

Memorandum

Date: February 23, 2022

To: Emad Sarriedine and Steve Hunn, Kier & Wright

From: Sarah Chan, PE, TE and Joseph Trost, Fehr & Peers

Subject: 80-12 Industrial Center, LLC Industrial Project – CEQA Vehicle Miles Traveled

Assessment [FINAL]

WC21-3816.00

This memorandum summarizes the results of the California Environmental Quality Act (CEQA) vehicle-miles traveled (VMT) assessment for the proposed 80-12 Industrial Center, LLC industrial project, herein referred to as the "Project." The Project site is located east of Chadbourne Road, between Busch Drive and the east-bound Highway 12 on-ramps in the City of Fairfield. The Project site was formally occupied by a Walmart retail shopping store, which vacated in the early 2010's. The Project proposes to construct a 225,045 square foot building and a separate 103,440 square foot building both with warehousing and office space following the demolition of the vacant distribution center on site. Attachment A includes an illustration of the proposed site plan.

Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the surrounding roadway system. Estimates are created on a weekday daily basis and for the peak one-hour periods during the morning and evening commute periods when traffic volumes on the adjacent streets are the highest. A trip generation analysis was performed to compare the trip generating characteristics of the proposed Project and the previously approved Walmart retail shopping store.

The trip generation analysis was estimated using rates from the Institute of Transportation Engineers *Trip Generation Manual, 11th Edition* using data from Land Use Code 813 (Free-Standing)

¹ The VMT analysis and conclusions in this report are based on an earlier iteration of the site plan with a larger building size of 226,300 and 103,400 square feet buildings, and therefore represent a more conservative assessment.



Discount Superstore) and 150 (Warehouse). **Table 1** summarizes the estimated vehicle trip generation for weekday daily, AM peak hour, and PM peak hour conditions.

Table 1: Vehicle Trip Generation

Land use	Size	Unit ²	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
				ln	Out	Total	ln	Out	Total
Free- Standing Discount Superstore ¹	125	ksf	6,315	130	103	233	265	276	541
Warehouse ²	328.5	ksf	596	67	20	87	25	67	92
Trip Generation Comparison		-5,719	-63	-83	-146	-240	-209	-449	

Notes:

1. Based on estimates provided by the City of Fairfield.

Trip Generation Manual, 11th Edition Land Use Category 813 – Free-Standing Discount Superstore:

Daily: T = 50.52(X)

AM: T = 1.86(X)

PM: T = 4.33(X)

2. Trip generation rates calculated separately for each building then added together for the total project.

Trip Generation Manual, 11th Edition Land Use Category 150 – Warehouse:

Daily: T = 1.58(X) + 38.29

AM: T = 0.12(X) + 23.62 (77% in, 23% out)

PM: T = 0.12(X) + 26.48 (28% in, 72% out)

3. ksf = 1,000 square feet

Source: Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition.*

As shown, the Project is estimated to generate approximately 600 daily vehicle trips, 90 AM peak hour trips, and 90 PM peak hour trips. The Project is expected to generate 5,700 fewer daily trips, including approximately 150 fewer AM peak hour trip and 450 fewer PM peak hour trips. Since the Project is expected to generate far fewer trips than the previously occupied use, it is assumed that the existing traffic signal adjacent to the Project driveway and adjacent roadway infrastructure may support the proposed Project traffic.

Vehicle-Miles Traveled (VMT) Background & Methodology

This section describes Fehr & Peers' approach and significance thresholds for the VMT analysis.

Background

The California Environmental Quality Act (CEQA) Guidelines were updated in December 2019 per Senate Bill 743 (SB 743) to remove LOS from CEQA analysis and to require the use of VMT to



evaluate a Project's environmental effect on the transportation system. VMT measures the amount of driving generated by the project and thereby the impacts on the environment from those miles traveled. SB 743 changes the focus of transportation impact analysis in CEQA from measuring *impacts on drivers* to measuring the *environmental impact of driving*.

