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The Ranch Sketch Plan
 Master Traffic Impact and Access Analysis
 (LSC #184390)
 December 21, 2018

Traffic Engineer's Statement 1
 is there a special district being formed or a "program" to construct Briargate from Stapleton to the west sooner rather than later? PJ has mention this.... I dont know that it needs to be included if not headed that direction....
 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.

DEC 21 2018

 Date

Summary of Comments on Microsoft Word - The Ranch

Page: 1

 Number: 1 Author: dsdparsons Subject: Callout Date: 1/24/2019 12:07:11 PM -07'00'

is there a special district being formed or a "program" to construct Briargate from Stapleton to the west sooner rather than later? PJ has mention this.... I dont know that it needs to be included if not headed that direction....

 Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 9:53:15 PM

To our knowledge, there is nothing to note at this time.

LAND USE

The site is surrounded by existing residential developments on the north, south and east. The Sterling Ranch development is located one-quarter mile west of the site. Figure 2 shows the currently proposed sketch plan. The 629.1-acre site is planned to be developed with a maximum of 2,100 residential dwelling units and a school.

The Ranch is planned to be developed starting with the parcels in the northeast corner and moving to the southwest. Initial access is planned via a new section of Briargate Parkway which will be constructed west from the intersection of Towner Avenue and Stapleton Drive. As the site develops to the south Woodmen Hills Drive will be extended west from Towner Avenue to provide secondary access. Woodmen Hills Drive will eventually extend northwest through the site connecting to the intersection of Raygor and Stapleton Drive. For this report Phase 1 was assumed to include 390 single family dwelling units with access to Meridian Road via both Briargate Parkway and Woodmen Hills Drive.

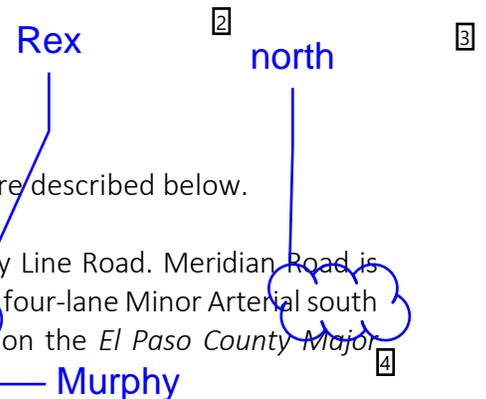
/Stapleton Drive ¹

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The area roadways in the site's vicinity are shown on Figure 1 and are described below.

- **Meridian Road** extends north from South Blaney Road to County Line Road. Meridian Road is shown as a Four Lane Principal Arterial south of Stapleton Drive, a four-lane Minor Arterial south of Rex Road and a two-lane Minor Arterial north of Rex Road on the *El Paso County Major Transportation Corridors Plan (MTCP)*.
- **Briargate Parkway** is a six-lane, Principal Arterial that extends east from I-25 to Grand Lawn Circle (about one-half mile east of Powers Boulevard). Briargate Parkway is planned to ultimately extend east to Stapleton Road. The County MTCP shows Briargate/Stapleton east of Black Forest Road as a four-lane Principal Arterial.
- **Stapleton Drive** currently extends east from just west of Towner Drive across US Highway 24 to the intersection of Judge Orr Road and Curtis Road. West of Meridian Road, Stapleton Drive is currently a two-lane roadway with a posted speed limit of 45 miles per hour (mph). Stapleton Drive is planned to be extended west from Towner Drive as Briargate Parkway with this development.
- **Woodmen Hills Drive** is a Rural Collector Roadway extending west from Eastonville Road and terminating at the site's southeast corner. West of Meridian Road, Woodmen Hills Drive is a two-lane road with a rural cross section and a posted speed limit of 30 mph. Woodmen Hills Drive has an 80-foot right-of-way and is about 30-feet wide west of Meridian Road, except for the westernmost 2,200 feet, which is about 40-feet wide. Woodmen Hills Drive is proposed to



Number: 1 Author: dsdrice Subject: Callout Date: 1/24/2019 10:24:21 AM -07'00'

[/Stapleton Drive](#)

Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 9:54:00 PM
Added as requested.

Number: 2 Author: dsdrice Subject: Cloud+ Date: 1/21/2019 11:37:13 PM -07'00'

[Rex](#)

Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 9:54:21 PM
Added as requested.

Number: 3 Author: dsdrice Subject: Cloud+ Date: 1/21/2019 11:38:09 PM -07'00'

[north](#)

Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 9:54:35 PM
Added as requested.

Number: 4 Author: dsdrice Subject: Cloud+ Date: 1/21/2019 11:37:22 PM -07'00'

[Murphy](#)

Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 9:54:54 PM
Added as requested.

The east intersection is planned to be constructed as a standard four-leg intersection. This intersection should be reevaluated with each Preliminary Plan submittal to determine if traffic signal warrant(s) will be met. It was assumed by 2040 that this intersection would be signal controlled. As a signalized intersection all movements are projected to operate at LOS D or better during the peak hours.

Woodmen Hills/Residential Collector

The intersection of Woodmen Hills Drive and the proposed Residential Collector loop is planned to be constructed as a modern two-lane roundabout. All movements at this intersection are projected to operate at LOS D or better during the peak hours based on the projected 2040 total traffic volumes.

Address conceptual transitions from rural to urban cross-sections. 1

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

The Ranch could be expected to generate about 19,823 new external vehicle-trips on the average weekday, with about one-half entering and one-half exiting in a 24-hour period. During the morning peak hour about 440 vehicles would enter and 1,190 vehicles would exit the site. During the afternoon peak hour about 1,319 vehicles would enter and 781 vehicles would exit the site.

Street Classification

Figure 11 shows the recommended street classifications the streets in the vicinity of the site based on the projected 2040 traffic volumes shown in Figure 10.

Improvements

A general, preliminary summary of potentially-needed transportation improvements in the area due to the sketch plan, background traffic or a combination is shown in Table 3.

A traffic study should be completed at each development phase of The Ranch to determine the specific roadway improvements necessary to accommodate the proposed number of lots based on the traffic conditions at the time of submittal. The need for and timing of regional improvements such as the improvement of the existing two-lane section of Stapleton Drive to a Principal Arterial cross-section, the extension of Briargate Parkway east of the site to Vollmer Road and the extension of Woodmen Hills Drive east of Towner Avenue should also be addressed with each applicable Preliminary Plan submittal.

Address mitigation for failing 2020 LOS specifically. 2

El Paso County Roadway Improvement Fee Program

This project will be required to participate in the El Paso County Road Impact Fee Program.

