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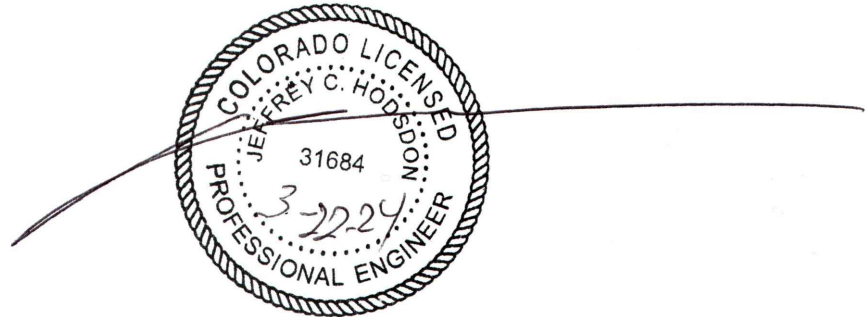
Settlers Ranch, Filing 3
Transportation Memorandum
(LSC #S234130)
March 22, 2024

PCD File: P2223

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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

LSC Responses to TIS redline comments

Page: 1

 Number: 1 Author: eschoenheit Subject: Text Box Date: 5/14/2024 08:55:51

[PCD File: P2223](#)

 Author: jchodsdon Subject: Sticky Note Date: 7/25/2024 13:09:44

LSC Response: Added as requested.

- Estimates of short- and long-term background traffic volumes at the study-area intersections;
- Total traffic (site traffic-plus-background traffic) projections at these intersections for the short term and long term;
- Level of service (LOS) analysis at the study-area intersections;
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes based on the criteria in El Paso County's *Engineering Criteria Manual (ECM)*;
- Comparison of pedestrian and multi-modal facilities and conformance with the County's *Major Transportation Corridors Plan (MTCP)*;
- Other recommended improvements and modifications to the study-area streets and intersections; and
- Summary of compiled data, analysis, findings, and recommendations.

PRIOR AREA TRAFFIC REPORTS

LSC utilized the following previous traffic reports (completed within the past five years) to assist in the production of this report:

- Settlers View Subdivision, Final Plat – dated December 18, 2018
- Walden Preserve 2, Filing 5 – dated March 1, 2022

Add PCD File P233
TIS 16850 Stepler Road
Traffic Study Memorandum AUG 2,
2023 for for reference of other TIS
completed in this area

LAND USE AND ACCESS


Figure 1 shows the site location relative to the adjacent and nearby streets. The proposed Settlers Ranch Filing No. 3 residential subdivision, shown in Figure 2, would consist of 24 lots for single-family residential dwelling units. The site is located generally northwest of the intersection of Hodgen Road/Steppler Road in El Paso County, Colorado.

Access is proposed to the existing portion of Settlers Ranch Road west of Timber Meadow Drive, as well as to the currently proposed extension of Settlers Ranch Road and connection to Steppler Road. This report has been prepared for submittal to El Paso County. A copy of the subdivision plat is attached, for reference.

The extension of Abert Ranch Drive south to the new section of Settlers Ranch Road is assumed in this report. Trips generated by the Abert Ranch and Settlers View subdivisions have been included in the background traffic.

 Number: 1 Author: eschoenheit Subject: Text Box Date: 5/14/2024 07:32:40

Add PCD File P233 TIS 16850 Stepler RoadTraffic Study Memorandum AUG 2, 2023 for for reference of other TIS completed in this area

 Author: jchodsdon Subject: Sticky Note Date: 7/25/2024 13:16:15

LSC Response: Added as requested.

Adjacent Subdivisions – Existing and Proposed

Settlers Ranch Filing Nos. 1 and 2

These subdivisions have been completed, with about five acres remaining. The portion of Settlers Ranch Road that has been extended to Meadow Drive provides access to these subdivisions.

Abert Ranch

Abert Ranch is a single-family residential subdivision consisting of 10 lots, each a minimum of 2.5 acres. Site access to Steppler Road is currently through the Settlers View subdivision and the extension of Silver Nell Drive. A second access will become available via the extension of Abert Ranch Drive to the proposed extension of Settlers Ranch Road (with this Settlers Ranch Filing No. 3 subdivision) once constructed by the applicant.

