## Kimley»)Horn



## 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.


Jeffrey R. Planck; PE \#53006
April 20, 2023

## Date

## Developer's Statement

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



For purposes of this study, it was assumed that this project will be completed in the next several years. Therefore, analysis was conфucted for the 2026 short-term horizon. Per scoping with El Paso County, a long-term hфrizon is not included in this study. This study follows El Paso County guidelines to serve as a Traffic Memorandum based on the daily trip generation being between 100 and 500 trips per day.

The intersection of Hodgen Road and Timber Meadow Drive (Intersection \#1) and the Settler Ranch Road and Timber Meadow Drive (\#2) intersection are incorporated into this traffic study in accordance with El Paso County standards and requirements. Access to the development is anticipated to be along Settlers Ranch Road and this access is also included for evaluation in this traffic study.

Regional access to 16850 Steppler Road will be provided by Interstate 25 (I-25), State Highway 83 (SH-83), and SH-105 while primary access to the site will be provided by SH 83, Hodgen Road, and Steppler Road. Direct access to the site will be provided by a proposed future access along Settlers Ranch Road to the northeast of the Settlers Ranch Rd and Timber Meadow Drive (\#2) intersection.

## EXISTING ROADWAY NETWORK

Hodgen Road is an east-west roadway with one through lane in each direction and a posted speed limit of 55 miles per hour within the study area. The EI Paso County Major Transportation Corridor Plan (MTCP) identifies Hodgen Road as a minor arterial through the 2060 horizon.

Rural local roadways per criteria have a 30mph design \& posted speed. Please revise.

## Kimley») Hbrn

Timber Meadows Drive is a Rural Collector roadway as identified in previous traffic studies by Settlers Ranch subdivision and per the existing 1500 ADT (fig 350 Steppler Road 3). Revise accordingly.

Timber Meadow Drive is a north-south roadway with one through lane in each direction and a posted speed limit of 30 miles per hour. This roadway operates as a two-lane local roadway classification based on the existing and future traffic volumes and due to houses fronting this roadway.

Settlers Ranch Road provides one through lane in each direction. No posted speed limit along Settlers Ranch Road coulg be determined from Google Street View, but it is assumed to operate with a speed limit of 25 miles per hour as a local residential road. This roadway operates as a two-lane local roadway classification based on the existing and future traffic volumes.

The intersection of Hodgen Road and Timber Meadow Drive (\#1) is an unsignalized intersection with stop control on the northbound and southbound Timber Meadow Drive approaches to the intersection. The eastbound and westbound Hodgen Road approaches each provide a left turn lane, a through lane, and a right turn lane in each direction. The northbound and southbound approach each provide one lane for shared left/through/right turning movements in each direction. An aerial photo that illustrates the existing intersection configuration is below (north is up).


Hodgen Road \& Timber Meadow Drive (\#1)

## Kimley»Horn

The intersection of Settlers Ranch Road and Timber Meadow Drive (\#2) is an unsignalized ' $T$ '-intersection with stop control on the westbound Settlers Ranch Road approach to the intersection. Each approach to the intersection provides one through lane for shared turning movements in each direction. An aerial photo that illustrates the existing intersection configuration is below.


Settlers Ranch Road \& Timber Meadow Drive (\#2)
The intersection lane configuration and control for the study area key intersections is shown in attached Figure 2.

## PEDESTRIAN AND BICYCLE FACILITIES REVIEW

There are no pedestrian and bicycle facilities along the roadways within the study area. This project is not anticipated to create the need for these alternate travel mode facilities.

## PUBLIC TRANSPORTATION SERVICES FACILITY REVIEW

There is no public transportation service in this area. With the rural nature of the site, it is believed that public transportation to serve this area is not feasible.

# Kimley»Horn 

Please indicate what your background values account for besides the annual growth as it does not appear to account for the most current approved phase of $\begin{array}{lr}\text { the settler ranch subdivision Filing 2C } & \text { 16850 Steppler Road } \\ \text { (PCD File SF1818). Filing 2C added 11 } & 196639000 \\ \text { lots to the existing14 lots age }\end{array}$ lots to the existing 14 lots along Settlers Ranch Rd.

## EXISTING AND FUTURE

Existing turning movement counts were conducted at the study intersections on Thursday, April 6, 2023 during the morning peak hour and Wednesday, April 5, 2025 during the afternoon peak hour. The counts were conducted on separate days because of inclement weather conditions during the other periods of these days that would have likely reduced the turning movement counts at these intersections. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on these count dates. The existing intersection traffic volumes are also shown in attached Figure 3 with count sheets attached. For purposes of this analysis, the volume traveling eastbound and westbound along Settlers Ranch Road from these traffic counts were contsenvatively assumed to carry through the project access along Settlers Ranch Road.

According to traffic projections płovided by CDOT Online Transportation Information System (OTIS), SH-83 approximatery two-thirds of a mile to the west of the site is expected to have an average 20 -year growth factor of approximately 1.56 . This equates to an annual growth rate of approximateły 2.23 percent. This annual growth rate was used to calculate short-term 2026 background traffic projections at the study area intersections as shown in Figure 4. CDOT traffic projection information is attached.

## TRIP GENERATION

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the Trip Generation Manual ${ }^{1}$ published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Manual fitted curve equations that apply to Single-Family Detached Housing (ITE Code 210) for traffic associated with this development. The following Table 1 summarizes the estimated trip generation for traffic associated with the development (calculations attached).

Table 1-16850 Steppler Road Traffic Generation

|  | Weekday Vehicles Trips |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
|  | Laily | AM Peak Hour |  | PM Peak Hour |  |  |
|  |  | Out | Total | In | Out | Total |
| Single Fe and Size <br> 14 Dwelling Unitached Housing (ITE 210) | 166 | 3 | 9 | 12 | 10 | 6 |

As shown in the table and based on ITE Trip Generation calculations, 16850 Steppler Road is expected to generate approximately 166 weekday daily trips, with 12 of these trips occurring during the morning peak hour and 16 of these trips occurring during the afternoon peak hour.

