	0	12	1	0	2	0	0	0	0	22
8:00 AM	0	5	0	1	4	1	0	0	0	0	2	0	13
8:15 AM	0	5	2	0	10	0	0	1	0	1	1	0	20
8:30 AM	0	4	1	0	4	0	0	0	0	0	0	0	9
8:45 AM	1	4	0	0	6	0	0	0	0	0	0	1	12
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1	32	5	3	65	4	1	5	1	1	7	3	128
APPROACH %'s :	2.63%	84.21%	13.16%	4.17%	90.28%	5.56%	14.29%	71.43%	14.29%	9.09%	63.64%	27.27%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	15	2	2	33	2	0	4	0	0	4	2	64
PEAK HR FACTOR :	0.607			0.712			0.500			0.500			0.892

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	1	0	0
0	2	0	0
0	2	0	0
0	0	0	0
0	1	0	0
0	0	0	0
NB	SB	EB	WB
0	6	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-001

Day: Tuesday

City: Westminster

Date: 4/12/2016

HT

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Trask Ave			Trask Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	0	1	2	0	1	2	0	
4:00 PM	0	7	0	0	5	0	1	0	1	0	0	0	14
4:15 PM	0	8	0	0	4	0	0	0	0	0	0	1	13
4:30 PM	0	10	0	0	2	0	0	0	1	0	0	0	13
4:45 PM	0	8	0	0	4	0	0	0	0	0	0	0	12
5:00 PM	0	5	0	0	0	0	0	0	0	0	0	0	5
5:15 PM	0	10	0	0	1	0	0	0	0	0	0	0	11
5:30 PM	0	6	0	0	0	0	0	0	0	0	0	0	6
5:45 PM	0	5	0	0	2	0	0	0	0	0	0	1	8
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	59	0	0	18	0	1	0	2	0	0	2	82
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	33.33%	0.00%	66.67%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	26	0	0	3	0	0	0	0	0	0	1	30
PEAK HR FACTOR :	0.650			0.375			0.000			0.250			0.962

UTURNS

	NB	SB	EB	WB
4:00 PM	0	0	0	0
4:15 PM	0	2	0	0
4:30 PM	0	1	0	0
4:45 PM	0	1	0	0
5:00 PM	0	3	0	0
5:15 PM	0	1	0	0
5:30 PM	0	1	0	0
5:45 PM	4	2	0	0
	NB	SB	EB	WB
TOTAL VOLUMES :	4	11	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-002

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Wyoming St			Wyoming St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	3	0	1	3	1	0.5	0.5	1	0	1	0					
7:00 AM	2	198	6	2	271	8	17	1	4	7	0	10	526	0	0	0	0
7:15 AM	1	201	2	2	379	20	8	1	2	2	0	8	626	0	0	0	0
7:30 AM	1	278	9	2	468	15	7	2	5	11	1	14	813	0	0	0	0
7:45 AM	5	265	15	11	405	20	17	3	3	6	1	11	762	0	0	0	0
8:00 AM	4	257	15	6	304	12	26	3	7	2	5	5	646	0	0	0	0
8:15 AM	1	209	10	2	300	21	16	2	6	7	1	4	579	0	0	0	0
8:30 AM	8	188	11	2	315	30	12	2	9	6	3	8	594	0	0	0	0
8:45 AM	3	184	6	7	294	30	19	4	3	5	3	6	564	1	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	25	1780	74	34	2736	156	122	18	39	46	14	66	5110	1	0	0	0
APPROACH %'s :	1.33%	94.73%	3.94%	1.16%	93.51%	5.33%	68.16%	10.06%	21.79%	36.51%	11.11%	52.38%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	11	1001	41	21	1556	67	58	9	17	21	7	38	2847				
PEAK HR FACTOR :		0.914			0.847			0.583			0.635		0.875				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-002

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Wyoming St			Wyoming St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	1	0.5	0.5	1	0	1	0	
4:00 PM	15	296	6	10	287	37	49	11	11	5	7	4	738
4:15 PM	17	304	18	10	304	51	43	10	12	2	7	15	793
4:30 PM	10	294	18	11	294	33	48	9	12	5	6	6	746
4:45 PM	26	328	19	13	316	39	51	8	9	7	0	4	820
5:00 PM	23	301	14	11	287	31	54	6	11	7	7	9	761
5:15 PM	17	347	13	14	327	48	45	13	12	7	10	8	861
5:30 PM	19	330	10	8	351	38	61	12	11	14	9	10	873
5:45 PM	15	347	10	11	280	40	56	9	6	7	4	7	792
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	142	2547	108	88	2446	317	407	78	84	54	50	63	6384
APPROACH %'s :	5.08%	91.06%	3.86%	3.09%	85.79%	11.12%	71.53%	13.71%	14.76%	32.34%	29.94%	37.72%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	85	1306	56	46	1281	156	211	39	43	35	26	31	3315
PEAK HR FACTOR :		0.960			0.934			0.872			0.697		0.949

UTURNS			
NB	SB	EB	WB
0	3	0	0
3	1	0	0
0	3	0	0
0	3	0	0
3	3	0	0
3	2	0	0
0	2	0	0
2	2	0	0
NB	SB	EB	WB
11	19	0	0

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Goldenwest St and Wyoming St , Westminster

Date: 4/12/2016

Day: Tuesday

Project #: 16-1087-002

City: Westminster

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Goldenwest St

Lanes	1	3	1		
AM	67	1556	21	1097	AM
NOON	0	0	0	0	NOON
PM	156	1281	46	1548	PM

Eastbound Approach

Wyoming St

	AM	NOON	PM
	85	0	267
0.5	58	0	211
0.5	9	0	39
1	17	0	43
Lanes	AM	NOON	PM

Westbound Approach

AM	NOON	PM	Lanes
38	0	31	0
7	0	26	1
21	0	35	0
71	0	141	
AM	NOON	PM	

CONTROL

Signalized

Northbound Approach

AM	1594	11	1001	41	AM
NOON	0	0	0	0	NOON
PM	1359	85	1306	56	PM
		1	3	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs

			North Leg			
			1644	1097	AM	
			0	0	NOON	
			1483	1548	PM	
AM	NOON	PM			East Leg	
85	0	267			66	0	92
84	0	293			71	0	141
West Leg					AM	NOON	PM
			1594	1053	AM	
			0	0	NOON	
			1359	1447	PM	
			South Leg			

Total Volume Per Leg

			North Leg			
			2741	AM		
			0	NOON		
			3031	PM		
AM	NOON	PM			East Leg	
169	0	560			137	0	233
West Leg					AM	NOON	PM
			2647	AM		
			0	NOON		
			2806	PM		
			South Leg			

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-002 | **Day:** Tuesday

City: Westminster | **Date:** 4/12/2016

Cars

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Wyoming St			Wyoming St				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	3	0	1	3	1	0.5	0.5	1	0	1	0					
7:00 AM	2	195	6	1	265	8	17	1	4	7	0	9	515	0	0	0	0
7:15 AM	1	196	2	2	365	20	8	1	2	2	0	8	607	0	0	0	0
7:30 AM	1	273	9	2	463	14	7	2	5	11	1	14	802	0	0	0	0
7:45 AM	5	259	14	11	395	20	17	3	3	6	1	11	745	0	0	0	0
8:00 AM	4	250	15	5	298	12	24	3	7	2	5	5	630	0	0	0	0
8:15 AM	1	206	10	2	290	20	14	2	6	7	1	4	563	0	0	0	0
8:30 AM	8	178	10	1	309	29	12	2	8	6	3	8	574	0	0	0	0
8:45 AM	3	176	6	7	289	30	19	4	3	5	3	6	551	1	0	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	25	1733	72	31	2674	153	118	18	38	46	14	65	4987	1	0	0	0
APPROACH %'s :	1.37%	94.70%	3.93%	1.08%	93.56%	5.35%	67.82%	10.34%	21.84%	36.80%	11.20%	52.00%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	11	978	40	20	1521	66	56	9	17	21	7	38	2784				
PEAK HR FACTOR :		0.909			0.839			0.603			0.635		0.868				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-002

Day: Tuesday

Cars

City: Westminster

Date: 4/12/2016

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Wyoming St			Wyoming St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	1	0.5	0.5	1	0	1	0	
4:00 PM	15	288	6	10	283	37	49	11	11	5	7	4	726
4:15 PM	17	296	18	10	298	50	42	10	12	2	7	15	777
4:30 PM	10	284	17	11	292	33	48	9	12	5	6	6	733
4:45 PM	26	316	19	13	311	39	51	8	9	7	0	4	803
5:00 PM	23	297	14	11	286	31	54	5	11	7	7	9	755
5:15 PM	17	337	13	14	323	48	45	13	12	7	10	8	847
5:30 PM	19	325	10	8	350	38	61	11	11	14	9	10	866
5:45 PM	15	343	10	11	278	40	56	9	6	7	4	7	786
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	142	2486	107	88	2421	316	406	76	84	54	50	63	6293
APPROACH %'s :	5.19%	90.90%	3.91%	3.12%	85.70%	11.19%	71.73%	13.43%	14.84%	32.34%	29.94%	37.72%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	85	1275	56	46	1270	156	211	37	43	35	26	31	3271
PEAK HR FACTOR :		0.965			0.929			0.877			0.697		0.944

UTURNS			
NB	SB	EB	WB
0	3	0	0
3	1	0	0
0	3	0	0
0	3	0	0
3	3	0	0
3	2	0	0
0	2	0	0
2	2	0	0
NB	SB	EB	WB
11	19	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-002