Settlers View

Settlers View is an existing single-family residential subdivision consisting of 14 lots, each a minimum of 2.5 acres. Located generally north of the site, Settlers View has been developed. A second access will become available through the Abert Ranch subdivision via the extension of Abert Ranch Drive to the proposed extension of Settlers Ranch Road (with this Settlers Ranch Filing No. 3 subdivision) once constructed by the applicant.

Grandview

Grandview is located to the north of the Settlers View and Abert Ranch sites. It is developed, and Silver Nell Drive through Grandview exists and connects to Steppler Road. Silver Nell Drive has provided the initial access to both the Settlers View and Abert Ranch subdivisions.

SIGHT DISTANCE

Steppler Road/Settlers Ranch Road (Proposed w/ Completion of Settlers Ranch Road)

The proposed access point to Steppler Road, which is a planned public street connection, must meet *Engineering Criteria Manual (ECM)* standards for sight distance. LSC has field-measured and evaluated the proposed Settlers Ranch Road connection to Steppler Road for sight distance.

Note: site improvements, such as landscaping, buildings, fencing, parking areas, etc., must not impede the lines of sight required for *ECM*-prescribed entering or stopping sight distance.

LSC did not see any speed limit signs (MUTCD R2-1) on Steppler Road in the field. The 2019 EPC Road Inventory identifies Steppler as a “local service” roadway with 24 feet of pavement. Based

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Include parcel 6100000485 which has been rezoned for 2.5ac lots and a pending 12 lot subdivision PCD File # P233
16850 Steppler Road
Traffic Study Memorandum update report and adjust as necessary with this additional ADT especially at Hodgen and Timber Meadow

 Number: 1 Author: eschoenheit Subject: Text Box Date: 5/14/2024 07:40:31

Include parcel 6100000485 which has been rezoned for 2.5ac lots and a pending 12 lot subdivision PCD File # P233 16850 Stepler RoadTraffic Study Memorandum update report and adjust as necessary with this additional ADT especially at Hodgen and Timber Meadow

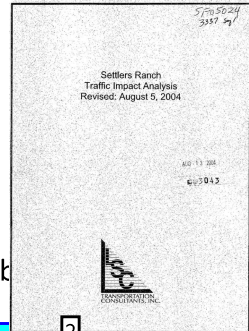
 Author: jchodsdon Subject: Sticky Note Date: 7/25/2024 13:16:34

LSC Response: Added as requested.

- Figure 4: 2023 Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 5: Short-Term Baseline Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 8: 2023 Existing + Site Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 9: 2043 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 10: 2043 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

Hodgen/Timber Meadow

All movements at the stop-sign-controlled intersection of Timber Meadows Drive/Hodgen are projected to continue to operate at LOS D or better during both short-term peak hours, based on the projected short-term total traffic volumes.



Long Term with Current Laneage

This was projected to be LOS F in 2025 from LSC TIS from PCD File SF05024 the original Settlers Ranch TIS.

By 2043, the northbound approach is projected to operate at LOS F during both peak hours. The southbound approach is projected to operate at LOS E during the long-term AM peak hour and LOS D during the long-term PM peak hour, with or without the addition of Filing No. 3 site-generated traffic. However, both the northbound and southbound approaches would have a volume-to-capacity (v/c) ratio below 0.74 during all long-term peak hours and would benefit from gaps in traffic at the nearby signalized intersection of SH 83/Hodgen Road. It is unlikely that a traffic-signal warrant would be met at this intersection,, based on the northbound and southbound through and left turn volumes.

Long Term with Modified Laneage (Two Southbound Lanes)


If the southbound approach were to be reconstructed for a right-only and shared-left/through turn lanes, the higher-volume southbound-right lane would operate at LOS D or better during all 2043 peak periods. The southbound shared-left/through lane would operate at LOS E during the AM peak and LOS F during the PM peak, with or without the addition of site-generated traffic. All minor-street individual turning movements would have a v/c ratio below 0.52 during all 2043 scenarios with two southbound turn lanes. It is unlikely that a traffic-signal warrant would be met at this intersection based on the northbound and southbound through and left-turn volumes.

