

# Memorandum

Date: May 26, 2023

To: Matt Simons, City of Lancaster  
Chandler Elliott, NorthPoint Development

From: Sarah Brandenberg, Biling Liu

**Subject: Lancaster Fox Field Commerce Center - West Cold Storage VMT Analysis**

LA23-3445

Fehr & Peers has completed quantifying Vehicle Miles Traveled (VMT) for the Fox Field Commerce Center – West cold storage development project (Project) in the City of Lancaster. This analysis compares Home-Based Work VMT per employee generated by the Project to the City's adopted threshold of 15% below Baseline VMT of the Antelope Valley. An impact will occur if the Project's Home-Based Work VMT per employee exceeds this threshold. This VMT analysis is consistent with requirements of Senate Bill 743 (SB 743), the Office of Planning and Research's (OPR) Technical Advisory, and the *City of Lancaster Department of Public Works Local Transportation Assessment Guidelines* (January 2021).

This memorandum is divided into four sections: Project Introduction, Modeling Methodology, VMT Analysis, and Conclusions.

## Project Description

The Fox Field Commerce Center – West development proposes a cold storage warehouse building with 581,000 square feet (sf) on the vacant land north of Avenue G and on the south side of William J Barnes Avenue just west of 45<sup>th</sup> Street West in the City of Lancaster, with access on William J Barnes Avenue and 45<sup>th</sup> Street West. **Attachment A** contains the project site plan.

## Modeling Methodology

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) trip-based model is a travel demand forecasting model with socioeconomic and transportation network inputs, such as population, employment,

and the regional and local roadway network, that estimates current travel behavior and forecasts future changes in travel demand. The current SCAG model has 2012 as the base year and 2040 as the forecast year and can be used to estimate VMT for existing year 2023 conditions. The 2040 model contains the planned transportation improvements in the RTP and the growth projections in the SCS.

**Table 1** presents the socioeconomic (SED) inputs for the Project. The Project employment was estimated from data provided by NorthPoint Development based on the expected operations of the site. The Fox Field Commerce Center - West development will have approximately 0.38 employees per thousand square feet.

**Table 1: Project SED Inputs**

Project TAZ SED	Employment
Project	221

When calculating VMT for a project site, the VMT methodology should match the methodology used to establish the Baseline VMT metrics and impact thresholds. For non-residential projects in the City of Lancaster, Baseline VMT is defined as a measurement of Home-Based Work VMT per employee, which reflects all commute trips for places of employment within the Los Angeles County Antelope Valley Planning Area (Antelope Valley). All Home-Based Work auto vehicle VMT attracted by the Project is divided by the total employment to get the efficiency metric of Home-Based Work VMT per employee. Following the VMT analysis, the Home-Based Work VMT per employee of the Project was then compared to the Antelope Valley Baseline VMT to determine if it exceeds the City's impact threshold.

## VMT Assessment

The Home-Based Work VMT per employee of the Project was calculated for the base year (2023) using the SCAG travel demand model. The year 2023 analysis shows how the VMT generated by the Project compares to current travel and VMT characteristics in the area. **Table 2** shows the Home-Based Work VMT per employee of the Project.

**Table 2: Project VMT and VMT Threshold for Non-residential Projects in Lancaster**

VMT Metrics for Non-Residential Projects	Home-Based Work VMT per Employee
<b>Project VMT Estimates (2023)</b>	<b>14.5</b>
<b>Antelope Valley Planning Area (AVPA) Baseline VMT (2023)</b>	9.0
<b>Threshold: 15% Below AVPA Baseline VMT</b>	<b>7.6</b>
<b>Percent Higher than VMT Threshold</b>	<b>90%</b>
<b>VMT Exceeds Threshold?</b>	<b>Yes</b>

As shown above, the Project generates 14.5 Home-Based Work VMT per employee. In comparison to the City’s threshold of 15% below Baseline VMT of the Antelope Valley, the Project is 6.9 Home-Based Work VMT per employee higher and will result in a VMT impact.