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT
Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in Table 1. Figure 5 illustrates the trip distribution and Figure 6 illustrates the traffic assignment for this project.

Of note, while it is recognized that some vehicles from this proposed development may use the future connection of Settlers Ranch Road to Steppler Road to travel north or south along Steppler Road, as well as some vehicles possibly continuing north along Timber Meadow Drive to the north of Settlers Ranch Road, because the trip generation of this development is so low and the vehicles that would perform these movements would be minimal, the trip distribution was conservatively assigned fully to Hodgen Road eastbound and westbound.

## TOTAL (BACKGROUND PLUS PROJECT) TRAFFIC

Site traffic volumes were added to the background volumes to represent estimated total traffic conditions for the 2026 horizon. These total traffic volumes for the study area are illustrated for the 2026 horizon year in Figure 7.

## TRAFFIC OPERATIONS ANALYSIS METHODOLOGY

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies at the project key intersections for the 2026 opening year horizon. The acknowledged source for determining overall capacity is the Highway Capacity Manual ${ }^{2}$.

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections and roadways, standard traffic engineering practice recommends LOS D as the minimum threshold for acceptable operations for intersections and LOS E for movements. Table 2 below shows the definition of level of service for unsignalized intersections.

[^0]Table 2 - Level of Service Definitions

| Level of <br> Service | Unsignalized Intersection <br> Average Total Delay <br> (sec/veh) |
| :---: | :---: |
| A | $\leq 10$ |

Transportation Research Board, Highway Capacity Manual, Sixth Edition, Washington DC, 2016.
Study area intersections were analyzed based on average total delay analysis for unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stopcontrolled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole.

Calculations for the level of service at the key intersections identified for the study are attached. The traffic analysis is based on the lane geometry and intersection control shown in Figure 2. The peak hour factor by intersection approach were used as determined by the existing turning movement counts. Synchro traffic analysis software was used to analyze the study area key intersections for level of service. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection delay and level of service.

## Hodgen Road \& Timber Meadow Drive (\#1)

The intersection of Hodgen Road and Timber Meadow Drive (\#1) is unsignalized with stop control on the northbound and southbound Timber Meadow Drive approaches to the intersection. The intersection movements currently operate acceptably at LOS C or better during both peak hours. With the addition of project traffic, the intersection movements are anticipated to continue operating at an acceptable level of service through the 2026 opening-year horizon. Therefore, improvements or modifications are not anticipated to be needed at this intersection based on the addition of project traffic. Table 3 provides the results of the level of service at this intersection.

Table 3 - Hodgen Road \& Timber Meadow Drive (\#1) LOS Results

| Scenario | AM Peak Hour |  | PM Peak Hour |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Delay <br> (sec/veh) | LOS | Delay <br> (sec/veh) | LOS |
| 2022 Existing | 13.9 | B | 20.4 | C |
| Northbound Approach | 7.8 | A | 8.0 | A |
| Eastbound Left | 7.6 | A | 8.5 | A |
| Westbound Left | 10.3 | B | 11.4 | B |
| Southbound Approach |  |  |  |  |
| 2026 Background | 14.5 | B | 22.1 | C |
| Northbound Approach | 7.9 | A | 8.0 | A |
| Eastbound Left | 7.6 | A | 8.6 | A |
| Westbound Left | 10.5 | B | 11.7 | B |
| Southbound Approach |  |  |  |  |
| 2026 Background Plus Project | 15.0 | C | 23.0 | C |
| Northbound Approach | 7.9 | A | 8.0 | A |
| Eastbound Left | 7.6 | A | 8.6 | A |
| Westbound Left | B | 12.0 | B |  |
| Southbound Approach |  |  |  |  |

Settlers Ranch Road \& Timber Meadow Drive (\#2)
The 'T'-intersection of Settlers Ranch Road and Timber Meadow Drive (\#2) is unsignalized with stop control on the westbound Settlers Ranch Road approach to the intersection. The intersection movements currently operate acceptably at LOS A during both peak hours. With the addition of project traffic, the intersection movements are anticipated to continue operating at an acceptable level of service through the 2026 opening-year horizon. Therefore, improvements or modifications are not anticipated to be needed at this intersection based on the addition of project traffic. Table 4 provides the results of the level of service at this intersection.

Table 4 - Settlers Ranch Road \& Timber Meadow Drive (\#2) LOS Results

| Scenario | AM Peak Hour |  | PM Peak Hour |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Delay <br> (sec/veh) | LOS | Delay <br> (sec/veh) | LOS |
| 2022 Existing | 8.8 | A | 9.5 | A |
| Westbound Approach | 7.3 | A | 0.0 | A |
| Southbound Left |  |  |  |  |
| 2026 Background | 8.9 | A | 9.6 | A |
| Westbound Approach | 7.3 | A | 0.0 | A |
| Southbound Left |  |  |  |  |
| 2026 Background Plus Project | 9.0 | A | 9.8 | A |
| Westbound Approach | 7.3 | A | 0.0 | A |
| Southbound Left |  |  |  |  |

Settlers Ranch Road \& Project Access (\#3)
The proposed ' $T$ '-intersection of Settlers Ranch Road and Project Access (\#3) is anticipated to be an unsignalized intersection with stop control on the northbound project access approach to the intersection with a recommended R1-1 "STOP" sign posted. The intersection is anticipated to operate well with one lane in each direction for shared turning movements and turn lanes are not anticipated to be needed or warranted at this intersection. With the addition of project traffic to this proposed intersection, the intersection movements are anticipated to operate at an acceptable LOS A through the 2026 horizon.
Table 5 provides the results of the level of service at this intersection.
Table 5 - Settlers Ranch Road \& Project Access (\#3) LOS Results


It is recommended that sight triangles ke provided at the projedt access along Settlers Ranch Road to give drivers exiting the project access a clear view of oncoming traffic. Landscaping and objects within sight triangles must not obstruct dkivers' views of the adjacent travel lanes. AASHTO standards nyere used along this roadmay to determine the sight distance needs. The following identifies sight distance requirements for the Settlers Ranch Road intersection associated with the pkoject.

