

September 27, 2024



Tamlin Storage, LLC  
57 Newport Circle, Unit B  
Colorado Springs, CO 80906

**Re: Traffic Compliance Letter for Tamlin Road RV Storage, a Supplement to *Tamlin Road Storage Traffic Impact Study* in Colorado Springs, CO dated July 15, 2020**

To Whom It May Concern:

This Traffic Compliance Letter has been prepared to provide a supplement to the approved *Tamlin Road Storage Traffic Impact Study* (TIS) dated July 15, 2020 and prepared by LSC Transportation Consultants. The scope of this letter will be limited to the recent site plan for the RV storage project along Tamlin Road, and the effects on site-generated traffic.

As seen in the TIS pages 2 and 3 (attached), two potential build-out scenarios were considered: moderate-intensity and high-intensity. The moderate-intensity scenario included office, industrial, and retail land uses. The high-intensity scenario included only retail land use. The TIS analyzed both of these scenarios in the future year 2038.

The recent site plan for the RV storage project presents a scenario in which storage remains the only land use on the site through 2038. The site plan adds 46 RV storage spaces to the existing storage facility. A trip generation table is attached. The storage land use generates fewer trips than the land uses considered in the moderate-intensity and high-intensity scenarios in the TIS. Therefore, site-generated traffic volumes are anticipated to be lower than what was considered in the TIS.

The TIS proposed a second site access along Tamlin Road. However, the recent site plan does not include this. Therefore, all trips to and from the site are expected to use the existing site access.

To confirm satisfactory traffic operations, JR analyzed the site access intersection in the opening day scenario, assumed to be year 2026, based on the recent site plan. Traffic volumes and operations are shown in the attached Synchro reports. All movements are expected to operate at LOS A in both the AM and PM peak hours. Queue lengths are nominal.

Because site-generated traffic volumes are expected to decrease, and Synchro analysis shows satisfactory traffic operations, the approved traffic impact study and roadway improvements are not adversely impacted by the recent site plan.

If you have any questions or comments, please feel free to contact me at [efarney@jrengineering.com](mailto:efarney@jrengineering.com) or 303-267-6183.

Sincerely,  
JR Engineering, LLC



Please provide stamp  
and statement with  
owner signature

Eli Farney, PE, PTOE  
Principal/Client Manager (Public Works)

Attachments: Excerpt from *Tamlin Road Storage TIS*  
RV Storage Site Plan  
RV Storage Trip Generation Table  
HCM 7<sup>th</sup> Edition Synchro Reports

### Traffic Engineer's Statement

The attached 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.

\_\_\_\_\_  
[Name, P.E. # \_\_\_\_\_ ]Date

### Developer's Statement

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

\_\_\_\_\_  
[Name, Title]Date  
[Business Name]  
[Address]



- Resulting traffic impacts of the proposed development expressed in terms of average daily traffic volumes and intersection levels of service
- Analysis of potential future intersection configurations at Marksheffel/Tamlin given that a future traffic signal is unlikely to be allowed at this intersection
- Recommendations for the roadway classification of Tamlin Road and auxiliary left-/right-turn lanes at the site access points and the Marksheffel/Tamlin intersection
- Summary of findings and recommendations

## LAND USE AND ACCESS

The 16-acre site is located south of Tamlin Road and east of Marksheffel Road in El Paso County. The entire site is zoned for commercial use. Figure 1 shows the site location and the adjacent roadways.

### Currently Proposed Land Use

Assumes RV storage would be the only land use for the short term. This report also includes a long-term scenario assuming the RV Storage remains on the site through 2038. The site plan is shown in Figure 2.

### Future Land Use Scenarios

LSC analyzed two additional future land use scenarios with the rezone application (approved). These scenarios have been taken from the March 5, 2019 TIS report and assume the RV Storage use removed in the future and development of new uses. These scenarios include a “moderate-intensity” (in terms of vehicle-trip generation associated with land use) buildout scenario and a “high-intensity” future land use scenario.

**Moderate-Intensity Buildout Scenario:** Assumes 115,600-square-foot mini-warehouse development on Lot 2 and a mixed-use, non-residential development on Lot 1. A general site plan is shown in Figure 3. This LSC-developed scenario assumes the following land use mix for Lot 1. This scenario assumes that the parcel would be separated into two separate lots (Lot 1 – 7.5 acres, Lot 2 – 8.5 acres):

- 21,500 square feet of general office
- 21,500 square feet of general light industrial
- 16,000 square feet of “shopping center” (retail center) land uses

This scenario **may** be more likely than the high-intensity scenario presented below given the location of the site.

**High-Intensity Future Land Use Scenario:** The high-intensity future land use scenario assumed that Lots 1 and 2 would collectively consist of 113,000 total square feet of shopping center/retail space. This scenario assumes no mini storage. This scenario has been analyzed as a reasonable representation of the “highest and best use” of the property with commercial zoning and associated

Add section on Road Impact fees paid under PPR1945. No additional road impact fees will be assessed with this submittal as an expansion of an existing use with no new structures. (Note this will change in 2025 with program updates).

estimate of “worst-case” trip generation resulting from the proposed land use. This scenario assumes that the parcel would be separated into two separate lots (Lot 1 – 7.5 acres, Lot 2 – 8.5 acres).

