DOCKETED	
Docket Number:	21-SPPE-01
Project Title:	CA3 Backup Generating Facility-Vantage
TN #:	239147
Document Title:	VDC CA3BGF Supplemental Response to Data Request Set 1 DR 22 VMT
Description:	N/A
Filer:	Scott Galati
Organization:	DayZenLLC
Submitter Role:	Applicant Representative
Submission Date:	8/2/2021 12:43:13 PM
Docketed Date:	8/2/2021

INTRODUCTION

Attached is Vantage Data Centers (VDC) supplemental response to California Energy Commission (CEC) Staff Data Request Set No. 1, Data Request 22 for the CA3 Backup Generation Facility (CA3BGF) Application for Small Power Plant Exemption (SPPE) (21-SPPE-01). Staff issued Data Request Set No. 1 on June 7, 2021 and VDC provided partial responses on June 15, 2021.

22. Please prepare and submit a revised VMT analysis for the project in accordance with City of Santa Clara's VMT Policy. Include a TDM plan, if required.

RESPONSE TO DATA REQUEST 22

Attachment TRANS DR-22 includes the VMT analysis as reviewed and approved by the City of Santa Clara. The analysis shows that VDC will implement a 4-40 work schedule at the CA3DC. VDC includes the commitment to a 4-40 work schedule in its Project Description as **PD TRANS-1** below:

PD TRANS-1 The operations workforce at the CA3DC will work a 4-day, 40 hour workshift.

ATTACHMENT TRANS DR-22

VMT Analysis

Kimley»Horn

MEMORANDUM

To: Vantage Data Centers Management Company, LLC

From: Mike Mowery, P.E. and Elizabeth Chau, P.E.
Kimley-Horn and Associates, Inc.

Date: July 27, 2021

Subject: 2590 Walsh Avenue Transportation Operational Analysis

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Vantage Data Centers Management Company, LLC (Vantage) is proposing to demolish an existing 115,500 square-foot office building and construct a 472,180 square-foot data center in Santa Clara, California (City). This memorandum summarizes the assumptions, methodology, and results of a transportation operation analysis conducted for the Project to identify any potential traffic operational implications.

Project Description

The Project is located at 2590 Walsh Avenue in Santa Clara, California. The project consists of redeveloping an existing 115,550-square foot office building into a 472,180-square foot data center. A site plan for the Project is included as **Attachment A**.

Similar to other Vantage sites, the data center will be operational 24-hours, 7-days a week. **Table 1** summarizes the anticipated headcount of personnel and visitors that would be on-site throughout a typical day. It is anticipated that on an average day there will be 33-35 people at the building throughout the day, with 17-30 people in the building at the same time. It should be noted that some personnel will be shared with other Vantage sites within the area and may park at the other sites. In addition, flexible work schedules will be available for all staff assigned to the project.

Table 1: Anticipated Average Daily Headcount

Type	Daily Persons	Persons Per Shift
Operational	14	2-9[1]
Security	5	2-5[2]
Janitor	2	1-2
Tenant Personnel	10-12	10-12
Visitors	2	2
Total	**33-35**	**17-30**

[1] Operational staff work in three shifts: day (9 employees), swing (3 employees), and graveyard (2 employees)
[2] There are 2 security staff stationed at the building and 3 shift rovers that patrol the Project building and nearby Vantage sites.

Transportation Operational Analysis

Kimley-Horn conducted a Transportation Operational Analysis (TOA) which evaluated the Project's potential effect relating to transportation operations. The TOA evaluated the following:

- Trip Generation
- VMT Analysis
- Site Access and Circulation

It should be noted that as of July 1, 2020, the state of California has fully adopted a change in the California Environmental Quality Act (CEQA) significant impact methodology for transportation impacts to use vehicle miles traveled (VMT) as opposed to level of service (LOS) via State Bill 743 (SB 743). To address this change, on June 23, 2020, the City of Santa Clara adopted Resolution No. 20-8861, which updated the City's Transportation Analysis Policy. This analysis is based on the City's updated transportation policy.