With AASHTO standards and a residential roadway assumed speed limit of 25 miles per hour, the intersection sight distance for vehicles turning right from stop from the project access is 240 feet. Therefore, all obstructions for rightturning vehicles from stop should be clear to the left within the triangle created with a vertexpoint located 14.5 feet from the edge of the major road traveled way and a line-of-sight distance of 240 feet located in the middle of the eastbound through lane along Settlers Ranch Road. The intersection sight distance for vehicles turning left from stop from the project access is 280 feet. Therefore, all obstructions for left-turning vehicles from stop should be clear to the right within the triangle created with a vertex point located 14.5 from the edge of the major road traveled way and a line-of-sight distance of 280 feet located in the middle of the westbound through lane along Settlers Ranch Road.

10 ft per ECM table
2-21 footnote 2
Further, Table 2-21 from the EI Paso County Engineering Criteria Manual identifies an intersection sight distance of 280 feet for a two-lane roadway with a design speed of 25 miles per hour.

Although the exact location of the proposed access along Settlers Ranch Road is not yet known at this time for the purposes of this traffic study, when this project access is determined and constructed, the sight triangles should be designated for vehicles turning out of the project access and onto Settlers Ranch Road. However, although the grade of

Settlers Ranch Road varies along the roadway, it should be noted the existing roadway alignment has very little sight obstructions adjacent to the roadway and it is not anticipated that this will become an issue.

## ROAD IMPACT FEE EVALUATION

At the request of El Paso County, a road impact fee evaluation was conducted project based on the anticipated 14 single-family homes proposed to be constru

Road Impact fees may be paid at time of building permit. Revise if necessary project. The road impact fee per dwelling unit for single-family homes based on El Paso County tripaet Feq Setractule guidelines is, $\$ 3,030$ perctwe fae, this project would result in a total road impact fee of $\$ 53,620$. Road impact fees are due upon plat recordation.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the traffic analysis presented in this report, Kimley-Horn and Associates, Inc. believes the 16850 Steppler Road project will be successfully incorporated into the existing and future roadway network. The following outlines the conclusions and recommendations from our traffic analysis:

- The project is proposed to construct approximately 14 single-family homes with project access anticipated to be gained along Settlers Ranch Road to the northeast of the Settlers Ranch Road and Timber Meadow Drive (\#2) intersection. Access to the project is anticipated to be an unsignalized ' $T$ '-intersection with stop control on the northbound project access approach to the intersection with an R1-1 "STOP" sign posted on this approach. Turn lanes are not anticipated to be needed at this intersection.
- The project is anticipated to generate approximately 166 weekday daily trips, with 12 of these trips occurring during the morning peak hour and 16 of these trips occurring during the afternoon peak hour.
- No improvements are anticipated to be needed at the Hodgen Road and Timber Meadow Drive (\#1) or Settlers Ranch Road and Timber Meadow Drive (\#2) intersections through the 2026 horizon with the addition of project traffic.
- Sight distance triangles should be provided at the proposed project access along Settlers Ranch Road, when constructed, based on the 280-foot intersection sight distance for vehicles turning from stop.
- The El Paso County road impact fee for the proposed 14 single-family homes in this project would result in a total of $\$ 53,620$ based on the $\$ 3,830$ per-unit fee for singlefamily homes.

Sincerely,
KIMLEY-HORN AND ASSOCIATES, INC.


Jeffrey R. Planck, P.E.
Project Traffic Engineer

-Please list any previous studies in the area (i.e. Abert Ranch, Settlers Ranch, Settlers View)
-Provide analysis of turn lane requirements at Timber Meadows and Hodgen. Per the total traffic volumes (figure 7) it appears that the threshold for a southbound dedicated right turn lane on Timber Meadows is met. Provide recommendations whether a dedicated right turn lane should be installed or if the queuing and widen radius that was allowed in the first fillings of Settlers ranch is sufficient. (previous TIS from Settlers Ranch will be uploaded onto EDARP for your use. See page 2 \#7)
Fig
-With the addition of these 14 lots, the code maximum of 25 lots on a dead end road will be exceeded therefore a secondary access will be needed. Please discuss where the secondary access will be obtained. FYI: Abert Ranch worked with Settlers Ranch by providing a secondary emergency access through Settlers Ranch Rd to Steppler Rd from Abert Ranch Drive to the east. Consider working with Settlers Ranch to extend the gravel cul-de-sac to Abert Ranch Drive.


Provide analysis of this subdivisions fair share contribution for the paving of Steppler Road. The adjacent subdivisions, Abert Ranch and Settlers View (PCD File SF1841) have each provided fair share contribution.

Additionally please contact CDOT regarding any requirements they may have. Please include any correspondence from CDOT in your report.

## Kimley \#Horn <br> N $\mathbf{N R T S}_{\text {NTS }} 19639000$



FIGURE 1
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
VICINITY MAP
Kimley»Horn

## Kimley:)Horn <br> $\mathbf{N} \underset{\text { NTS } 196639000}{\boldsymbol{T}} \mathbf{1}$




HODGEN RD \& TIMBER MEADOW DR


## $\frac{\text { Kimley Horn }}{\substack{\text { Nis sessonol }}}$




HODGEN RD \& TIMBER MEADOW DR
Thursday, April 6, 2023
(Wednesday, April 5, 2023)
8:00 to 9:00AM (4:30 to 5:30PM) 7:00 to 8:00AM (4:00 to 5:00PM)


Thursday, April 6, 2023
(Wednesday, April 5, 2023)

## EEGEND

[^1]$X X X(X X X)$
Weekday AM (PM)
Peak Hour Traffic Volumes
XX,X00 Estimated Daily Traffic Volume

FIGURE 3

2023 EXISTING TRAFFIC VOLUMES

## $\frac{\text { Kimley Horn }}{\substack{\text { Nis Sessocoll }}}$




See comment on page 5 and adjust your analysis accordingly.