### **Currently Proposed RV Storage Access**

The RV storage access is anticipated to align with the existing Trojan Storage of Stetson Hills access, as described in the “Sight Distance” section later in this report.

### **Potential Future Land Use Scenario Access**

Potential future Lot 2 access point to Tamlin Road is shown on Figure 3. This eastern lot site access point is planned to align with the Trojan Storage of Stetson Hills access. Lot 1 access under a future redevelopment scenario would likely be located approximately 560 feet northeast of the intersection of Marksheffel Road/Tamlin Road.

Although the rezone traffic report (and Figure 3 of this report) show preliminary access point locations for the future land use scenarios, these final access point locations for future redevelopment scenarios will be determined at the time of redevelopment if/when the RV Storage is replaced with other future land uses. Access points must meet ECM standards for sight distance, should be placed a sufficient distance from Marksheffel for acceptable traffic operations, constructed in a location where any necessary auxiliary turn lanes can be installed, and result in adequate spacing between access points. Access points are anticipated to be stop-controlled, full-movement intersections with Tamlin Road.

## **ROADWAYS AND TRAFFIC CONDITIONS**

### **Area Roadways**

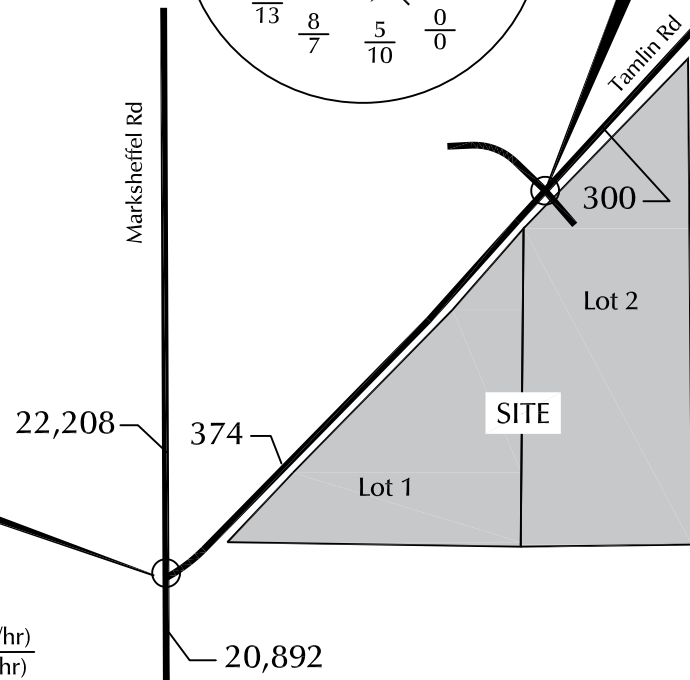
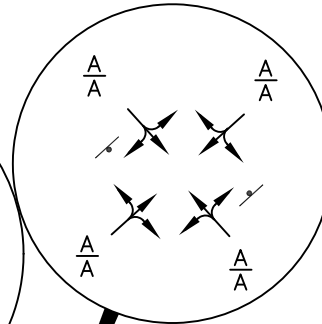
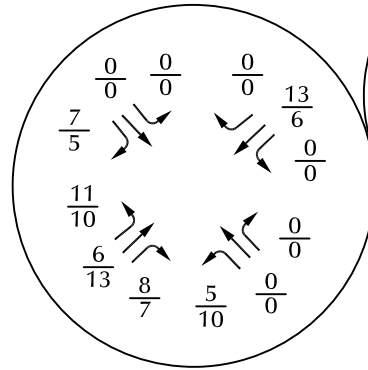
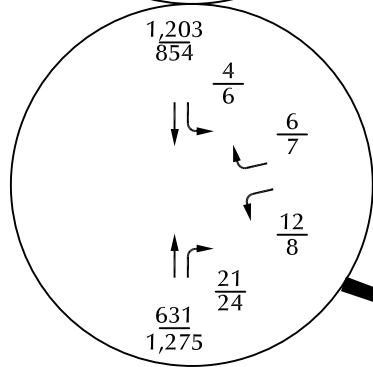
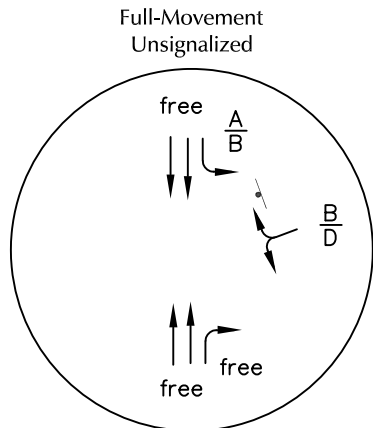
Study area roadways are identified below, followed by a brief description of each:

**Marksheffel Road** is designated as a Principal Arterial on the El Paso County 2016 Major Transportation Corridor Plan (MTCP). Currently a two-lane road, Marksheffel extends north-to-south for 17.4 miles between Link Road in the City of Fountain to the south (at the intersection of C&S Road/Link Road) and just north of Woodmen Road. Marksheffel Road is planned to be extended north to Vollmer Road in the short term. In the vicinity of the site, the posted speed limit on Marksheffel Road is 55 miles per hour (mph).