Timber Meadow/Settlers Ranch Road


All approaches and individual turning movements at the intersection of Timber Meadow/Settlers Ranch Road currently operate at and are projected to remain at LOS B or better through 2043 during both peak hours.

Impact of Include parcel 610000485 which has been rezoned for 2.5ac lots and a pending 12 lot subdivision PCD File # P233
16850 Stepler Road

 Number: 1 Author: eschoenheit Subject: Image Date: 5/14/2024 07:43:36


 Number: 2 Author: eschoenheit Subject: Text Box Date: 5/14/2024 07:46:49


This was projected to be LOF F in 2025 from LSC TIS from PCD File SF05024 the original Settlers Ranch TIS.

 Author: jchodsdon Subject: Sticky Note Date: 7/28/2024 22:49:14

LSC Response: This paragraph has been revised.


 Number: 3 Author: eschoenheit Subject: Highlight Date: 5/14/2024 08:35:49

 Number: 4 Author: eschoenheit Subject: Highlight Date: 5/14/2024 08:51:47
peak

 Number: 5 Author: eschoenheit Subject: Highlight Date: 5/14/2024 08:51:43
peak

 Number: 6 Author: eschoenheit Subject: Cloud+ Date: 5/14/2024 08:54:47

Impact of Include parcel 6100000485 which has been rezoned for 2.5ac lots and a pending 12 lot subdivision PCD File # P233 16850 Stepler Road

 Author: jchodsdon Subject: Sticky Note Date: 7/26/2024 17:08:32

LSC Response: The TIS has been revised to include trips to ge generated by this parcel.

11. An escrow agreement to provide for a westbound acceleration lane on Hodgen Road at Timber Meadow Drive shall be filed at the time of recording the Final Plat. Escrow funds shall be provided prior to plat recordation.

Steppler Road/Settlers Ranch Road

All approaches and individual turning movements at the proposed Settlers Ranch Road connection to Steppler Road are projected to operate at LOS A through 2043 during both peak hours.

Hodgen Road/Steppler Road

All approaches and individual turning movements at the Road currently operate at and are projected to remain a both peak hours.

AUXILIARY TURN-LANE NEEDS ANALYSIS

Hodgen/Timber Meadow

Eastbound-Left-Turn Lane

An eastbound-left-turn deceleration lane current exists on Hodgen Road approaching Timber Meadow Drive. Currently, the eastbound-left-turn lane is 680 feet total, consisting of 290 feet of deceleration length, a 240-foot taper, and 150 feet of additional storage (for stop-sign-controlled intersections). No modifications to this existing left-turn lane on Hodgen Road approaching Timber Meadow Drive would be required, as it meets the *ECM*-required 680-foot total length.

Westbound-Right-Turn Lane

A westbound-right-turn deceleration lane currently exists on Hodgen Road approaching Timber Meadow Drive. Currently, the eastbound-left-turn lane is 760 feet total, consisting of 520 feet of deceleration length plus a 240-foot taper. No modifications to this existing right-turn lane on Hodgen Road approaching Timber Meadow Drive would be required, as it meets the *ECM*-required 530-foot total length.

Hodgen/Steppler Road

Eastbound-Left-Turn Lane

An eastbound-left-turn deceleration lane currently exists on Hodgen Road approaching Steppler Road. Currently, the eastbound-left-turn lane is 655 feet total, consisting of 290 feet of deceleration length, a 240-foot taper, and 125 feet of additional storage length. No modifications to this existing left-turn lane on Hodgen Road approaching Timber Meadow Drive would be required, as it meets the *ECM*-required 605-foot total length (290 feet of deceleration length, a 240-foot taper, and 50-75 feet of additional storage length).

Hodgen Road/Timber Meadow Drive

The future intersection of Hodgen Road/Timber Meadow Drive will operate at an acceptable LOS D or better for all the movements during both morning and evening peak hours with or without the addition of site-generated traffic through Year 2025 with the recommended lane geometry shown in Figure 14. The following turn lanes are necessary upon connection to Hodgen Road according to the County Access Code—widening of Hodgen to provide an eastbound left-turn lane and a westbound right-turn acceleration lane will be required. Regarding the need for a westbound right-turn deceleration lane, current estimates show the projected right-turn volume at a level below the threshold of 25 vehicles per hour. As the projected volume is close to the threshold volume, and Hodgen Road is a significant east/west Arterial with a posted speed of 55 mph, the County may require that funds be placed in escrow amounting to a proportionate share of the cost of future construction of this lane.