TRIP GENERATION

A trip generation analysis was conducted to determine the change in the number of trips the project will generate. The trip generation was determined based on average rates from the Institute of Transportation Engineer's (ITE) publication, *Trip Generation Manual, 10th Edition*. The ITE *Trip Generation Manual, 10th Edition* is a standard reference used by jurisdictions throughout the country for the estimation of trip generation potential of proposed projects. This manual provides trip rates based on land use. For the existing land use, ITE Land Use 710: General Office Building was assumed and ITE Land Use 160: Data Center for the proposed data center. **Table 2** presents the trip generation for the project. The project is expected to generate net new -658 daily trips, -82 trips in the AM peak hour, and -91 trips in the PM peak hour.

LEVEL OF SERVICE ANALYSIS

A level of service analysis was not conducted due to the Project's negative trip generation. The Project will result in a net decrease in trips and would not result in an increase of delay for nearby intersections.

VMT ANALYSIS

VMT Screening

The City's Transportation Analysis Policy provides guidance on when a project may be exempt from performing VMT analysis if the project meets at least one screening criteria based on:

- Small Project
- Local Serving Retail Project
- Local Serving Public Project
- 100% Affordable Housing Project
- Transit Supportive Project

Table 2: Project Trip Generation

ITE Land Use Code	Land Use	Units	Daily	AM Peak			PM Peak		
				Rate	In%	Out%	Rate	In%	Out%
160	Data Center	1,000 Sq Ft	0.99	0.11	55%	45%	0.09	30%	70%
710	General Office Building	1,000 Sq Ft	9.74	1.16	86%	14%	1.15	16%	84%

	ITE Land Use Code	Land Use	Size	Units	Daily Trips	AM Peak			PM Peak		
						Total	In	Out	Total	In	Out
Existing	710	General Office Building	115.500	1,000 Sq Ft	1,125	134	115	19	133	21	112
Proposed	160	Data Center	472.180	1,000 Sq Ft	467	52	29	23	42	13	29
Net New Project Trips					**-658**	**-82**	**-86**	**4**	**-91**	**-8**	**-83**

Source: ITE *Trip Generation Manual, 10th Edition;* ITE *Trip Generation Handbook, 3rd Edition*

Project information was evaluated to determine if the Project would be exempt from a VMT analysis and is summarized in **Table 3**. Based on current project information given for this analysis, a VMT analysis is required for the Project. Detailed evaluation for each criterion is discussed in the following sections.

Table 3: Project CEQA Screening

CEQA Land Use Screening Criteria	Project Exempt?
Small Project	No
Local Serving Retail Project	N/A
Local Serving Public Project	N/A
100% Affordable Housing Project	N/A
Transit Supportive Project	No

Small Project

Small projects are defined as projects that generate fewer than 110 average daily trips. For projects where there is a change use, the total project traips are considered without any credit for existing land use replacement.

Local Serving Retail Project

Local Serving Retail Projects are defined as project that are of 50,000 square feet or less or retail land use. The project is not considered retail land uses; therefore, this criterion does not apply.

Local Serving Public Project

Local Serving Public Projects are projects such as fire stations, neighborhood parks, libraries, and community centers. The project is not considered a public project; therefore, this criterion does not apply.

100% Affordable Housing

Project components which consist of 100 percent restricted affordable housing may be exempt. This criterion is not applicable to the Project since this project is not proposing any affordable housing.

Transit Supportive Project

Locations near major transit stops or high-quality transit corridors will have a less-than-significant impact on VMT and may be exempt. This screening may apply for the following project characteristics:

- The Project is located within ½-mile of an existing Major Transit Stop or an existing transit stop along a High-Quality Transit Corridor
- For Office/R&D projects, a minimum Floor Area Ratio of 0.75
- For Residential projects, a minimum density of 35 units/acre
- Project promotes multimodal transportation networks
- Project includes transit-oriented design elements
- No excess parking: the project does not include more parking for use by residents, customers, or employees of the project than required by the City Code
- No loss of affordable dwelling units: the project does not replace affordable residential units with a smaller number of affordable units, and any replacement units are at the same level of affordability

While the project is adjacent to Caltrain tracks, the nearest Caltrain station is the Lawrence Station, which is located 1.2 miles from the project site and would not be considered a Transit Supportive Project.