☰ Number: 1 Author: dsdrice Subject: Text Box Date: 1/24/2019 12:03:20 PM -07'00'

[Address conceptual transitions from rural to urban cross-sections.](#)

↶ Author: Kirstin Subject: Sticky Note Date: 4/17/2019 2:19:12 PM
JCH?

↷ Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 9:55:07 PM
Added as requested.

☰ Number: 2 Author: dsdrice Subject: Text Box Date: 1/24/2019 12:00:43 PM -07'00'

[Address mitigation for failing 2020 LOS specifically.](#)

↷ Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 9:57:08 PM
Short-term analysis has been removed from the Sketch Plan report. This analysis will be provided with future Preliminary Plan submittals.

**Table 3
Roadway Improvements
The Ranch**

| Improvement | Timing | Responsibility ⁽¹⁾ |
|--|--|---|
| Roadway Segment Improvements | | |
| Stapleton Drive (Meridian Road to Towner Avenue): Upgrade the existing unimproved roadway by constructing a one-half section of a four-lane Urban Principal Arterial with auxiliary turn lanes as required per the ECM. | Once the ADT on this segment of roadway exceeds 7,000 vehicles per day. | Applicant and or adjacent development(s) potentially with other matching funds from other sources. |
| Stapleton Drive (Meridian Road to Towner Avenue): Upgrade Stapleton Drive to a Four-Lane Urban Principal Arterial Cross Section from Meridian Road to Towner Avenue | Once the ADT on this segment of roadway exceeds the capacity of the half section of 4-lane, Principal Arterial (Estimated 15,000 -20,000 ADT) depending on the design of the half section and other capacity considerations. | El Paso County, adjacent development(s) and/or the applicant. |
| Briargate Parkway (Towner Avenue to the west boundary of The Ranch Sketch Plan area): Construct as a half section or full-section 4-lane Principal Arterial. | As required for capacity/to meet ECM criteria/to satisfy yet-to-be-formulated development agreements. To be evaluated with each Preliminary Plan submittal. | The applicant and potentially El Paso County/PPRTA for completion of the 3rd and 4th through lanes (if phased by construction of a half-section) |
| Briargate Parkway (from the west boundary of The Ranch Sketch Plan area to the section being constructed by Sterling Ranch Phase 1 just east of Vollmer Road): | To be evaluated with each Preliminary Plan submittal. | Depending on timing of development, Sterling Ranch, the applicant and/or potentially El Paso County/PPRTA. |
| Woodmen Hills (Meridian Road to Garrison Road): Upgrade to an Urban Residential Collector standard | Once this project adds significant traffic to this segment of roadway; volumes already exceed 1,500 vehicles per day. To be evaluated with each Preliminary Plan submittal. | Applicant, potentially with matching funds from other sources. |
| Woodmen Hills (Garrison Road to 750' west of Theriot Road): Upgrade to an Urban Residential Collector standard | Once the ADT on this segment of roadway exceeds 1,500 vehicles per day; To be evaluated with each Preliminary Plan submittal. | Applicant, potentially with matching funds from other sources. |
| Woodmen Hills Drive (Towner Avenue to the future extension of Briargate Parkway): Construct as a two-lane Urban Residential Collector | To be evaluated with each Preliminary Plan submittal. | Applicant |
| Construct Raygor Road from Old Stapleton Drive to the future extension of Briargate Parkway as a two-lane Urban Residential Collector | To be evaluated with each Preliminary Plan submittal. | Applicant |
| Intersection Improvements | | |
| Woodmen Hills Drive/Meridian Road- Upgrade the west leg of the intersection for additional eastbound lanes and to match the east side; any other necessary auxiliary turn lane improvements; signal modifications. | As required for capacity/to meet ECM criteria/to satisfy yet-to-be-formulated development agreements. To be evaluated with each Preliminary Plan submittal. | Applicant, potentially with matching funds from other sources. |
| Stapleton/Meridian: Auxiliary turn lane improvements (ultimately right turn lanes and dual northbound, eastbound and westbound left-turn lanes); Two eastbound and westbound through lanes (ultimately); and any needed traffic signal modifications | As required for capacity/to meet ECM criteria/to satisfy yet-to-be-formulated development agreements. To be evaluated with each Preliminary Plan submittal. | Depending on timing of development, Sterling Ranch, the applicant and/or potentially El Paso County/PPRTA. |
| Stapleton/Towner: Construct additional auxiliary turn lanes as needed to accommodate turning movements from this development | As required for capacity/to meet ECM criteria/to satisfy yet-to-be-formulated development agreements. To be evaluated with each Preliminary Plan submittal. | Applicant, potentially with matching funds from other sources. |
| Meridian/Woodmen: Lengthen Eastbound Dual Left Turn Lanes or fair-share contribution toward a lengthening project. | As needed to accommodate vehicle queuing | Falcon Marketplace Development and potentially the applicant depending on timing and phasing of this development and the Briargate extension; potentially other developments and/or El Paso County/PPRTA. |
| Construct the intersection of Briargate/Raygor/Woodmen Hills as a modern two-lane roundabout | To be evaluated with each Preliminary Plan submittal. | Applicant |
| Construct a modern two-lane roundabout intersection on Briargate Parkway west of Woodmen Hills/Raygor | With development of The Ranch parcels adjacent to the intersection | Applicant |
| Signalize the east intersection of the proposed Urban Residential Collector loop and Briargate Parkway | Once warrants are met; This should be evaluated with each Preliminary Plan submittal. The decision on timing of traffic signal installation rest with El Paso County Public Works | Applicant |
| Signalize the intersection of Briargate Parkway/Towner (or construct as a multi-lane modern roundabout) | Once warrants are met; This should be evaluated with each Preliminary Plan submittal. The decision on timing of traffic signal installation rest with El Paso County Public Works | El Paso County |
| Notes: (1) Preliminary concept of responsibility; the actual construction or participation responsibility would be determined through development agreements and/or subdivision improvement agreements. (2) PPRTA = Pikes Peak Rural Transportation Authority. Source: LSC Transportation Consultants, Inc. | | |

or development that meets warrants

1

or roundabout?

2

☰ Number: 1 Author: dsdrice Subject: Callout Date: 1/22/2019 8:36:38 AM -07'00'

[or development that meets warrants](#)

👉 Author: Kirstin Subject: Sticky Note Date: 5/1/2019 3:08:40 PM
done

☰ Number: 2 Author: dsdrice Subject: Callout Date: 1/22/2019 8:41:08 AM -07'00'

[or roundabout?](#)

👉 Author: Kirstin Subject: Sticky Note Date: 4/17/2019 2:28:58 PM
done

 Number: 1 Author: dsdrice Subject: Callout Date: 1/22/2019 8:37:32 AM -07'00'

[Label WHD](#)

 Author: Kirstin Subject: Sticky Note Date: 4/17/2019 3:39:35 PM
done

1 21,000?

