

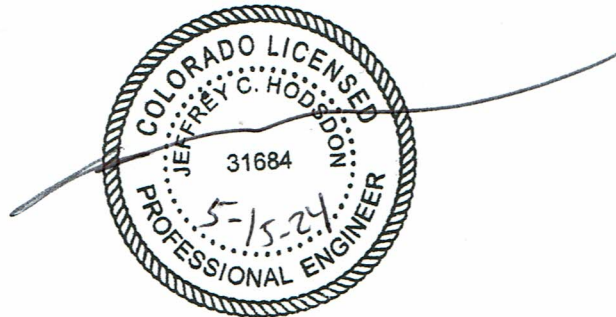


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**Berisford Minor Subdivision
Trip Generation & Access Technical Memo
(No TIS Required)
(LSC #S244030)
May 15, 2024**

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.

Date



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May 15, 2024

Chris Berisford
The Berisford Group
25 N Spruce St.
Colorado Springs, CO 80905

RE: Berisford Minor Subdivision
El Paso County, CO
Trip Generation & Access Technical Memo
(No TIS Required)
LSC #S244030

Dear Mr. Berisford,

LSC Transportation Consultants, Inc. has prepared this “trip generation and access” technical memorandum for the proposed four-lot residential development in the Black Forest area of El Paso County, Colorado. The 20-acre site is located north of the intersections of Hodgen Road/Goshawk Road (El Paso County parcel ID 5123000026). A total of four single-family residential lots are proposed for the site.

This memo presents information regarding the proposed land use, the estimated vehicle-trip generation, and an evaluation of the site-access points/driveways relative to County access criteria. The memo is called a “Trip Generation & Access Technical Memo” as the criteria under *Engineering Criteria Manual (ECM)* section B.1.2.D “No TIS Required” is met. This memo presents details of how these criteria are met.

PROPOSED LAND USE

The 20-acre property is zoned RR-5 and is located approximately 1 mile north of Hodgen Road. The site is accessed via East Goshawk Road or West Goshawk Road, which both connect to Hodgen Road. A total of four single-family residential lots are proposed for the site. Please refer to the attached site plan. Two “Flag” lots are proposed.

INDIVIDUAL RESIDENTIAL LOT DRIVEWAYS

The access points for the two flag lots (Lots 1 and 3) would be set with this plat. The driveway locations for the two lots with the remaining frontage along Goshawk Road (Lots 2 and 4) can be determined with the driveway permit applications for these lots, as there is flexibility for the locations of these relative locations that would meet *ECM* driveway sight-distance criteria. This

determination has been made based on LSC field-measured sight distances from the following probable locations along the site's frontage on Goshawk Road to determine the "best" location(s) for future site-access point(s):

- 15 feet east of west property line (Lot 1 driveway location)
- Center of property (see note on Exhibit 1 regarding potential locations for Lots 2 and 3)
- 15 feet west of east property line (Lot 2 driveway location)

Please refer to Exhibit 1 (attached) and the copy of the site plan (attached) for reference.

Goshawk Road forms a rectangular loop on the north side of Hodgen Road. The site is on the east-west segment of Goshawk Road East – on the north side of the "Goshawk loop" which extends approximately 0.8 miles north from Hodgen Road. Goshawk Road is identified in the *El Paso County Road System – 2016* report as a "graded and drained" (not paved), local, "Open Public Road Not Maintained by County - not eligible for HUTF.". The posted speed limit along this gravel road is 25 mph.

TRAFFIC CRASH DATA

LSC obtained and reviewed the reported crash-history data for the Goshawk intersections with Hodgen Road. Based on the data (copy attached), there is no identifiable **pattern** of any particular type of crash at the Goshawk intersections with Hodgen Road.

SIGHT DISTANCE

Please refer to the attached sight-distance Exhibit 1 for details regarding the driveways for Lots 1-4 relative to sight distance along the roadway (Goshawk Road). Lines of sight for the lot driveways will need to be kept clear of any sight-distance obstructions, including proposed landscaping, signage, etc. for the residential development.