FIGURE 4
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO

## LEGEND



Study Area Key Intersection
Weekday AM (PM)
Peak Hour Traffic Volumes
XX,X00 Estimated Daily Traffic Volume

## 



(HODGEN RD \& TIMBER MEADOW DR



## LEGEND

(X) Study Area Key Intersection
(X) Project Access Intersection
$\xrightarrow{\text { XX\% External Trip Distribution Percentage }}$
Entering[Exiting]
Trip Distribution Percentage

FIGURE 5
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO PROJECT TRIP DISTRIBUTION

## 




HODGEN RD \& TIMBER MEADOW DR



LEGEND
Study Area Key Intersection
Project Access Intersection
Weekday AM (PM)
Peak Hour Traffic Volumes
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
PROJECT TRAFFIC ASSIGNMENT



HODGEN RD \& TIMBER MEADOW DR



## LEGEND

Study Area Key Intersection
Project Access Intersection
Weekday AM (PM)
Peak Hour Traffic Volumes
16850 STEPPLER ROAD
EL PASO COUNTY, COLORADO
2026 TOTAL TRAFFIC VOLUMES

## Intersection Count Sheets

Ridgeview Data
Collection

El Paso County ,CO 16850 Steppler Rd AM Peak<br>Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 1

|  | Hodgen Road Eastbound |  |  |  |  | Hodgen Road Westbound |  |  |  |  | Timber Meadow Dr Northbound |  |  |  |  | Timber Meadow Dr Southbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 07:00 AM | 0 | 15 | 1 | 0 | 16 | 0 | 66 | 0 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 89 |
| 07:15 AM | 4 | 25 | 1 | 0 | 30 | 0 | 81 | 0 | 0 | 81 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 9 | 0 | 9 | 121 |
| 07:30 AM | 4 | 16 | 0 | 0 | 20 | 0 | 71 | 0 | 0 | 71 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 18 | 0 | 19 | 110 |
| 07:45 AM | 2 | 23 | 0 | 0 | 25 | 0 | 89 | 0 | 0 | 89 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 5 | 0 | 6 | 121 |
| Total | 10 | 79 | 2 | 0 | 91 | 0 | 307 | 0 | 0 | 307 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 39 | 0 | 41 | 441 |
| 08:00 AM | 2 | 24 | 0 | 0 | 26 | 0 | 60 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 93 |
| 08:15 AM | 5 | 21 | 0 | 0 | 26 | 1 | 56 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 10 | 0 | 12 | 95 |
| 08:30 AM | 4 | 48 | 0 | 0 | 52 | 1 | 66 | 2 | 0 | 69 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 17 | 0 | 17 | 140 |
| 08:45 AM | 4 | 45 | 1 | 0 | 50 | 0 | 66 | 1 | 0 | 67 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 4 | 123 |
| Total | 15 | 138 | 1 | 0 | 154 | 2 | 248 | 3 | 0 | 253 | 4 | 0 | 0 | 0 | 4 | 2 | 0 | 38 | 0 | 40 | 451 |
| Grand Total | 25 | 217 | 3 | 0 | 245 | 2 | 555 | 3 | 0 | 560 | 6 | 0 | 0 | 0 | 6 | 4 | 0 | 77 | 0 | 81 | 892 |
| Apprch \% | 10.2 | 88.6 | 1.2 | 0 |  | 0.4 | 99.1 | 0.5 | 0 |  | 100 | 0 | 0 | 0 |  | 4.9 | 0 | 95.1 | 0 |  |  |
| Total \% | 2.8 | 24.3 | 0.3 | 0 | 27.5 | 0.2 | 62.2 | 0.3 | 0 | 62.8 | 0.7 | 0 | 0 | 0 | 0.7 | 0.4 | 0 | 8.6 | 0 | 9.1 |  |
| Automobiles | 25 | 217 | 3 | 0 | 245 | 2 | 555 | 3 | 0 | 560 | 6 | 0 | 0 | 0 | 6 | 4 | 0 | 77 | 0 | 81 | 892 |
| \% Automobiles | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 0 | 0 | 0 | 100 | 100 | 0 | 100 | 0 | 100 | 100 |
| Bicycle and Pedestrian | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| \% Bicycle and Pedestrian | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

El Paso County ,CO 16850 Steppler Rd
AM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No :2

EI Paso County ,CO
16850 Steppler Rd
AM Peak
Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 3

|  | Hodgen Road Eastbound |  |  |  |  | Hodgen Road Westbound |  |  |  |  | Timber Meadow Dr Northbound |  |  |  |  | Timber Meadow Dr Southbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 08:00 AM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 08:00 AM | 2 | 24 | 0 | 0 | 26 | 0 | 60 | 0 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 93 |
| 08:15 AM | 5 | 21 | 0 | 0 | 26 | 1 | 56 | 0 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 10 | 0 | 12 | 95 |
| 08:30 AM | 4 | 48 | 0 | 0 | 52 | 1 | 66 | 2 | 0 | 69 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 17 | 0 | 17 | 140 |
| 08:45 AM | 4 | 45 | 1 | 0 | 50 | 0 | 66 | 1 | 0 | 67 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 4 | 123 |
| Total Volume | 15 | 138 | 1 | 0 | 154 | 2 | 248 | 3 | 0 | 253 | 4 | 0 | 0 | 0 | 4 | 2 | 0 | 38 | 0 | 40 | 451 |
| \% App. Total | 9.7 | 89.6 | 0.6 | 0 |  | 0.8 | 98 | 1.2 | 0 |  | 100 | 0 | 0 | 0 |  | 5 | 0 | 95 | 0 |  |  |
| PHF | . 750 | . 719 | . 250 | . 000 | . 740 | . 500 | . 939 | . 375 | . 000 | . 917 | . 500 | . 000 | . 000 | . 000 | . 500 | . 250 | . 000 | . 559 | . 000 | . 588 | . 805 |



Ridgeview Data
Collection

El Paso County ,CO 16850 Steppler Rd<br>AM Peak<br>Hodgen Rd and Timber Meadow Dr

File Name : Hodgen and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 4
Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.