Day: Tuesday

City: Westminster

Date: 4/12/2016

HT

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Wyoming St			Wyoming St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	1	0.5	0.5	1	0	1	0	
7:00 AM	0	3	0	1	6	0	0	0	0	0	0	1	11
7:15 AM	0	5	0	0	14	0	0	0	0	0	0	0	19
7:30 AM	0	5	0	0	5	1	0	0	0	0	0	0	11
7:45 AM	0	6	1	0	10	0	0	0	0	0	0	0	17
8:00 AM	0	7	0	1	6	0	2	0	0	0	0	0	16
8:15 AM	0	3	0	0	10	1	2	0	0	0	0	0	16
8:30 AM	0	10	1	1	6	1	0	0	1	0	0	0	20
8:45 AM	0	8	0	0	5	0	0	0	0	0	0	0	13
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	47	2	3	62	3	4	0	1	0	0	1	123
APPROACH %'s :	0.00%	95.92%	4.08%	4.41%	91.18%	4.41%	80.00%	0.00%	20.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	23	1	1	35	1	2	0	0	0	0	0	63
PEAK HR FACTOR :	0.857			0.661			0.250			0.000			0.868

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
NB	SB	EB	WB
1	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-002

Day: Tuesday

City: Westminster

Date: 4/12/2016

HT

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Wyoming St			Wyoming St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	3	0	1	3	1	0.5	0.5	1	0	1	0	
4:00 PM	0	8	0	0	4	0	0	0	0	0	0	0	12
4:15 PM	0	8	0	0	6	1	1	0	0	0	0	0	16
4:30 PM	0	10	1	0	2	0	0	0	0	0	0	0	13
4:45 PM	0	12	0	0	5	0	0	0	0	0	0	0	17
5:00 PM	0	4	0	0	1	0	0	1	0	0	0	0	6
5:15 PM	0	10	0	0	4	0	0	0	0	0	0	0	14
5:30 PM	0	5	0	0	1	0	0	1	0	0	0	0	7
5:45 PM	0	4	0	0	2	0	0	0	0	0	0	0	6
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	61	1	0	25	1	1	2	0	0	0	0	91
APPROACH %'s :	0.00%	98.39%	1.61%	0.00%	96.15%	3.85%	33.33%	66.67%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	31	0	0	11	0	0	2	0	0	0	0	44
PEAK HR FACTOR :		0.646			0.550			0.500			0.000		0.944

UTURNS			
NB	SB	EB	WB
0	3	0	0
3	1	0	0
0	3	0	0
0	3	0	0
3	3	0	0
3	2	0	0
0	2	0	0
2	2	0	0
NB	SB	EB	WB
11	19	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-003

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

AM

NS/EW Streets:	Edwards St			Edwards St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	2	0	1	2	0	1	2	0	1	3	0					
7:00 AM	45	60	18	11	79	30	14	141	55	18	107	18	596	0	0	1	0
7:15 AM	63	65	34	24	131	35	18	153	81	39	161	8	812	0	0	0	0
7:30 AM	37	83	38	35	172	33	31	159	126	51	181	21	967	0	0	3	0
7:45 AM	70	101	46	56	132	30	34	168	103	56	239	20	1055	0	0	5	0
8:00 AM	56	105	69	54	137	49	20	143	70	43	184	13	943	0	0	3	2
8:15 AM	52	63	33	25	77	23	15	139	73	24	162	9	695	0	0	1	4
8:30 AM	51	64	17	12	67	43	23	142	39	12	168	21	659	0	0	5	0
8:45 AM	60	64	22	21	45	27	23	169	37	20	181	15	684	0	0	6	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	434	605	277	238	840	270	178	1214	584	263	1383	125	6411	0	0	24	6
APPROACH %'s :	32.98%	45.97%	21.05%	17.66%	62.31%	20.03%	9.01%	61.44%	29.55%	14.85%	78.09%	7.06%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	226	354	187	169	572	147	103	623	380	189	765	62	3777				
PEAK HR FACTOR :	0.834			0.925			0.875			0.806			0.895				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-003

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

PM

NS/EW Streets:	Edwards St			Edwards St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	2	0	1	2	0	1	2	0	1	3	0					
4:00 PM	65	105	58	21	89	37	33	182	34	39	161	27	851	0	0	0	0
4:15 PM	57	91	34	29	98	33	39	180	44	36	162	20	823	0	0	9	0
4:30 PM	65	113	56	17	101	15	30	182	53	40	212	33	917	0	0	3	0
4:45 PM	60	128	51	30	99	31	44	173	66	31	176	26	915	0	0	6	1
5:00 PM	65	118	73	23	81	26	32	204	60	44	220	34	980	0	0	10	0
5:15 PM	107	136	46	24	102	28	44	190	62	40	206	32	1017	0	0	4	0
5:30 PM	78	164	59	26	119	22	39	172	52	48	220	34	1033	0	0	7	1
5:45 PM	75	116	46	44	109	28	44	173	49	41	166	24	915	0	0	8	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	572	971	423	214	798	220	305	1456	420	319	1523	230	7451	0	0	47	2
APPROACH %'s :	29.09%	49.39%	21.52%	17.37%	64.77%	17.86%	13.98%	66.76%	19.26%	15.40%	73.50%	11.10%					

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	325	534	224	117	411	104	159	739	223	173	812	124	3945
PEAK HR FACTOR :		0.900			0.873			0.947			0.918		0.955

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Edwards St and Westminster Ave , Westminster

Date: 4/12/2016

Day: Tuesday

Project #: 16-1087-003

City: Westminster

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Edwards St)

Lanes	0	2	1		
AM	147	572	169	519	AM
NOON	0	0	0	0	NOON
PM	104	411	117	817	PM

Eastbound Approach (Westminster Ave)

Lanes	AM	NOON	PM
	1138	0	1241
1	103	0	159
2	623	0	739
0	380	0	223

Westbound Approach

	AM	NOON	PM	Lanes
	62	0	124	0
	765	0	812	3
	189	0	173	1
	979	0	1080	

Northbound Approach

AM	1141	226	354	187	AM
NOON	0	0	0	0	NOON
PM	807	325	534	224	PM
		2	2	0	Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	888	519	AM
NOON	0	0	NOON
PM	632	817	PM

West Leg	AM	NOON	PM
	1138	0	1241
	1106	0	1121

East Leg	AM	NOON	PM
	1016	0	1109
	979	0	1080

South Leg		
AM	1141	767
NOON	0	0
PM	807	1083

Total Volume Per Leg

North Leg	
1407	AM
0	NOON
1449	PM

West Leg	AM	NOON	PM
	2244	0	2362

East Leg	AM	NOON	PM
	1995	0	2189

South Leg	
AM	1908
NOON	0
PM	1890

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-003

Day: Tuesday

City: Westminster

Cars

Date: 4/12/2016

AM

NS/EW Streets:	Edwards St			Edwards St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	2	0	1	2	0	1	2	0	1	3	0					
7:00 AM	45	60	18	11	79	29	14	138	55	18	105	15	587	0	0	1	0
7:15 AM	58	65	33	24	128	32	18	148	80	34	159	8	787	0	0	0	0
7:30 AM	37	83	36	35	171	33	31	154	124	51	179	21	955	0	0	3	0
7:45 AM	68	101	46	56	127	30	32	167	101	52	236	20	1036	0	0	5	0
8:00 AM	53	105	68	53	136	49	19	139	68	41	178	12	921	0	0	3	2
8:15 AM	51	63	32	24	76	23	15	137	72	22	157	8	680	0	0	1	4
8:30 AM	49	64	16	11	66	43	23	134	39	12	164	21	642	0	0	5	0
8:45 AM	57	62	22	21	45	27	23	160	36	19	178	14	664	0	0	6	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	418	603	271	235	828	266	175	1177	575	249	1356	119	6272	0	0	24	6
APPROACH %'s :	32.35%	46.67%	20.98%	17.68%	62.30%	20.02%	9.08%	61.08%	29.84%	14.44%	78.65%	6.90%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	216	354	183	168	562	144	100	608	373	178	752	61	3699				
PEAK HR FACTOR :	0.833			0.914			0.875			0.804			0.893				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-003

Day: Tuesday

City: Westminster

Cars

Date: 4/12/2016

PM

NS/EW Streets:	Edwards St			Edwards St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	2	0	1	2	0	1	2	0	1	3	0					
4:00 PM	64	104	57	20	89	37	32	178	34	39	158	26	838	0	0	0	0
4:15 PM	57	90	34	29	97	33	38	177	44	33	157	20	809	0	0	9	0
4:30 PM	62	113	55	17	99	15	30	180	52	40	209	33	905	0	0	3	0
4:45 PM	60	128	50	30	99	31	44	172	66	31	171	24	906	0	0	6	1
5:00 PM	65	118	71	23	81	26	32	201	60	44	216	34	971	0	0	10	0
5:15 PM	107	135	44	23	102	28	44	189	62	38	202	32	1006	0	0	4	0
5:30 PM	78	163	59	26	118	22	39	168	52	48	219	34	1026	0	0	7	1
5:45 PM	73	116	46	44	109	28	44	173	48	41	166	24	912	0	0	8	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	566	967	416	212	794	220	303	1438	418	314	1498	227	7373	0	0	47	2
APPROACH %'s :	29.04%	49.62%	21.34%	17.29%	64.76%	17.94%	14.03%	66.60%	19.36%	15.40%	73.47%	11.13%					

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	323	532	220	116	410	104	159	731	222	171	803	124	3915
PEAK HR FACTOR :		0.896			0.870			0.942			0.912		0.954

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-003

Day: Tuesday

City: Westminster

Date: 4/12/2016

HT

AM

NS/EW Streets:	Edwards St			Edwards St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	2	0	1	2	0	1	2	0	1	3	0					
7:00 AM	0	0	0	0	0	1	0	3	0	0	2	3	9	0	0	1	0
7:15 AM	5	0	1	0	3	3	0	5	1	5	2	0	25	0	0	0	0
7:30 AM	0	0	2	0	1	0	0	5	2	0	2	0	12	0	0	3	0
7:45 AM	2	0	0	0	5	0	2	1	2	4	3	0	19	0	0	5	0
8:00 AM	3	0	1	1	1	0	1	4	2	2	6	1	22	0	0	3	2
8:15 AM	1	0	1	1	1	0	0	2	1	2	5	1	15	0	0	1	4
8:30 AM	2	0	1	1	1	0	0	8	0	0	4	0	17	0	0	5	0
8:45 AM	3	2	0	0	0	0	0	9	1	1	3	1	20	0	0	6	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	16	2	6	3	12	4	3	37	9	14	27	6	139	0	0	24	6
APPROACH %'s :	66.67%	8.33%	25.00%	15.79%	63.16%	21.05%	6.12%	75.51%	18.37%	29.79%	57.45%	12.77%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	10	0	4	1	10	3	3	15	7	11	13	1	78				
PEAK HR FACTOR :	0.583			0.583			0.893			0.694			0.893				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-003