For this project, the transportation-related CEQA Guidelines Appendix G checklist² questions are:

Would the project:

- a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
- b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- d) Result in inadequate emergency access?

Criterion B is the formal implementation of the SB 743 requirement to analyze VMT as part of the CEQA Transportation section. Under SB 743, congestion related project effects (such as those measured by LOS or similar metrics) are deemed to be not a suitable basis on which to determine a significant environmental effect. Relevant subsections of CEQA Guidelines section 15064.3(b) for the project read as follows:

- 1. Land Use Projects. Vehicle-miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle-miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
- (4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in the CEQA Guidelines, Article 10, Section 15151 shall apply to the analysis described in this section.

² 2021 CEQA Guidelines, Appendix G: https://www.califaep.org/docs/CEQA Handbook 2021.pdf.



As noted in subsection (4), the City of Fairfield, in its discretion as lead agency, has the ability to select the methodology and CEQA significance criteria for use in the CEQA Transportation section. The City of Fairfield formally adopted locally applicable CEQA metrics, methodology, and significance criteria in December 2020, published in the summarized in the *Fairfield Guidelines for Project VMT Screening Transportation Analysis* and summarized in the section below.

Analysis Methodology

The Fairfield Guidelines for Project VMT Screening Transportation Analysis states that VMT analysis shall be prepared using the City of Fairfield travel demand model. As part of the City's SB 743 implementation efforts, the City of Fairfield model was updated in 2020 by the City's consultant to improve the accounting of trip lengths for trips that leave the model coverage area. Subsequently, Fehr & Peers made updates to the City of Fairfield model to reflect additional edits to land uses and the transportation system as identified during Fehr & Peers' work on the City of Fairfield Traffic Impact Fee Update project. Models are frequently updated over time to reflect new information, and the use of the latest available models in the CEQA analysis of a project is encouraged as CEQA analyses should use the latest and best data available (Cleveland National Forest Foundation vs. San Diego Associations of Governments, 2017).

VMT calculations were prepared for the following four scenarios:

- Near-Term No Project: Total model-wide VMT using the Near-term scenario from the City of Fairfield model with the inclusion of the Sutter site project land use.
- Near-Term (2020) Plus Project: Total model-wide VMT using the Near-term scenario from the City of Fairfield model plus the Project land use added into transportation analysis zone (TAZ) 45³.
- Cumulative (2040) No Project: Total model-wide VMT was calculated using year 2040 City
 of Fairfield model. This horizon year of the model incorporates approved projects in the
 City of Suisun City and City of Fairfield area and land use forecasts from the City's
 adopted General Plan and Plan Bay Area 2040 as well as the Sutter site project land use.
- Cumulative (2040) Plus Project: Total model-wide VMT using year 2040 City of Fairfield
 model plus the Project land use added into TAZ 45 with a land use control total method.
 The land use control total method assumes that the total land use growth between the
 Near-term and Cumulative scenarios are fixed. The delta between the Near-term and
 Cumulative industrial land use was calculated for each TAZ. A proportion of the net new
 industrial use was allocated to the Project TAZ based on their proportionate growth. The
 total industrial land use quantity removed across all TAZs is equal to the added industrial

³ The Fairfield Model area is divided into geographic sub-areas called TAZs. TAZs are used in the Fairfield Model to connect the land uses to the roadway network. Each TAZ includes land use information for that geographic sub-area within the model. The Project is located in TAZ 45.



land use quantity in the Project TAZ. Maps showing the industrial land use growth by TAZ in 2040 and the 2040 Plus Project are presented in **Attachment B**.

VMT Thresholds of Significance CEQA impacts are identified based on the project's VMT compared against a percentage of a baseline value of VMT. CEQA Guidelines §15064.3(a) notes that, for the purposes of §15064.3 and CEQA Transportation analysis, VMT "refers to the amount and distance of automobile travel attributable to a project." This statement has been interpreted by OPR to mean automobile and light-duty truck travel (e.g., pickup trucks). For many employment-focused land uses, the amount and distance of automobile travel is largely attributable to commute trips for employees. OPR notes that heavy-duty truck VMT could be included for convenience and ease of calculation, if a lead agency so chooses, but are not required to be included in the calculations. The guidance is non-binding and allows lead agencies to come up with their own VMT analysis methodology and set their own thresholds of significance.