Ridgeview Data
Collection

El Paso County ,CO 16850 Steppler Rd<br>PM Peak<br>Hodgen Rd and Timber Meadow Dr<br>File Name : Hodgen and Timber Meadow PM<br>Site Code : IPO 644<br>Start Date : 4/5/2023<br>Page No : 1

Groups Printed- Automobiles - Bicycle and Pedestrian

|  | Hodgen Road Eastbound |  |  |  |  | Hodgen Road Westbound |  |  |  |  | Timber Meadow Dr Northbound |  |  |  |  | Timber Meadow Dr Southbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Thru | Right | Peds | App Toal | Left | Thru | Right | Peds | App. Toal | Left | Thru | Right | Peds | App. Toal | Left | Thru | Right | Peds | App. Toal | Int. Total |
| 04:00 PM | 1 | 103 | 1 | 0 | 105 | 0 | 59 | 0 | 0 | 59 | 1 | 1 | 2 | 0 | 4 | 1 | 6 | 24 | 0 | 31 | 199 |
| 04:15 PM | 35 | 102 | 3 | 0 | 140 | 1 | 52 | 3 | 0 | 56 | 3 | 0 | 0 | 0 | 3 | 0 | 2 | 10 | 0 | 12 | 211 |
| 04:30 PM | 13 | 115 | 4 | 0 | 132 | 0 | 62 | 1 | 0 | 63 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 10 | 0 | 10 | 208 |
| 04:45 PM | 23 | 109 | 2 | 0 | 134 | 0 | 63 | 2 | 0 | 65 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 15 | 0 | 17 | 217 |
| Total | 72 | 429 | 10 | 0 | 511 | 1 | 236 | 6 | 0 | 243 | 7 | 1 | 3 | 0 | 11 | 3 | 8 | 59 | 0 | 70 | 835 |


| 05:00 PM | 16 | 109 | 0 | 0 | 125 | 1 | 47 | 3 | 0 | 51 | 1 | 1 | 1 | 0 | 3 | 1 | 0 | 12 | 0 | 13 | 192 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 05:15 PM | 24 | 133 | 2 | 0 | 159 | 0 | 57 | 2 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 11 | 0 | 13 | 231 |
| 05:30 PM | 16 | 116 | 1 | 0 | 133 | 0 | 62 | 1 | 0 | 63 | 3 | 0 | 0 | 0 | 3 | 2 | 0 | 4 | 0 | 6 | 205 |
| 05:45 PM | 21 | 93 | 1 | 0 | 115 | 0 | 60 | 0 | 0 | 60 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 11 | 0 | 12 | 188 |
| Total | 77 | 451 | 4 | 0 | 532 | 1 | 226 | 6 | 0 | 233 | 5 | 1 | 1 | 0 | 7 | 6 | 0 | 38 | 0 | 44 | 816 |


| Grand Total | 149 | 880 | 14 | 0 | 1043 | 2 | 462 | 12 | 0 | 476 | 12 | 2 | 4 | 0 | 18 | 9 | 8 | 97 | 0 | 114 | 1651 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Apprch \% | 14.3 | 84.4 | 1.3 | 0 |  | 0.4 | 97.1 | 2.5 | 0 |  | 66.7 | 11.1 | 22.2 | 0 |  | 7.9 | 7 | 85.1 | 0 |  |  |
| Total \% | 9 | 53.3 | 0.8 | 0 | 63.2 | 0.1 | 28 | 0.7 | 0 | 28.8 | 0.7 | 0.1 | 0.2 | 0 | 1.1 | 0.5 | 0.5 | 5.9 | 0 | 6.9 |  |
| Automobiles | 149 | 880 | 14 | 0 | 1043 | 2 | 462 | 12 | 0 | 476 | 12 | 2 | 4 | 0 | 18 | 9 | 8 | 97 | 0 | 114 | 1651 |
| \% Automobiles | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 | 100 | 100 | 0 | 100 | 100 |
| Bicrie and Peesestian | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| \% Biocte | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

El Paso County ,CO
16850 Steppler Rd
File Name : Hodgen and Timber Meadow PM
Site Code : IPO 644
PM Peak
Hodgen Rd and Timber Meadow Dr


El Paso County ,CO
File Name : Hodgen and Timber Meadow PM
Site Code : IPO 644
16850 Steppler Rd
Start Date: 4/5/2023
PM Peak
Hodgen Rd and Timber Meadow Dr


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:30 PM

| 04:30 PM | 13 | 115 | 4 | 0 | 132 | 0 | 62 | 1 | 0 | 63 | 2 | 0 | 1 | 0 | 3 | 0 | 0 | 10 | 0 | 10 | 208 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 04:45 PM | 23 | 109 | 2 | 0 | 134 | 0 | 63 | 2 | 0 | 65 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 15 | 0 | 17 | 217 |
| 05:00 PM | 16 | 109 | 0 | 0 | 125 | 1 | 47 | 3 | 0 | 51 | 1 | 1 | 1 | 0 | 3 | 1 | 0 | 12 | 0 | 13 | 192 |
| 05:15 PM | 24 | 133 | 2 | 0 | 159 | 0 | 57 | 2 | 0 | 59 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 11 | 0 | 13 | 231 |
| Total Volume | 76 | 466 | 8 | 0 | 550 | 1 | 229 | 8 | 0 | 238 | 4 | 1 | 2 | 0 | 7 | 5 | 0 | 48 | 0 | 53 | 848 |
| \% App. Total | 13.8 | 84.7 | 1.5 | 0 |  | 0.4 | 96.2 | 3.4 | 0 |  | 57.1 | 14.3 | 28.6 | 0 |  | 9.4 | 0 | 90.6 | 0 |  |  |
| PHF | . 792 | . 876 | . 500 | . 000 | . 865 | . 250 | . 909 | . 667 | . 000 | . 915 | . 500 | . 250 | . 500 | . 000 | . 583 | . 625 | . 000 | . 800 | . 000 | . 779 | . 918 |



Ridgeview Data
Collection

El Paso County ,CO 16850 Steppler Rd<br>File Name : Hodgen and Timber Meadow PM<br>Site Code : IPO 644<br>PM Peak<br>Hodgen Rd and Timber Meadow Dr<br>Start Date : 4/5/2023<br>Page No : 4

## Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.