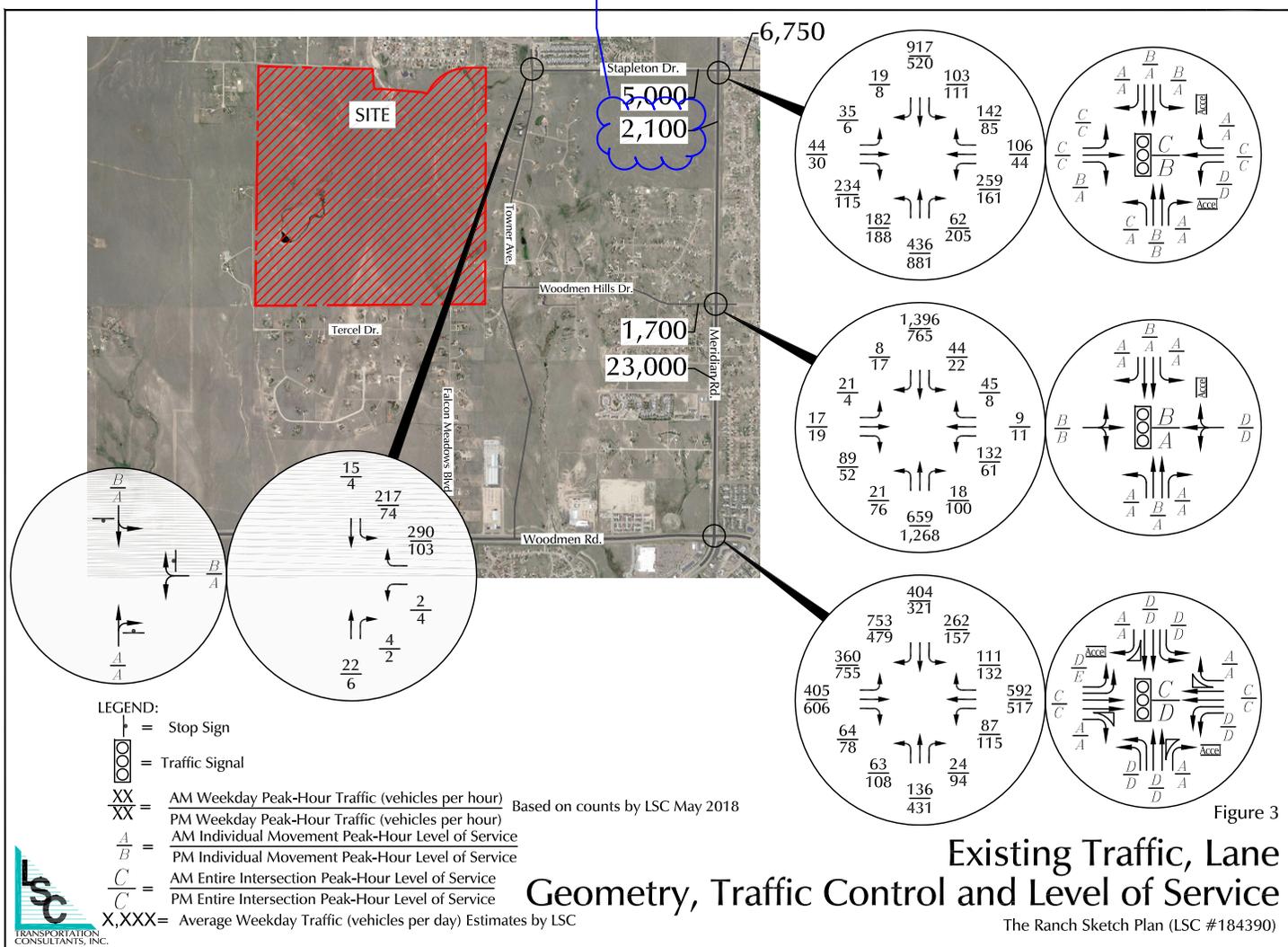


Figure 3

Number: 1 Author: dsdrice Subject: Cloud+ Date: 1/22/2019 8:42:59 AM -07'00'

21,000?

Author: Kirstin Subject: Sticky Note Date: 4/17/2019 2:29:08 PM
typo has been corrected