The model VMT metric estimates are key in setting baseline values to be used in CEQA thresholds going forward. It is noted, however, that the "base year" thresholds rely on a rolling baseline – that is, the base year baseline metric value should be re-considered on a project-by-project basis when each project's Notice of Preparation is released. As such, the following Near-Term and Cumulative No Project home-based total model-wide VMT was estimated:

Near-Term Total VMT: 10,976,000Cumulative Total VMT: 12,108,000

As noted previously, the City of Fairfield has formally adopted locally-specific CEQA VMT thresholds. The thresholds in the *Fairfield Guidelines for Project VMT Screening Transportation Analysis* are stratified by project type and include the following generalized thresholds for use in CEQA VMT analyses:

A project would result in a significant impact if:

- Single-Family Residential Projects: Project VMT would be in excess of 85% of the City-wide average VMT per single-family dwelling unit
- Multifamily Residential Projects: Project VMT would be in excess of 85% of the City-wide average VMT per multifamily dwelling unit
- Office Projects: Project VMT would be in excess of 85% of the City-wide average VMT per 1,000 square feet of office space
- Other Projects (Retail, Industrial, and Other Non-residential Uses): Any net increase in total model-wide VMT



Based on the proposed Project description, the primary purpose of the Project is an industrial site, therefore, the "Other Projects" threshold of significance would apply. As such, the Project would result in a significant impact if the addition of the Project increases the Near-Term or Cumulative total model-wide VMT.

VMT Analysis

This section describes CEQA VMT analysis prepared for the proposed Project.

Project Land Use Changes

The Project includes the occupancy of 329,700 square feet of industrial warehousing with no credit from the previous occupants assumed due to the length of time that has passed since the site was previously occupied. **Table 2** summarizes the land use changes made in the City of Fairfield model to reflect the Project.

Table 2: Project TAZ Industrial Land Use Assumptions

Scenario	No Project Land Use (square feet)	Plus Project Land Use (square feet)	Delta ¹
Near-Term	0	329,700	+329,700
Cumulative	0	329,700	+329,700

Note:

 The Near-Term and Cumulative industrial land use quantities in the Project TAZ are the same because there was no industrial growth assumed between the 2020 and 2040 No Project conditions.
 Source: Fehr & Peers

As shown above, under Near-Term conditions, the Project was added to the Project site TAZ. Under Cumulative conditions, a control total method was applied. The control total method assumes that the total industrial growth between the Near-Term and Cumulative scenarios in the City of Fairfield is fixed. The City of Fairfield General Plan assumes and allocates an estimated amount of industrial growth throughout the City. Estimates are based on available data at the time of the General Plan. The proportion of industrial land use growth between the Near-Term and Cumulative scenarios were calculated for each TAZ and applied to the Project's industrial land use size to calculate the quantity of industrial land use to be reallocated from each TAZ to the Project TAZ. **Attachment B** describes how the industrial land uses were redistributed from other TAZs in the Cumulative scenario.

VMT Results

The analysis scenarios were analyzed using the methodologies described above, and the VMT analysis results are summarized in **Table 3** below.



Table 3: VMT Analysis Summary

Scenario	Baseline Total VMT	Plus Project Total VMT	Delta
Near-Term	10,976,000	10,994,000	+18,000 (+<1%)
Cumulative	12,108,000	12,107,000	-1,000 (-<1%)

Source: Fehr & Peers

Based on the City of Fairfield VMT impact threshold described above, the Project would result in a significant VMT impact if the Project increases the total VMT compared to Baseline (No Project) conditions. The addition of the Project is expected to increase the total VMT under Near-Term conditions by approximately 18,000 VMT and decrease total VMT by approximately 1,000 in Cumulative conditions. Therefore, the Project would result in a *significant impact* in the Near-Term (2020) and a *less-than-significant impact* under Cumulative (2040) conditions.