To mitigate the Project’s VMT impact, the Home-Based Work VMT per employee needs to be reduced by 90% as shown above in Table 2. To determine the total amount of VMT that exceeds the City’s VMT threshold, the Project Home-Based Work VMT per employee was multiplied by the estimated employment of the Project (14.5 Home-Based Work VMT per employee as shown in Table 2 multiplied by 221 employees as shown in Table 1 which equates to 3,205 VMT as shown in Table 3). The City’s VMT threshold for non-residential projects was then applied to the Project employment to determine the maximum amount of VMT that the Project would be allowed to generate without exceeding the City’s threshold (7.6 VMT per employee as shown in Table 2 multiplied by 221 employees as shown in Table 1 which equates to 1,680 VMT as shown in Table 3). The Project VMT is then compared to the maximum allowable VMT based on the City’s threshold and the excess VMT generated by the Project is used to determine the required VMT reduction. The VMT reduction required equates to 1,525 total VMT as shown in **Table 3**. The City recently adopted a \$150 per VMT mitigation fee under the VMT impact fee program. Therefore, the Project’s VMT impacts will be reduced by contributing \$228,735 to the City’s VMT impact fee program. This equates to a fee of approximately \$393 per KSF.

**Table 3: VMT Reduction Required**

Home-Based Work VMT for Non-Residential	Project VMT Estimate	VMT Threshold (15% below Baseline)	VMT Reduction Required
VMT / Employee	14.5	7.6	6.9
<b>Project VMT</b>	<b>3,205</b>	<b>1,680</b>	<b>1,525</b>
<b>City of Lancaster VMT Impact Fee Program</b>			
Mitigation Fee per VMT			\$150
<b>Mitigation Fee</b>			<b>\$228,735</b>
Building Size (SF)			581,000
Fee per KSF			\$393

## Conclusions

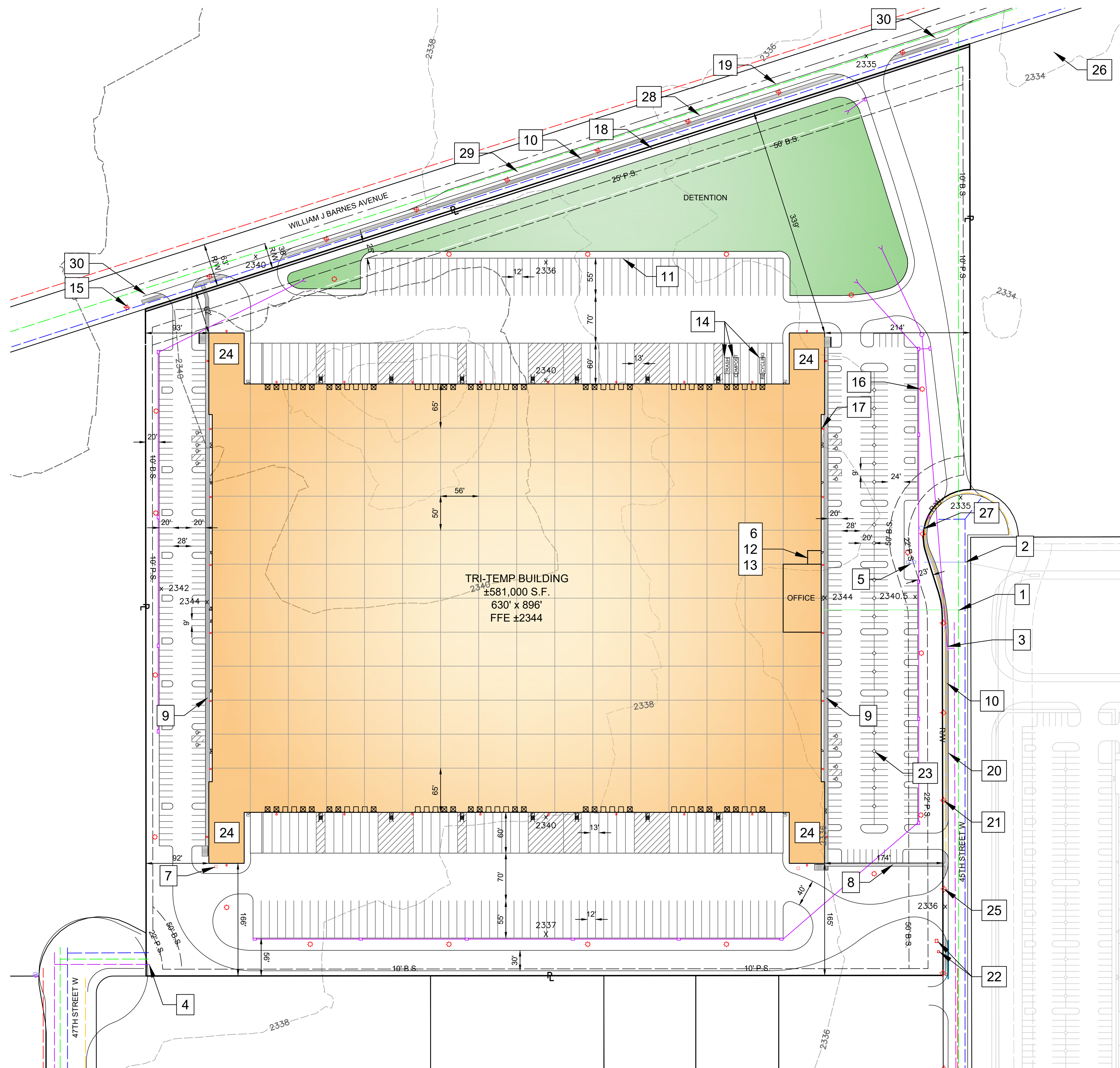
This technical memorandum documents the process to determine the potential VMT impacts of the proposed Fox Field Commerce Center – West cold storage development project in the City of Lancaster. The following summarizes the results of the VMT analysis:

- The VMT analysis for the Project is based on the City’s guidance for transportation impacts. The VMT analysis methodology for the Project is consistent with the methodology used to establish the Baseline VMT metrics and impact thresholds for projects in the City of Lancaster.
- For non-residential projects in the City of Lancaster, the Home-Based Work VMT per employee is analyzed to determine the VMT impact. The Home-Based Work VMT per employee generated by the Project under base year (2023) is then compared to the Antelope Valley Baseline VMT.
- The Project generates 14.5 Home-Based Work VMT per employee which is 90% higher than the City’s threshold. Therefore, the Project will result in a VMT impact.
- The Project’s VMT impacts can be reduced by contributing to the City’s recently adopted VMT impact fee program.
- The VMT reduction required by the Project results in a total VMT impact fee of \$228,735, which equates to a fee of approximately \$393 per KSF.

# **Attachment A: Project Site Plan**



S:\01 PROJECTS\INDUSTRIAL\4300 FOX FIELD 70 (LANCASTER, CA)\BUILDINGS 1 & 2 SUBMITTAL\PLANS\C-0200 SITE PLANING



**GENERAL NOTES**

- A. THIS PLAN SHALL SERVE AS A PRELIMINARY PLAT.
- B. EXISTING CONDITIONS AND UTILITIES ARE INDICATED ON THE SITE PLAN.
- C. GENERAL CONFIGURATION OF PROPOSED LOTS AND TRACTS ARE AS INDICATED ON THE PLAN.
- D. PROPOSED CONTOURS, GRADES AND UTILITIES ARE SUBJECT TO FINAL ENGINEERING DESIGN AND APPROVAL BY CITY, PRIVATE UTILITY COMPANIES AND BUILDING PERMIT PLAN APPROVAL.
- E. INGRESS AND EGRESS TO EACH LOT WILL BE FROM A PUBLIC STREET AND/OR ACCESS EASEMENT.
- F. PRIVATE ACCESS EASEMENT AGREEMENTS FOR EACH LOT SHALL BE RECORDED AGAINST THE PROPERTY AS REQUIRED TO PROVIDE ACCESS.
- G. LOTS OR TRACTS ESTABLISHED BY THIS PLAN MAY BE FURTHER SUBDIVIDED BY APPLICATION FOR LOT SPLIT OR MINOR SUBDIVISION.
- H. ALL ROOFTOP MECHANICAL EQUIPMENT WILL BE SCREENED.
- I. PHOTOMETRIC PLAN WILL BE SUBMITTED AT A LATER DATE INDICATING PARKING LOT AND WALL MOUNTED LIGHTS AND LIGHT LEVELS AND STREET LIGHTS ALONG WILLIAM J BARNES AVENUE. STREET LIGHTS HAVE BEEN INSTALLED ALONG THE WEST SIDE OF 45TH STREET W. SIGNAGE PLAN WILL BE SUBMITTED AT A LATER DATE. SIGNS SHALL CONFORM WITH CITY OF LANCASTER CALIFORNIA ZONING REGULATIONS.