Sight Distance Along the Roadway

Stopping sight distance along Goshawk Road approaching the potential site individual residential lot driveways would meet sight-distance along a roadway requirements in *ECM* Table 2-33. Exhibit 1 shows the sight distances along a roadway at the potential site-access point(s), assuming the driver's eye height of an approaching vehicle at 3.5 feet to a height of 3.5 feet above the road.

Entering Sight Distance

Intersection entering sight distance at the proposed site-access point(s) to Goshawk Road would meet sight-distance requirements in *ECM* Table 2-35. The following are the existing sight-distance measurements conducted in the field by LSC. Measurements were taken from a driver's eye height of 3.5 feet to an approaching vehicle height of 3.5 feet.

- 15 feet east of west property line
 - Greater than 1,000 feet looking to/from the west
 - 721 feet looking to/from the east
- Center of the property
 - Greater than 1,000 feet looking to/from the west
 - 431 feet looking to/from the east
- 15 feet west of east property line
 - Greater than 1,000 feet looking to/from the west
 - 674 feet looking to/from the east

TRIP GENERATION ESTIMATE

The trip-generation estimates for this proposed development are based on nationally published trip-generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE). Table 1 (attached) shows the results of the trip-generation estimates.

The single-family residential development is expected to generate about 38 vehicle trips on the average weekday, with about half entering and half exiting the site during 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 1 vehicle would enter and 3 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:00 p.m. and 6:00 p.m., about 3 vehicles would enter and 2 vehicles would exit the site.

“LINK LOS” FOR GOSHAWK ROAD

Goshawk Road is a **Private** Rural Local (gravel) roadway. The *ECM* design ADT for public “Rural Local (gravel)” roadways is 200 vehicles per day (vpd) average daily traffic (ADT). Currently, the ADT on Goshawk Road West is estimated to be 14 vehicles per day. Once site-generated traffic from these four residential lots is added, the ADT on Goshawk Road East would increase to approximately 180 vehicles per day (assuming 90 percent [or less] of site-generated trips would use Goshawk Road West for travel to/from Hodgen Road). With the addition of projected site-generated traffic to the roadway, average daily traffic volumes on Goshawk Road West are **not** likely to exceed the 200 ADT threshold (for paving) based on the projected overall average daily volumes and the *ECM* design ADT threshold for **public** “Rural Local (gravel)” roadways (this roadway is **private**).

EVALUATION AGAINST ECM APPENDIX B

The criteria under *Engineering Criteria Manual (ECM)* section B.1.2.D “No TIS Required” is met. Please refer to the attached worksheet.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

This project will be required to participate in the El Paso County Road Improvement Fee Program. The applicant will select the "Opt-out" option (no PID) and would pay the "full fee" amount at building permit. The current (2019) fee amount associated with this option is **\$3,830** per dwelling unit (subject to change). Based on 4 lots, the total building permit fee for this plat would be \$15,320.

* * * * *

Please contact me if you have any questions.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.

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

JCH/JAB:jas

Enclosures: Table 1
Exhibit 1 - Sight Distance
ECM Appendix B – "No TIS Required" Worksheet
Site Plan Exhibit
Reported Crash Data