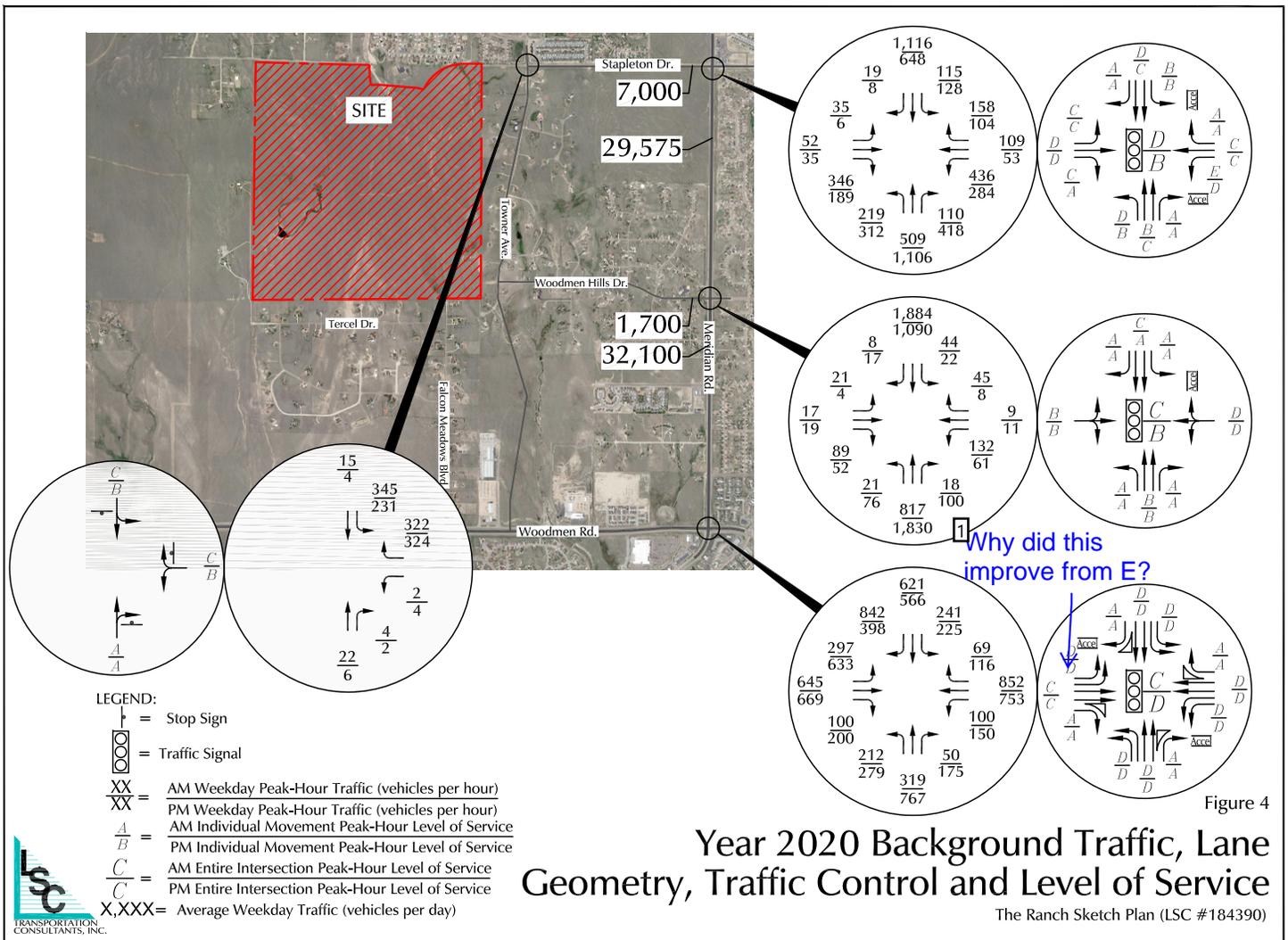


Figure 4

Year 2020 Background Traffic, Lane Geometry, Traffic Control and Level of Service

The Ranch Sketch Plan (LSC #184390)



Number: 1 Author: dsdrice Subject: Callout Date: 1/22/2019 8:48:10 AM -07'00'

[Why did this improve from E?](#)

 Author: Kirstin Subject: Sticky Note Date: 5/16/2019 2:05:30 PM

Short-term analysis has been removed from the Sketch Plan report. This report is intended as a "master" traffic study to accompany the sketch plan. This report addresses the long-term buildout of the Development with planned area roadways shown on the MTCP for 2040. As development progresses, the capacity of the adjacent and connecting roads and the need for road improvements will be assessed by a more detailed traffic impact analyses for each phase of development.

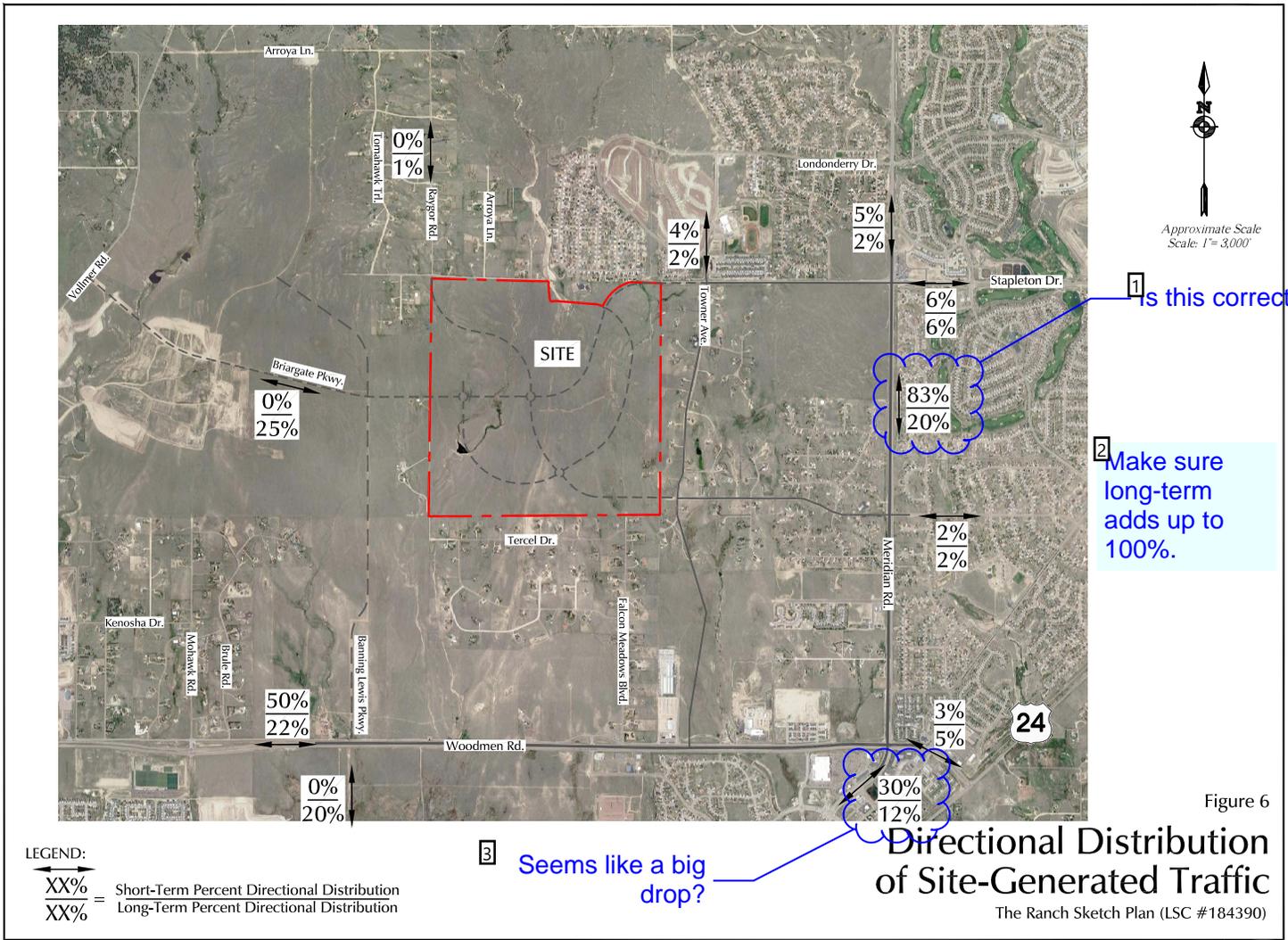


Figure 6

Number: 1 Author: dsdrice Subject: Cloud+ Date: 1/23/2019 8:27:50 PM -07'00'

Is this correct?

Author: Kirstin Subject: Sticky Note Date: 5/1/2019 3:11:19 PM

The distribution shown should have been shown south of Woodmen Hill Drive. The figure has been updated in the revised TIS.

Number: 2 Author: dsdrice Subject: Text Box Date: 1/23/2019 8:25:02 PM -07'00'

Make sure long-term adds up to 100%.

