



LSC TRANSPORTATION CONSULTANTS, INC.
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Forest Lakes Filing No. 5
Transportation Memorandum
(LSC #194530)
August 30, 2019
PCD File No. SF1915

Traffic Engineer's Statement

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

A handwritten signature in blue ink, reading 'Jam Boulton'. The signature is written in a cursive style with a large, looped 'J' and 'B'.

9-2-19
Date



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August 30, 2019
Ms. Andrea Barlow
N.E.S., Inc.
619 North Cascade Avenue, Suite 200
Colorado Springs, CO 80903

RE: Forest Lakes Filing No. 5
El Paso County, Colorado
Transportation Memorandum
LSC #194530

Dear Ms. Barlow:

LSC Transportation Consultants, Inc. has prepared this transportation memorandum to accompany the Filing 5 submittal for the Forest Lakes residential development to be located northwest of the intersection of Hay Creek Road and Baptist Road in El Paso County, Colorado. This memorandum contains the following:

- A list of previous Forest Lakes traffic reports and the context of this project
- A summary of the proposed land use and access plan
- The projected average weekday and peak-hour vehicle-trips to be generated by the Filing 5 land uses
- Recommendations for street functional classifications for streets within Filing 5
- Recommended signing and striping for the short-radius horizontal curve on Mesa Top Road.
- The required Countywide Road Impact Fees

PREVIOUS FOREST LAKES TRAFFIC REPORTS AND MEMORANDUM

LSC completed a master-plan-level study for all of Forest Lakes dated August 13, 2001. LSC also prepared three letters in response to comments on the initial master plan study dated January 8, 2002, March 15, 2002, and August 5, 2002. A traffic impact analysis (TIA) for Forest Lakes Filing 2 dated December 9, 2015 and a traffic impact analysis for Forest Phase II dated February 21, 2019 have also been prepared. The area within the currently proposed Forest Lakes Filing No. 5 was included in Phase II TIA.

SITE DEVELOPMENT AND LAND USE

Land Use

Forest Lakes Filing No. 5 is planned to include 33 lots for single family homes. This is about two more lots than was assumed for this same area in the Phase II TIA. An Overall Site Exhibit has been attached.

Access

No change to the access is proposed with this filing.

TRIP GENERATION

Estimates of the traffic volumes expected to be generated by the site have been made using the nationally published trip generation rates found in *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Table 1 shows the results of the trip generation estimates.

As shown in Table 1, Forest Lakes is projected to generate about 312 new vehicle-trips on the average weekday, with about one-half of the vehicles entering and one-half of the vehicles exiting in a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 a.m. and 8:30 a.m., about six vehicles would enter and 18 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:30 p.m. and 6:30 p.m., about 21 vehicles would enter and 12 vehicles would exit the site.

SHORT-TERM AND 2040 TOTAL TRAFFIC

Please refer to *Forest Lakes Phase 2 Traffic Impact Analysis* dated February 21, 2019 for the short-term and 2040 total traffic volumes and level of service analysis.

ROADWAY CLASSIFICATIONS

As part of Filing No. 5, Forest Lakes Drive will be extended from its current terminus about 1,945 feet to the northwest and Mesa Top Drive will be extended from its current terminus about 2,030 feet to the southwest. As shown on Figure 11 of the Phase II TIS, both of these street sections should be classified as Urban Local.

HORIZONTAL CURVE SAFETY RECOMMENDATIONS

The section of Mesa Top Drive just south of the existing terminus is planned to have a maximum grade of 10% and a minimum centerline curve radius of 100 feet. This is less than the 200-foot minimum centerline curve radius for an Urban Local set by Table 2-7 of the *El Paso County*

Engineering Criteria Manual (ECM). The proposed radius would meet the criteria for an Urban Local (low volume). The maximum grade will need to be permitted at the discretion of the ECM administrator. Based on the information contained in the *Low-Cost Treatments for Horizontal Curve Safety 2016* by the U.S. Department of Transportation Federal Highway Administration (FHWA), LSC recommends the following signing and striping based on the publication “for the section of Mesa Top Drive with the short-radius, curve:

- Mesa Top Drive should be striped with center dual 4” yellow strip and white 4” edge stripes on the approaches and through the curve from approximately 16+00 to 19+00.
- Advance warning signs MUTCD W1-1a with a printed advisory speed of 15 miles per hour should be placed on Mesa Top Drive at 19+75 and 15+50.



W1-1a
(Typical)

- Chevron Alignment (W1-8) signs should be placed at least four feet above the roadway surface on the outside of this curve. The signs should be spaced at 40 feet apart and separate signs facing each direction of travel should be installed. Please refer to the MUTCD for additional placement details.



W1-8
(Typical)

- The plan shows guardrail on the outside of this curve.