Ridgeview Data Collection

El Paso County ,CO<br>16850 Steppler Rd<br>AM Peak<br>Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 1

|  | Settlers Ranch Rd Westbound |  |  |  | Timber Meadow Dr Northbound |  |  |  | Timber Meadow Dr Southbound |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 07:00 AM | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 10 |
| 07:15 AM | 1 | 1 | 0 | 2 | 4 | 0 | 1 | 5 | 1 | 8 | 0 | 9 | 16 |
| 07:30 AM | 3 | 0 | 0 | 3 | 4 | 0 | 0 | 4 | 0 | 16 | 0 | 16 | 23 |
| 07:45 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 6 | 0 | 6 | 8 |
| Total | 5 | 2 | 0 | 7 | 10 | 0 | 1 | 11 | 2 | 37 | 0 | 39 | 57 |
| 08:00 AM | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 5 | 0 | 5 | 7 |
| 08:15 AM | 2 | 0 | 0 | 2 | 4 | 1 | 0 | 5 | 0 | 10 | 0 | 10 | 17 |
| 08:30 AM | 3 | 0 | 0 | 3 | 5 | 1 | 0 | 6 | 0 | 14 | 0 | 14 | 23 |
| 08:45 AM | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 0 | 4 | 0 | 4 | 9 |
| Total | 6 | 0 | 0 | 6 | 15 | 2 | 0 | 17 | 0 | 33 | 0 | 33 | 56 |
| Grand Total | 11 | 2 | 0 | 13 | 25 | 2 | 1 | 28 | 2 | 70 | 0 | 72 | 113 |
| Apprch \% | 84.6 | 15.4 | 0 |  | 89.3 | 7.1 | 3.6 |  | 2.8 | 97.2 | 0 |  |  |
| Total \% | 9.7 | 1.8 | 0 | 11.5 | 22.1 | 1.8 | 0.9 | 24.8 | 1.8 | 61.9 | 0 | 63.7 |  |
| Automobiles | 11 | 2 | 0 | 13 | 25 | 2 | 0 | 27 | 2 | 70 | 0 | 72 | 112 |
| \% Automobiles | 100 | 100 | 0 | 100 | 100 | 100 | 0 | 96.4 | 100 | 100 | 0 | 100 | 99.1 |
| Bicycle and Pedestrian | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| \% Bicycle and Pedestrian | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 3.6 | 0 | 0 | 0 | 0 | 0.9 |

El Paso County ,CO 16850 Steppler Rd
AM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No :2


El Paso County ,CO 16850 Steppler Rd
AM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name: Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 3

|  | Settlers Ranch Rd Westbound |  |  |  | Timber Meadow Dr Northbound |  |  |  | Timber Meadow Dr Southbound |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:00 AM

| 07:00 AM | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 8 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 07:15 AM | 1 | 1 | 0 | 2 | 4 | 0 | 1 | 5 | 1 | 8 | 0 | 9 | 16 |
| 07:30 AM | 3 | 0 | 0 | 3 | 4 | 0 | 0 | 4 | 0 | 16 | 0 | 16 | 23 |
| 07:45 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 6 | 0 | 6 | 8 |
| Total Volume | 5 | 2 | 0 | 7 | 10 | 0 | 1 | 11 | 2 | 37 | 0 | 39 | 57 |
| \% App. Total | 71.4 | 28.6 | 0 |  | 90.9 | 0 | 9.1 |  | 5.1 | 94.9 | 0 |  |  |
| PHF | . 417 | . 500 | . 000 | . 583 | . 625 | . 000 | . 250 | . 550 | . 500 | . 578 | . 000 | . 609 | . 620 |



Ridgeview Data
Collection

El Paso County ,CO 16850 Steppler Rd<br>AM Peak<br>Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow AM
Site Code : IPO 644
Start Date : 4/6/2023
Page No : 4

## Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.


Ridgeview Data Collection

El Paso County ,CO<br>16850 Steppler Rd<br>PM Peak<br>Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 1

|  | Settlers Ranch Rd Westbound |  |  |  | Timber Meadow Dr Northbound |  |  |  | Timber Meadow Dr Southbound |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 04:00 PM | 0 | 1 | 0 | 1 | 10 | 2 | 0 | 12 | 0 | 30 | 0 | 30 | 43 |
| 04:15 PM | 4 | 0 | 0 | 4 | 25 | 2 | 1 | 28 | 0 | 11 | 0 | 11 | 43 |
| 04:30 PM | 0 | 2 | 0 | 2 | 15 | 1 | 0 | 16 | 0 | 11 | 0 | 11 | 29 |
| 04:45 PM | 1 | 0 | 0 | 1 | 25 | 0 | 0 | 25 | 0 | 13 | 0 | 13 | 39 |
| Total | 5 | 3 | 0 | 8 | 75 | 5 | 1 | 81 | 0 | 65 | 0 | 65 | 154 |
| 05:00 PM | 0 | 0 | 0 | 0 | 18 | 2 | 0 | 20 | 0 | 12 | 0 | 12 | 32 |
| 05:15 PM | 0 | 1 | 0 | 1 | 22 | 4 | 0 | 26 | 0 | 13 | 0 | 13 | 40 |
| 05:30 PM | 2 | 0 | 0 | 2 | 14 | 2 | 0 | 16 | 0 | 4 | 0 | 4 | 22 |
| 05:45 PM | 0 | 0 | 0 | 0 | 20 | 1 | 0 | 21 | 0 | 12 | 0 | 12 | 33 |
| Total | 2 | 1 | 0 | 3 | 74 | 9 | 0 | 83 | 0 | 41 | 0 | 41 | 127 |
| Grand Total | 7 | 4 | 0 | 11 | 149 | 14 | 1 | 164 | 0 | 106 | 0 | 106 | 281 |
| Apprch \% | 63.6 | 36.4 | 0 |  | 90.9 | 8.5 | 0.6 |  | 0 | 100 | 0 |  |  |
| Total \% | 2.5 | 1.4 | 0 | 3.9 | 53 | 5 | 0.4 | 58.4 | 0 | 37.7 | 0 | 37.7 |  |
| Automobiles | 7 | 4 | 0 | 11 | 149 | 14 | 0 | 163 | 0 | 106 | 0 | 106 | 280 |
| \% Automobiles | 100 | 100 | 0 | 100 | 100 | 100 | 0 | 99.4 | 0 | 100 | 0 | 100 | 99.6 |
| Bicycle and Pedestrian | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 |
| \% Bicycle and Pedestrian | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 0.6 | 0 | 0 | 0 | 0 | 0.4 |