VTA VMT Evaluation Tool

The Santa Clara Valley Transportation Authority (VTA) in conjunction with Santa Clara County cities, developed the VTA VMT Evaluation Tool. This tool allows city staff, consultants, and developments to measure VMT for land use projects within Santa Clara County. **Table 4** shows that the target VMT for the Project is 15 percent below the county average. The construction of the project alone would not reduce VMT for the parcel to below the target threshold. Therefore, consistent with the data center use of the project, the evaluation incorporates an alternative work schedule for employees reflecting a 4-40 work schedule (40 hours in 4 days). With the implementation of the 4-40 work schedule the project VMT is anticipated to be below the target threshold. The VTA VMT Evaluation outputs are included in **Attachment B**.

Table 4: VTA VMT Estimation

	VMT per Worker
County Average VMT	16.64
Target 15% Below County Average	14.14
Existing Parcel Without Project	15.81
Estimated VMT With Project	15.53
Estimated VMT with Project and 4-40 Work Schedule	13.20

SITE ACCESS AND CIRCULATION

Kimley-Horn qualitatively reviewed the site plan (**Attachment A**) for on-site vehicular access, circulation, and parking for overall safety access and parking considerations.

Site Access

Overall access to the site would be restricted. For vehicle access, vehicles will be able enter the site from the gated entrance located at the eastern driveway and the western driveway. However, the security protocols will most likely require vehicles to enter through the security checkpoint located at the eastern driveway. Vehicles exiting the site may exit from the western or eastern driveways.

For pedestrian traffic, the site is accessible via the sidewalk along Walsh Avenue. Pedestrians would enter the site through the gated entranced located adjacent to the vehicle entrance at the eastern driveway. Bicyclists may access the site through Class II bicycle lanes along Bowers Avenue and Scott Boulevard. There are no existing or planned bicycle facilities along Walsh Avenue. For transit, there is a bus stop for the ACE Yellow bus route at the intersection of Walsh Avenue and Northwestern Parkway, approximately 300 feet (0.1 miles) away from the project. In addition, there is a bus stop for Route 57 located at the intersection of Walsh Avenue and Bowers Avenue, approximately 1,850 feet (0.4 miles) from the project site. Transit riders may use the sidewalks along Walsh Avenue to access the site.

Overall, the review of the site plan found no deficiencies related to site access. In addition, the Project does not conflict with any pedestrian, bicycle, or transit plans.

Site Circulation

Truck turning movement evaluations were conducted for each of the Project driveways. The evaluation determined if a CA Legal semi-truck could enter or exit from either driveway even if the proposed site access does allow for that movement. A truck may need to make these maneuvers in case of emergency.

Attachment C illustrates turning movements for a truck traveling in the eastbound direction along Walsh Avenue. At the western driveway, trucks are able to exit the site, but are unable to enter the site due to the acute angle of the driveway with Walsh Avenue. At the eastern driveway, trucks are able to enter the site, but may conflict with proposed curbs when exiting from the western driveway.

Attachment D illustrates turning movements for a truck traveling in the westbound direction along Walsh Avenue. Trucks are able to make inbound and outbound movements at the western driveway. At the eastern driveway, trucks are able to enter the site, but may conflict with proposed curbs when exiting from the eastern driveway.

While the evaluation found some movements infeasible, there are no major site circulation deficiency since trucks are able to enter or exit through at least one of the Project's driveways. It is recommended that trucks not be allowed to exit from the eastern driveway due to the conflict with proposed curbs.

Parking

Table 5 summarizes the parking requirements for the Project. Santa Clara City Code 18.74.0.0 for data centers requires one parking space per four thousand (4,000) square feet of gross floor area; however the Client is requesting a parking exception of one parking space per five thousand (5,000) square feet of gross floor area. The gross floor area of the project is 472,180-square feet which equates to 95 required parking spaces. The site plan proposes a total of 36 parking spaces, which is 59 spaces deficient from the City's requirements. Providing the 95 spaces would result in excess parking spaces, due to the anticipated parking demand. As previously discussed, Vantage anticipates 17 to 30 people on-site during the same period, where some personnel may park their vehicles at other Vantage sites within the area. The highest number of total daily employees is 35 persons, which is less than the proposed 36 spaces. Therefore, the proposed 36 spaces can accommodate the anticipated parking demand.