Author: Kirstin Subject: Sticky Note Date: 5/1/2019 3:10:13 PM

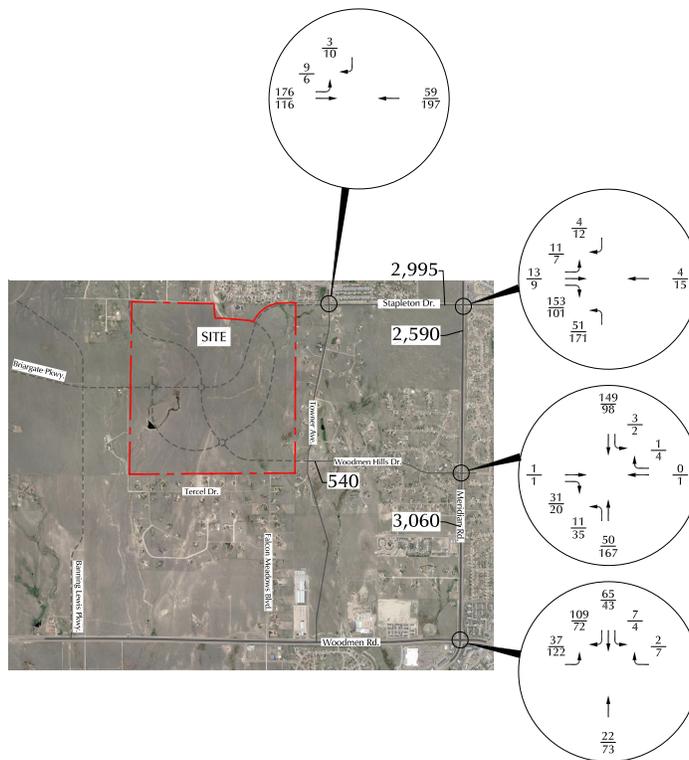
The figure has been revised in the updated TIS

Number: 3 Author: dsdrice Subject: Cloud+ Date: 1/23/2019 8:28:25 PM -07'00'

Seems like a big drop?

Author: jchodsdon Subject: Sticky Note Date: 5/15/2019 10:03:43 PM

The 2040 distribution assumes Banning Lewis Parkway in-place to distribute site-generated trips to the south, west and southwest. The assumption is the connection south to Highway 24 as shown in the US Highway 24 PEL study. It is our understanding that Banning Lewis Parkway will be classified as a Principal Arterial. This connection in conjunction with the extension of Stapleton/Briargate will result in a significant distribution shift.



Provide a conceptual map of the Phase 1 area or hatch on this map.

Figure 7
Assignment of Short-Term
Phase 1 Site-Generated Traffic
The Ranch Sketch Plan (LSC #184390)

LEGEND:
XX = AM Weekday Peak-Hour Traffic (vehicles per hour)
XX = PM Weekday Peak-Hour Traffic (vehicles per hour)
X,XXX = Average Weekday Traffic (vehicles per day)



☰ Number: 1 Author: dsdrice Subject: Text Box Date: 1/24/2019 11:34:01 AM -07'00'

Provide a conceptual map of the Phase 1 area or hatch on this map.

👉 Author: Kirstin Subject: Sticky Note Date: 5/16/2019 2:06:56 PM

Detailed phasing of the proposed development is undetermined at this time. As such, short-term analysis has been removed from the Sketch Plan report. This report is intended as a "master" traffic study to accompany the sketch plan. This report addresses the long-term buildout of the Development with planned area roadways shown on the MTCP for 2040. As development progresses, the capacity of the adjacent and connecting roads and the need for road improvements will be assessed by a more detailed traffic impact analyses for each phase of development.