El Paso County ,CO 16850 Steppler Rd
PM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No :2


El Paso County ,CO 16850 Steppler Rd
PM Peak
Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 3

|  | Settlers Ranch Rd Westbound |  |  |  | Timber Meadow Dr Northbound |  |  |  | Timber Meadow Dr Southbound |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 04:00 PM

| 04:00 PM | 0 | 1 | 0 | 1 | 10 | 2 | 0 | 12 | 0 | 30 | 0 | 30 | 43 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 04:15 PM | 4 | 0 | 0 | 4 | 25 | 2 | 1 | 28 | 0 | 11 | 0 | 11 | 43 |
| 04:30 PM | 0 | 2 | 0 | 2 | 15 | 1 | 0 | 16 | 0 | 11 | 0 | 11 | 29 |
| 04:45 PM | 1 | 0 | 0 | 1 | 25 | 0 | 0 | 25 | 0 | 13 | 0 | 13 | 39 |
| Total Volume | 5 | 3 | 0 | 8 | 75 | 5 | 1 | 81 | 0 | 65 | 0 | 65 | 154 |
| \% App. Total | 62.5 | 37.5 | 0 |  | 92.6 | 6.2 | 1.2 |  | 0 | 100 | 0 |  |  |
| PHF | . 313 | . 375 | . 000 | . 500 | . 750 | . 625 | . 250 | . 723 | . 000 | . 542 | . 000 | . 542 | . 895 |



Ridgeview Data
Collection

El Paso County ,CO 16850 Steppler Rd<br>PM Peak<br>Settlers Ranch Rd and Timber Meadow Dr

File Name : Settlers Ranch and Timber Meadow PM
Site Code : IPO 644
Start Date : 4/5/2023
Page No : 4

## Image 1

The number of pedestrians shown on this report is representative of the crossing on the approaching leg, i.e. pedestrians crossing the north side of the intersection are counted as pedestrians in the southbound crosswalk, as that is the approaching leg that they are crossing (see figure below). Diagonal crossings are counted on the two legs that will get the pedestrian to the same end point. Diagonals can be counted separately if discussed prior to count.


## Traffic Projections

| ROUTE | REFPT | ENDREFPT | AADT | YR20FACTOR | GROWTHRATE | DHV | LOCATION |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 083A | 23.127 | 25.87 | 15000 | 1.55 | $2.22 \%$ | 10 | ON SH 83 N/O NORTH GATE RD |
| 083 A | 25.87 | 28.132 | 14000 | 1.56 | $2.25 \%$ | 10.5 | ON SH 83 S/O SH 105 WALKER RD |
| Average |  |  |  |  | 1.555 | $2.23 \%$ |  |

## Trip Generation Worksheet

## Kimley»)Horn

Project

$$
16850 \text { Steppler Road }
$$

Subject Trip Generation for Single-Family Detached Housing

$$
\begin{array}{ll}
\text { Designed by } & \text { TJD } \\
\text { Checked by } & \text { Date } \\
\hline & \text { Date } \ldots \quad \text { April 10, 2023 }
\end{array} \quad \begin{gathered}
\text { Job No. } \\
\hline
\end{gathered}
$$

## TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations
Land Use Code - Single-Family Detached Housing (210)
Independent Variable - Dwelling Units (X)

$$
\begin{aligned}
& X=14 \\
& T=\text { Average Vehicle Trip Ends }
\end{aligned}
$$

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 220)

$$
\begin{aligned}
& \operatorname{Ln}(\mathrm{T})=0.91 \operatorname{Ln}(\mathrm{X})+0.12 \\
& \operatorname{Ln}(\mathrm{~T})=0.91^{*} \quad \operatorname{Ln}(14)+0.12
\end{aligned}
$$

Directional Distribution: 26\% ent. 74\% exit.
$\mathrm{T}=12 \quad$ Average Vehicle Trip Ends 3 entering 9 exiting $3+9=12$

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 221)

$$
\begin{aligned}
& \operatorname{Ln}(\mathrm{T})=0.94 \operatorname{Ln}(\mathrm{X})+0.27 \\
& \operatorname{Ln}(\mathrm{~T})=0.94^{*} \quad \operatorname{Ln}(14)+0.27
\end{aligned}
$$

Directional Distribution: 63\% ent. 37\% exit.
$\begin{array}{cccc}\mathrm{T}= & 16 & \text { Average Vehicle Trip Ends } \\ 10 & \text { entering } & 6 & \text { exiting }\end{array}$ $10+6=16$

## Weekday (200 Series Page 219)

$$
\begin{aligned}
& \operatorname{Ln}(T)=0.92 \operatorname{Ln}(X)+2.68 \\
& \operatorname{Ln}(T)=0.92 \text { * } \quad \operatorname{Ln}(14)+2.68
\end{aligned}
$$

Directional Distribution: 50\% entering, 50\% exiting $\mathrm{T}=166 \quad$ Average Vehicle Trip Ends 83 entering 83 exiting $83+83=166$