Table 5: Parking Requirements

Facility	Size	Santa Clara Municipal Code Requirements		
		Land Use Description	Requirement	Parking Spaces Required
Data Center	472,180 SF	Data Center	1 space for each 5,000 square feet of gross floor area	95
Proposed Parking Spaces				36
Parking Surplus (+) / Deficient (-)				-59

Conclusion

A transportation operational analysis (TOA) was conducted to determine the Project's potential effect relating to transportation operation. The TOA included a trip generation analysis, VMT analysis, and site access and circulation evaluation. The trip generation calculations resulted in the Project generating net new -658 daily trips, -82 trips in the AM peak hour, and -91 trips in the PM peak hour. Since the Project is reducing the number of trips, it is anticipated that the Project would not increase the delay at any surrounding intersections. A VMT analysis using the VTA VMT online tool determined that the project would be below the target count threshold with the TDM measure of a 4-40 work schedule. Site access and circulation evaluation found that the site will provide adequate site access and circulation; however the proposed parking (36 spaces) is less than City's requirements (95 spaces). However, providing 95 spaces would result in excess parking since the estimated parking demand ranges from 17 to 30 vehicles and can be accommodated by the proposed 36 parking spaces.

Attachment A – Site Plan
Attachment B – VTA VMT Evaluation Outputs
Attachment C – Eastbound Truck Turning Movements
Attachment D – Westbound Truck Turning Movements