Table 1

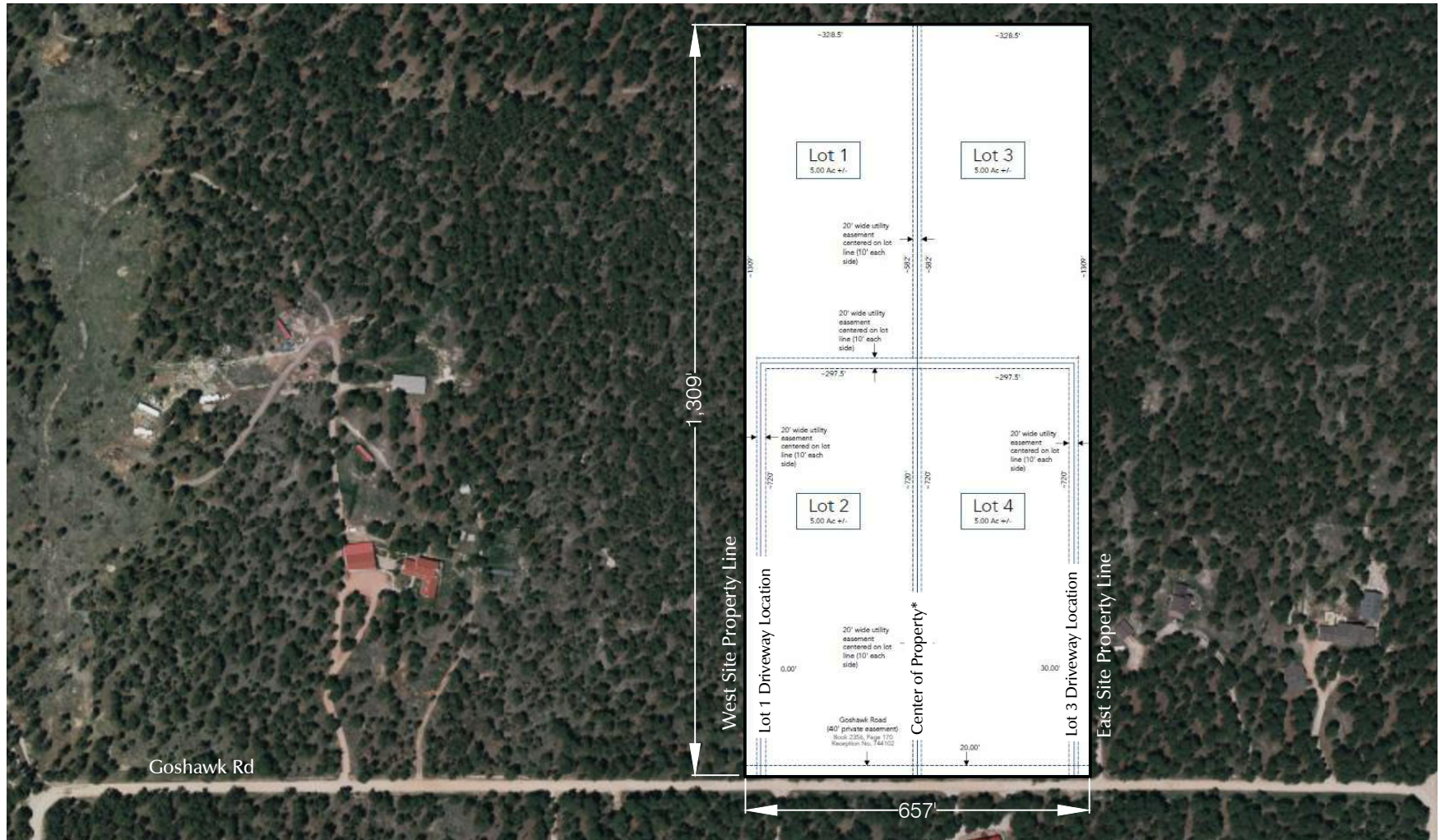
Table 1: Detailed Trip Generation

ITE		Value	Units ¹	Trip Generation Rates ²				Total Driveway Trips Generated					
Code	Description			Average Weekday	A.M.		P.M.		Average Weekday	A.M.		P.M.	
				In	Out	In	Out	In	Out	In	Out		
210	Single-Family (Detached) Housing	4	DU	9.43	0.18	0.53	0.59	0.35	38	1	3	3	2
¹ DU = dwelling units													
² Source: <i>Trip Generation, 11th Edition (2021)</i> by the Institute of Transportation Engineers (ITE)													
Note: Based on ITE average rates													
Updated by LSC: May 14, 2024													