The Cumulative conditions reflect the buildout of the City's General Plan. The City's General Plan seeks to diversify the City's land use program and transportation network and does not anticipate new projects to conflict with state and regional long-term greenhouse gas emission reduction targets and statewide VMT reduction targets. The Project's impact on VMT, or net new model-wide VMT, is reduced over time. Therefore, it is reasonable to assume that the proposed Project is in line with the planned industrial growth in the City of Fairfield. Thus, while the Project would result in a significant impact under Near-Term conditions, the Project would mitigate itself over time with the planned future development, resulting in a *less-than-significant impact with mitigation* under Near-Term conditions. Since timing of General Plan buildout is uncertain, near-term mitigation measures shall be implemented to reduce the Project's near-term VMT impacts.

VMT Mitigation Measures

This section describes potential mitigation measures the Project should consider to reduce the Project's VMT impact.

General Plan Improvements

The Fairfield Active Transportation Plan proposes to build new bicycle facilities adjacent to the Project site. Class II buffered bike lanes are proposed along Chadbourne Road, between Cordelia Road and Highway 12, adjacent to the Project site. Additionally, Class II buffered bike lanes are proposed along Auto Mall Parkway, Cordelia Road, and Courage Drive, which intersect Chadbourne Road. The City of Fairfield's Street Capital Improvement Program also includes pavement and ADA accessibility improvements on Beck Avenue, Chadbourne Road, Courage Drive, Cordelia Road, Guittard Way, and Low Court. These improvements may increase the safety, bikeability, and walkability of the Project site, thereby encouraging more biking or walking trips



which can reduce VMT. Therefore, the Project applicant, in coordination with City staff, should consider installation of these proposed improvements to reduce VMT impacts. Should the City adopt a VMT mitigation bank program or trip credit program, the appropriate fees or credits can be applied to the Project.

Transportation Demand Management (TDM) Program

For employment-focused land uses, such as the proposed Project, mitigation measures tend to focus on reducing employee trips through implementation of Transportation Demand Management (TDM) Programs. TDM refers to strategies that motivate alternatives to automobile travel, either through positive incentives or walking, biking, and transit, or through adding additional costs to automobile use at the project site. Fehr & Peers developed the TDM+ tool that estimates a percent reduction in VMT due to a single TDM strategy as well as the combination of multiple TDM strategies. TDM+ incorporates the effects of numerous land use and design strategies as well as various travel incentives and disincentives. The VMT reductions applied in TDM+ are based on strategies identified in the forthcoming 2021 update of the Air Resource Board Zero Carbon Buildings Study and the Quantifying Greenhouse Gas Mitigation Measures Report, California Air Pollution Control Officers Association (CAPCOA), 2010.4

The TDM+ tool was used to analyze the Project's VMT reduction potential in a suburban environment. Typical vehicle trip reduction strategies for employment-based development like the Project are related to commuter trip reductions. The recommended TDM measures include transit pass subsidies, a commuter marketing program, carpool/vanpool incentives, and a ridematch program. Outputs from the TDM+ measurement of feasible TDM measures to reduce Project VMT and their estimated percent VMT reduction are summarized in **Table 4**.

⁴ This report is a resource for local agencies to quantify the benefit, in terms of reduced travel demand, of implementing various TDM strategies.



Table 4: TDM Program

Measure	Description	VMT % Reduction ¹	
Pedestrian-Oriented Design	Provide pedestrian facilities, such as paved sidewalks and pedestrian-scale lighting along Project site frontages.	Up to 3%	
Transit Pass Subsidies	Provide 100% transit pass subsidy to encourage employees to take transit to work. ²	1-4%	
Commute Marketing Program	Designate a TDM Coordinator to plan, manage, and implement commute programs. The TDM Coordinator shall share information via regular emails, bulletin postings, challenges, or events on resources and incentives to encourage employees to use alternative modes of travel to work.	2-8%	
Carpool/Vanpool Incentives	Provide incentives for carpool/vanpool participants such as mileage and toll fee reimbursement, participation rewards, and preferred reserved parking spaces.	1-9%	
Ridematch Program	Promote ridematch programs to increase carpool/vanpool opportunities. ³	Up to 3%	
Total	5% to 25%		