**Tamlin Road** is a rural, paved, local roadway that extends northeast from Marksheffel Road for just over one mile and serves the properties located within the unincorporated County enclave. Tamlin continues east as a gravel road through the Banning Lewis Ranch property to Meridian Road. However, use of the road is minimal and will be removed as future Banning Lewis Ranch development occurs. Tamlin is classified as a Collector on the El Paso County 2016 MTCP. Adjacent to the site, the posted speed limit is 35 mph.

**Table 3: Trip Generation Estimate and Comparison**

| Lots  | Acres | ITE  |                          | Value   | Units <sup>1</sup> | Trip Generation Rates <sup>2</sup> |      |      |      | Driveway Trips Generated |             |            |           | % Primary  | % Non-Primary | Non-Pass-by Trips Generated |     |             |           |           |            |            |
|---|-------|------|--------------------------|---------|--------------------|------------------------------------|------|------|------|--------------------------|-------------|------------|-----------|------------|---------------|-----------------------------|-----|-------------|-----------|-----------|------------|------------|
|   |       | Code | Description              |         |                    | Average                            | A.M. |      | P.M. |                          | Average     | A.M.       |           |            |               | P.M.                        |     | Average     | A.M.      |           | P.M.       |            |
|   |       |      |                          |         |                    | Weekday                            | In   | Out  | In   | Out                      | Weekday     | In         | Out       |            |               | In                          | Out | Weekday     | In        | Out       | In         | Out        |
| <b>INITIAL DEVELOPMENT</b>  |       |      |                          |         |                    |                                    |      |      |      |                          |             |            |           |            |               |                             |     |             |           |           |            |            |
| <b>RV Storage Only</b>  |       |      |                          |         |                    |                                    |      |      |      |                          |             |            |           |            |               |                             |     |             |           |           |            |            |
| 1 + 2   | 16.0  |      | RV/Vehicle Storage       | 2.890   | HOC                | 20.00                              | 2.28 | 1.37 | 1.98 | 2.81                     | 58          | 7          | 4         | 6          | 8             | 100%                        | 0%  | 58          | 7         | 4         | 6          | 8          |
| <b>POTENTIAL FUTURE LAND USE SCENARIOS</b>  |       |      |                          |         |                    |                                    |      |      |      |                          |             |            |           |            |               |                             |     |             |           |           |            |            |
| <b>Low-Intensity</b>  |       |      |                          |         |                    |                                    |      |      |      |                          |             |            |           |            |               |                             |     |             |           |           |            |            |
| 1   | 7.5   | 710  | General Office Building  | 21.500  | KSF                | 9.74                               | 1.00 | 0.16 | 0.18 | 0.97                     | 209         | 21         | 3         | 4          | 21            | 100%                        | 0%  | 209         | 21        | 3         | 4          | 21         |
|   |       | 110  | General Light Industrial | 21.500  | KSF                | 4.96                               | 0.62 | 0.08 | 0.08 | 0.55                     | 107         | 13         | 2         | 2          | 12            | 100%                        | 0%  | 107         | 13        | 2         | 2          | 12         |
|   |       | 820  | Shopping Center          | 16.000  | KSF                | 108.07                             | 6.19 | 3.79 | 4.20 | 4.55                     | 1729        | 99         | 61        | 67         | 73            | 42%                         | 58% | 726         | 42        | 26        | 28         | 31         |
| 2   | 8.5   | 151  | Mini-Warehousing         | 115.600 | KSF                | 1.51                               | 0.06 | 0.04 | 0.08 | 0.09                     | 175         | 7          | 5         | 9          | 10            | 100%                        | 0%  | 175         | 7         | 5         | 9          | 10         |
|   |       |      |                          |         |                    | <b>Total</b>                       |      |      |      |                          | <b>2220</b> | <b>141</b> | <b>71</b> | <b>82</b>  | <b>116</b>    |                             |     | <b>1217</b> | <b>83</b> | <b>35</b> | <b>43</b>  | <b>10</b>  |
| <b>High-Intensity</b>   |       |      |                          |         |                    |                                    |      |      |      |                          |             |            |           |            |               |                             |     |             |           |           |            |            |
| 1 + 2   | 16.0  | 820  | Shopping Center          | 113.000 | KSF                | 57.81                              | 1.14 | 0.70 | 2.53 | 2.74                     | <b>6533</b> | <b>129</b> | <b>79</b> | <b>286</b> | <b>309</b>    | 42%                         | 58% | <b>2744</b> | <b>54</b> | <b>33</b> | <b>120</b> | <b>130</b> |
| <sup>1</sup> KSF = 1,000 square feet, HOC = hundred occupied spaces<br><sup>2</sup> Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)<br>Note: "RV/Vehicle Storage" rates are based on RV storage facility turning movement counts conducted by LSC in El Paso County (2018) |       |      |                          |         |                    |                                    |      |      |      |                          |             |            |           |            |               |                             |     |             |           |           |            |            |