- K. GRADING PLAN WILL BE SUBMITTED AT A LATER DATE. PRELIMINARY SPOT ELEVATIONS INDICATED ON PLAN.
- L. STORM SEWER PLAN AND DRAINAGE STUDY WILL BE SUBMITTED AT A LATER DATE AND WILL INDICATE SIZES AND VOLUMES. PRELIMINARY STORM SEWER ALIGNMENT INDICATED ON PLAN.
- M. DETENTION BASIN TO BE OVER EXCAVATED FOR ONSITE BORROW AREA. PRELIMINARY PERCOLATION TESTS INDICATE PERCOLATION RATES FROM 1.5-2.2" PER HOUR. BASIN WILL BE DESIGNED WITH A CONNECTION TO EXISTING STORM SEWER AND TO PERCOLATE INTO THE GROUND.
- N. LANDSCAPING PLANS WILL BE SUBMITTED AT A LATER DATE. IT WILL INDICATE PARKING LOT SHADING OF 50% AFTER 15 YEARS OF TREE GROWTH.
- O. GROUND MOUNTED EQUIPMENT SHALL BE SCREENED.
- P. SITE PLAN IS BASED ON GIS BASE DATA, NOT SURVEY DATA.

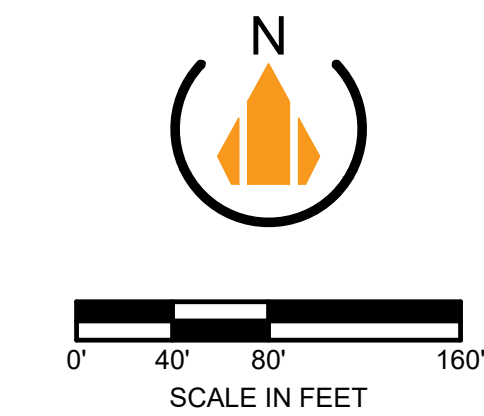
**LEGEND**

1. CONNECT TO EXISTING 15" CVP SANITARY SEWER
2. CONNECT TO EXISTING 16" STL WATER MAIN
3. CONNECT TO EXISTING STORM SEWER - DETENTION BASIN DISCHARGE
4. EXISTING 36" STORM SEWER
5. WATER VAULT - METER AND BACKFLOW PREVENTER
6. FIRE PUMP
7. TRANSFORMER
8. 5' SIDEWALK (PRIVATE)
9. 6' SIDEWALK (PRIVATE)
10. 5' SIDEWALK (PUBLIC)
11. RIBBON CURB TO ALLOW SURFACE FLOW TO DETENTION BASIN
12. ROOF ACCESS FROM INSIDE THE BUILDING IS FROM WITH THE FIRE PUMP ROOM
13. SWITCH/ELECTRONIC GEAR WILL BE LOCATED ADJACENT TO FIRE PUMP ROOM
14. COMPACTORS SHALL BE PROVIDED FOR TRASH, COMPOST, AND RECYCLING
15. PROPOSED STREET LIGHT
16. PARKING LOT LIGHT
17. BUILDING MOUNTED LIGHT
18. 4' RIGHT-OF-WAY DEDICATION FOR A HALF STREET DEDICATION OF 42 FEET
19. EXISTING EDGE OF PAVEMENT
20. EXISTING CURB
21. EXISTING STREET LIGHT
22. EXISTING TRANSFORMER
23. DIAMOND ISLAND FOR TREES
24. BUILDING WINGS FOR COOLING APPARATUS IF NECESSARY FOR COLD/FREEZER STORAGE
25. RELOCATE LIGHT POLE
26. APPROXIMATE LIMIT OF TRANSITIONAL SURFACE SLOPE. APPROXIMATE BUILDING HEIGHT ELEVATION ±2,508, ALLOWS A ±164' TALL BUILDING
27. FIRE HYDRANT
28. NEW CURB
29. NEW BIKE LANE
30. END BIKE LANE