Notes

- 1. VMT % reductions and measures are not additive but complementary of one another. A 5-percent reduction assumes a conservative reduction appropriate for CEQA purposes. A 25-percent reduction assumes that the site tenant is committed to promoting and implementing the TDM measures that go beyond typical applications.
- 2. The Project site includes two transit stops adjacent to the site: the Fairfield and Suisun Transit (FAST) Route 7 and Rio Vista Delta Breeze Route 50. Route 7 connects the Fairfield Transportation Center, Project site, and Cordelia Library, and operates once an hour, on weekdays between 6:00 AM and 6:55 PM and on Saturdays between 10:00 AM and 4:30 PM. Route 50 offers a deviated fixed route bus service within the Cities of Rio Vista, Isleton, Fairfield, Suisun City, Antioch, and the Pittsburg/Bay Point BART stations, and includes connections to Lodi. Route 50 operates between 5:00 AM and 7:30 PM and must be reserved at least 30 minutes in advance of a pick-up.
- 3. A ridematch program can be developed by the TDM Coordinator for the site-specific employees. There is an existing free ridematch program at merge.511.org for the Bay Area. The larger the pool of participants, the more effective the program will be.

Source: TDM+, Fehr & Peers

The pedestrian-oriented design TDM measure shall be implemented on the front end by the developer, while ongoing TDM measures, including transit pass subsidies, commute marketing program, and carpool/vanpool incentives, shall be implemented and managed by the designated TDM Coordinator.

As shown in **Table 4**, the total of all measures has potential to reduce Project VMT from 5- to 25-percent. A 5-percent reduction assumes a conservative reduction, suitable for use in



environmental documents. A 25-percent reduction assumes a Project where the site operator is willing to invest heavily in TDM programs. Given the site's characteristics and for purposes of this conservative assessment, it would be reasonable to assume that the maximum reduction this site could achieve with implementation of the above program is approximately 5-percent. Therefore, implementation of a TDM program would result in an impact that is *less-than-significant with mitigation*.

Monitoring Program

An annual monitoring program shall be implemented to measure the TDM Program outcomes. To measure the TDM Program's commute VMT reductions and mode share, a commute survey shall be administered to employees by the site occupant. In addition, traffic counts at the Project driveways shall be collected and compared to the Institution of Transportation Engineers (ITE)⁵ estimated trip generation for the Project site's specific use. If the commute survey and Project trip count data find that the Project's trip generation is at least five percent less than the ITE estimated trip generation, then the Project's TDM goal will be met. If the Project's TDM goal is not met, then the Project shall pay penalty fees as agreed upon with the City at the Project approval stage.

Conclusion

The Project is expected to increase total VMT in the Near-Term and decrease total VMT under Cumulative conditions. While the Project would mitigate itself over time, mitigation measures are recommended to reduce the Project's near-term VMT impacts to *less-than-significant with mitigation*.

This concludes our assessment. Please contact Ian Barnes or Joseph Trost if you have questions or comments.