Exhibit 1

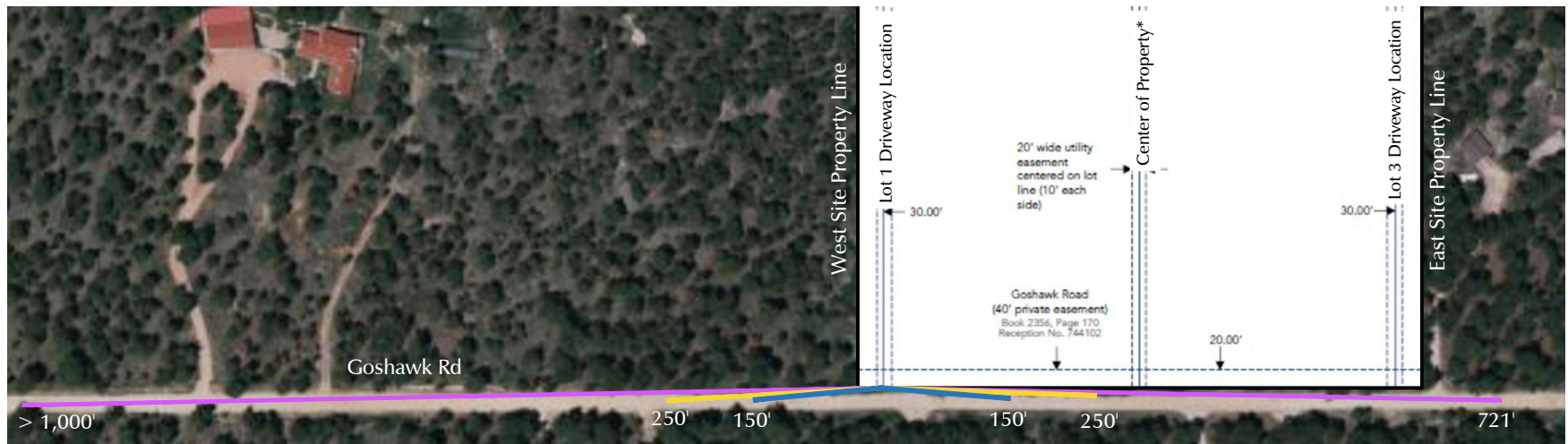


Site plan showing locations of 4 lots and proposed access points

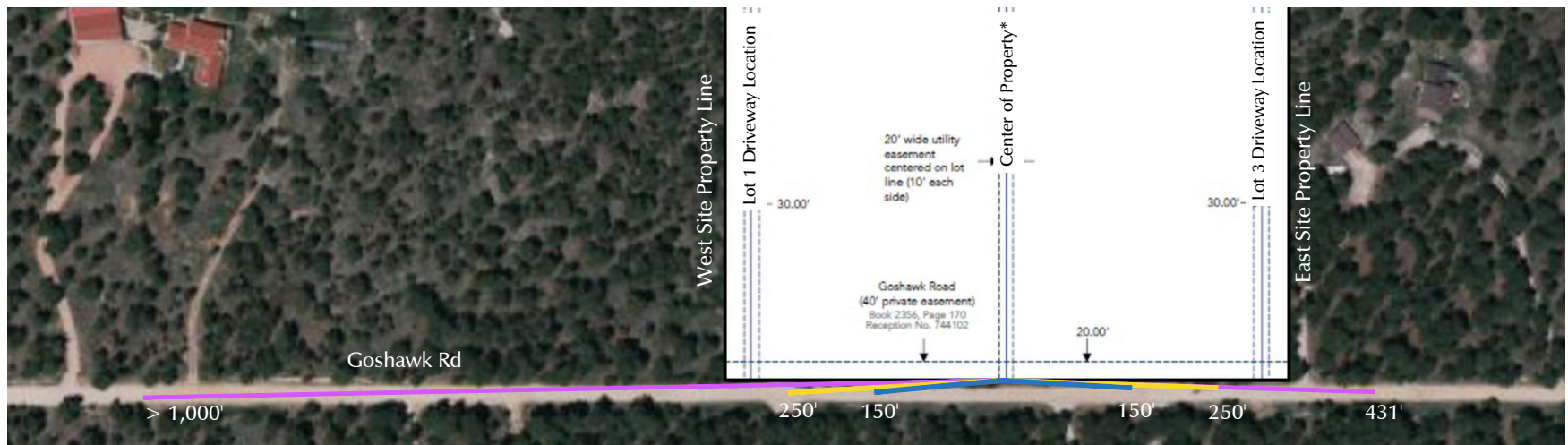


1" = 200' scale

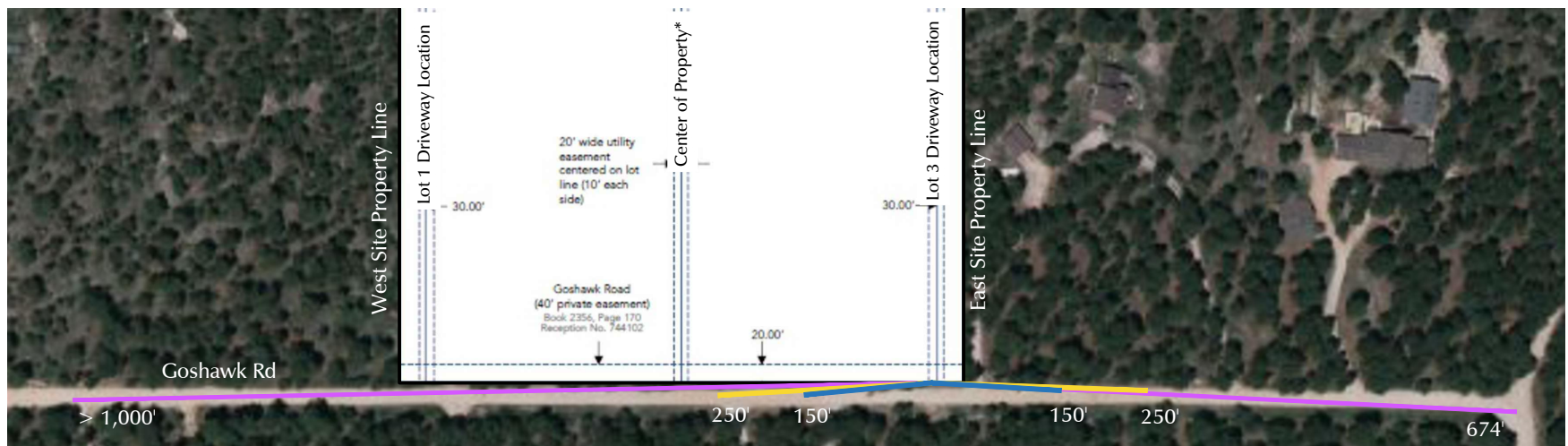
Proposed Lot 1 access location -- 15' east of west property line



Measurement from the center of the property



Proposed Lot 3 access location -- 15' west of east property line



- XXX' = field-measured sight distance
- ECM-required sight distance along the roadway (per ECM Table 2-33) 150'
- ECM-required entering sight distance (per ECM Table 2-35) 250' -- passenger cars and pickup trucks

* Sight distance measurement to/from the center of the property. Driveways for Lots 2 and 4, if located just east and west of this proposed lot line, would meet ECM sight distance criteria. Locations in the middle of the lot frontages would also meet ECM sight distance criteria.



Exhibit 1 Sight Distance Analysis Driveway Locations for Lots 1-4 on Goshawk Rd

ECM Appendix B – “No TIS Required” Worksheet



ECM Section B.1.2.D, Appendix B – “No TIS Required” Worksheet
Berisford Minor Subdivision