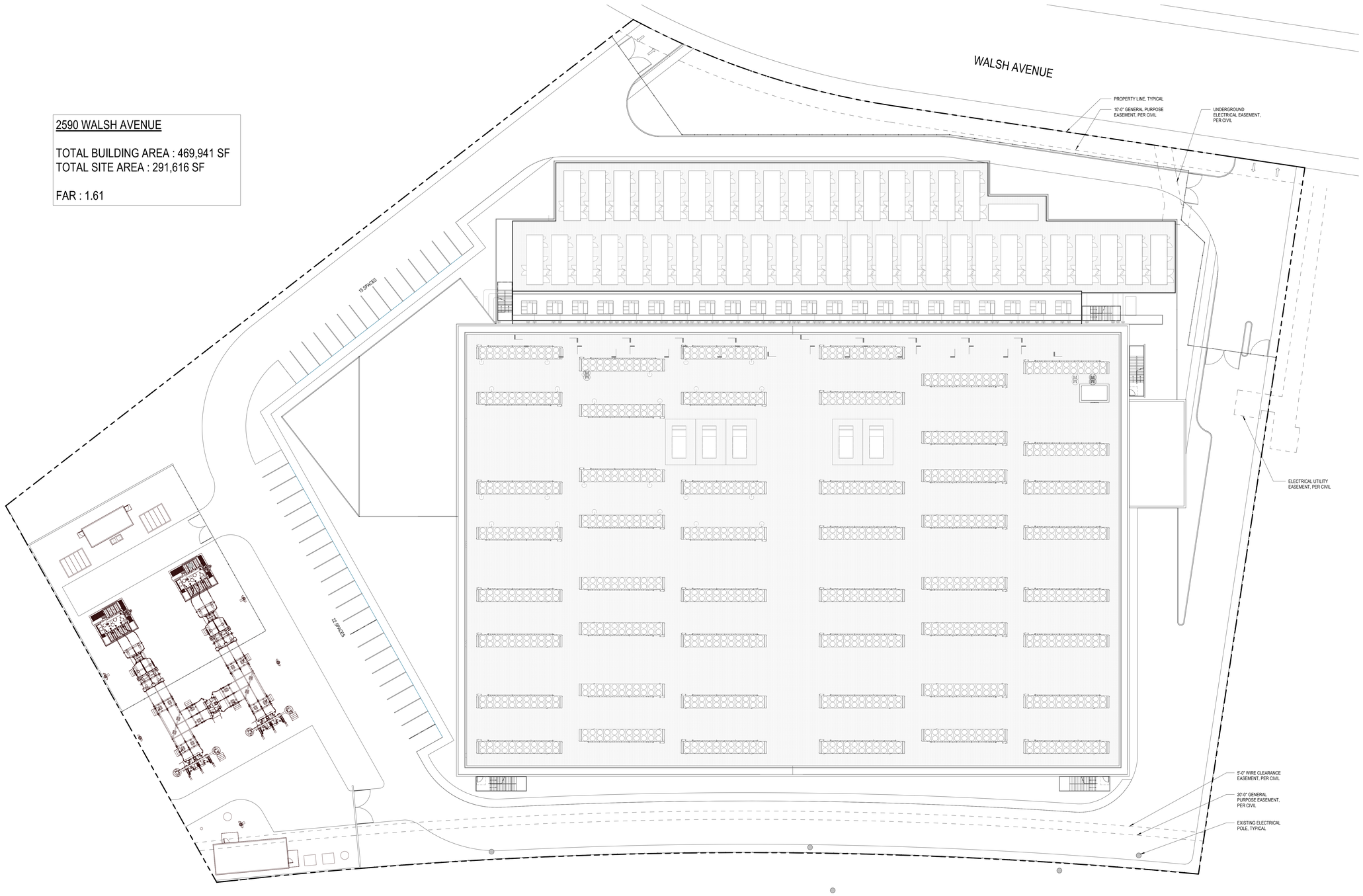
Kimley»Horn

Attachment A – Site Plan

2590 WALSH AVENUE

TOTAL BUILDING AREA : 469,941 SF
TOTAL SITE AREA : 291,616 SF

FAR : 1.61



1 ARCHITECTURAL SITE PLAN
3/64" = 1'-0"

GENERAL NOTES

OWNER

VANTAGE DATA CENTERS

ARCHITECT

SHEEHAN NAGLE HARTRAY ARCHITECTS
130 East Randolph, Suite 3100
Chicago, IL 60601
o: 312.633.2900
CHICAGO | LONDON

MEP ENGINEER

KW Mission Critical Engineering
40 E. Rio Salado Parkway, 4th Floor
602.568.3144

CUPERTINO ELECTRIC
1132 NORTH 7TH STREET
SAN JOSE, CA 95112
(408) 808-8000
C-10 LIC. NO. 174637

STRUCTURAL ENGINEER

CIVIL ENGINEER

RUTH AND GOING, INC.
Civil Engineering Land Surveying Planning
2216 THE ALAMEDA SANTA CLARA, CA 95050
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LANDSCAPE ARCHITECT

REED ASSOCIATES
LANDSCAPE ARCHITECTURE
417 SOUTH FIRST STREET
SAN JOSE, CALIFORNIA 95113
PHONE: 408.287.6992

PROGRESS SET
NOT FOR CONSTRUCTION

No.	Description	Date

VANTAGE CA31

2590 WALSH AVENUE
SANTA CLARA, CA 95051

MASTERPLAN

ARCHITECTURAL SITE PLAN

A0

SCALE: AS NOTED

Kimley»Horn

Attachment B – VTA VMT Evaluation Outputs

Santa Clara Countywide VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: July 21, 2021, 07:51:05 AM

Project Name: 2590 Walsh Avenue

Project Description: 472,180 SF Data Center

Project Location

Jurisdiction:
Santa Clara

APN	TAZ
21628112	1227

Inside Transit Priority Area (TPA)?
Yes (Pass)

Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1

Data Version: VTA Countywide Model December 2019

Analysis Methodology: Parcel Buffer Method

Baseline Year: 2015

Project Land Use

Residential:

Single Family DU:

Multifamily DU:

Total DUs: 0

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF: 472

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

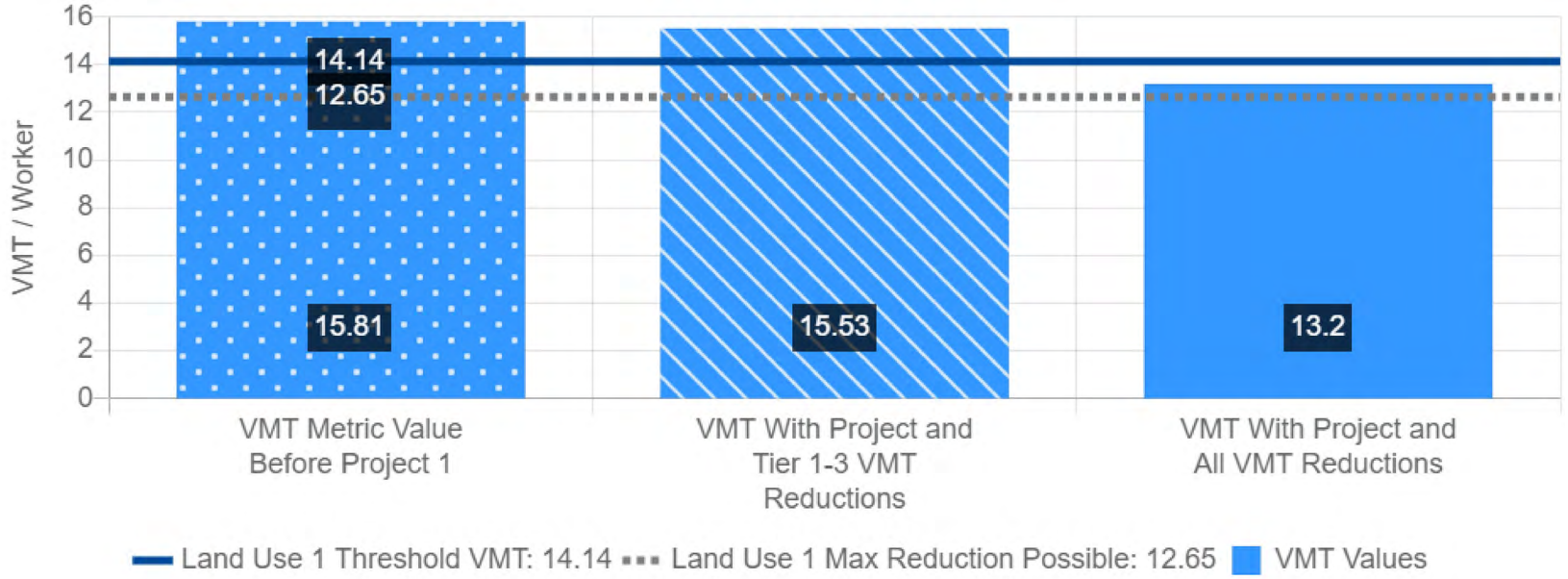
Motor Vehicle Parking: 100

Bicycle Parking: 10

Industrial Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Industrial
VMT Without Project:	Home-based Work VMT per Worker
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	16.64
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	15.81	15.53	13.2
Low VMT Screening Analysis	No (Fail)	No (Fail)	Yes (Pass)



Tier 1 Project Characteristics

PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.84
With Project Residential Diversity Index:	0.82

PC04 Increase Employment Density

Existing Employment Density:	37.41
With Project Employment Density:	39.65

Tier 2 Multimodal Infrastructure

Tier 3 Parking

PK01 Limit Parking Supply

Minimum Parking Required by City Code:	95
Total Parking Spaces Available to Employees:	100