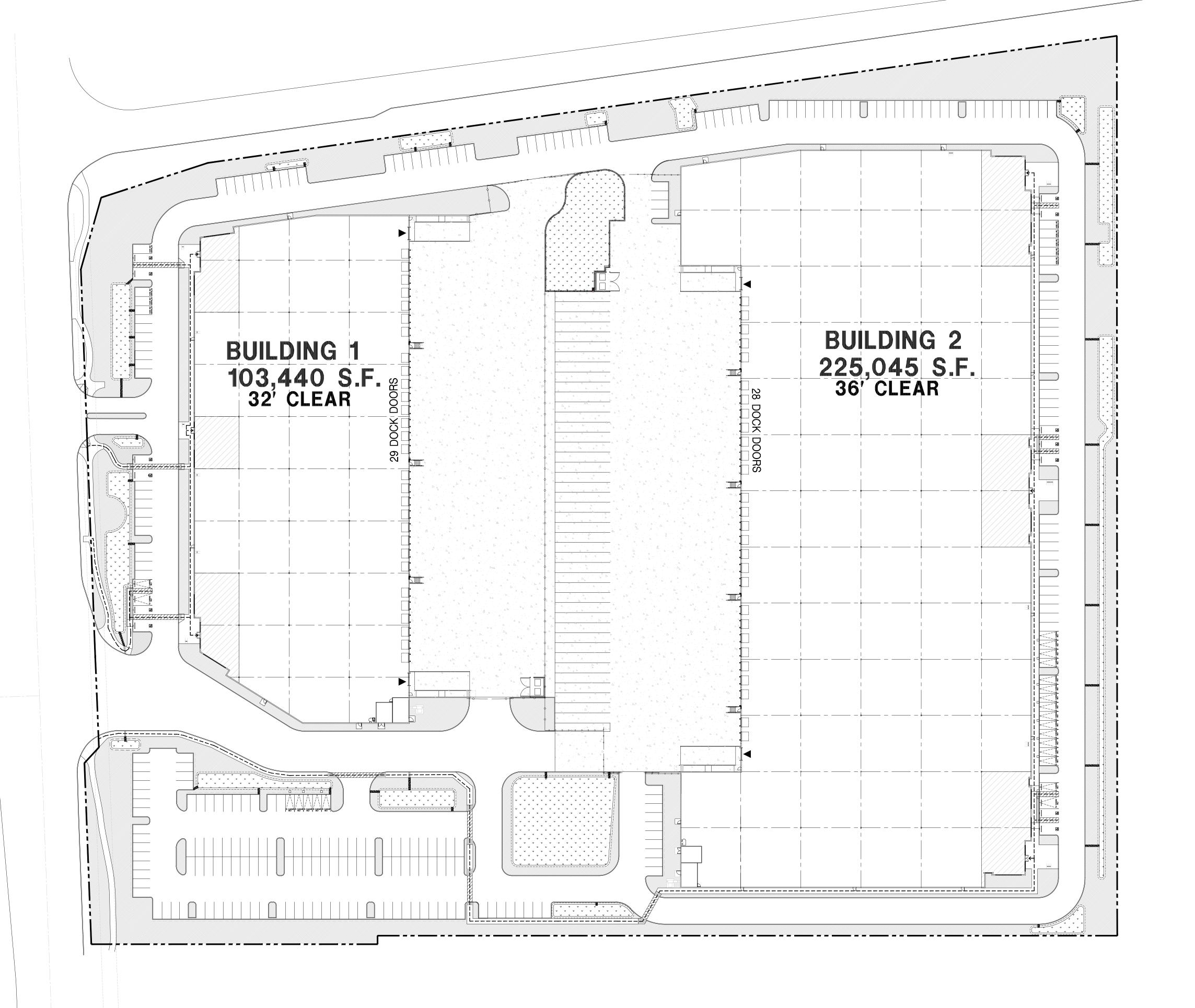
Attachments:

Attachment A: Project Site Plan

Attachment B: Fairfield Model Industrial Land Use Growth

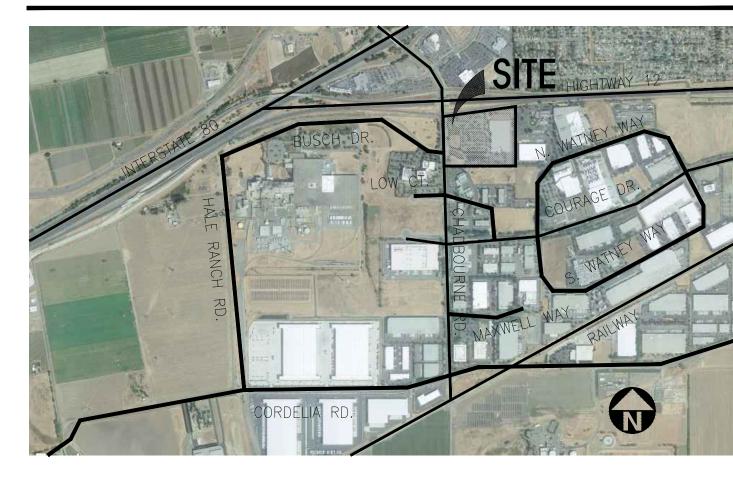
⁵ The industry standard is to estimate trip generation using rates from the Institute of Transportation Engineers *Trip Generation Manual, 11th Edition* (2021).