LEGEND:

- $\frac{XX}{XX}$  = AM Weekday Peak-Hour Traffic (veh/hr)
- $\frac{XX}{XX}$  = PM Weekday Peak-Hour Traffic (veh/hr)
- $\frac{A}{A}$  = AM Individual Movement LOS
- $\frac{A}{A}$  = PM Individual Movement LOS
- $\frac{A}{A}$  = AM Entire Intersection Peak-Hour Level of Service
- $\frac{A}{A}$  = PM Entire Intersection Peak-Hour Level of Service
- XX,XXX = Average Daily Traffic Volumes (ADTs)

⊥ = Stop Sign

\* Volumes reflect existing plus the RV storage traffic volumes only

\*\* Laneage for this scenario assumes Marksheffel improved to a five-lane roadway

Figure 9

## Currently-Proposed Use (Short-Term) Total Traffic\* (RV Storage Only), Lane Geometry\*\*, and Traffic Control

Tamlin Rd. Rezone (LSC# 184610)



# RV STORAGE PROJECT TAMLIN ROAD

5080 TAMLIN ROAD

LOCATED IN SECTION 21, TOWNSHIP 13S, RANGE 65W OF THE 6TH P.M.,  
COUNTY OF EL PASO, STATE OF COLORADO

## PRELIMINARY PLAN

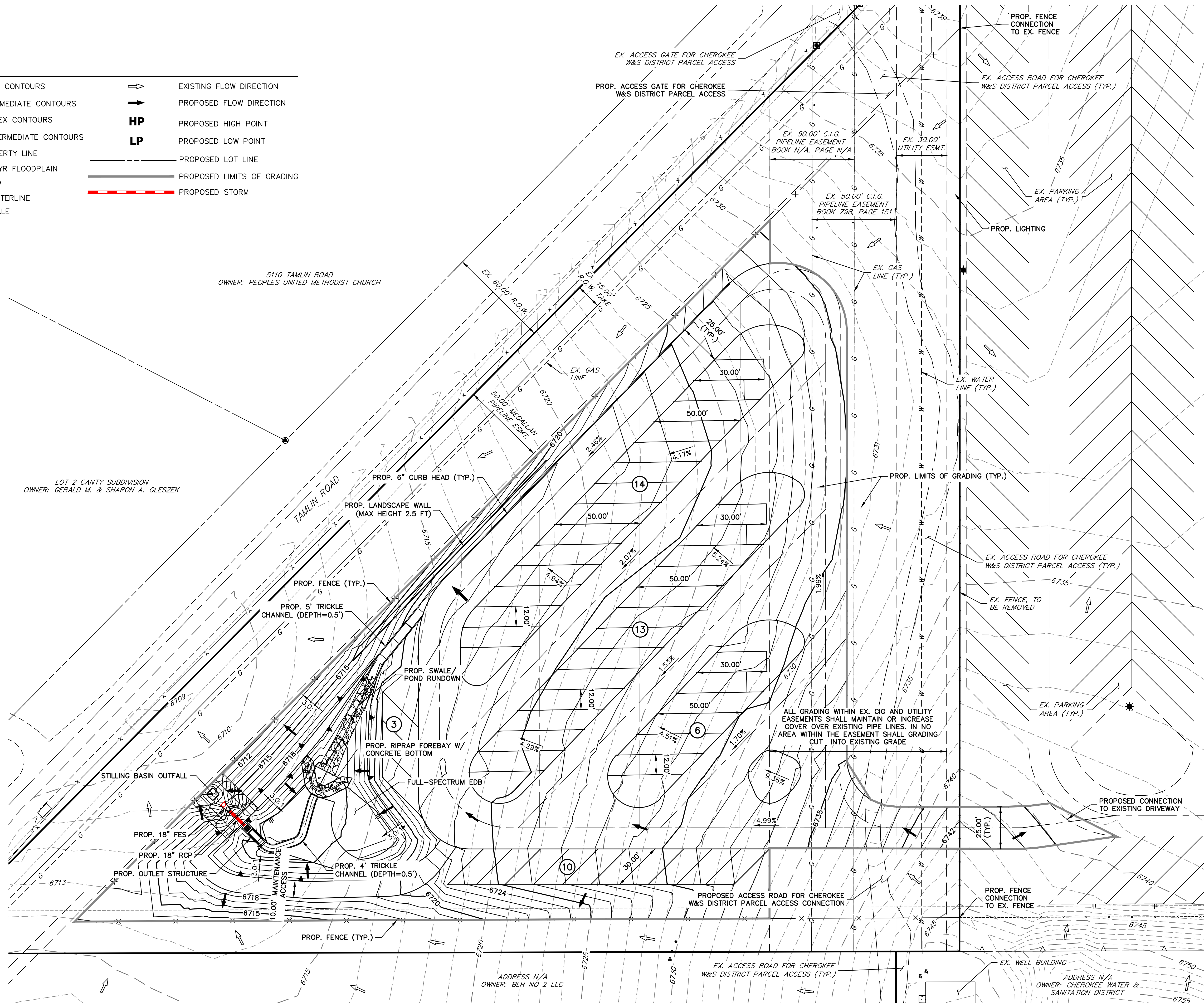
### LEGEND

|             |                                |     |                            |
|-------------|--------------------------------|-----|----------------------------|
| ---6100---  | EXISTING INDEX CONTOURS        | ⇨   | EXISTING FLOW DIRECTION    |
| ---6095---  | EXISTING INTERMEDIATE CONTOURS | ➔   | PROPOSED FLOW DIRECTION    |
| ---6095---  | PROPOSED INDEX CONTOURS        | HP  | PROPOSED HIGH POINT        |
| ---6100---  | PROPOSED INTERMEDIATE CONTOURS | LP  | PROPOSED LOW POINT         |
| ---         | EXISTING PROPERTY LINE         | --- | PROPOSED LOT LINE          |
| ---100YR--- | EXISTING 100-YR FLOODPLAIN     | --- | PROPOSED LIMITS OF GRADING |
| ---         | PROPOSED ROW                   | --- | PROPOSED STORM             |
| ---         | PROPOSED CENTERLINE            | --- |                            |
| ---         | PROPOSED SWALE                 | --- |                            |

### NOTE:

TOTAL PARKING COUNT: 46

30 15 0 30 60  
ORIGINAL SCALE: 1" = 30'



Know what's below.  
Call before you dig.

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**TAMLIN STORAGE LLC**  
57 NEWPORT CIRCLE UNIT B  
COLORADO SPRINGS, CO 80906  
PARKER SAMELSON  
(719) 659-7126

**J.R. ENGINEERING**  
A Westman Company  
Central 303-740-9888 • Colorado Springs 719-583-2583  
Fort Collins 970-491-9888 • www.jrengineering.com

| BY | DATE | REVISION |
|----|------|----------|