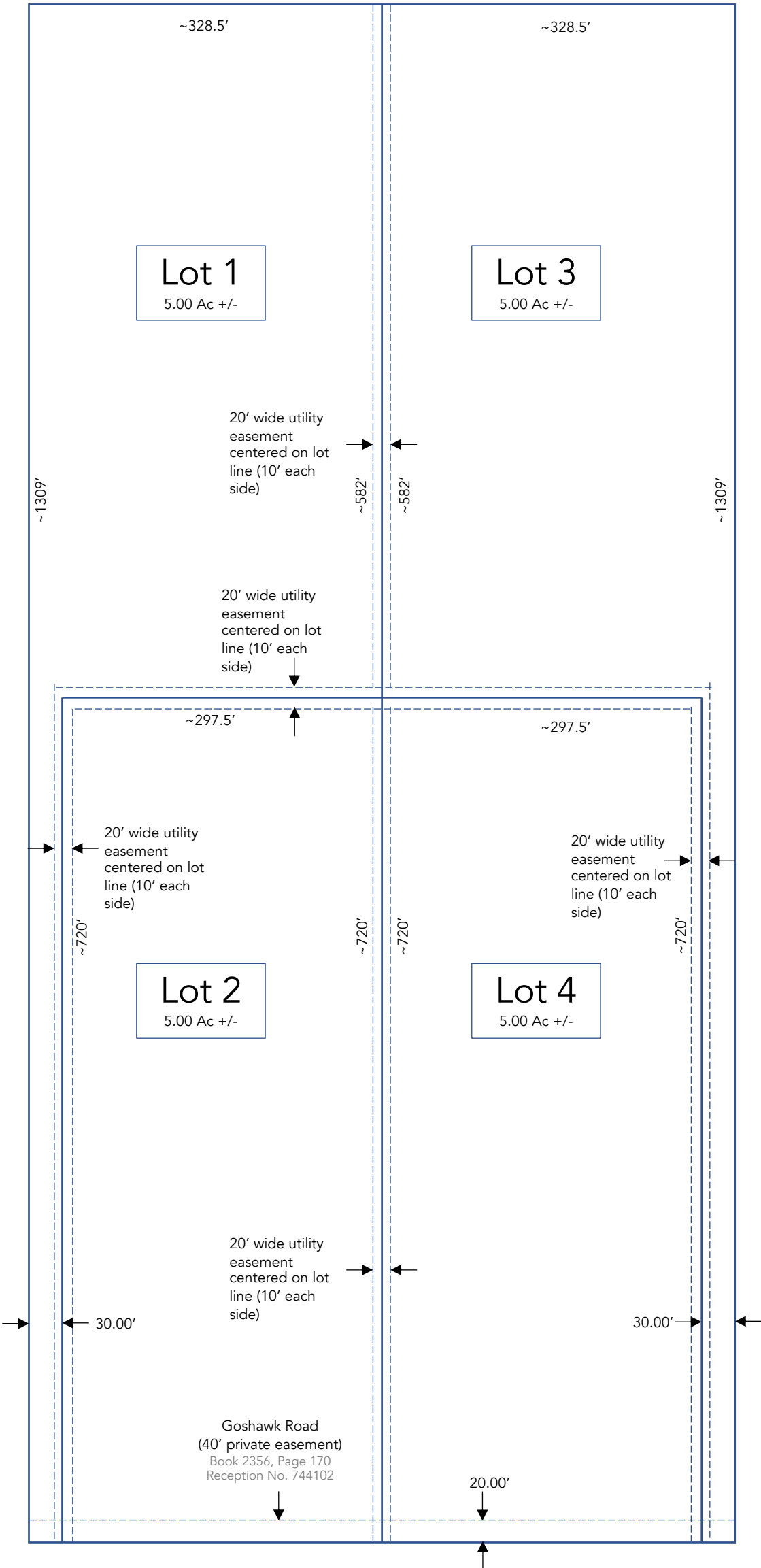
No TIS is required if all of the following criteria below are satisfied:

- 1. Daily vehicle trip-end generation is less than 100 or the peak hour trip generation is less than 10.**
 - ADT = 38
 - AM peak = 1 in + 3 out = 4 total trips
 - PM peak = 3 in + 2 out = 5 total trips
- 2. There are no additional proposed minor or major roadway intersections on Major Collectors, Arterials, or State Highways.**
 - Individual lot driveways would connect to Goshawk Road which is a Private Rural Local (gravel) roadway.
- 3. The increase in the number of vehicular trips does not exceed the existing trip generation by more than 10 peak hour trips or 100 daily trip ends.**
 - See No. 1. This is a proposed new development. The site is currently vacant land.
- 4. The change in the type of traffic to be generated (i.e., the addition of truck traffic) does not adversely affect the traffic currently planned for and accommodated within, and adjacent to, the property.**
 - Site-generated trips to be generated by the single-family residential development would be predominantly passenger vehicles. Therefore, the mix of traffic generated would be similar to other residential homes in the vicinity.
- 5. Acceptable LOS on the adjacent public roadways, accesses, and intersections will be maintained.**
 - With the addition of projected site-generated traffic to the roadway, average daily traffic volumes on Goshawk Road are not likely to exceed the 200 ADT threshold (for paving), based on the projected overall average daily volumes. An acceptable link LOS would be maintained on Goshawk Road.
- 6. No roadway or intersection in the immediate vicinity has a history of safety or accident problems.**
 - Based on a review of the reported crash-history data, there is no identifiable pattern of any particular type of crash at the Goshawk intersections with Hodgen Road.
- 7. There is no change of land use with access to a State Highway**
 - The site is not near any State Highway.
- 8. Pedestrian traffic – paved pedestrian facilities exist or will be constructed on, or adjacent to, the site.**
 - This site is located in a rural area and far removed from urban or suburban areas. Goshawk Road and county roads in the vicinity have rural cross sections, which do not require sidewalks per *ECM* criteria.
- 9. Bicycle traffic – paved bicycle lanes or paths exist or will be constructed on, or adjacent to, the site.**
 - This site is located in a rural area and far removed from urban or suburban areas. Goshawk Road and county roads in the vicinity have rural cross sections, which do not require paved, marked bicycle lanes per *ECM* criteria.