Attachment A: Project Site Plan









TABULATION

	BLDG 1	BLDG 2	TOTAL	
SITE AREA				
In s.f.			846,923	s.f.
In acres			19.44	acre
BUILDING AREA				
Office	15,000	24,000	39,000	s.f.
Warehouse	88,440	201,045	289,485	s.f.
TOTAL	103,440	225,045	328,485	s.f.
FLOOR AREA RATIO			0.39	
AUTO PARKING REQUIRED				
Office: 1/250 s.f.	60	96	156	stalls
Whse: 1/1000 s.f. (First 10k s.f.)	10	10	20	stalls
1/1500 s.f. (Betw een 10k to 40k s.f.)	27	27	53	stalls
1/3000 s.f. (above 40k s.f.)	17	54	71	stalls
TOTAL	114	187	301	stalls
AUTO PARKING PROVIDED				
Standard (9' x 20')	97	160	257	stalls
Accessible Parking (9' x 19' + 5' asile)	3	4	7	stalls
Accessible Van Parking (12' x 19' + 5' asile)	3	3	6	stalls
EV/ Clean air/ Van pool (9' x 17' w /2' overhang)	4	5	9	stalls
EV standard (9' x 17' w /2' overhang)	5	14	19	stalls
Accessible EV Van Parking (12' x 19' + 5' asile)	1	1	2	stalls
Accessible EV Parking (9' x 19' + 5' asile)	1	1	2	stalls
TOTAL	114	188	302	stalls
BICYCLE RACK REQUIRED				
Short Term (5% of total stalls)	6	12		
Long Term (5% of total stalls)	6	12		
BICYCLE RACK PROVIDED				
Short Term	6	12		
Long Term	6	12		
TRAILER PARKING PROVIDED				
Trailer (10' x 55')	0	43	43	stalls

Zoning Designation -IL (Liminted Industrial) with Zoning amendment

MAXIMUM BUILDING HEIGHT ALLOWED Height - 50'

(Final building height shall be determined prior to the issuance of building permit)

MAXIMUM FLOOR AREA RATIO FAR - 0.6

<u>SETBACKS</u>

Building Front/ Side

Front/ Side Street Yard - 20'
Side/ Rear Yard - 0' or as required to meet applicable building and fire codes

Side/ Rear Yard adjacent to residential - 25', plus 1' set back for each 1' of bldg height over 35'

Rear yard abutting road - 15'

Landscape

frontage abutting a roadway - 10'

Interior property lines - 5' w ithin 75' of a street frontage, and abutting auto parking area

Interior property lines adjacent to residential district - 10'

entry to a tenant space; 5' in other areas where parking or a drive aisle is adjacent to a bldg; 0' in



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Owner:

80-12 INDUSTRIAL CENTER, LLC

415 Mission Street, 45th Floor, San Francisco, CA 94105 Tel. No.: (650) 224-8707

Project:

80-12 INDUSTRIAL CENTER

300 CHADBOURNE RD

FAIRFIELD, CA 94533



Consultants:

Mechanical:
Plumbing:
Electrical:

Landscape: GreenDesign
Fire Protection:
Soils Engineer:



Title: OVERALL SITE PLAN

Project Number: 21293

Drawn by: D.Z.