Day: Tuesday

City: Westminster

Date: 4/12/2016

HT

PM

NS/EW Streets:	Edwards St			Edwards St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	2	0	1	2	0	1	2	0	1	3	0					
4:00 PM	1	1	1	1	0	0	1	4	0	0	3	1	13	0	0	0	0
4:15 PM	0	1	0	0	1	0	1	3	0	3	5	0	14	0	0	9	0
4:30 PM	3	0	1	0	2	0	0	2	1	0	3	0	12	0	0	3	0
4:45 PM	0	0	1	0	0	0	0	1	0	0	5	2	9	0	0	6	1
5:00 PM	0	0	2	0	0	0	0	3	0	0	4	0	9	0	0	10	0
5:15 PM	0	1	2	1	0	0	0	1	0	2	4	0	11	0	0	4	0
5:30 PM	0	1	0	0	1	0	0	4	0	0	1	0	7	0	0	7	1
5:45 PM	2	0	0	0	0	0	0	0	1	0	0	0	3	0	0	8	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	6	4	7	2	4	0	2	18	2	5	25	3	78	0	0	47	2
APPROACH %'s :	35.29%	23.53%	41.18%	33.33%	66.67%	0.00%	9.09%	81.82%	9.09%	15.15%	75.76%	9.09%					

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	2	2	4	1	1	0	0	8	1	2	9	0	30
PEAK HR FACTOR :	0.667			0.500			0.563			0.458			0.954

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004 **Day:** Tuesday

City: Westminster **Date:** 4/12/2016

TOTALS

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	2	1	2	2	1	
7:00 AM	47	163	28	24	246	17	37	106	41	26	90	14	839
7:15 AM	35	154	25	36	278	30	38	126	31	45	107	12	917
7:30 AM	50	227	54	41	374	46	30	152	60	80	143	21	1278
7:45 AM	69	211	72	46	303	42	45	157	45	81	180	22	1273
8:00 AM	48	209	30	34	243	36	52	170	38	28	146	12	1046
8:15 AM	49	156	27	40	233	30	40	103	33	38	107	19	875
8:30 AM	50	147	21	26	262	25	43	111	42	26	147	24	924
8:45 AM	48	133	19	36	221	38	45	123	41	35	141	15	895
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	396	1400	276	283	2160	264	330	1048	331	359	1061	139	8047
APPROACH %'s :	19.11%	67.57%	13.32%	10.45%	79.79%	9.75%	19.31%	61.32%	19.37%	23.03%	68.06%	8.92%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	202	801	181	157	1198	154	165	605	174	234	576	67	4514
PEAK HR FACTOR :		0.841			0.818			0.908			0.775		0.883

UTURNS

	NB	SB	EB	WB
7:00 AM	0	0	0	0
7:15 AM	0	1	1	0
7:30 AM	0	0	1	0
7:45 AM	0	3	0	0
8:00 AM	0	0	4	0
8:15 AM	2	2	2	0
8:30 AM	0	1	2	0
8:45 AM	0	2	1	0
	NB	SB	EB	WB
TOTAL VOLUMES :	2	9	11	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004 | **Day:** Tuesday

City: Westminster | **Date:** 4/12/2016

TOTALS

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	2	1	2	2	1	
4:00 PM	82	255	40	42	234	34	60	120	48	41	142	28	1126
4:15 PM	57	276	34	42	245	40	52	145	37	47	159	28	1162
4:30 PM	64	258	38	48	255	32	42	126	30	37	174	27	1131
4:45 PM	63	288	25	48	247	47	57	153	54	33	158	28	1201
5:00 PM	77	272	52	35	253	32	46	148	54	47	189	27	1232
5:15 PM	66	293	38	56	263	38	66	167	49	50	178	30	1294
5:30 PM	68	285	34	54	285	49	50	140	40	47	155	28	1235
5:45 PM	54	271	46	43	231	29	75	145	53	55	174	28	1204
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	531	2198	307	368	2013	301	448	1144	365	357	1329	224	9585
APPROACH %'s :	17.49%	72.40%	10.11%	13.72%	75.06%	11.22%	22.89%	58.46%	18.65%	18.69%	69.58%	11.73%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	265	1121	170	188	1032	148	237	600	196	199	696	113	4965
PEAK HR FACTOR :		0.970			0.881			0.916			0.958		0.959

UTURNS			
NB	SB	EB	WB
2	0	0	1
0	1	5	1
0	3	5	0
2	2	3	0
0	6	4	0
1	2	5	0
1	1	6	1
0	0	5	1
NB	SB	EB	WB
6	15	33	4

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Goldenwest St and Westminster Ave , Westminster

Date: 4/12/2016

Day: Tuesday

Project #: 16-1087-004

City: Westminster

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Goldenwest St)

Lanes	0	3	2		
AM	154	1198	157	1033	AM
NOON	0	0	0	0	NOON
PM	148	1032	188	1471	PM

Eastbound Approach (Westminster Ave)

Lanes	AM	NOON	PM
	932	0	1109
2	165	0	237
2	605	0	600
1	174	0	196

Westbound Approach

AM	NOON	PM	Lanes
67	0	113	1
576	0	696	2
234	0	199	2
943	0	958	

Northbound Approach

AM	1606	202	801	181	AM
NOON	0	0	0	0	NOON
PM	1427	265	1121	170	PM
Lanes		2	3	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	1509	1033	AM
NOON	0	0	NOON
PM	1368	1471	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
932	0	1109	877	0	1008
944	0	1033	943	0	958

	South Leg	
AM	1606	1184
NOON	0	0
PM	1427	1556

Total Volume Per Leg

	North Leg
AM	2542
NOON	0
PM	2839

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
1876	0	2142	1820	0	1966

	South Leg
AM	2790
NOON	0
PM	2983

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004

Day: Tuesday

City: Westminster

Cars

Date: 4/12/2016

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	2	1	2	2	1	
7:00 AM	47	161	26	24	242	16	36	103	40	25	88	13	821
7:15 AM	35	151	24	36	270	29	37	123	31	45	104	12	897
7:30 AM	50	224	53	41	369	46	29	148	59	79	142	21	1261
7:45 AM	68	208	71	46	298	40	43	157	45	78	177	21	1252
8:00 AM	48	206	29	33	241	33	50	167	37	27	142	11	1024
8:15 AM	49	155	26	39	228	27	38	101	33	37	105	19	857
8:30 AM	50	143	20	26	252	23	40	108	39	25	145	23	894
8:45 AM	47	128	18	35	216	38	44	117	40	34	138	15	870
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	394	1376	267	280	2116	252	317	1024	324	350	1041	135	7876
APPROACH %'s :	19.34%	67.55%	13.11%	10.57%	79.91%	9.52%	19.04%	61.50%	19.46%	22.94%	68.22%	8.85%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	201	789	177	156	1178	148	159	595	172	229	565	65	4434
PEAK HR FACTOR :		0.841			0.813			0.911			0.778		0.879

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	1	1	0
0	0	1	0
0	3	0	0
0	0	4	0
2	2	2	0
0	1	2	0
0	2	1	0
NB	SB	EB	WB
2	9	11	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004 | **Day:** Tuesday

City: Westminster | **Date:** 4/12/2016

Cars

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	2	1	2	2	1	
4:00 PM	81	248	40	42	230	33	60	118	48	40	140	27	1107
4:15 PM	56	270	33	42	242	39	52	145	37	47	157	28	1148
4:30 PM	63	247	37	48	251	32	42	125	29	36	173	27	1110
4:45 PM	62	280	25	47	246	46	57	151	54	31	156	28	1183
5:00 PM	77	267	51	35	253	31	46	147	53	45	186	27	1218
5:15 PM	66	283	38	56	262	36	66	165	49	49	177	30	1277
5:30 PM	67	282	32	54	284	49	50	138	40	46	154	27	1223
5:45 PM	54	266	45	43	230	29	74	144	53	54	174	28	1194
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	526	2143	301	367	1998	295	447	1133	363	348	1317	222	9460
APPROACH %'s :	17.71%	72.15%	10.13%	13.80%	75.11%	11.09%	23.01%	58.31%	18.68%	18.44%	69.79%	11.76%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	264	1098	166	188	1029	145	236	594	195	194	691	112	4912
PEAK HR FACTOR :		0.967			0.880			0.915			0.966		0.962

UTURNS

	NB	SB	EB	WB
4:00 PM	2	0	0	1
4:15 PM	0	1	5	1
4:30 PM	0	3	5	0
4:45 PM	2	2	3	0
5:00 PM	0	6	4	0
5:15 PM	1	2	5	0
5:30 PM	1	1	6	1
5:45 PM	0	0	5	1
	NB	SB	EB	WB
TOTAL VOLUMES :	6	15	33	4

