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## Meridian Ranch Sketch Plan 2021 Amendment Traffic Impact Analysis (LSC #S214250) May 4, 2021

### 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.

GTL, INC.

  
Raul Guzman, Vice President

May 4, 2021

Date

Add PCD File No  
SKP213

Updated

### **Meridian Road/Rex Road**

The intersection of Meridian Road/Rex Road is currently stop-sign controlled. It is our understanding that, as part of the Estates at Rolling Hills Ranch Filing No. 2, the Meridian Ranch developer has entered into an IGA with the County to complete the design and construction of intersection improvements for the intersection of Meridian Road/Rex Road, including road alignment and drainage improvements along with a traffic-signal design. The design is expected to be completed during the third quarter of 2021 and the construction is expected to be completed sometime in 2022.

As the final design plans are unknown, the short-term analysis was completed assuming this intersection is converted to traffic-signal control, both with and without improvements to the alignment. If the existing configuration with a shared westbound-left and through lane remains, this lane is projected to operate at LOS F during the morning peak hour and LOS E during the afternoon peak hour, even as a traffic-signal-controlled intersection. If the alignment of this intersection is improved, such that separate eastbound and westbound left-turn lanes are provided and a protected signal phase is included in the design, the intersection is projected to operate at LOS D or better during the peak hours.

By 2041, it was assumed that the intersection would be converted to traffic-signal control. The southbound through lane is projected to continue to operate at LOS E or better during the peak hours.

### **Eastonville Road/Rex Road**

Rex Road is planned to be improved as part of the development of the current Grandview Reserve development. The intersection of Rex Road just east of Eastonville Road is also planned to be improved as part of the development. The intersection of Rex Road/Eastonville Road is projected to operate at LOS C or better for all movements during the peak hours as a four-leg, stop-sign-controlled intersection.

By 2041, it was assumed that this intersection would either need to be converted to traffic-signal control or designed as a modern roundabout to maintain an acceptable level of service. As shown in Figure 10c, all movements at this intersection are projected to operate at LOS D or better during the peak hours, if it is converted to traffic-signal control or constructed as a modern roundabout.

### **Londonderry Drive/Eastonville Road**

The intersection of Londonderry/Rex is currently a stop-sign-controlled "T" intersection. It is anticipated that auxiliary lanes will be added to Eastonville Road approaching this intersection as part of the planned improvements to Eastonville Road. Based on the projected short-term total traffic volumes shown in Figure 9a and the lane geometry and traffic control shown in Figure 9b, the eastbound left-turn movement at this intersection is projected to operate at LOS C during the morning peak hour and LOS F during the afternoon peak hour.