Discuss and address westbound accel lane as discussed in BoCC Resolution 09-159 from PCD File SF06026 and SF05024 TIS extract above

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Number: 1 Author: eschoenheit Subject: Image Date: 5/14/2024 08:13:20

Number: 2 Author: eschoenheit Subject: Image Date: 5/14/2024 07:48:27

 Number: 3 Author: eschoenheit Subject: Arrow Date: 5/14/2024 07:48:44

 Number: 4 Author: eschoenheit Subject: Text Box Date: 5/14/2024 08:29:54

Discuss and address westbound accel lane as discussed in BoCC Resolution 09-159 from PCD File SF06026 and SF05024 TIS extract above

 Author: jchodsdon Subject: Sticky Note Date: 7/26/2024 06:49:32

LSC Response: The TIS has been revised to address this comment and these follow-up comments/ direction from staff:

Staff comments via email: *Please detail in the TIS what the trigger point will be for future construction of the W/B accel lane.*

*Please compute what the fair share contribution will be for the Settlers Ranch development for the W/B acceleration lane. This was the required part of the previous BoCC Resolution vs outright construction.
That amount of escrow would be submitted as part of the Settlers Ranch plat submission.*

Note: The original LSC TIS report was completed based on a previous version of the MTCP and before the original version of the ECM. Based on the current version of the ECM and the current 2024 MTCP, Hodgen Road is classified as Minor Arterial, and per ECM section 2.3.7.D.2: a right turn acceleration lane is "generally not required."

Westbound-Right-Turn Lane

Per *ECM* criteria, exclusive right-turn lanes shall be provided for any access on a Minor Arterial with a projected peak-hour ingress turning volume of 50 vehicles per hour (vph) or greater. The projected westbound-left-turn volume on Hodgen Road approaching Stepler Road is **not** expected to exceed the *ECM*-minimum right-turn volume thresholds prescribing a turn lane upon Filing 3 site buildout.

STEPPLER ROAD

MTCP Analysis

Steppler Road is shown to have classification of Collector on the 2016 *MTCP* 2040 Roadway Plan. The roadway is currently an unimproved paved roadway in the vicinity of the site (between Silver Nell and Hodgen Road). The 2040 *MTCP* plan shows Steppler Road as a current paved, unimproved roadway, although the north segment is gravel. The *MTCP* Unimproved Roadway Analysis shows the roadway as “adequate” as a paved, unimproved roadway.

Steppler Road Paving (North Segment)

Not submitted ¹

Please refer to the **Escrow Agreement narrative submitted with the application**. This document proposes/requests relief from obligation to participate in paving based on past contributions to Steppler Road (paving of the segment south of Silver Nell). The projected net site-generated ADT on Steppler Road north of Silver Nell Drive is projected to be 42 vehicles per day.

Long Term

In the long term, Settlers Ranch Filing No. 3 traffic would constitute about 7 percent of the total long-term daily traffic on Steppler Road north of Silver Nell Drive. (42 vpd site traffic divided by 600 vpd total traffic [x100 for percent]).

STREET CLASSIFICATIONS


Streets internal to Filing No. 3 will be **Rural Local**.

MULTI-MODAL AND PEDESTRIAN/BIKE TRANSPORTATION


Pedestrian facilities do not currently exist on Hodgen or Timber Meadow adjacent to the site. No multi-modal improvement projects are shown adjacent to the site on “Map 15: Bicycle and Pedestrian Network and Improvements” on El Paso County’s *Major Transportation Corridors Plan (MTCP)*. Sidewalks would not be required on Settlers Ranch Road adjacent to the site, as the subdivision is classified as Rural.

 Number: 1 Author: eschoenheit Subject: Cloud+ Date: 5/13/2024 18:44:41

Not submitted

 Author: jchodsdon Subject: Sticky Note Date: 7/28/2024 22:50:21

LSC Response: This has been revised. No escrow will be required.

 Number: 2 Author: eschoenheit Subject: Highlight Date: 5/13/2024 18:44:44