PK02 Provide Bike Facilities

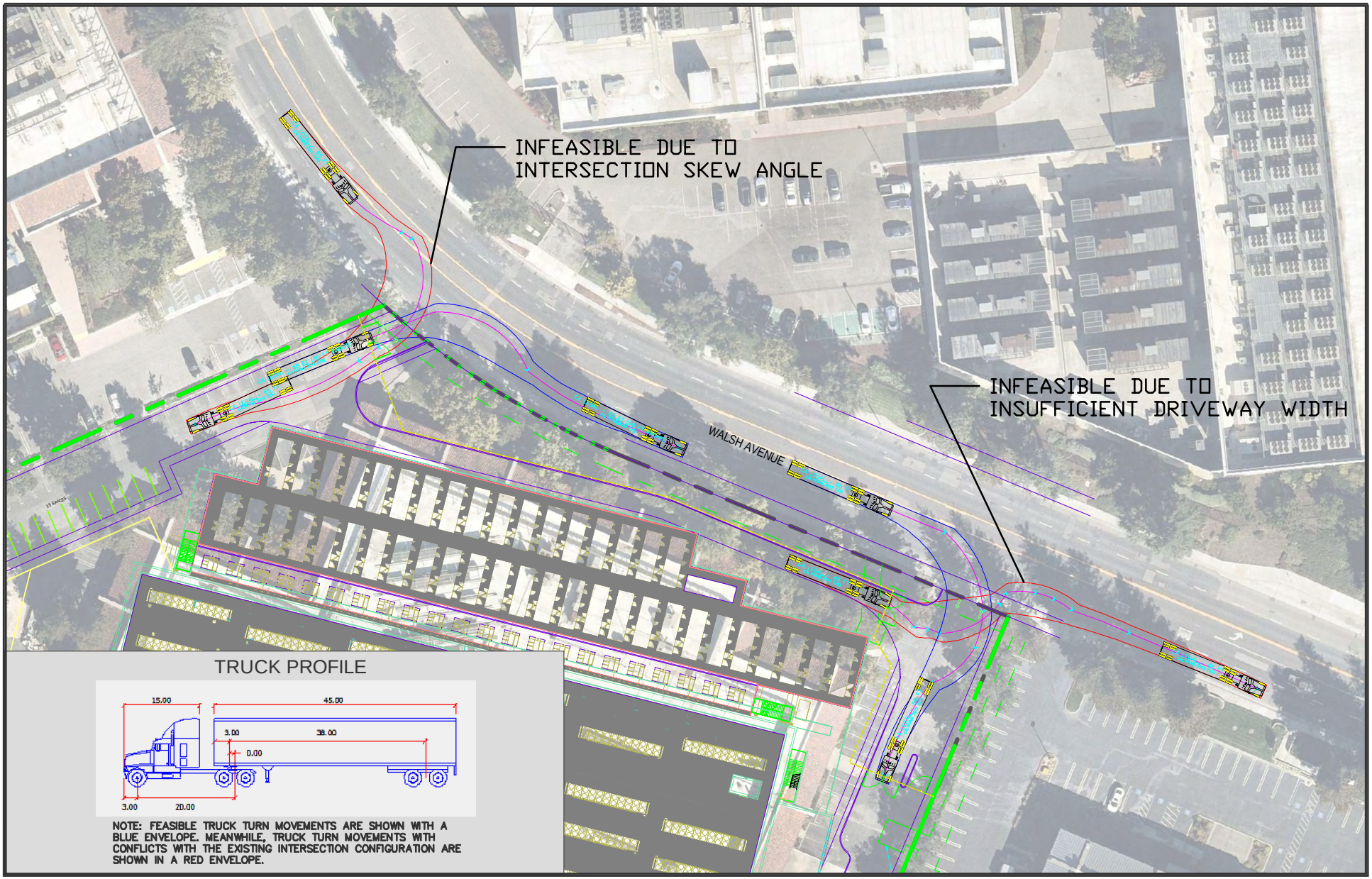
Bicycle Parking:	10
Project End-of-trip Bike Facilities:	Yes

Tier 4 TDM Programs

TP08 Telecommuting and Alternative Work Schedules

Telecommuting and Alternative Work Schedule Type:	4/40 schedule
Alternative Work Schedule Percent Participants:	100 %