|    |      |          |
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| H-SCALE | V-SCALE | DATE     | DESIGNED BY | DRAWN BY | CHECKED BY |
|---------|---------|----------|-------------|----------|------------|
| 1"=30'  | N/A     | 09/17/24 | PAL         | PAL      |            |

| RV STORAGE PROJECT<br>TAMLIN ROAD<br>PRELIMINARY PLAN |                 |
|---|-----------------|
| SHEET 1 OF 1  | JOB NO. 2530500 |



### Trip Generation Summary

















**Project: Tamlin Road RV Storage**

| ITE Code | Description | Size | Units                            | Weekday Average Daily Trips |      |       | Weekday AM Peak Hour Trips |      |       | Weekday PM Peak Hour Trips |      |       |
|----------|-------------|------|----------------------------------|-----------------------------|------|-------|----------------------------|------|-------|----------------------------|------|-------|
|          |             |      |                                  | Enter                       | Exit | Total | Enter                      | Exit | Total | Enter                      | Exit | Total |
| N/A*     | RV Storage  | 46   | Occupied Spaces                  | 1                           | 1    | 2     | 1                          | 1    | 2     | 5                          | 5    | 10    |
|          |             |      | Unadjusted Volume                | 1                           | 1    | 2     | 1                          | 1    | 2     | 5                          | 5    | 10    |
|          |             |      | Internal Capture                 | 0%                          | 0%   | 0%    | 0%                         | 0%   | 0%    | 0%                         | 0%   | 0%    |
|          |             |      | Pass-By Trips                    | 0%                          | 0%   | 0%    | 0%                         | 0%   | 0%    | 0%                         | 0%   | 0%    |
|          |             |      | Volume Added to Adjacent Streets | 1                           | 1    | 2     | 1                          | 1    | 2     | 5                          | 5    | 10    |

\*ITE *Trip Generation Manual*, 11th Edition does not include a land use for RV storage. Therefore, trip generation rates are based on traffic counts collected by LSC Transportation Consultants at several RV storage facilities in El Paso County in 2018.