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004

Day: Tuesday

2-Axle HT

City: Westminster

Date: 4/12/2016

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	2	1	2	2	1	
7:00 AM	0	1	2	0	3	1	0	3	1	1	2	0	14
7:15 AM	0	1	0	0	7	1	0	1	0	0	2	0	12
7:30 AM	0	2	1	0	3	0	0	2	1	1	1	0	11
7:45 AM	1	0	1	0	4	1	0	0	0	3	2	1	13
8:00 AM	0	2	1	0	2	1	0	3	1	1	1	0	12
8:15 AM	0	1	1	1	4	1	1	2	0	1	2	0	14
8:30 AM	0	4	1	0	7	2	2	2	3	1	1	1	24
8:45 AM	1	4	1	1	4	0	0	5	0	1	2	0	19
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	15	8	2	34	7	3	18	6	9	13	2	119
APPROACH %'s :	8.00%	60.00%	32.00%	4.65%	79.07%	16.28%	11.11%	66.67%	22.22%	37.50%	54.17%	8.33%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	5	3	0	16	3	0	6	2	5	6	1	48
PEAK HR FACTOR :	0.750			0.594			0.500			0.500			0.879

UTURNS			
NB	SB	EB	WB
0	0	0	0
0	1	1	0
0	0	1	0
0	3	0	0
0	0	4	0
2	2	2	0
0	1	2	0
0	2	1	0
NB	SB	EB	WB
2	9	11	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004

Day: Tuesday

City: Westminster

2-Axle HT

Date: 4/12/2016

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	2	1	2	2	1	
4:00 PM	1	6	0	0	3	1	0	1	0	1	2	1	16
4:15 PM	0	3	1	0	3	0	0	0	0	0	2	0	9
4:30 PM	1	6	1	0	4	0	0	1	1	1	1	0	16
4:45 PM	0	5	0	0	1	0	0	2	0	2	2	0	12
5:00 PM	0	2	1	0	0	1	0	0	0	2	3	0	9
5:15 PM	0	2	0	0	1	2	0	2	0	1	1	0	9
5:30 PM	0	2	2	0	1	0	0	1	0	1	1	0	8
5:45 PM	0	4	1	0	1	0	1	1	0	1	0	0	9
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	2	30	6	0	14	4	1	8	1	9	12	1	88
APPROACH %'s :	5.26%	78.95%	15.79%	0.00%	77.78%	22.22%	10.00%	80.00%	10.00%	40.91%	54.55%	4.55%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	10	4	0	3	3	1	4	0	5	5	0	35
PEAK HR FACTOR :	0.700			0.500			0.625			0.500			0.962

UTURNS			
NB	SB	EB	WB
2	0	0	1
0	1	5	1
0	3	5	0
2	2	3	0
0	6	4	0
1	2	5	0
1	1	6	1
0	0	5	1
NB	SB	EB	WB
6	15	33	4

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004 | **Day:** Tuesday

3-Axle+ HT

City: Westminster | **Date:** 4/12/2016

AM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	2	3	0	2	3	0	2	2	1	2	2	1					
7:00 AM	0	1	0	0	1	0	1	0	0	0	0	1	4	0	0	0	0
7:15 AM	0	2	1	0	1	0	1	2	0	0	1	0	8	0	1	1	0
7:30 AM	0	1	0	0	2	0	1	2	0	0	0	0	6	0	0	1	0
7:45 AM	0	3	0	0	1	1	2	0	0	0	1	0	8	0	3	0	0
8:00 AM	0	1	0	1	0	2	2	0	0	0	3	1	10	0	0	4	0
8:15 AM	0	0	0	0	1	2	1	0	0	0	0	0	4	2	2	2	0
8:30 AM	0	0	0	0	3	0	1	1	0	0	1	0	6	0	1	2	0
8:45 AM	0	1	0	0	1	0	1	1	1	0	1	0	6	0	2	1	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	9	1	1	10	5	10	6	1	0	7	2	52	2	9	11	0
APPROACH %'s :	0.00%	90.00%	10.00%	6.25%	62.50%	31.25%	58.82%	35.29%	5.88%	0.00%	77.78%	22.22%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	0	7	1	1	4	3	6	4	0	0	5	1	32				
PEAK HR FACTOR :	0.667			0.667			0.833			0.375			0.879				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-004

Day: Tuesday

City: Westminster

3-Axle+ HT

Date: 4/12/2016

PM

NS/EW Streets:	Goldenwest St			Goldenwest St			Westminster Ave			Westminster Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	3	0	2	3	0	2	2	1	2	2	1	
4:00 PM	0	1	0	0	1	0	0	1	0	0	0	0	3
4:15 PM	1	3	0	0	0	1	0	0	0	0	0	0	5
4:30 PM	0	5	0	0	0	0	0	0	0	0	0	0	5
4:45 PM	1	3	0	1	0	1	0	0	0	0	0	0	6
5:00 PM	0	3	0	0	0	0	0	1	1	0	0	0	5
5:15 PM	0	8	0	0	0	0	0	0	0	0	0	0	8
5:30 PM	1	1	0	0	0	0	0	1	0	0	0	1	4
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	3	25	0	1	1	2	0	3	1	0	0	1	37
APPROACH %'s :	10.71%	89.29%	0.00%	25.00%	25.00%	50.00%	0.00%	75.00%	25.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	1	13	0	0	0	0	0	2	1	0	0	1	18
PEAK HR FACTOR :	0.438			0.000			0.375			0.250			0.962

UTURNS			
NB	SB	EB	WB
2	0	0	1
0	1	5	1
0	3	5	0
2	2	3	0
0	6	4	0
1	2	5	0
1	1	6	1
0	0	5	1
NB	SB	EB	WB
6	15	33	4

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-005

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

AM

NS/EW Streets:	Hoover St			Hoover St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
7:00 AM	12	47	12	15	100	20	17	162	6	10	76	8	485	0	0	0	4
7:15 AM	7	42	11	28	138	25	15	149	12	16	154	25	622	0	0	0	2
7:30 AM	18	63	18	25	156	45	35	187	17	12	223	19	818	0	0	1	0
7:45 AM	36	77	16	19	133	36	38	234	23	18	234	37	901	0	0	2	2
8:00 AM	7	46	16	19	129	20	25	159	22	11	139	23	616	0	0	0	0
8:15 AM	15	51	9	17	66	17	11	158	12	8	146	24	534	0	0	1	1
8:30 AM	7	54	13	20	105	22	22	172	12	11	158	22	618	0	0	1	1
8:45 AM	22	53	14	26	78	14	18	147	20	16	165	22	595	0	0	2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	124	433	109	169	905	199	181	1368	124	102	1295	180	5189	0	0	7	12
APPROACH %'s :	18.62%	65.02%	16.37%	13.28%	71.09%	15.63%	10.82%	81.77%	7.41%	6.47%	82.12%	11.41%					

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	68	228	61	91	556	126	113	729	74	57	750	104	2957
PEAK HR FACTOR :		0.692			0.855			0.776			0.788		0.820

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-005

Day: Tuesday

City: Westminster

Date: 4/12/2016

TOTALS

PM

NS/EW Streets:	Hoover St			Hoover St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
4:00 PM	23	95	17	30	85	33	25	176	10	16	204	27	741	0	0	2	3
4:15 PM	21	89	21	21	86	31	27	184	17	13	176	32	718	0	0	0	3
4:30 PM	23	109	10	27	94	21	25	190	15	17	184	27	742	0	0	0	4
4:45 PM	18	101	14	22	106	30	30	166	18	11	185	26	727	0	0	0	3
5:00 PM	17	127	19	19	101	30	17	195	10	16	244	29	824	0	0	0	5
5:15 PM	20	123	23	24	103	24	20	222	16	17	184	31	807	0	0	2	5
5:30 PM	17	112	13	25	108	24	27	197	22	14	229	31	819	0	0	1	3
5:45 PM	23	102	17	22	103	16	16	173	15	10	205	22	724	0	0	2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	162	858	134	190	786	209	187	1503	123	114	1611	225	6102	0	0	7	28
APPROACH %'s :	14.04%	74.35%	11.61%	16.03%	66.33%	17.64%	10.31%	82.90%	6.78%	5.85%	82.62%	11.54%					

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	72	463	69	90	418	108	94	780	66	58	842	117	3177
PEAK HR FACTOR :		0.910			0.975			0.911			0.880		0.964

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Hoover St and Westminster Ave , Westminster

Date: 4/12/2016

Day: Tuesday

Project #: 16-1087-005

City: Westminster

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Hoover St)

Lanes	0	2	1		
AM	126	556	91	445	AM
NOON	0	0	0	0	NOON
PM	108	418	90	674	PM

Eastbound Approach (Westminster Ave)

Lanes	AM	NOON	PM
	944	0	1022
1	113	0	94
2	729	0	780
0	74	0	66

Westbound Approach

Lanes	AM	NOON	PM
0	104	0	117
2	750	0	842
1	57	0	58
	881	0	939

Northbound Approach

AM	687	68	228	61	AM
NOON	0	0	0	0	NOON
PM	542	72	463	69	PM
		1	2	0	Lanes

CONTROL

Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	773	0	616
	445	0	674
West Leg	944	0	1022
	916	0	940
East Leg	911	0	1017
	881	0	939
South Leg	687	0	542
	357	0	604

Total Volume Per Leg

	AM	NOON	PM
North Leg	1218	0	1290
West Leg	1860	0	1962
East Leg	1792	0	1956
South Leg	1044	0	1146

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-005

Day: Tuesday

City: Westminster

Cars

Date: 4/12/2016

AM

NS/EW Streets:	Hoover St			Hoover St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
7:00 AM	11	42	12	15	97	20	17	156	6	10	74	8	468	0	0	0	4
7:15 AM	7	42	10	28	137	25	15	146	12	16	150	24	612	0	0	0	2
7:30 AM	17	63	18	24	155	45	35	183	17	12	220	19	808	0	0	1	0
7:45 AM	36	77	16	19	133	36	38	230	23	18	230	37	893	0	0	2	2
8:00 AM	7	46	14	19	128	20	25	157	22	11	135	23	607	0	0	0	0
8:15 AM	14	51	9	17	66	17	11	155	11	8	141	24	524	0	0	1	1
8:30 AM	7	53	13	20	103	21	22	167	12	11	156	22	607	0	0	1	1
8:45 AM	22	53	14	26	78	14	17	142	20	15	162	22	585	0	0	2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	121	427	106	168	897	198	180	1336	123	101	1268	179	5104	0	0	7	12
APPROACH %'s :	18.50%	65.29%	16.21%	13.30%	71.02%	15.68%	10.98%	81.51%	7.50%	6.52%	81.91%	11.56%					

PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	67	228	58	90	553	126	113	716	74	57	735	103	2920
PEAK HR FACTOR :		0.684			0.858			0.776			0.785		0.817

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-005

Day: Tuesday

City: Westminster

Cars

Date: 4/12/2016

PM

NS/EW Streets:	Hoover St			Hoover St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
4:00 PM	23	93	17	30	84	33	25	175	9	16	199	27	731	0	0	2	3
4:15 PM	21	88	21	20	85	31	27	182	17	13	173	32	710	0	0	0	3
4:30 PM	23	108	10	27	94	21	25	188	15	16	180	27	734	0	0	0	4
4:45 PM	18	101	14	22	105	30	30	162	18	11	183	26	720	0	0	0	3
5:00 PM	17	127	19	19	99	30	17	192	10	15	241	29	815	0	0	0	5
5:15 PM	20	122	23	24	103	24	20	221	16	17	182	31	803	0	0	2	5
5:30 PM	17	111	13	25	107	24	27	192	22	14	225	31	808	0	0	1	3
5:45 PM	23	101	17	21	103	16	15	172	15	10	204	22	719	0	0	2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	162	851	134	188	780	209	186	1484	122	112	1587	225	6040	0	0	7	28
APPROACH %'s :	14.12%	74.19%	11.68%	15.97%	66.27%	17.76%	10.38%	82.81%	6.81%	5.82%	82.48%	11.69%					

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	72	461	69	90	414	108	94	767	66	57	831	117	3146
PEAK HR FACTOR :		0.912			0.975			0.902			0.882		0.965

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-005

Day: Tuesday

City: Westminster

Date: 4/12/2016

HT

AM

NS/EW Streets:	Hoover St			Hoover St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
7:00 AM	1	5	0	0	3	0	0	6	0	0	2	0	17	0	0	0	4
7:15 AM	0	0	1	0	1	0	0	3	0	0	4	1	10	0	0	0	2
7:30 AM	1	0	0	1	1	0	0	4	0	0	3	0	10	0	0	1	0
7:45 AM	0	0	0	0	0	0	0	4	0	0	4	0	8	0	0	2	2
8:00 AM	0	0	2	0	1	0	0	2	0	0	4	0	9	0	0	0	0
8:15 AM	1	0	0	0	0	0	0	3	1	0	5	0	10	0	0	1	1
8:30 AM	0	1	0	0	2	1	0	5	0	0	2	0	11	0	0	1	1
8:45 AM	0	0	0	0	0	0	1	5	0	1	3	0	10	0	0	2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	3	6	3	1	8	1	1	32	1	1	27	1	85	0	0	7	12
APPROACH %'s :	25.00%	50.00%	25.00%	10.00%	80.00%	10.00%	2.94%	94.12%	2.94%	3.45%	93.10%	3.45%					
PEAK HR START TIME :	715 AM												TOTAL				
PEAK HR VOL :	1	0	3	1	3	0	0	13	0	0	15	1	37				
PEAK HR FACTOR :	0.500			0.500			0.813			0.800			0.817				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 16-1087-005

Day: Tuesday

City: Westminster

Date: 4/12/2016

HT

PM

NS/EW Streets:	Hoover St			Hoover St			Westminster Ave			Westminster Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
LANES:	1	2	0	1	2	0	1	2	0	1	2	0					
4:00 PM	0	2	0	0	1	0	0	1	1	0	5	0	10	0	0	2	3
4:15 PM	0	1	0	1	1	0	0	2	0	0	3	0	8	0	0	0	3
4:30 PM	0	1	0	0	0	0	0	2	0	1	4	0	8	0	0	0	4
4:45 PM	0	0	0	0	1	0	0	4	0	0	2	0	7	0	0	0	3
5:00 PM	0	0	0	0	2	0	0	3	0	1	3	0	9	0	0	0	5
5:15 PM	0	1	0	0	0	0	0	1	0	0	2	0	4	0	0	2	5
5:30 PM	0	1	0	0	1	0	0	5	0	0	4	0	11	0	0	1	3
5:45 PM	0	1	0	1	0	0	1	1	0	0	1	0	5	0	0	2	2
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	0	7	0	2	6	0	1	19	1	2	24	0	62	0	0	7	28
APPROACH %'s :	0.00%	100.00%	0.00%	25.00%	75.00%	0.00%	4.76%	90.48%	4.76%	7.69%	92.31%	0.00%					

PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	2	0	0	4	0	0	13	0	1	11	0	31
PEAK HR FACTOR :		0.500			0.500			0.650			0.750		0.965

CONTROL : Signalized

APPENDIX C
Intersection Level of Service Worksheets
Existing Conditions

Aldi Market, Westminster - TIS
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Goldenwest Street & Trask Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.589
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Goldenwest Street						Trask Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	69	933	143	64	1306	58	99	176	75	93	240	78
Growth 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
Initial Bse:	69	933	143	64	1306	58	99	176	75	93	240	78
User 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
PHF 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
PHF Volume:	69	933	143	64	1306	58	99	176	75	93	240	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	933	143	64	1306	58	99	176	75	93	240	78
PCE 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
MLF 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
FinalVolume:	69	933	143	64	1306	58	99	176	75	93	240	78
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.60	0.40	1.00	2.87	0.13	1.00	1.40	0.60	1.00	1.51	0.49
Final Sat.:	1600	4162	638	1600	4596	204	1600	2244	956	1600	2415	785
Capacity Analysis Module:												
Vol/Sat:	0.04	0.22	0.22	0.04	0.28	0.28	0.06	0.08	0.08	0.06	0.10	0.10
Crit Moves:	****				****		****				****	

Aldi Market, Westminster - TIS
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Goldenwest Street & Trask Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.586
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Goldenwest Street						Trask Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	75	1271	151	74	1193	73	71	123	63	136	192	93
Growth 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
Initial Bse:	75	1271	151	74	1193	73	71	123	63	136	192	93
User 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
PHF 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
PHF Volume:	75	1271	151	74	1193	73	71	123	63	136	192	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	1271	151	74	1193	73	71	123	63	136	192	93
PCE 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
MLF 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
FinalVolume:	75	1271	151	74	1193	73	71	123	63	136	192	93
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.68	0.32	1.00	2.83	0.17	1.00	1.32	0.68	1.00	1.35	0.65
Final Sat.:	1600	4290	510	1600	4523	277	1600	2116	1084	1600	2156	1044
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.30	0.05	0.26	0.26	0.04	0.06	0.06	0.09	0.09	0.09
Crit Moves:			****	****				****		****		

Aldi Market, Westminster - TIS
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Goldenwest Street & Wyoming Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.514
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Goldenwest Street						Wyoming Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	3	0 1	0 1	0	0 1	0 0	1!	0 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	11	1001	41	21	1556	67	58	9	17	21	7	38
Growth 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
Initial Bse:	11	1001	41	21	1556	67	58	9	17	21	7	38
User 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
PHF 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
PHF Volume:	11	1001	41	21	1556	67	58	9	17	21	7	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	1001	41	21	1556	67	58	9	17	21	7	38
PCE 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
MLF 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
FinalVolume:	11	1001	41	21	1556	67	58	9	17	21	7	38
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.88	0.12	1.00	3.00	1.00	0.87	0.13	1.00	0.32	0.11	0.58
Final Sat.:	1600	4611	189	1600	4800	1600	1385	215	1600	509	170	921
Capacity Analysis Module:												
Vol/Sat:	0.01	0.22	0.22	0.01	0.32	0.04	0.04	0.04	0.01	0.04	0.04	0.04
Crit Moves:	****				****			****				****

Aldi Market, Westminster - TIS
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Goldenwest Street & Wyoming Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	43	Level Of Service:	B

Street Name:	Goldenwest Street						Wyoming Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	3	0 1	0 1	0	0 1	0 0	1!	0 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	85	1306	56	46	1281	156	211	39	43	35	26	31
Growth 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
Initial Bse:	85	1306	56	46	1281	156	211	39	43	35	26	31
User 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
PHF 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
PHF Volume:	85	1306	56	46	1281	156	211	39	43	35	26	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	1306	56	46	1281	156	211	39	43	35	26	31
PCE 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
MLF 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
FinalVolume:	85	1306	56	46	1281	156	211	39	43	35	26	31
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.88	0.12	1.00	3.00	1.00	0.84	0.16	1.00	0.38	0.28	0.34
Final Sat.:	1600	4603	197	1600	4800	1600	1350	250	1600	609	452	539
Capacity Analysis Module:												
Vol/Sat:	0.05	0.28	0.28	0.03	0.27	0.10	0.16	0.16	0.03	0.06	0.06	0.06
Crit Moves:	****				****			****				****

Aldi Market, Westminster - TIS
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Edwards Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.835
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	D

Street Name:	Edwards Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	226	354	187	169	572	147	103	623	380	189	765	62
Growth 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
Initial Bse:	226	354	187	169	572	147	103	623	380	189	765	62
User 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
PHF 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
PHF Volume:	226	354	187	169	572	147	103	623	380	189	765	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	226	354	187	169	572	147	103	623	380	189	765	62
PCE 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
MLF 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
FinalVolume:	226	354	187	169	572	147	103	623	380	189	765	62
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.31	0.69	1.00	1.59	0.41	1.00	1.24	0.76	1.00	2.78	0.22
Final Sat.:	2880	2094	1106	1600	2546	654	1600	1988	1212	1600	4440	360
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.17	0.11	0.22	0.22	0.06	0.31	0.31	0.12	0.17	0.17
Crit Moves:	****				****			****		****		

Aldi Market, Westminster - TIS
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Edwards Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.819
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	71	Level Of Service:	D