ROADWAY IMPROVEMENT FEE PROGRAM

This project will be required to participate in the El Paso County Road Improvement Fee Program. Forest Lakes Filing No. 5 will join the ten-mil PID. The ten-mil PID building permit fee portion

associated with this option is \$1,221 per single-family dwelling unit. Based on 33 lots, the total building permit fee would be \$40,293.

* * * * *

Please contact me if you have any questions regarding this memo.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

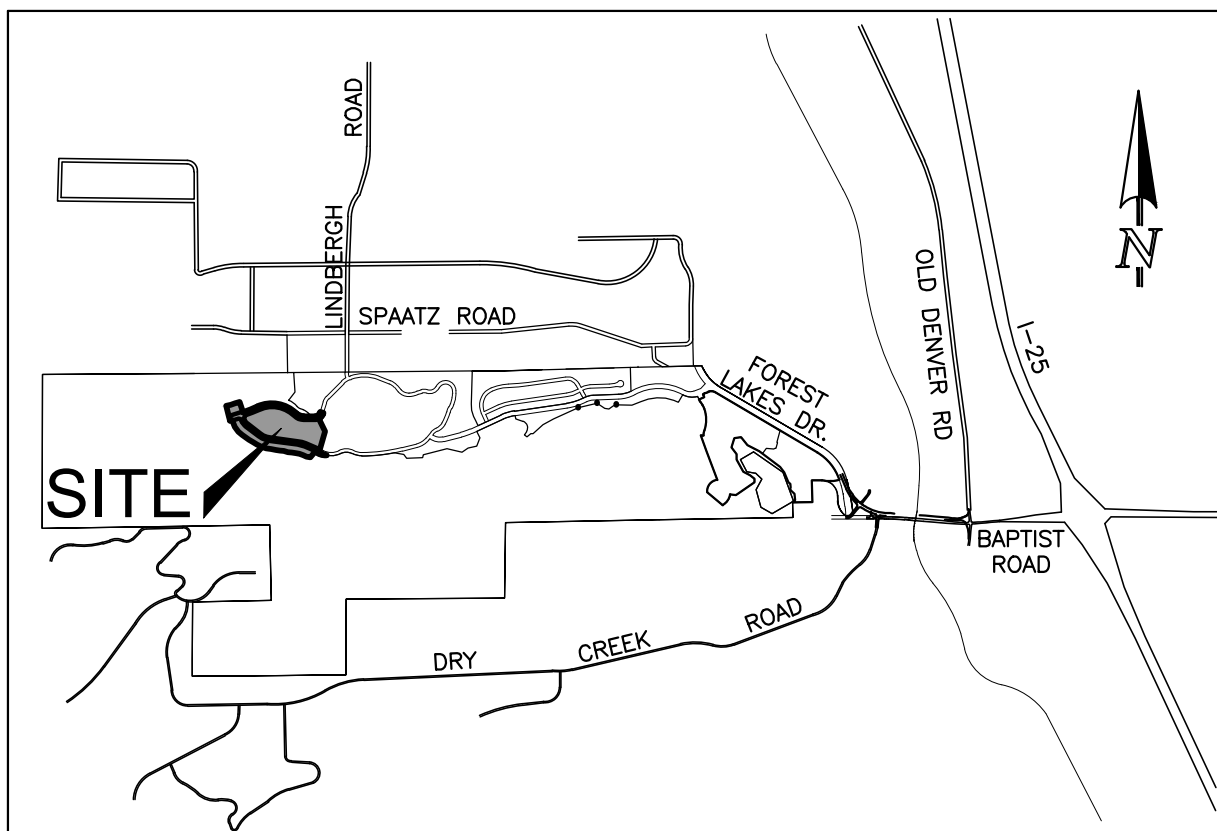
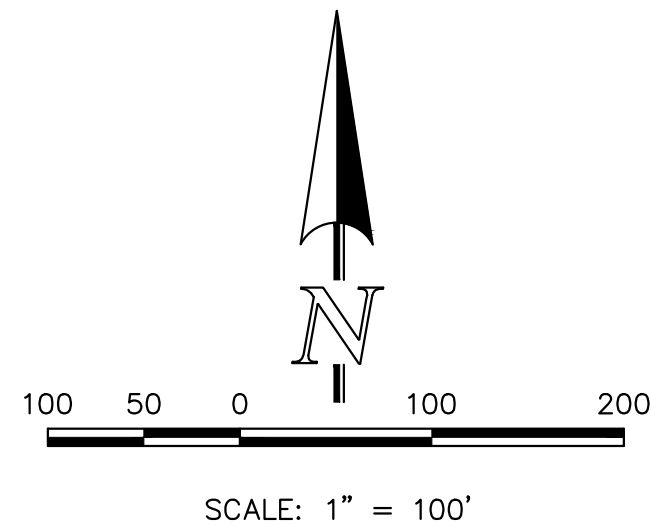
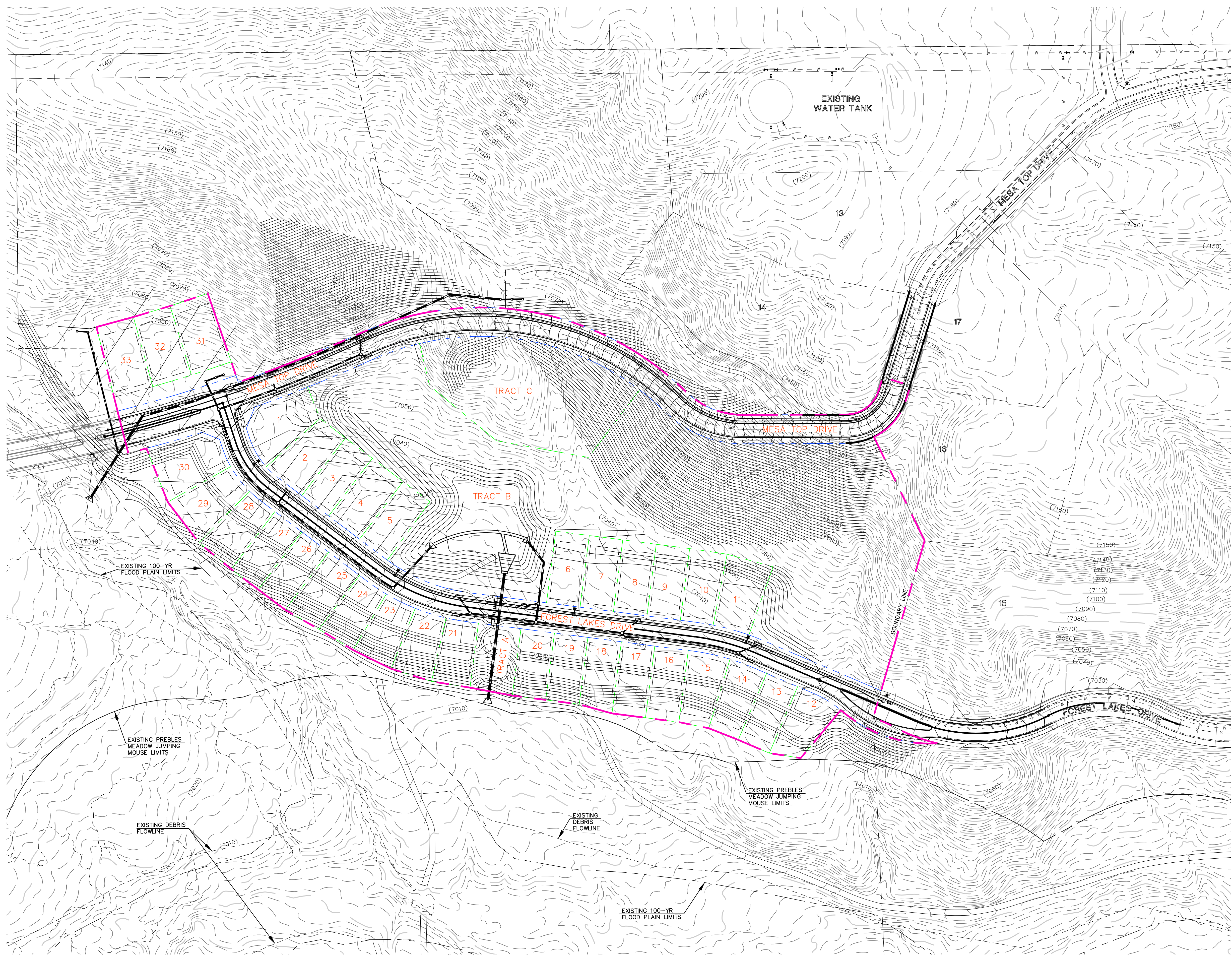
By: Jeffrey C. Hodsdon, P.E.
Principal

JCH:KDF:jas

Enclosures: Table 1
Forest Lakes Filing No. 5 Overall Site Exhibit
Plan and Profile exhibit (Classic Consulting)

Table 1
Trip Generation Estimate
Forest Lakes Fil 5

Table 1 Trip Generation Estimate Forest Lakes Fil 5												
Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates ⁽¹⁾						Total Trips Generated			
			Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
				In	Out	In	Out		In	Out	In	Out
210	Single-Family Detached Housing	33 DU ⁽²⁾	9.44	0.19	0.56	0.62	0.37	312	6	18	21	12
Notes: (1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE) (2) DU = dwelling unit												
Source: LSC Transportation Consultants, Inc.												



VICINITY MAP
NOT TO SCALE



619 N. Cascade Avenue, Suite 200
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(719)785-0790
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FOREST LAKES FILING NO. 5

OVERALL SITE EXHIBIT

DESIGNED BY	MAL	SCALE	DATE	06/06/19
DRAWN BY	BB	(H) 1"= 100'	SHEET	1 OF 1
CHECKED BY	(V) 1"= N/A	JOB NO.	1175.50	