Lanes, Volumes, Timings  
1: Tamlin Road & Site Access

|                                   |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                        | SEL   | SET   | SER   | NWL   | NWT   | NWR   | NEL  | NET   | NER   | SWL   | SWT   | SWR   |
| Lane Configurations               |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (vph)              | 0   | 0   | 7   | 6   | 0   | 0   | 11   | 6   | 9   | 0   | 13  | 0   |
| Future Volume (vph)               | 0   | 0   | 7   | 6   | 0   | 0   | 11   | 6   | 9   | 0   | 13  | 0   |
| Ideal Flow (vphpl)                | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor                 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Fr <sub>t</sub>                   |   | 0.865   |   |   |   |   |  | 0.952   |   |   |   |   |
| Fl <sub>t</sub> Protected         |   |   |   |   | 0.950   |   |  | 0.980   |   |   |   |   |
| Satd. Flow (prot)                 | 0   | 1494  | 0   | 0   | 1641  | 0   | 0  | 1611  | 0   | 0   | 1727  | 0   |
| Fl <sub>t</sub> Permitted         |   |   |   |   | 0.950   |   |  | 0.980   |   |   |   |   |
| Satd. Flow (perm)                 | 0   | 1494  | 0   | 0   | 1641  | 0   | 0  | 1611  | 0   | 0   | 1727  | 0   |
| Link Speed (mph)                  |   | 30  |   |   | 30  |   |  | 35  |   |   | 35  |   |
| Link Distance (ft)                |   | 607   |   |   | 625   |   |  | 585   |   |   | 609   |   |
| Travel Time (s)                   |   | 13.8  |   |   | 14.2  |   |  | 11.4  |   |   | 11.9  |   |
| Peak Hour Factor                  | 0.78  | 0.78  | 0.78  | 0.78  | 0.78  | 0.78  | 0.78   | 0.78  | 0.78  | 0.78  | 0.78  | 0.78  |
| Growth Factor                     | 100%  | 100%  | 100%  | 100%  | 100%  | 100%  | 100%   | 100%  | 100%  | 100%  | 100%  | 800%  |
| Heavy Vehicles (%)                | 10%   | 10%   | 10%   | 10%   | 10%   | 10%   | 10%  | 10%   | 10%   | 10%   | 10%   | 10%   |
| Adj. Flow (vph)                   | 0   | 0   | 9   | 8   | 0   | 0   | 14   | 8   | 12  | 0   | 17  | 0   |
| Shared Lane Traffic (%)           |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)             | 0   | 9   | 0   | 0   | 8   | 0   | 0  | 34  | 0   | 0   | 17  | 0   |
| Enter Blocked Intersection        | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment                    | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)                  |   | 0   |   |   | 0   |   |  | 0   |   |   | 0   |   |
| Link Offset(ft)                   |   | 0   |   |   | 0   |   |  | 0   |   |   | 0   |   |
| Crosswalk Width(ft)               |   | 16  |   |   | 16  |   |  | 16  |   |   | 16  |   |
| Two way Left Turn Lane            |   |   |   |   |   |   |  |   |   |   |   |   |
| Headway Factor                    | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)               | 15  |   | 9   | 15  |   | 9   | 15   |   | 9   | 15  |   | 9   |
| Sign Control                      |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |
| <b>Intersection Summary</b>       |   |   |   |   |   |   |  |   |   |   |   |   |
| Area Type:                        | Other   |   |   |   |   |   |  |   |   |   |   |   |
| Control Type:                     | Unsignalized  |   |   |   |   |   |  |   |   |   |   |   |
| Intersection Capacity Utilization | 19.8%   |   |   |   |   | ICU Level of Service A  |  |   |   |   |   |   |
| Analysis Period (min)             | 15  |   |   |   |   |   |  |   |   |   |   |   |

















| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 3.7  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | SEL  | SET  | SER  | NWL  | NWT  | NWR  | NEL  | NET  | NER  | SWL  | SWT  | SWR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 7    | 6    | 0    | 0    | 11   | 6    | 9    | 0    | 13   | 0    |
| Future Vol, veh/h        | 0    | 0    | 7    | 6    | 0    | 0    | 11   | 6    | 9    | 0    | 13   | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   |
| Heavy Vehicles, %        | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| Mvmt Flow                | 0    | 0    | 9    | 8    | 0    | 0    | 14   | 8    | 12   | 0    | 17   | 0    |

| Major/Minor          | Minor2 |      | Minor1 |      |      | Major1 |      | Major2 |   |      |   |   |
|----------------------|--------|------|--------|------|------|--------|------|--------|---|------|---|---|
| Conflicting Flow All | 53     | 64   | 17     | 58   | 58   | 13     | 17   | 0      | 0 | 19   | 0 | 0 |
| Stage 1              | 17     | 17   | -      | 42   | 42   | -      | -    | -      | - | -    | - | - |
| Stage 2              | 36     | 47   | -      | 17   | 17   | -      | -    | -      | - | -    | - | - |
| Critical Hdwy        | 7.2    | 6.6  | 6.3    | 7.2  | 6.6  | 6.3    | 4.2  | -      | - | 4.2  | - | - |
| Critical Hdwy Stg 1  | 6.2    | 5.6  | -      | 6.2  | 5.6  | -      | -    | -      | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.2    | 5.6  | -      | 6.2  | 5.6  | -      | -    | -      | - | -    | - | - |
| Follow-up Hdwy       | 3.59   | 4.09 | 3.39   | 3.59 | 4.09 | 3.39   | 2.29 | -      | - | 2.29 | - | - |
| Pot Cap-1 Maneuver   | 927    | 811  | 1040   | 919  | 817  | 1044   | 1550 | -      | - | 1547 | - | - |
| Stage 1              | 983    | 866  | -      | 953  | 845  | -      | -    | -      | - | -    | - | - |
| Stage 2              | 960    | 840  | -      | 983  | 866  | -      | -    | -      | - | -    | - | - |
| Platoon blocked, %   |        |      |        |      |      |        |      | -      | - | -    | - | - |
| Mov Cap-1 Maneuver   | 918    | 804  | 1040   | 902  | 810  | 1044   | 1550 | -      | - | 1547 | - | - |
| Mov Cap-2 Maneuver   | 918    | 804  | -      | 902  | 810  | -      | -    | -      | - | -    | - | - |
| Stage 1              | 983    | 866  | -      | 944  | 837  | -      | -    | -      | - | -    | - | - |
| Stage 2              | 951    | 832  | -      | 974  | 866  | -      | -    | -      | - | -    | - | - |