Street Name:	Edwards Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1 1	0	1 0	1 1	0	1 0	1 1	0	1 0	2 1	0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	325	534	224	117	411	104	159	739	223	173	812	124
Growth 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
Initial Bse:	325	534	224	117	411	104	159	739	223	173	812	124
User 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
PHF 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
PHF Volume:	325	534	224	117	411	104	159	739	223	173	812	124
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	325	534	224	117	411	104	159	739	223	173	812	124
PCE 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
MLF 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
FinalVolume:	325	534	224	117	411	104	159	739	223	173	812	124
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.41	0.59	1.00	1.60	0.40	1.00	1.54	0.46	1.00	2.60	0.40
Final Sat.:	2880	2254	946	1600	2554	646	1600	2458	742	1600	4164	636
Capacity Analysis Module:												
Vol/Sat:	0.11	0.24	0.24	0.07	0.16	0.16	0.10	0.30	0.30	0.11	0.20	0.19
Crit Moves:		****		****				****		****		

Aldi Market, Westminster - TIS
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Goldenwest Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.722
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Street Name:	Goldenwest Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	2 0	2 1	0	2 0	2 0	1	2 0	2 0	1
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	202	801	181	157	1198	154	165	605	174	234	576	67
Growth 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
Initial Bse:	202	801	181	157	1198	154	165	605	174	234	576	67
User 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
PHF 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
PHF Volume:	202	801	181	157	1198	154	165	605	174	234	576	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	202	801	181	157	1198	154	165	605	174	234	576	67
PCE 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
MLF 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
FinalVolume:	202	801	181	157	1198	154	165	605	174	234	576	67
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	2.00	2.45	0.55	2.00	2.66	0.34	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2880	3915	885	2880	4253	547	2880	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.20	0.20	0.05	0.28	0.28	0.06	0.19	0.11	0.08	0.18	0.04
Crit Moves:	****				****			****		****		

Aldi Market, Westminster - TIS
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Goldenwest Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.738
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Goldenwest Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	2 0	2 1	0	2 0	2 0	1	2 0	2 0	1
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	265	1121	170	188	1032	148	237	600	196	199	696	113
Growth 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
Initial Bse:	265	1121	170	188	1032	148	237	600	196	199	696	113
User 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
PHF 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
PHF Volume:	265	1121	170	188	1032	148	237	600	196	199	696	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	265	1121	170	188	1032	148	237	600	196	199	696	113
PCE 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
MLF 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
FinalVolume:	265	1121	170	188	1032	148	237	600	196	199	696	113
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	2.00	2.61	0.40	2.00	2.62	0.38	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2880	4168	632	2880	4198	602	2880	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.27	0.27	0.07	0.25	0.25	0.08	0.19	0.12	0.07	0.22	0.07
Crit Moves:	****				****		****				****	

Aldi Market, Westminster - TIS
Existing Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Westminster Avenue & Hoover Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.693
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	Level Of Service:	B

Street Name:	Hoover Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	68	228	61	91	556	126	113	729	74	57	750	104
Growth 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
Initial Bse:	68	228	61	91	556	126	113	729	74	57	750	104
User 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
PHF 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
PHF Volume:	68	228	61	91	556	126	113	729	74	57	750	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	228	61	91	556	126	113	729	74	57	750	104
PCE 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
MLF 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
FinalVolume:	68	228	61	91	556	126	113	729	74	57	750	104
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.58	0.42	1.00	1.63	0.37	1.00	1.82	0.18	1.00	1.76	0.24
Final Sat.:	1600	2525	675	1600	2609	591	1600	2905	295	1600	2810	390
Capacity Analysis Module:												
Vol/Sat:	0.04	0.09	0.09	0.06	0.21	0.21	0.07	0.25	0.25	0.04	0.27	0.27
Crit Moves:	****				****		****				****	

Aldi Market, Westminster - TIS
Existing Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Westminster Avenue & Hoover Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.681
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Street Name:	Hoover Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	72	463	69	90	418	108	94	780	66	58	842	117
Growth 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
Initial Bse:	72	463	69	90	418	108	94	780	66	58	842	117
User 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
PHF 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
PHF Volume:	72	463	69	90	418	108	94	780	66	58	842	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	463	69	90	418	108	94	780	66	58	842	117
PCE 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
MLF 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
FinalVolume:	72	463	69	90	418	108	94	780	66	58	842	117
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.74	0.26	1.00	1.59	0.41	1.00	1.84	0.16	1.00	1.76	0.24
Final Sat.:	1600	2785	415	1600	2543	657	1600	2950	250	1600	2810	390
Capacity Analysis Module:												
Vol/Sat:	0.05	0.17	0.17	0.06	0.16	0.16	0.06	0.26	0.26	0.04	0.30	0.30
Crit Moves:			****	****			****				****	

APPENDIX D
Intersection Level of Service Worksheets
Future pre- Project Conditions

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Goldenwest Street & Trask Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.595
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Goldenwest Street						Trask Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	69	933	143	64	1306	58	99	176	75	93	240	78
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	70	942	144	65	1319	59	100	178	76	94	242	79
Added Vol:	0	13	0	0	7	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	955	144	65	1326	59	100	178	76	94	242	79
User 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
PHF 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
PHF Volume:	70	955	144	65	1326	59	100	178	76	94	242	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	955	144	65	1326	59	100	178	76	94	242	79
PCE 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
MLF 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
FinalVolume:	70	955	144	65	1326	59	100	178	76	94	242	79
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.61	0.39	1.00	2.87	0.13	1.00	1.40	0.60	1.00	1.51	0.49
Final Sat.:	1600	4170	630	1600	4597	203	1600	2244	956	1600	2415	785
Capacity Analysis Module:												
Vol/Sat:	0.04	0.23	0.23	0.04	0.29	0.29	0.06	0.08	0.08	0.06	0.10	0.10
Crit Moves:	****				****		****				****	

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Goldenwest Street & Trask Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.593
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Street Name:	Goldenwest Street						Trask Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	75	1271	151	74	1193	73	71	123	63	136	192	93
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	76	1284	153	75	1205	74	72	124	64	137	194	94
Added Vol:	0	13	0	0	16	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	76	1297	153	75	1221	74	72	124	64	137	194	94
User 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
PHF 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
PHF Volume:	76	1297	153	75	1221	74	72	124	64	137	194	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	76	1297	153	75	1221	74	72	124	64	137	194	94
PCE 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
MLF 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
FinalVolume:	76	1297	153	75	1221	74	72	124	64	137	194	94
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.68	0.32	1.00	2.83	0.17	1.00	1.32	0.68	1.00	1.35	0.65
Final Sat.:	1600	4295	505	1600	4527	273	1600	2116	1084	1600	2156	1044
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.30	0.05	0.27	0.27	0.04	0.06	0.06	0.09	0.09	0.09
Crit Moves:		****		****				****		****		

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Goldenwest Street & Wyoming Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.520
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Street Name:	Goldenwest Street						Wyoming Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	3	0 1	0 1	0	0 1	0 0	1!	0 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	11	1001	41	21	1556	67	58	9	17	21	7	38
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	11	1011	41	21	1572	68	59	9	17	21	7	38
Added Vol:	0	10	0	0	9	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	1021	41	21	1581	68	59	9	17	21	7	38
User 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
PHF 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
PHF Volume:	11	1021	41	21	1581	68	59	9	17	21	7	38
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	1021	41	21	1581	68	59	9	17	21	7	38
PCE 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
MLF 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
FinalVolume:	11	1021	41	21	1581	68	59	9	17	21	7	38
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.88	0.12	1.00	3.00	1.00	0.87	0.13	1.00	0.32	0.11	0.58
Final Sat.:	1600	4613	187	1600	4800	1600	1385	215	1600	509	170	921
Capacity Analysis Module:												
Vol/Sat:	0.01	0.22	0.22	0.01	0.33	0.04	0.04	0.04	0.01	0.04	0.04	0.04
Crit Moves:	****				****			****				****

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Goldenwest Street & Wyoming Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.642
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Street Name:	Goldenwest Street						Wyoming Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	3	0 1	0 1	0	0 1	0 0	1!	0 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	85	1306	56	46	1281	156	211	39	43	35	26	31
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	86	1319	57	46	1294	158	213	39	43	35	26	31
Added Vol:	0	13	0	0	14	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	1332	57	46	1308	158	213	39	43	35	26	31
User 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
PHF 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
PHF Volume:	86	1332	57	46	1308	158	213	39	43	35	26	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	1332	57	46	1308	158	213	39	43	35	26	31
PCE 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
MLF 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
FinalVolume:	86	1332	57	46	1308	158	213	39	43	35	26	31
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.88	0.12	1.00	3.00	1.00	0.84	0.16	1.00	0.38	0.28	0.34
Final Sat.:	1600	4604	196	1600	4800	1600	1350	250	1600	609	452	539
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.29	0.03	0.27	0.10	0.16	0.16	0.03	0.06	0.06	0.06
Crit Moves:	****				****			****				****

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Edwards Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.845
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	78	Level Of Service:	D

Street Name:	Edwards Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	226	354	187	169	572	147	103	623	380	189	765	62
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	228	358	189	171	578	148	104	629	384	191	773	63
Added Vol:	0	0	5	0	0	0	0	6	0	1	7	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	228	358	194	171	578	148	104	635	384	192	780	63
User 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
PHF 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
PHF Volume:	228	358	194	171	578	148	104	635	384	192	780	63
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	358	194	171	578	148	104	635	384	192	780	63
PCE 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
MLF 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
FinalVolume:	228	358	194	171	578	148	104	635	384	192	780	63
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.30	0.70	1.00	1.59	0.41	1.00	1.25	0.75	1.00	2.78	0.22
Final Sat.:	2880	2075	1125	1600	2546	654	1600	1995	1205	1600	4443	357
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.17	0.11	0.23	0.23	0.07	0.32	0.32	0.12	0.18	0.18
Crit Moves:	****				****			****		****		

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Edwards Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.833
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	Level Of Service:	D

