

Appendix H

Project Trip Generation

ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

Date: September 14, 2023
Prepared by: Maryam Javanmardi
To: City of Lake Forest
Site: Great Scott Tree Service Lake Forest Facility
Subject: Project Trip Generation

Project Location

This memorandum provides a preliminary estimate of the potential vehicle trips that would be generated by the proposed Great Scott Tree Service Facility and a vehicle mile traveled (VMT) screening analysis. The project site, including 6.72 acres, is located within the City of Lake Forest, west of Linear Lane, north of Canada Street and bordered by Serrano Creek to the west. The project is bordered by industrial buildings on the east. The site includes the parcels numbered 610-301-07, 610-301-20, and 610-301-2.

Project Description

The Project proposes to rehabilitate one existing single-family residence as an office for the GSTC-SOC administrative functions alongside the removal of a second residence converted for office use which has taken place subsequent to the receipt of a demolition permit from the City of Lake Forest. Furthermore, the undertaking encompasses the establishment of parking zones dedicated to the tree service vehicles, referred to as “Tree Trucks” and equipment. Although wood chipping is currently not planned, it is desired in the future as it necessitates the installation of robust concrete “backstops” to facilitate the maneuvering of tractor loaders during chipping. The operational configuration and flow of Tree Truck locations for chipping are anticipated to evolve for heightened efficiency over time. Additional considerations regarding the strategy, approach, and location for wood chipping are pending discussion in relation to the use permit. According to the site plan, the site would have a total of 26 truck parking, eight (8) office employee parking (located adjacent to Linear Lane), one (1) EV (Electric Vehicle) parking, and one (1) ADA parking. The project site plan is shown in Figure 1.

Employee Workforce Specifications

The estimate of project trip generation is based on the anticipated operation of the site provided by GSTS-SOC. Based on a conservative assumption, the project would have approximately 52 employees broken down as follows:

- Nine (9) Staff members (including supervisors, administrative and maintenance staff)
- 43 Field Employees

Job-Specific Arrival/Departure Patterns

Field employees would arrive at the project site in their personal vehicle (or by carpool) and would then travel to the daily work site in a field equipment vehicle. Similarly, Supervisors would arrive at the project site in their personal vehicle to pick up a work truck and then depart to the work site. The remaining employees would remain at the project site. According to GSTS-SOC, many of their current field employees carpool resulting in a vehicle occupancy of approximately 1.5 persons per vehicle.

Presented below is the Arrival/Departure Time Pattern breakdown, which is specific to the job and has been provided by the GSTS-SOC:

Morning Operations

- At 6 AM, four (4) GSTC-SOC Supervisors will arrive in GSTC-SOC passenger trucks and park them in a designated section of the eight (8) stalls adjacent to Linear Lane.
- The Supervisors will disperse by 7 AM, making the stalls adjacent to Linear Lane available for other use.
- Starting at 6 AM, a maximum of 43 Crew members will arrive, receive work instructions, load trucks, and then clear the stalls for their personal vehicles.
- The objective is for the crews to depart for job sites by 6:30 AM.
- At 8 AM, approximately four Administrative Staff members will arrive and park in the Linear Lane stalls.

Afternoon Operations

Around 3 PM, Supervisors may return to stalls adjacent to Linear Lane, potentially sharing stalls with Administrative Staff members.

- Typically, the Supervisors depart by 4 PM.
 - At 5 PM, the Administrative Staff members usually depart, leaving the Tree Trucks parked overnight on the premises.
- At 3PM, field employees return from job sites and depart the facility by 3:30pm

The lot will maintain 24-hour operations to respond to emergency situations such as storms and administrative operations including weekends.

Parking

The 43 field employees park their personal vehicles in the same spot where their large work trucks are parked overnight. Based on the site plan, each truck parking spot can accommodate approximately two passenger cars. Regarding parking dimensions, truck stalls measure 13'x45', standard stalls adjacent to Linear Lane measure 9'x19', tree truck stalls measure 11'x35', ADA accessible stalls measure 9'x18', and EV stalls measure 12'x18'.

Based on the information provided by GSTS-SOC, here is parking breakdown for the project:

- **Boom Trucks:** 10 spaces
- **Boom/Dump Trucks:** 9 spaces
- **Dump Trucks:** 2 spaces
- **Tree Truck:** 5

These stalls are flexible in quantity and position for efficiency and are distinctly marked with railroad ties.

Circulation

Based on the information provided by GSTS-SOC, here's an overview of the gates designated for the project:

- **Gate A** on Private Drive/Linear Lane: This gate is utilized by Staff to enter to the project site.