| Approach               | SE   |  | NW   |  | NE   |  | SW |  |
|------------------------|------|--|------|--|------|--|----|--|
| HCM Control Delay, s/v | 8.49 |  | 9.02 |  | 3.11 |  | 0  |  |
| HCM LOS                | A    |  | A    |  |      |  |    |  |

| Minor Lane/Major Mvmt     | NEL   | NET | NERNWLn1 | SELn1 | SWL   | SWT  | SWR |
|---------------------------|-------|-----|----------|-------|-------|------|-----|
| Capacity (veh/h)          | 680   | -   | -        | 902   | 1040  | 1547 | -   |
| HCM Lane V/C Ratio        | 0.009 | -   | -        | 0.009 | 0.009 | -    | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | -        | 9     | 8.5   | 0    | -   |
| HCM Lane LOS              | A     | A   | -        | A     | A     | A    | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | -        | 0     | 0     | 0    | -   |

Lanes, Volumes, Timings  
1: Tamlin Road & Site Access

|                            |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group                 | SEL   | SET   | SER   | NWL   | NWT   | NWR   | NEL  | NET   | NER   | SWL   | SWT   | SWR   |
| Lane Configurations        |   |  |   |   |  |   |  |  |   |   |  |   |
| Traffic Volume (vph)       | 0   | 0   | 5   | 11  | 0   | 0   | 10   | 13  | 8   | 0   | 6   | 0   |
| Future Volume (vph)        | 0   | 0   | 5   | 11  | 0   | 0   | 10   | 13  | 8   | 0   | 6   | 0   |
| Ideal Flow (vphpl)         | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900   | 1900  | 1900  | 1900  | 1900  | 1900  |
| Lane Util. Factor          | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Fr <sub>t</sub>            |   | 0.865   |   |   |   |   |  | 0.966   |   |   |   |   |
| Fl <sub>t</sub> Protected  |   |   |   |   | 0.950   |   |  | 0.984   |   |   |   |   |
| Satd. Flow (prot)          | 0   | 1494  | 0   | 0   | 1641  | 0   | 0  | 1642  | 0   | 0   | 1727  | 0   |
| Fl <sub>t</sub> Permitted  |   |   |   |   | 0.950   |   |  | 0.984   |   |   |   |   |
| Satd. Flow (perm)          | 0   | 1494  | 0   | 0   | 1641  | 0   | 0  | 1642  | 0   | 0   | 1727  | 0   |
| Link Speed (mph)           |   | 30  |   |   | 30  |   |  | 35  |   |   | 35  |   |
| Link Distance (ft)         |   | 607   |   |   | 625   |   |  | 585   |   |   | 609   |   |
| Travel Time (s)            |   | 13.8  |   |   | 14.2  |   |  | 11.4  |   |   | 11.9  |   |
| Peak Hour Factor           | 0.78  | 0.78  | 0.78  | 0.78  | 0.78  | 0.78  | 0.78   | 0.78  | 0.78  | 0.78  | 0.78  | 0.78  |
| Heavy Vehicles (%)         | 10%   | 10%   | 10%   | 10%   | 10%   | 10%   | 10%  | 10%   | 10%   | 10%   | 10%   | 10%   |
| Adj. Flow (vph)            | 0   | 0   | 6   | 14  | 0   | 0   | 13   | 17  | 10  | 0   | 8   | 0   |
| Shared Lane Traffic (%)    |   |   |   |   |   |   |  |   |   |   |   |   |
| Lane Group Flow (vph)      | 0   | 6   | 0   | 0   | 14  | 0   | 0  | 40  | 0   | 0   | 8   | 0   |
| Enter Blocked Intersection | No  | No  | No  | No  | No  | No  | No   | No  | No  | No  | No  | No  |
| Lane Alignment             | Left  | Left  | Right   | Left  | Left  | Right   | Left   | Left  | Right   | Left  | Left  | Right   |
| Median Width(ft)           |   | 0   |   |   | 0   |   |  | 0   |   |   | 0   |   |
| Link Offset(ft)            |   | 0   |   |   | 0   |   |  | 0   |   |   | 0   |   |
| Crosswalk Width(ft)        |   | 16  |   |   | 16  |   |  | 16  |   |   | 16  |   |
| Two way Left Turn Lane     |   |   |   |   |   |   |  |   |   |   |   |   |
| Headway Factor             | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Turning Speed (mph)        | 15  |   | 9   | 15  |   | 9   | 15   |   | 9   | 15  |   | 9   |
| Sign Control               |   | Stop  |   |   | Stop  |   |  | Free  |   |   | Free  |   |