1 Is a dual left recommended for 2020?

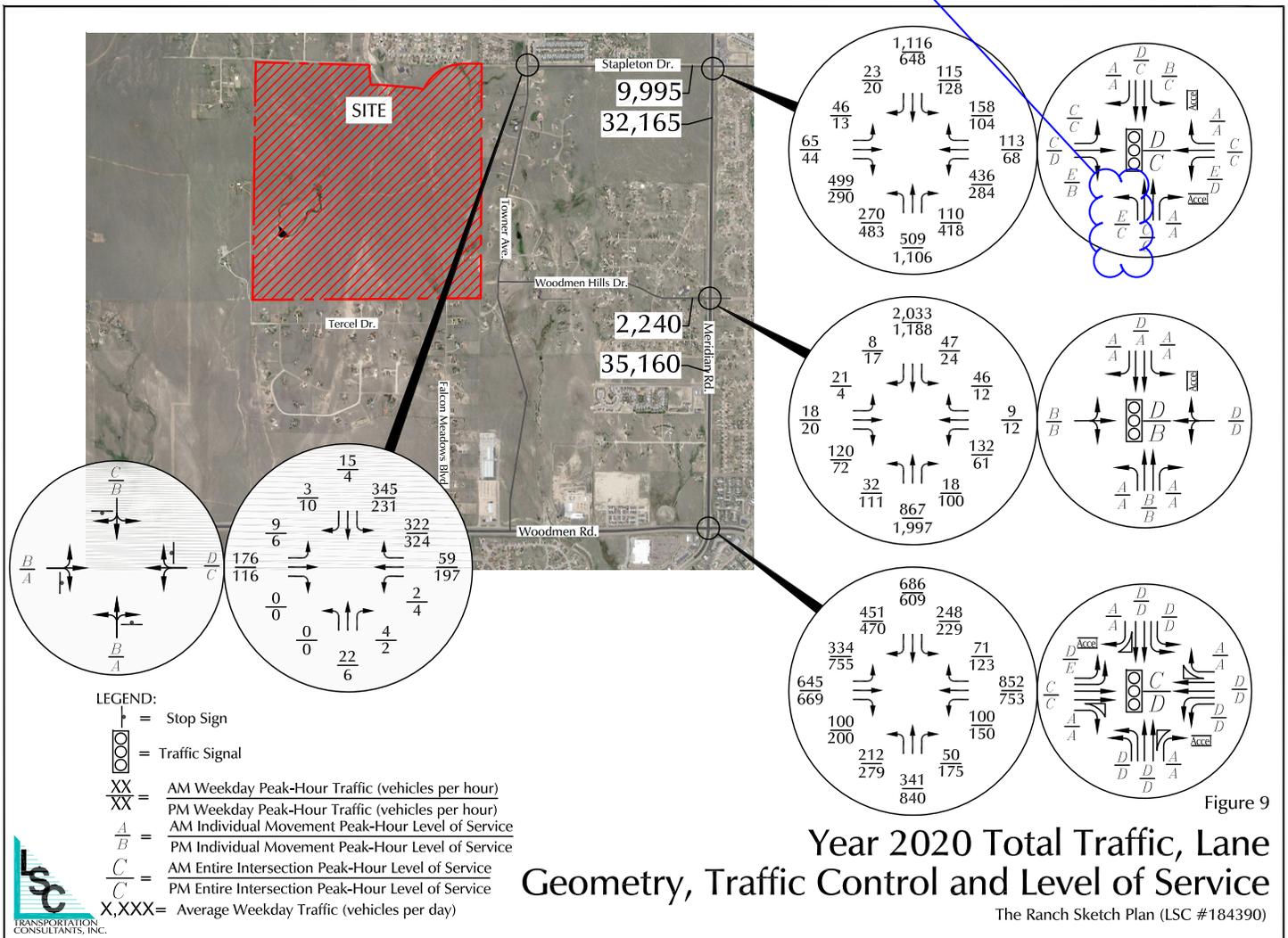


Figure 9

Number: 1 Author: dsdrice Subject: Cloud+ Date: 1/24/2019 12:01:04 PM -07'00'

[Is a dual left recommended for 2020?](#)

Author: jchodsdon Subject: Sticky Note Date: 5/16/2019 2:06:38 PM

Short-term analysis has been removed from the Sketch Plan report. This report is intended as a "master" traffic study to accompany the sketch plan. This report addresses the long-term buildout of the Development with planned area roadways shown on the MTCP for 2040. As development progresses, the capacity of the adjacent and connecting roads and the need for road improvements will be assessed by a more detailed traffic impact analyses for each phase of development.