- **Gate B** on Private Drive/Linear Lane: This gate is utilized by tree trucks to enter to the project site.
- **Gate C:** on Private Drive/Linear Lane: This gate is utilized by fire trucks, which both enter and exit through this gate. This gate is also utilized by staff and tree truck to exist the project site.

The flow from Gate A and Gate B to Gate C is guided by a one-way road originating from Linear Lane and leading into designated angled parking spots.

Project trip generation

The project trip generation is shown in Table 1. The analysis utilizes peak commute period from 7-9 AM and 4-6 PM. For the purpose of this analysis, AM peak hour is assumed from 7-8 AM and the PM peak hour is assumed from 5-6 PM. Table 1 shows the trip generation by employee type: five (5) office employees, four (4) supervisors, and 43 field employees.

The Trip Generation was analyzed by the following assumptions listed below:

- **Office Employees:** During the AM peak hour, five (5) office employees enter the site, and no office employees leave the project site, resulting in a total of five (5) trips during the AM peak hour. During the PM peak hour, no office employees enter the site, and five (5) office employees leave the project site, resulting in a total of five (5) trips during the PM peak hour. The total number of daily trips as a result of the operations summary provided previously for office employees is ten (10) trips.
- **Supervisors:** During the AM peak hour, no supervisors enter the site, and four (4) supervisors leave the project site, resulting in a total of four (4) trips during the AM peak hour. During the PM peak hour, there are no supervisor entries or exits at the project site, resulting in a total of zero (0) trips during this period. The total number of daily trips as a result of the operations summary provided previously for supervisors is 16 trips.
- **Field Workers:** During the AM and PM peak hours, there are no field workers entries or exits at the project site, resulting in a total of zero (0) trips during these periods. The total number of daily trips as a result of the operations summary provided previously for field workers is 58 trips.

Summarizing the passenger trips for the project, there are 84 daily trips, with nine (9) trips during the AM peak hour and five (5) trips during the PM peak hour. Additionally, trips generated by field equipment (Tree Truck) are 58 daily trips, but none of these occur during either the AM or PM peak hours. In total, this project generates 142 daily trips (including 84 daily passenger trips) with nine (9) trips in AM peak hours and five (5) trips in PM peak hours.

Vehicle Miles Traveled

Background

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating Transportation impacts. SB743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks and a diversity of land uses. The bill also specified that delay-based level of service could no longer be considered an indicator of a significant impact on the environment. In response, Section 15064.3 was added to the CEQA Guidelines beginning January 1, 2019. Section 15064.3 - Determining the Significance of Transportation Impacts states that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

VMT Screening Analysis

The City of Lake Forest has adopted VMT thresholds and guidelines that provide methodology and impact thresholds for projects that would require a vehicle mile traveled (VMT) analysis. The City of Lake Forest Transportation Analysis Guidelines (July 21, 2020) provide criteria for projects that would be considered to have a less-than significant impact on VMT and therefore could be screened out for further analysis. If a project meets one of the following criteria, then the VMT impact of the project is considered less-than significant and no further analysis of VMT would be required:

- The project serves the local community and thereby has the potential to reduce VMT.
- The project generates less than 110 daily vehicle trips.
- The project is located within a Transit Priority area.
- The project is located in a low VMT generating area.