Site Plan



Berisford Minor Subdivision - PROPOSED



Site Location



Crash History



Occurrence Id	Date Of Report	Accident Date	Year	Day Of Week	Accident Time	Total Vehicles	Location County Name	Location Road Name	Number Killed	Number Injured	FIP	Highest Injury Level	Highway Code	Highway Name	Direction Code	Road Surface Code	Road Condition Code	Road Contour Curves Code	Road Contour Grade Code	Lighting Condition Code	Weather Condition Code1	AccidentNarrative
90325007000000161522792	7/5/2021 4:00	7/5/2021	2021	Monday	03:45	1	El Paso	HODGEN	0	2	Injury	3	03	CR002	E	02	01	STR	LEV	04	CLR	Vehicle 1 was west on Hodgen Road approaching Goshawk Road East. Vehicle 1 traveled off the northbound side of the roadway briefly before overcorrecting back onto the roadway. This caused vehicle 1 to have to overcorrect back to the right. Vehicle 1 then travelled off the right side of the roadway before it hit a trip point and rolled approximately 2 and 1/2 times. Vehicle 1 rolled off the nortside of the roadway through a barbed wire fence before coming to final rest on its top facing southeast.
90325007000000163219286	8/1/2021 13:30	8/1/2021	2021	Sunday	13:30	1	El Paso	HODGEN	0	0	Property	0	03	CR002	E	02	01	STR	HIL	01	CLO	Vehicle#1 was travelling westbound Hodgen Road approaching Goshawk Road. A doe ran across the roadway from the south edge. Vehicle#1 struck the deer within the lane of travel. Vehicle#1 was driven to the right shoulder of the roadway. The doe came to rest on the right shoulder of the roadway.
90325007000000163543892	8/6/2021 15:05	8/6/2021	2021	Friday	14:05	2	El Paso	HODGEN	0	0	Property	0	03	CR002		02	01	STR	LEV	01	CLR	Vehicle #1 was east bound on Hodgen Road. Vehicle #2 was also east bound on Hodgen Road in front of Vehicle #1. Vehicle #2 slowed and was attempting to turn left onto north bound Goshawk Road. Vehicle #1 failed to stop and collided with the rear of Vehicle #2. Unknown location of final rest as both vehicles were moved prior to investigation.
90325007000000212293955	8/29/2023 12:56	8/29/2023	2023	Tuesday	08:35	2	El Paso	HODGEN	0	0	Property	0	03	CR002	W	02	01	STR	UPH	01	CLR	Vehicle#1 was traveling behind Vehicle#2 west bound on Hodgen Road. 2 bucks jumped onto the roadway from the south edge of the roadway. Vehicle#2 came to a sudden stop. Vehicle#1 braked hard and attempted to avoid striking Vehicle#2, striking the front left of Vehicle#1 with the rear right of Vehicle#2. Both vehicles were driven to the right shoulder.
90325007000000229680484	12/29/2023 14:01	12/27/2023	2023	Wednesday	10:45	2	El Paso	HODGEN	0	0	Property	0	03	CR002	E	02	04	STR	DOW	01	CLR	Vehicle#1 was traveling east on Hodgen Road. Vehicle#2 was stopped in traffic on Hodgen Road. Vehicle#1 was unable to stop on the snow covered/ icy roadway and struck its front with the rear of Vehicle#2. Vehicle#2 was driven to a safe location. Vehicle#1 came to final rest on its wheels at POI facing east and was moved prior to investigation.