1 Verify (directional dist.)

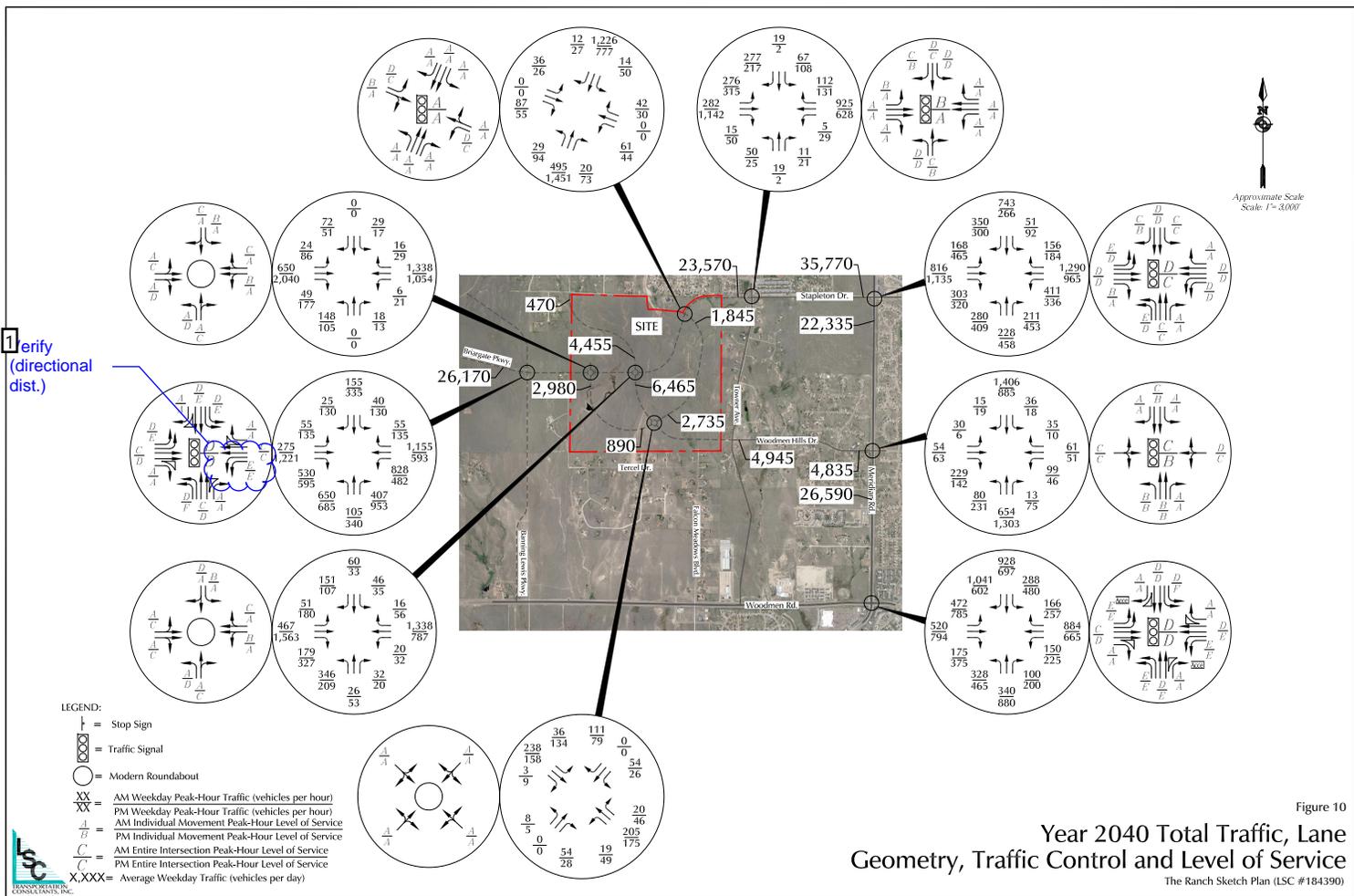


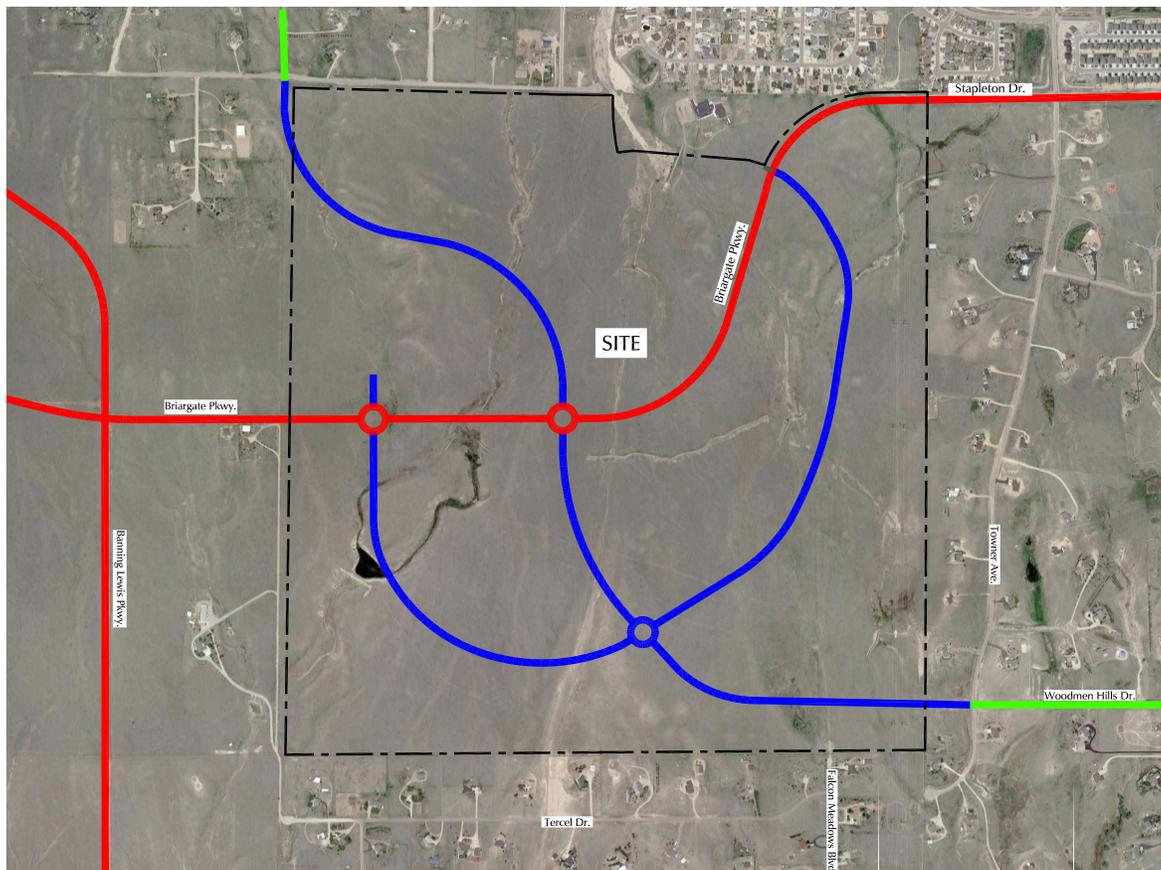
Figure 10
 Year 2040 Total Traffic, Lane
 Geometry, Traffic Control and Level of Service
 The Ranch Sketch Plan (LSC #184390)

Number: 1 Author: dsdrice Subject: Cloud+ Date: 1/24/2019 12:01:53 PM -07'00'

[Verify \(directional dist.\)](#)

Author: Kirstin Subject: Sticky Note Date: 5/15/2019 10:06:59 PM

The 2040 distribution assumes Banning Lewis Parkway in-place to distribute site-generated trips to the south, west and southwest. The assumption is the connection south to Highway 24 as shown in the US Highway 24 PEL study. It is our understanding that Banning Lewis Parkway will be classified as a Principal Arterial. This connection in conjunction with the extension of Stapleton/ Briargate will result in a significant distribution shift.



Approximate Scale
Scale: 1" = 1,200'

LEGEND:

- = 4-Lane Principal Arterial
- = Urban Residential Collector
- = Rural Collector

1 urban cross-section?

Recommended Street Classification

The Ranch Sketch Plan (LSC #184390)

Figure 11

Number: 1 Author: dsdrice Subject: Callout Date: 1/24/2019 12:04:11 PM -07'00'

[urban cross-section?](#)

 Author: Kirstin Subject: Sticky Note Date: 4/17/2019 3:40:56 PM
Done

LSC Transportation Consultants, Inc.
 Colorado Springs, CO 80905
 719-633-2868

Default Comments
 Change These in The Preferences Window
 Select File/Preference in the Main Scree
 Then Click the Comments Tab

Provide dates on all counts. 1

Groups Printed- Unshifted

| Start Time | Meridian Rd Southbound | | | | | Woodmen Hills Dr Westbound | | | | | Meridian Rd Northbound | | | | | Woodmen Hills Dr Eastbound | | | | | Int. Total |
|------------|------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------------------|------|-------|------|------------|----------------------------|------|-------|------|------------|------------|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | |
| 16:00 | 6 | 244 | 2 | 0 | 252 | 13 | 0 | 1 | 0 | 14 | 24 | 272 | 21 | 0 | 317 | 2 | 0 | 13 | 0 | 15 | 598 |
| 16:15 | 1 | 199 | 5 | 0 | 205 | 11 | 7 | 6 | 0 | 24 | 20 | 276 | 18 | 1 | 315 | 1 | 4 | 6 | 0 | 11 | 555 |
| 16:30 | 4 | 181 | 6 | 0 | 191 | 24 | 3 | 2 | 0 | 29 | 14 | 320 | 24 | 0 | 358 | 3 | 5 | 12 | 0 | 20 | 598 |
| 16:45 | 2 | 215 | 3 | 0 | 220 | 4 | 5 | 3 | 0 | 12 | 23 | 297 | 23 | 1 | 344 | 1 | 1 | 14 | 0 | 16 | 592 |
| Total | 13 | 839 | 16 | 0 | 868 | 52 | 15 | 12 | 0 | 79 | 81 | 1165 | 86 | 2 | 1334 | 7 | 10 | 45 | 0 | 62 | 2343 |
| 17:00 | 5 | 195 | 5 | 1 | 206 | 20 | 3 | 1 | 0 | 24 | 27 | 334 | 22 | 0 | 383 | 0 | 8 | 12 | 0 | 20 | 633 |
| 17:15 | 11 | 174 | 3 | 0 | 188 | 13 | 0 | 2 | 0 | 15 | 12 | 317 | 31 | 2 | 362 | 0 | 5 | 14 | 0 | 19 | 584 |
| 17:30 | 3 | 192 | 1 | 0 | 196 | 18 | 1 | 3 | 0 | 22 | 28 | 292 | 42 | 0 | 362 | 3 | 2 | 8 | 0 | 13 | 593 |
| 17:45 | 8 | 161 | 4 | 0 | 173 | 17 | 5 | 0 | 0 | 22 | 17 | 327 | 19 | 0 | 363 | 2 | 4 | 16 | 0 | 22 | 580 |
| Total | 27 | 722 | 13 | 1 | 763 | 68 | 9 | 6 | 0 | 83 | 84 | 1270 | 114 | 2 | 1470 | 5 | 19 | 50 | 0 | 74 | 2390 |

 Number: 1 Author: dsdrice Subject: Text Box Date: 1/24/2019 12:05:13 PM -07'00'

Provide dates on all counts.

 Author: Kirstin Subject: Sticky Note Date: 5/1/2019 3:12:47 PM
done

What would LOS be with dual left?