Date: 08/30/2021

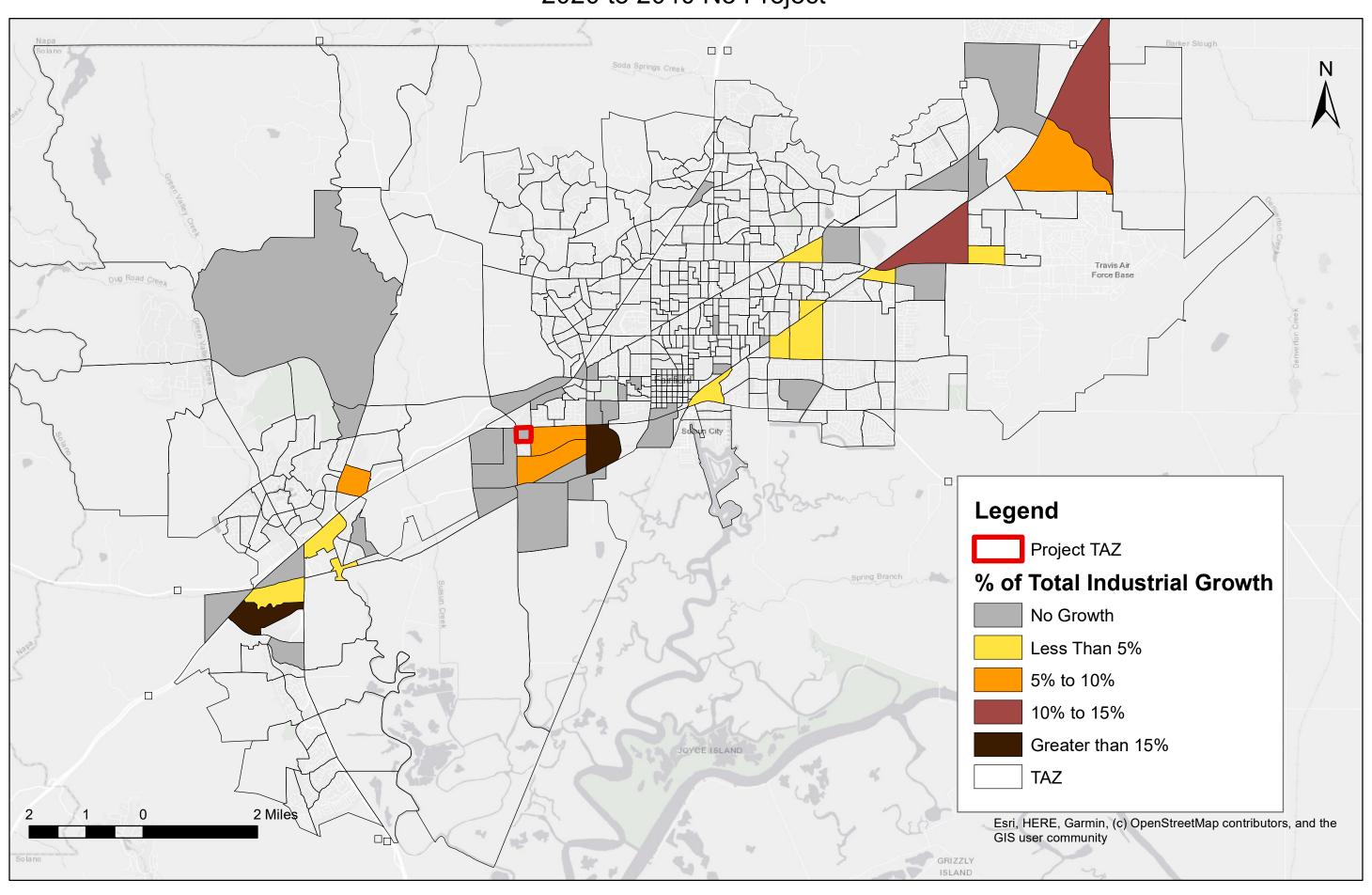
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Attachment B: Fairfield Model Industrial Land Use Growth

Fairfield Industrial Growth By TAZ 2020 to 2040 No Project



Fairfield Industrial Growth By TAZ 2020 to 2040 Plus Project