Street Name:	Edwards Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	325	534	224	117	411	104	159	739	223	173	812	124
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	328	539	226	118	415	105	161	746	225	175	820	125
Added Vol:	0	0	3	0	0	0	0	10	0	5	10	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	328	539	229	118	415	105	161	756	225	180	830	125
User 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
PHF 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
PHF Volume:	328	539	229	118	415	105	161	756	225	180	830	125
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	328	539	229	118	415	105	161	756	225	180	830	125
PCE 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
MLF 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
FinalVolume:	328	539	229	118	415	105	161	756	225	180	830	125
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.40	0.60	1.00	1.60	0.40	1.00	1.54	0.46	1.00	2.61	0.39
Final Sat.:	2880	2246	954	1600	2554	646	1600	2466	734	1600	4171	629
Capacity Analysis Module:												
Vol/Sat:	0.11	0.24	0.24	0.07	0.16	0.16	0.10	0.31	0.31	0.11	0.20	0.20
Crit Moves:		****		****				****		****		

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Goldenwest Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.734
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Goldenwest Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	2 0	2 1	0	2 0	2 0	1	2 0	2 0	1
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	202	801	181	157	1198	154	165	605	174	234	576	67
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	204	809	183	159	1210	156	167	611	176	236	582	68
Added Vol:	1	1	2	3	6	1	3	4	1	7	7	5
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	205	810	185	162	1216	157	170	615	177	243	589	73
User 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
PHF 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
PHF Volume:	205	810	185	162	1216	157	170	615	177	243	589	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	810	185	162	1216	157	170	615	177	243	589	73
PCE 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
MLF 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
FinalVolume:	205	810	185	162	1216	157	170	615	177	243	589	73
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	2.00	2.44	0.56	2.00	2.66	0.34	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2880	3908	892	2880	4253	547	2880	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.21	0.21	0.06	0.29	0.29	0.06	0.19	0.11	0.08	0.18	0.05
Crit Moves:	****				****			****		****		

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Goldenwest Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	57	Level Of Service:	C

Street Name:	Goldenwest Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	2 0	2 1	0	2 0	2 0	1	2 0	2 0	1
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	265	1121	170	188	1032	148	237	600	196	199	696	113
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	268	1132	172	190	1042	149	239	606	198	201	703	114
Added Vol:	1	3	5	9	3	3	3	12	1	4	9	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	269	1135	177	199	1045	152	242	618	199	205	712	121
User 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
PHF 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
PHF Volume:	269	1135	177	199	1045	152	242	618	199	205	712	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	269	1135	177	199	1045	152	242	618	199	205	712	121
PCE 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
MLF 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
FinalVolume:	269	1135	177	199	1045	152	242	618	199	205	712	121
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	2.00	2.60	0.40	2.00	2.62	0.38	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2880	4153	647	2880	4189	611	2880	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.27	0.27	0.07	0.25	0.25	0.08	0.19	0.12	0.07	0.22	0.08
Crit Moves:	****				****		****				****	

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
AM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Future Volume Alternative)

Intersection #5 Westminster Avenue & Hoover Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.604
Loss Time (sec):	10	Average Delay (sec/veh):	17.8
Optimal Cycle:	44	Level Of Service:	C

Street Name:	Hoover Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	68	228	61	91	556	126	113	729	74	57	750	104
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	69	230	62	92	562	127	114	736	75	58	758	105
Added Vol:	1	0	3	0	3	0	0	10	4	2	8	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	230	65	92	565	127	114	746	79	60	766	105
User 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
PHF 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
PHF Volume:	70	230	65	92	565	127	114	746	79	60	766	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	230	65	92	565	127	114	746	79	60	766	105
PCE 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
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
FinalVolume:	70	242	68	92	593	134	114	784	83	60	804	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.97	0.97	0.95	0.99	0.99	0.95	0.98	0.98
Lanes:	1.00	1.56	0.44	1.00	1.63	0.37	1.00	1.81	0.19	1.00	1.76	0.24
Final Sat.:	1805	2870	805	1805	3015	680	1805	3388	357	1805	3281	450
Capacity Analysis Module:												
Vol/Sat:	0.04	0.08	0.08	0.05	0.20	0.20	0.06	0.23	0.23	0.03	0.24	0.24
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.24	0.24	0.15	0.33	0.33	0.10	0.45	0.45	0.06	0.41	0.41
Volume/Cap:	0.60	0.35	0.35	0.35	0.60	0.60	0.60	0.52	0.52	0.52	0.60	0.60
Delay/Veh:	35.4	20.3	20.3	25.1	18.9	18.9	31.4	13.1	13.1	32.5	15.6	15.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.4	20.3	20.3	25.1	18.9	18.9	31.4	13.1	13.1	32.5	15.6	15.6
DesignQueue:	4	7	7	4	14	14	6	14	14	3	16	16

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KOA CORP, MONTEREY PK

Aldi Market, Westminster - TIS
Future Pre-Project Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Future Volume Alternative)

Intersection #5 Westminster Avenue & Hoover Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.595
Loss Time (sec):	10	Average Delay (sec/veh):	17.3
Optimal Cycle:	43	Level Of Service:	C

Street Name:	Hoover Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	72	463	69	90	418	108	94	780	66	58	842	117
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	73	468	70	91	422	109	95	788	67	59	850	118
Added Vol:	4	2	9	0	1	0	0	15	2	9	17	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	77	470	79	91	423	109	95	803	69	68	867	118
User 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
PHF 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
PHF Volume:	77	470	79	91	423	109	95	803	69	68	867	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	470	79	91	423	109	95	803	69	68	867	118
PCE 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
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
FinalVolume:	77	493	83	91	444	115	95	843	72	68	911	124
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.97	0.97	0.95	0.99	0.99	0.95	0.98	0.98
Lanes:	1.00	1.71	0.29	1.00	1.59	0.41	1.00	1.84	0.16	1.00	1.76	0.24
Final Sat.:	1805	3185	534	1805	2928	755	1805	3459	296	1805	3284	447
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.15	0.05	0.15	0.15	0.05	0.24	0.24	0.04	0.28	0.28
Crit Moves:		****		****			****				****	
Green/Cycle:	0.08	0.26	0.26	0.08	0.27	0.27	0.09	0.48	0.48	0.07	0.47	0.47
Volume/Cap:	0.56	0.59	0.59	0.59	0.56	0.56	0.59	0.51	0.51	0.51	0.59	0.59
Delay/Veh:	32.7	21.6	21.6	32.8	20.9	20.9	32.5	11.7	11.7	31.4	13.1	13.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	21.6	21.6	32.8	20.9	20.9	32.5	11.7	11.7	31.4	13.1	13.1
DesignQueue:	4	12	12	5	12	12	5	14	14	4	17	17

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KOA CORP, MONTEREY PK

APPENDIX E
Intersection Level of Service Worksheets
Future post- Project Conditions

Aldi Market, Westminster - TIS
Future Post-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Goldenwest Street & Trask Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.597
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Goldenwest Street						Trask Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	69	933	143	64	1306	58	99	176	75	93	240	78
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	70	942	144	65	1319	59	100	178	76	94	242	79
Added Vol:	1	17	1	0	13	0	0	0	1	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	71	959	145	65	1332	59	100	178	77	95	242	79
User 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
PHF 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
PHF Volume:	71	959	145	65	1332	59	100	178	77	95	242	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	959	145	65	1332	59	100	178	77	95	242	79
PCE 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
MLF 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
FinalVolume:	71	959	145	65	1332	59	100	178	77	95	242	79
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.61	0.39	1.00	2.87	0.13	1.00	1.40	0.60	1.00	1.51	0.49
Final Sat.:	1600	4168	632	1600	4598	202	1600	2235	965	1600	2415	785
Capacity Analysis Module:												
Vol/Sat:	0.04	0.23	0.23	0.04	0.29	0.29	0.06	0.08	0.08	0.06	0.10	0.10
Crit Moves:	****				****		****				****	

Aldi Market, Westminster - TIS
Future Post-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #1 Goldenwest Street & Trask Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.598
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	40	Level Of Service:	A

Street Name:	Goldenwest Street						Trask Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	75	1271	151	74	1193	73	71	123	63	136	192	93
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	76	1284	153	75	1205	74	72	124	64	137	194	94
Added Vol:	2	23	2	0	26	0	0	0	2	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	78	1307	155	75	1231	74	72	124	66	139	194	94
User 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
PHF 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
PHF Volume:	78	1307	155	75	1231	74	72	124	66	139	194	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	1307	155	75	1231	74	72	124	66	139	194	94
PCE 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
MLF 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
FinalVolume:	78	1307	155	75	1231	74	72	124	66	139	194	94
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.68	0.32	1.00	2.83	0.17	1.00	1.31	0.69	1.00	1.35	0.65
Final Sat.:	1600	4292	508	1600	4529	271	1600	2094	1106	1600	2156	1044
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.30	0.05	0.27	0.27	0.04	0.06	0.06	0.09	0.09	0.09
Crit Moves:		****		****				****			****	

Aldi Market, Westminster - TIS
Future Post-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Goldenwest Street & Wyoming Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.530
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Street Name:	Goldenwest Street						Wyoming Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	3	0 1	0 1	0	0 1	0 0	1!	0 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	11	1001	41	21	1556	67	58	9	17	21	7	38
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	11	1011	41	21	1572	68	59	9	17	21	7	38
Added Vol:	0	16	0	11	9	0	0	0	0	14	0	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	1027	41	32	1581	68	59	9	17	35	7	39
User 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
PHF 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
PHF Volume:	11	1027	41	32	1581	68	59	9	17	35	7	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	1027	41	32	1581	68	59	9	17	35	7	39
PCE 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
MLF 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
FinalVolume:	11	1027	41	32	1581	68	59	9	17	35	7	39
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.88	0.12	1.00	3.00	1.00	0.87	0.13	1.00	0.43	0.09	0.48
Final Sat.:	1600	4614	186	1600	4800	1600	1385	215	1600	690	139	772
Capacity Analysis Module:												
Vol/Sat:	0.01	0.22	0.22	0.02	0.33	0.04	0.04	0.04	0.01	0.05	0.05	0.05
Crit Moves:	****				****			****			****	