CITY OF LANCASTER REQUIREMENTS			
CURRENT ZONING:	SP-9501		
PROPOSED ZONING:	SP-9501		
PROPOSED USES:	WAREHOUSE AND COLD STORAGE		
SITE CONSTRAINTS		BUILDING 1	
	REQUIRED	PROVIDED	
BUILDING HEIGHT:	NONE	50'	
CAR PARKING DIMENSIONS:	9' x 20'	9' x 20'	
DRIVE AISLE WIDTH (MIN.):	20'/28"*	20'/28"*	
BUILDING SETBACKS			
FRONT - WILLIAM J BARNES AVENUE:	50'**	62'**	
FRONT - 45TH AND 47TH STREET W:	50'**	174'**	
SIDE (SOUTH):	10'	93'**	
REAR (WEST):	10'	93'**	
PARKING SETBACKS			
FRONT - WILLIAM J BARNES AVENUE:	25'	25'	
FRONT - 45TH AND 47TH STREET W:	22'	24'	
SIDE (SOUTH):	10'	20'	
REAR (WEST):	10'	20'	
DEVELOPMENT DATA			
BUILDING DATA		BUILDING 1	
LOT AREA (AC.):	32.1 AC.		
RIGHT-OF-WAY DEDICATION (SF):	0.2 AC.		
NET SITE AREA (AC.):	31.9 AC.		
BUILDING AREA (SF):	581,000 SF		
BUILDING COVERAGE:	41.7%		
LANDSCAPED AREA:	9.1 AC.		
LANDSCAPED COVERAGE:	28.3%		
DOCKS:	38		
KNOCKOUTS:	50		
PARKING DATA		REQUIRED	PROVIDED
(1) INDUSTRIAL REQUIREMENT (STALLS):	117	419	
(2) BICYCLE PARKING:	42	42	
ADA PARKING (STALLS):	9	14	
TRAILER PARKING (STALLS):			116
(4) ELECTRIC CAR CHARGING STATION (EV):			
REQUIRED EV STALLS:	84	84	
EVCS CAPABLE STALLS:	21	21	

(1) INDUSTRIAL REQUIREMENT (STALLS): 5 PARKING STALLS FOR 25,000 SF; AND 1 PARKING STALL PER EACH ADDITIONAL 5,000 SF  
 (2) BICYCLE PARKING: 1 BICYCLE SPACE PER 10 EMPLOYEES  
 \*28' WIDE FIRE ACCESS  
 \*\*50' SETBACK DUE TO BUILDING HEIGHT OVER 35' TALL AND BUILDING LENGTH LONGER THAN 150'

LEGEND	
GENERAL	
2332 X	PROPOSED SPOT ELEVATIONS
B.S.	EASEMENTS & SETBACKS
B.S.	BUILDING SETBACK
RW	RIGHT OF WAY
PL	PROPERTY LINE
P.S.	PARKING SETBACK
UTILITIES	
	EXISTING NATURAL GAS MAIN
	EXISTING POWER/ELECTRIC LINE
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
CONTOURS	
	EXISTING INDEX CONTOURS
	EXISTING INTERMEDIATE CONTOURS



REVIEWED BY:	DESIGNED BY:	DRAFTED BY:	SP PROJECT #:
JAMES KRAATZ	JAMES KRAATZ	ALEX EDWARDS	4320

**BUILDING 1 SITE PLAN**  
**FOX FIELD COMMERCE CENTER - WEST (FFCC-W)**  
**CITY SUBMITTAL**  
 LANCASTER, LOS ANGELES COUNTY, CA

**SHEET #:**  
**C-0200**