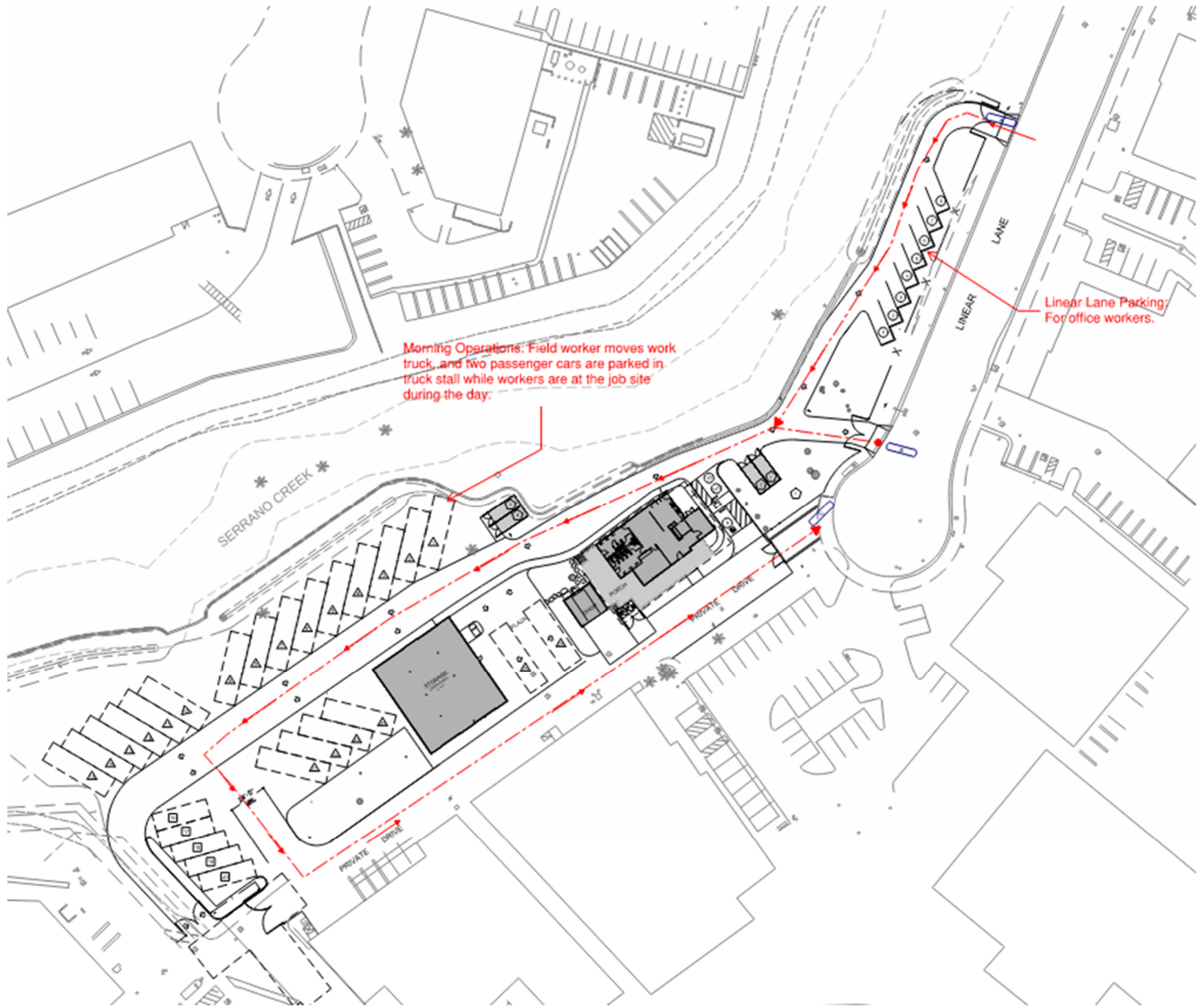
The project would not be considered a local-serving use, as defined in the guidelines. The project is also not located in either a Transit Priority Area or a low VMT generating area.

The City's Guidelines discuss the type of VMT that should be evaluated for various types of projects. Per the guidelines, VMT is defined as "the amount and distance of automobile travel attributable to a project. The term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks". This is consistent with CEQA Guidelines Section 15064.3(a) which states "For the purpose of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project". Based on both of these guidance documents, truck trips are not included in the VMT analysis.

To determine if the project's trip generation would exceed the 110 daily vehicle trips screening threshold, the passenger vehicle trip generation was utilized. This approach is consistent with both the County and CEQA Guidelines. As shown in Table 1, the project would generate 84 daily passenger vehicle trips. Because the project would generate fewer than 110 daily passenger vehicle trips, the project is presumed to have a less than significant impact on VMT and would not require further VMT analysis.

If you have any questions on this information, please contact me at mjavanmardi@epdsolutions.com or at (408) 893-0402.

Figure 1: Project Site Plan



Per architectural site plan dated 8/30/2023

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Table 1: Great Scott Trip Generation

Trip Type	# of Employees/Trips	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Office Employees	5	10	5	0	5	0	5	5
Supervisors ¹	4	16	0	4	4	0	0	0
Field Employees (Passenger Vehicle) ²	43	58	0	0	0	0	0	0
Total Passenger Trips	52	84	5	4	9	0	5	5
Field Equipment/Tree Trucks ³	29	58	0	0	0	0	0	0
Total		142	5	4	9	0	5	5
<p>¹ Supervisors arrive at the project site, pick up a truck and depart to the job site. Therefore 4 daily trips per supervisor are assumed.</p> <p>² Many field employees carpool, averaging 1.5 employees per vehicle.</p> <p>³ Based on the information provided by GSTC-OC, there are 12 spaces designated for Boom Trucks, 11 spaces for Boom/Dump Trucks, 2 spaces for Dump Trucks.</p>								