Table 4 Meridian Ranch 2021 Sketch Plan Amendment Roadway Improvements			
Item #	Improvement	Timing	Responsibility
Roadway Segment Improvements			
1	Eastonville Road - Rex Road to Latigo final grading and paving	TBD by EPC; PPRTA "A-List" Project	PPRTA <sup>(1)</sup>
2	Eastonville Road - Roadway Design - Stapleton to Rex Road	As per EPC direction	Meridian Ranch
3	Eastonville Road - Roadway Upgrade - Stapleton to Rex Road	TBD by EPC; PPRTA "A-List" Project	PPRTA <sup>(1)</sup>
4	Construct Rex Road as an Urban 2-Lane Minor Arterial from Sunrise Ridge Drive to Rolling Ranch Drive.	The Estates at Rolling Hills Ranch Filing No. 2	Meridian Ranch
5	Construct Rex Road as an Urban 2-Lane Minor Arterial from Rolling Ranch Drive to Estate Ridge Drive.	The Estates at Rolling Hills Ranch Filing No. 2	Meridian Ranch
6	Construct Rex Road as an Urban 2-Lane Minor Arterial from the Rolling Ranch Drive to Eastonville Road	With future subdivisions within the currently proposed Meridian Ranch Amendment Area	Meridian Ranch
7	Rex Road from Eastonville Road to US 24	With Grandview Estates	
8	Meridian Road - Widen to provide two northbound and two southbound through lanes from just north of Indian Paint Trail to Murphy Road.	Shown on 2040 MTCP Roadway Plan	
8	Stapleton Drive - Meridian Road to Eastonville Road complete southern (eastbound) half	Shown on 2040 MTCP Roadway Plan	El Paso County
9	Stapleton Drive - Eastonville Road to US Hwy 24 complete southern (eastbound) half	Shown on 2040 MTCP Roadway Plan	Waterbury Metro District
Rex/Meridian			
(Please refer to the "Rex/Meridian Intersection" section of the report for additional details)			
10	Rex/Meridian intersection traffic control (Traffic Signal)	-Expected design completion during third quarter of 2021. -Expected completion of construction sometime in 2022.	The County will enter into an IGA with the applicant to complete the design and construction of the intersection improvements including road alignment and drainage improvements along with a signal design. The County will be the lead contact agency for the design and construction. The applicant will request the traffic advisory board to add the intersection to the Traffic Impact Program.
11	Potentially improve the vertical roadway profile on Meridian Road north of the intersection if the such an improvement in the vertical roadway profile would improve the sight distance and as a result, the safety of the intersection.	-Expected design completion during third quarter of 2021. -Expected completion of construction sometime in 2022.	El Paso County
12	Potentially improve the west leg of this intersection to improve lane alignment, potentially reduce the skew, provide separate left and right-turn lanes, and potentially other improvements (potentially including restriping/reconfigure the east leg as needed). If determined as part of the study by EPC that safety and operations would be improved as a result.	-Expected design completion during third quarter of 2021. -Expected completion of construction sometime in 2022.	El Paso County
Rex/Eastonville			
13	Include a northbound left-turn lane on Eastonville Road at Rex Road into the design of the Eastonville Road PPRTA project.	TBD by EPC; PPRTA "A-List" Project	PPRTA
14	Include a southbound right turn lane on Eastonville Road at Rex Road into the design of the Eastonville Road PPRTA project.	TBD by EPC; PPRTA "A-List" Project	PPRTA
15	Construct 205' eastbound left-turn plus 160' taper on Rex Road approaching Eastonville Road	To be included in the design and construction (lane will be included in roadway cross section).	Meridian Ranch
16	Construct 155' eastbound right-turn deceleration lane plus 160 foot taper on Rex Road approaching Eastonville Road	With development of projects adjacent to this section of Rex Road	Meridian Ranch
17	Convert from two-way, stop-sign control to alternate traffic control (traffic signal or modern one-lane roundabout)	Future (with the connection of Rex Road to Highway 24, future area development and increases in through traffic)	Likely El Paso County under the county fee program guidelines
Eastonville/Londonderry			
18	Include a northbound left-turn lane on Eastonville Road at Londonderry Drive into the design of the Eastonville Road PPRTA project.	TBD by EPC; PPRTA "A-List" Project	PPRTA
19	Include a southbound right turn lane on Eastonville Road at Londonderry Drive into the design of the Eastonville Road PPRTA project.	TBD by EPC; PPRTA "A-List" Project	PPRTA
18	Convert from two-way, stop-sign control to alternate traffic control (traffic signal or modern one-lane roundabout)	Future (with future area development and increases in through traffic)	Likely El Paso County under the county fee program guidelines
Rex/Rolling Ranch & Rex/Estate Ridge			
19	Construct a 190-foot westbound left-turn lane on Rex Road approaching Rolling Ranch Drive and a 185-foot eastbound left-turn lane on Rex Road approaching Estate Ridge Drive with a shared 90-foot reverse curve taper.	With The Estates at Rolling Hills Ranch Filing No. 2 or Rolling Hills Ranch at Meridian Ranch Filing No. 3	Meridian Ranch
20	Construct a 155-foot eastbound right-turn deceleration lane on Rex Road approaching Rolling Ranch Drive plus a 160-foot taper.	Rolling Hills Ranch at Meridian Ranch Filing No. 3	Meridian Ranch
21	Construct a 155-foot westbound right-turn deceleration lane on Rex Road approaching Estates Ridge Drive plus a 160-foot taper.	With development of filings within the amendment area north of Rex Road	Meridian Ranch
West Amendment Area Access Point to Rex Road			
22	Construct a 205-foot westbound left-turn lane on Rex Road approaching the west access to the amendment area plus a 160-foot taper	With development of filings within the amendment area south of Rex Road	Meridian Ranch
23	Construct a 155-foot eastbound right-turn deceleration lane on Rex Road approaching the west access to the amendment area plus a 160-foot taper.	With development of filings within the amendment area north of Rex Road	Meridian Ranch
East Amendment Area Access Point to Rex Road			
24	Construct a 255-foot westbound left-turn lane on Rex Road approaching the west access to the amendment area plus a 160-foot taper	With development of filings within the amendment area south of Rex Road	Meridian Ranch
25	Construct a 155-foot eastbound right-turn deceleration lane on Rex Road approaching the west access to the amendment area plus a 160-foot taper.	With development of filings within the amendment area south of Rex Road	Meridian Ranch
Notes: Shaded rows are improvement associated with Filing No. 3 (1) The design of Eastonville Road is being performed by the Meridian Ranch developer. The projected will be constructed by El Paso County as PPRTA project.			
Source: LSC Transportation Consultants, Inc. -- (April, 2021)			

Discuss with the developer and propose a specific trigger for item 6.

Table 4 updated