| Intersection Summary              |              |  |  |  |  |                        |  |  |  |  |  |  |
|-----------------------------------|--------------|--|--|--|--|------------------------|--|--|--|--|--|--|
| Area Type:                        | Other        |  |  |  |  |                        |  |  |  |  |  |  |
| Control Type:                     | Unsignalized |  |  |  |  |                        |  |  |  |  |  |  |
| Intersection Capacity Utilization | 22.3%        |  |  |  |  | ICU Level of Service A |  |  |  |  |  |  |
| Analysis Period (min)             | 15           |  |  |  |  |                        |  |  |  |  |  |  |

| Intersection             |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Int Delay, s/veh         | 4.1  |      |      |      |      |      |      |      |      |      |      |      |
| Movement                 | SEL  | SET  | SER  | NWL  | NWT  | NWR  | NEL  | NET  | NER  | SWL  | SWT  | SWR  |
| Lane Configurations      |      | ↕    |      |      | ↕    |      |      | ↕    |      |      | ↕    |      |
| Traffic Vol, veh/h       | 0    | 0    | 5    | 11   | 0    | 0    | 10   | 13   | 8    | 0    | 6    | 0    |
| Future Vol, veh/h        | 0    | 0    | 5    | 11   | 0    | 0    | 10   | 13   | 8    | 0    | 6    | 0    |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Stop | Stop | Stop | Stop | Stop | Stop | Free | Free | Free | Free | Free | Free |
| RT Channelized           | -    | -    | None | -    | -    | None | -    | -    | None | -    | -    | None |
| Storage Length           | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| Veh in Median Storage, # | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Grade, %                 | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    | -    | 0    | -    |
| Peak Hour Factor         | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   | 78   |
| Heavy Vehicles, %        | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   | 10   |
| Mvmt Flow                | 0    | 0    | 6    | 14   | 0    | 0    | 13   | 17   | 10   | 0    | 8    | 0    |

| Major/Minor          | Minor2 |      | Minor1 |      | Major1 |      |      | Major2 |   |      |   |   |
|----------------------|--------|------|--------|------|--------|------|------|--------|---|------|---|---|
| Conflicting Flow All | 50     | 60   | 8      | 55   | 55     | 22   | 8    | 0      | 0 | 27   | 0 | 0 |
| Stage 1              | 8      | 8    | -      | 47   | 47     | -    | -    | -      | - | -    | - | - |
| Stage 2              | 42     | 53   | -      | 8    | 8      | -    | -    | -      | - | -    | - | - |
| Critical Hdwy        | 7.2    | 6.6  | 6.3    | 7.2  | 6.6    | 6.3  | 4.2  | -      | - | 4.2  | - | - |
| Critical Hdwy Stg 1  | 6.2    | 5.6  | -      | 6.2  | 5.6    | -    | -    | -      | - | -    | - | - |
| Critical Hdwy Stg 2  | 6.2    | 5.6  | -      | 6.2  | 5.6    | -    | -    | -      | - | -    | - | - |
| Follow-up Hdwy       | 3.59   | 4.09 | 3.39   | 3.59 | 4.09   | 3.39 | 2.29 | -      | - | 2.29 | - | - |
| Pot Cap-1 Maneuver   | 930    | 815  | 1052   | 923  | 821    | 1033 | 1562 | -      | - | 1537 | - | - |
| Stage 1              | 993    | 874  | -      | 946  | 840    | -    | -    | -      | - | -    | - | - |
| Stage 2              | 952    | 836  | -      | 993  | 874    | -    | -    | -      | - | -    | - | - |
| Platoon blocked, %   |        |      |        |      |        |      |      | -      | - | -    | - | - |
| Mov Cap-1 Maneuver   | 922    | 809  | 1052   | 910  | 814    | 1033 | 1562 | -      | - | 1537 | - | - |
| Mov Cap-2 Maneuver   | 922    | 809  | -      | 910  | 814    | -    | -    | -      | - | -    | - | - |
| Stage 1              | 993    | 874  | -      | 938  | 833    | -    | -    | -      | - | -    | - | - |
| Stage 2              | 944    | 829  | -      | 987  | 874    | -    | -    | -      | - | -    | - | - |

| Approach               | SE   | NW   | NE   | SW |
|------------------------|------|------|------|----|
| HCM Control Delay, s/v | 8.44 | 9.02 | 2.36 | 0  |
| HCM LOS                | A    | A    |      |    |

| Minor Lane/Major Mvmt     | NEL   | NET | NERNWLn1 | SELn1 | SWL   | SWT  | SWR |
|---------------------------|-------|-----|----------|-------|-------|------|-----|
| Capacity (veh/h)          | 540   | -   | -        | 910   | 1052  | 1537 | -   |
| HCM Lane V/C Ratio        | 0.008 | -   | -        | 0.016 | 0.006 | -    | -   |
| HCM Control Delay (s/veh) | 7.3   | 0   | -        | 9     | 8.4   | 0    | -   |
| HCM Lane LOS              | A     | A   | -        | A     | A     | A    | -   |
| HCM 95th %tile Q(veh)     | 0     | -   | -        | 0     | 0     | 0    | -   |