Aldi Market, Westminster - TIS
Future Post-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #2 Goldenwest Street & Wyoming Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.670
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	Level Of Service:	B

Street Name:	Goldenwest Street						Wyoming Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2	1 0	1 0	3	0 1	0 1	0	0 1	0 0	1!	0 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	85	1306	56	46	1281	156	211	39	43	35	26	31
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	86	1319	57	46	1294	158	213	39	43	35	26	31
Added Vol:	0	27	0	17	14	0	0	0	0	33	0	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	86	1346	57	63	1308	158	213	39	43	68	26	34
User 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
PHF 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
PHF Volume:	86	1346	57	63	1308	158	213	39	43	68	26	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	1346	57	63	1308	158	213	39	43	68	26	34
PCE 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
MLF 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
FinalVolume:	86	1346	57	63	1308	158	213	39	43	68	26	34
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.88	0.12	1.00	3.00	1.00	0.84	0.16	1.00	0.53	0.20	0.27
Final Sat.:	1600	4606	194	1600	4800	1600	1350	250	1600	848	326	426
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.29	0.04	0.27	0.10	0.16	0.16	0.03	0.08	0.08	0.08
Crit Moves:		****		****				****			****	

Aldi Market, Westminster - TIS
Future Post-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Edwards Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.846
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	79	Level Of Service:	D

Street Name:	Edwards Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	226	354	187	169	572	147	103	623	380	189	765	62
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	228	358	189	171	578	148	104	629	384	191	773	63
Added Vol:	0	0	7	2	0	0	0	8	0	3	8	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	228	358	196	173	578	148	104	637	384	194	781	64
User 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
PHF 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
PHF Volume:	228	358	196	173	578	148	104	637	384	194	781	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	358	196	173	578	148	104	637	384	194	781	64
PCE 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
MLF 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
FinalVolume:	228	358	196	173	578	148	104	637	384	194	781	64
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.29	0.71	1.00	1.59	0.41	1.00	1.25	0.75	1.00	2.77	0.23
Final Sat.:	2880	2067	1133	1600	2546	654	1600	1997	1203	1600	4438	362
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.17	0.11	0.23	0.23	0.07	0.32	0.32	0.12	0.18	0.18
Crit Moves:	****				****			****		****		

Aldi Market, Westminster - TIS
Future Post-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #3 Edwards Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.838
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	76	Level Of Service:	D

Street Name:	Edwards Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	325	534	224	117	411	104	159	739	223	173	812	124
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	328	539	226	118	415	105	161	746	225	175	820	125
Added Vol:	0	0	6	3	0	0	0	14	0	7	14	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	328	539	232	121	415	105	161	760	225	182	834	128
User 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
PHF 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
PHF Volume:	328	539	232	121	415	105	161	760	225	182	834	128
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	328	539	232	121	415	105	161	760	225	182	834	128
PCE 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
MLF 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
FinalVolume:	328	539	232	121	415	105	161	760	225	182	834	128
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	1.40	0.60	1.00	1.60	0.40	1.00	1.54	0.46	1.00	2.60	0.40
Final Sat.:	2880	2237	963	1600	2554	646	1600	2469	731	1600	4160	640
Capacity Analysis Module:												
Vol/Sat:	0.11	0.24	0.24	0.08	0.16	0.16	0.10	0.31	0.31	0.11	0.20	0.20
Crit Moves:		****		****				****		****		

Aldi Market, Westminster - TIS
Future Post-Project Conditions
AM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Goldenwest Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.736
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Street Name:	Goldenwest Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	2 0	2 1	0	2 0	2 0	1	2 0	2 0	1
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	202	801	181	157	1198	154	165	605	174	234	576	67
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	204	809	183	159	1210	156	167	611	176	236	582	68
Added Vol:	1	9	2	7	11	5	10	4	1	7	7	13
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	205	818	185	166	1221	161	177	615	177	243	589	81
User 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
PHF 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
PHF Volume:	205	818	185	166	1221	161	177	615	177	243	589	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	818	185	166	1221	161	177	615	177	243	589	81
PCE 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
MLF 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
FinalVolume:	205	818	185	166	1221	161	177	615	177	243	589	81
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	2.00	2.45	0.55	2.00	2.65	0.35	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2880	3915	885	2880	4242	558	2880	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.21	0.21	0.06	0.29	0.29	0.06	0.19	0.11	0.08	0.18	0.05
Crit Moves:	****				****			****		****		

Aldi Market, Westminster - TIS
Future Post-Project Conditions
PM Peak Hour

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #4 Goldenwest Street & Westminster Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.760
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	Level Of Service:	C

Street Name:	Goldenwest Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	2 1	0	2 0	2 1	0	2 0	2 0	1	2 0	2 0	1
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	265	1121	170	188	1032	148	237	600	196	199	696	113
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	268	1132	172	190	1042	149	239	606	198	201	703	114
Added Vol:	1	15	5	20	14	14	15	12	1	4	9	18
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	269	1147	177	210	1056	163	254	618	199	205	712	132
User 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
PHF 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
PHF Volume:	269	1147	177	210	1056	163	254	618	199	205	712	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	269	1147	177	210	1056	163	254	618	199	205	712	132
PCE 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
MLF 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
FinalVolume:	269	1147	177	210	1056	163	254	618	199	205	712	132
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00
Lanes:	2.00	2.60	0.40	2.00	2.60	0.40	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	2880	4159	641	2880	4157	643	2880	3200	1600	2880	3200	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.28	0.28	0.07	0.25	0.25	0.09	0.19	0.12	0.07	0.22	0.08
Crit Moves:		****		****			****				****	

Aldi Market, Westminster - TIS
Future Post-Project Conditions
AM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Future Volume Alternative)

Intersection #5 Westminster Avenue & Hoover Street

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.606
Loss Time (sec): 10 | Average Delay (sec/veh): 17.8
Optimal Cycle: 44 | Level Of Service: C

Street Name:	Hoover Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	68	228	61	91	556	126	113	729	74	57	750	104
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	69	230	62	92	562	127	114	736	75	58	758	105
Added Vol:	3	0	3	0	3	0	0	13	5	2	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	72	230	65	92	565	127	114	749	80	60	770	105
User 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
PHF 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
PHF Volume:	72	230	65	92	565	127	114	749	80	60	770	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	230	65	92	565	127	114	749	80	60	770	105
PCE 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
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
FinalVolume:	72	242	68	92	593	134	114	787	84	60	808	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.97	0.97	0.95	0.99	0.99	0.95	0.98	0.98
Lanes:	1.00	1.56	0.44	1.00	1.63	0.37	1.00	1.81	0.19	1.00	1.76	0.24
Final Sat.:	1805	2870	805	1805	3015	680	1805	3385	360	1805	3283	448
Capacity Analysis Module:												
Vol/Sat:	0.04	0.08	0.08	0.05	0.20	0.20	0.06	0.23	0.23	0.03	0.25	0.25
Crit Moves:	****				****		****				****	
Green/Cycle:	0.07	0.24	0.24	0.15	0.32	0.32	0.10	0.45	0.45	0.06	0.41	0.41
Volume/Cap:	0.61	0.35	0.35	0.35	0.61	0.61	0.61	0.52	0.52	0.52	0.61	0.61
Delay/Veh:	35.3	20.3	20.3	25.1	19.0	19.0	31.5	13.1	13.1	32.6	15.6	15.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.3	20.3	20.3	25.1	19.0	19.0	31.5	13.1	13.1	32.6	15.6	15.6
DesignQueue:	4	7	7	4	14	14	6	14	14	3	16	16

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KOA CORP, MONTEREY PK

Aldi Market, Westminster - TIS
Future Post-Project Conditions
PM Peak Hour

Level Of Service Computation Report
1994 HCM Operations Method (Future Volume Alternative)

Intersection #5 Westminster Avenue & Hoover Street

Cycle (sec): 100 | Critical Vol./Cap.(X): 0.597
Loss Time (sec): 10 | Average Delay (sec/veh): 17.3
Optimal Cycle: 43 | Level Of Service: C

Street Name:	Hoover Street						Westminster Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 12 Apr 2016 <<												
Base Vol:	72	463	69	90	418	108	94	780	66	58	842	117
Growth Adj:	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Initial Bse:	73	468	70	91	422	109	95	788	67	59	850	118
Added Vol:	7	2	9	0	1	0	0	22	5	9	24	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	80	470	79	91	423	109	95	810	72	68	874	118
User 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
PHF 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
PHF Volume:	80	470	79	91	423	109	95	810	72	68	874	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	470	79	91	423	109	95	810	72	68	874	118
PCE 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
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.05	1.05
FinalVolume:	80	493	83	91	444	115	95	850	75	68	918	124
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.98	0.98	0.95	0.97	0.97	0.95	0.99	0.99	0.95	0.98	0.98
Lanes:	1.00	1.71	0.29	1.00	1.59	0.41	1.00	1.84	0.16	1.00	1.76	0.24
Final Sat.:	1805	3185	534	1805	2928	755	1805	3448	305	1805	3288	444
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.15	0.05	0.15	0.15	0.05	0.25	0.25	0.04	0.28	0.28
Crit Moves:		****		****			****				****	
Green/Cycle:	0.08	0.26	0.26	0.08	0.27	0.27	0.09	0.48	0.48	0.07	0.47	0.47
Volume/Cap:	0.57	0.60	0.60	0.60	0.57	0.57	0.60	0.51	0.51	0.51	0.60	0.60
Delay/Veh:	32.7	21.7	21.7	32.9	21.1	21.1	32.6	11.7	11.7	31.5	13.1	13.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.7	21.7	21.7	32.9	21.1	21.1	32.6	11.7	11.7	31.5	13.1	13.1
DesignQueue:	4	12	12	5	12	12	5	14	14	4	17	17

Note: Queue reported is the number of cars per lane.

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to KOA CORP, MONTEREY PK