Attachment C: Eastbound Truck Turning Movements



Kimley»Horn

NOT TO SCALE

ATTACHMENT C
EASTBOUND TRUCK TURNING MOVEMENTS

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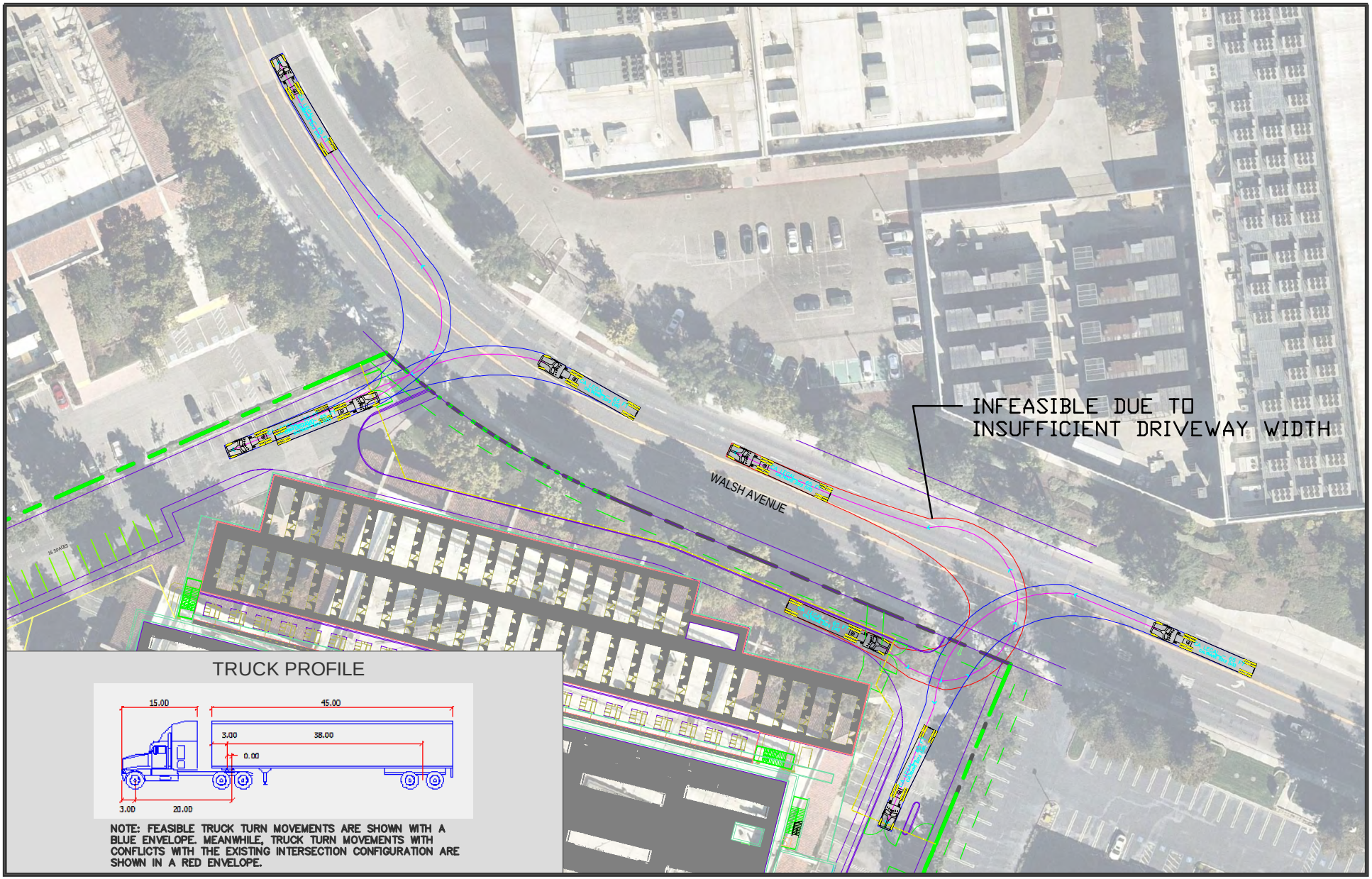
VANTAGE DATA CENTER-2590 WALSH AVENUE

Attachment D: Westbound Truck Turning Movements



Kimley»Horn

NOT TO SCALE

ATTACHMENT D
WESTBOUND TRUCK TURNING MOVEMENTS

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VANTAGE DATA CENTER-2590 WALSH AVENUE