Timings
6: Meridian Rd & Stapleton Dr

Short-Term Total Traffic
AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 46 | 65 | 499 | 436 | 113 | 158 | 270 | 509 | 110 | 115 | 1116 | 23 |
| Future Volume (vph) | 46 | 65 | 499 | 436 | 113 | 158 | 270 | 509 | 110 | 115 | 1116 | 23 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Free | pm+pt | NA | Free | pm+pt | NA | Perm |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | Free | 2 | | Free | 6 | | 6 |
| Detector Phase | 7 | 4 | 4 | 3 | 8 | | 5 | 2 | | 1 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| Minimum Split (s) | 9.0 | 9.0 | 9.0 | 9.0 | 9.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | 9.0 |
| Total Split (s) | 10.0 | 27.0 | 27.0 | 15.0 | 32.0 | | 18.0 | 48.0 | | 10.0 | 40.0 | 40.0 |
| Total Split (%) | 10.0% | 27.0% | 27.0% | 15.0% | 32.0% | | 18.0% | 48.0% | | 10.0% | 40.0% | 40.0% |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | 5.0 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | Yes | Yes | | Yes | Yes | Yes |
| Recall Mode | None | None | None | None | None | | None | Max | | None | Max | Max |
| Act Effct Green (s) | 27.0 | 22.0 | 22.0 | 37.0 | 29.0 | 100.0 | 53.0 | 43.0 | 100.0 | 40.0 | 35.0 | 35.0 |
| Actuated g/C Ratio | 0.27 | 0.22 | 0.22 | 0.37 | 0.29 | 1.00 | 0.53 | 0.43 | 1.00 | 0.40 | 0.35 | 0.35 |
| v/c Ratio | 0.14 | 0.17 | 1.04 | 1.01 | 0.23 | 0.11 | 0.96 | 0.36 | 0.08 | 0.33 | 0.98 | 0.04 |
| Control Delay | 22.0 | 33.0 | 77.2 | 75.0 | 29.5 | 0.1 | 69.9 | 20.1 | 0.1 | 16.1 | 54.2 | 0.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.0 | 33.0 | 77.2 | 75.0 | 29.5 | 0.1 | 69.9 | 20.1 | 0.1 | 16.1 | 54.2 | 0.1 |
| LOS | C | C | E | E | C | A | E | C | A | B | D | A |
| Approach Delay | | 68.1 | | | 51.0 | | | 32.7 | | | 49.7 | |
| Approach LOS | | E | | | D | | | C | | | D | |

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 48.7
 Intersection LOS: D
 Intersection Capacity Utilization 98.4%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 6: Meridian Rd & Stapleton Dr



Number: 1 Author: dsdrice Subject: Cloud+ Date: 1/24/2019 12:13:24 PM -07'00'

What would LOS be with dual left?

Author: Kirstin Subject: Sticky Note Date: 5/16/2019 2:07:13 PM

Short-term analysis has been removed from the Sketch Plan report. This report is intended as a "master" traffic study to accompany the sketch plan. This report addresses the long-term buildout of the Development with planned area roadways shown on the MTCP for 2040. As development progresses, the capacity of the adjacent and connecting roads and the need for road improvements will be assessed by a more detailed traffic impact analyses for each phase of development.

Note: long-term models not reviewed pending confirmation of directional distribution.

2040 Background Traffic

Timings

1: Banning Lewis Pkwy & Briargate Pkwy

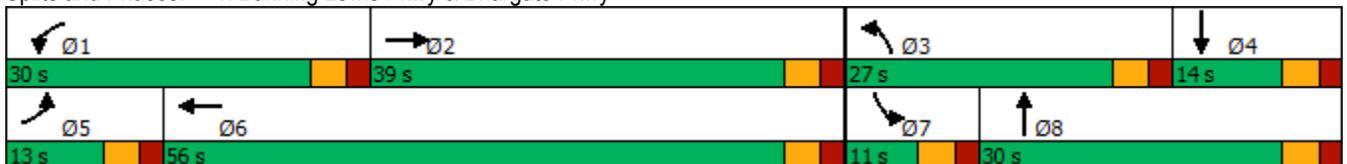
AM Peak Hour

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|----------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 55 | 168 | 530 | 329 | 866 | 55 | 650 | 105 | 222 | 40 | 155 | 25 |
| Future Volume (vph) | 55 | 168 | 530 | 329 | 866 | 55 | 650 | 105 | 222 | 40 | 155 | 25 |
| Turn Type | Prot | NA | Free |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | Free | | | Free | | | Free | | | Free |
| Detector Phase | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 13.0 | 39.0 | | 30.0 | 56.0 | | 27.0 | 30.0 | | 11.0 | 14.0 | |
| Total Split (%) | 11.8% | 35.5% | | 27.3% | 50.9% | | 24.5% | 27.3% | | 10.0% | 12.7% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | Lag | |
| Lead-Lag Optimize? | Yes | Yes | |
| Recall Mode | None | None | |
| Act Effct Green (s) | 6.9 | 18.9 | 82.6 | 13.5 | 28.5 | 82.6 | 21.2 | 28.7 | 82.6 | 6.0 | 8.5 | 82.6 |
| Actuated g/C Ratio | 0.08 | 0.23 | 1.00 | 0.16 | 0.35 | 1.00 | 0.26 | 0.35 | 1.00 | 0.07 | 0.10 | 1.00 |
| v/c Ratio | 0.20 | 0.22 | 0.35 | 0.60 | 0.73 | 0.04 | 0.75 | 0.09 | 0.15 | 0.17 | 0.45 | 0.02 |
| Control Delay | 40.9 | 26.5 | 0.6 | 38.4 | 28.3 | 0.0 | 36.6 | 23.7 | 0.2 | 42.0 | 42.1 | 0.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 40.9 | 26.5 | 0.6 | 38.4 | 28.3 | 0.0 | 36.6 | 23.7 | 0.2 | 42.0 | 42.1 | 0.0 |
| LOS | D | C | A | D | C | A | D | C | A | D | D | A |
| Approach Delay | | 9.3 | | | 29.7 | | | 26.8 | | | 37.4 | |
| Approach LOS | | A | | | C | | | C | | | D | |

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 82.6
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 24.4
 Intersection LOS: C
 Intersection Capacity Utilization 66.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Banning Lewis Pkwy & Briargate Pkwy



☰ Number: 1 Author: dsdrice Subject: Text Box Date: 1/24/2019 12:08:28 PM -07'00'

Note: long-term models not reviewed pending confirmation of directional distribution.

👤 Author: Kirstin Subject: Sticky Note Date: 5/1/2019 3:13:22 PM
noted