## Intersection Capacity Analysis Outputs

| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh 1.8 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | 4 | 「 | ${ }^{7}$ | 4 | 「 |  | \$ |  |  | * |  |
| Traffic Vol, veh/h | 15 | 138 | 1 | 2 | 248 | 3 | 4 | 0 | 0 | 2 | 0 | 38 |
| Future Vol, veh/h | 15 | 138 | 1 | 2 | 248 | 3 | 4 | 0 | 0 | 2 | 0 | 38 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 500 | - | 425 | 525 | - | 525 | - | - | - | - | - | - |
| Veh in Median Storage, \# | \# - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 74 | 74 | 74 | 92 | 92 | 92 | 50 | 50 | 50 | 59 | 59 | 59 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 20 | 186 | 1 | 2 | 270 | 3 | 8 | 0 | 0 | 3 | 0 | 64 |



| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 1.8 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{*}$ | 4 | 「 | ${ }^{*}$ | + | 「 |  | $\uparrow$ |  |  | $\stackrel{+}{*}$ |  |
| Traffic Vol, veh/h | 76 | 466 | 8 | 1 | 229 | 8 | 4 | 1 | 2 | 5 | 0 | 48 |
| Future Vol, veh/h | 76 | 466 | 8 | 1 | 229 | 8 | 4 | 1 | 2 | 5 | 0 | 48 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control Frest | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |
| Storage Length | 500 | - | 425 | 525 | - | 525 | - | - | - | - | - | - |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 87 | 87 | 87 | 92 | 92 | 92 | 58 | 58 | 58 | 78 | 78 | 78 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 87 | 536 | 9 | 1 | 249 | 9 | 7 | 2 | 3 | 6 | 0 | 62 |







| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh | 2.1 |  |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |  |
| Lane Configurations | ${ }^{*}$ | 4 | 「 | ${ }^{1}$ | 4 | T |  | \$ |  |  | \$ |  |  |
| Traffic Vol, veh/h | 19 | 147 | 1 | 2 | 265 | 3 | 4 | 0 | 0 | 3 | 0 | 49 |  |
| Future Vol, veh/h | 19 | 147 | 1 | 2 | 265 | 3 | 4 | 0 | 0 | 3 | 0 | 49 |  |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |  |
| RT Channelized | - | - | None | - | - | None | - | - | None | - | - | None |  |
| Storage Length | 500 | - | 425 | 525 | - | 525 | - | - | - | - | - | - |  |
| Veh in Median Storage, \# | \# | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Grade, \% | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |  |
| Peak Hour Factor | 74 | 74 | 74 | 92 | 92 | 92 | 50 | 50 | 50 | 59 | 59 | 59 |  |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |  |
| Mvmt Flow | 26 | 199 | 1 | 2 | 288 | 3 | 8 | 0 | 0 | 5 | 0 | 83 |  |



| Intersection |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay，s／veh | 1.9 |  |  |  |  |  |  |  |  |  |  |  |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ${ }^{7}$ | 4 | 「゙ | ${ }^{*}$ | ＋ | 「 |  | $\uparrow$ |  |  | $\stackrel{+}{*}$ |  |
| Traffic Vol，veh／h | 90 | 498 | 9 | 1 | 245 | 10 | 4 | 1 | 2 | 6 | 0 | 56 |
| Future Vol，veh／h | 90 | 498 | 9 | 1 | 245 | 10 | 4 | 1 | 2 | 6 | 0 | 56 |
| Conflicting Peds，\＃／hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | － | － | None | － | － | None | － | － | None | － | － | None |
| Storage Length | 500 | － | 425 | 525 | － | 525 | － | － | － | － | － | － |
| Veh in Median Storage，\＃ | \＃ | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Grade，\％ | － | 0 | － | － | 0 | － | － | 0 | － | － | 0 | － |
| Peak Hour Factor | 87 | 87 | 87 | 92 | 92 | 92 | 58 | 58 | 58 | 78 | 78 | 78 |
| Heavy Vehicles，\％ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 103 | 572 | 10 | 1 | 266 | 11 | 7 | 2 | 3 | 8 | 0 | 72 |



2: Timber Meadow Drive \& Settlers Ranch Road



2: Timber Meadow Drive \& Settlers Ranch Road



2: Timber Meadow Drive \& Settlers Ranch Road



2: Timber Meadow Drive \& Settlers Ranch Road




| Major/Minor | Minor1 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 95 | 23 | 0 | 0 | 25 | 0 |
| Stage 1 | 23 | - | - | - | - | - |
| Stage 2 | 72 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 905 | 1054 | - | - | 1589 | - |
| Stage 1 | 1000 | - | - | - | - | - |
| Stage 2 | 951 | - | - | - | - | - |
| Platoon blocked, \% |  |  | - | - |  | - |
| Mov Cap-1 Maneuver | 903 | 1054 | - | - | 1589 | - |
| Mov Cap-2 Maneuver | 903 | - | - | - | - | - |
| Stage 1 | 1000 | - | - | - | - | - |
| Stage 2 | 949 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |
| HCM Control Delay, s | 9 |  | 0 |  | 0.3 |  |
| HCM LOS | A |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRV | BLn1 | SBL |  |
| Capacity (veh/h) |  | - | - | 919 | 1589 | - |
| HCM Lane V/C Ratio |  | - | - | 0.03 | 0.002 | - |
| HCM Control Delay (s) |  | - | - | 9 | 7.3 | 0 |
| HCM Lane LOS |  | - | - | A | A | A |
| HCM 95th \%tile Q(veh) |  | - | - | 0.1 | 0 | - |



| Major/Minor M | Minor1 |  | Major1 |  | Major2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conflicting Flow All | 250 | 122 | 0 | 0 | 132 | 0 |
| Stage 1 | 122 | - | - | - | - | - |
| Stage 2 | 128 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.12 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - | - | 2.218 | - |
| Pot Cap-1 Maneuver | 739 | 929 | - | - | 1453 | - |
| Stage 1 | 903 | - | - | - | - | - |
| Stage 2 | 898 | - | - | - | - | - |
| Platoon blocked, \% |  |  | - | - |  | - |
| Mov Cap-1 Maneuver | 739 | 929 | - | - | 1453 | - |
| Mov Cap-2 Maneuver | 739 | - | - | - | - | - |
| Stage 1 | 903 | - | - | - | - | - |
| Stage 2 | 898 | - | - | - | - | - |
|  |  |  |  |  |  |  |
| Approach | WB |  | NB |  | SB |  |
| HCM Control Delay, s | 9.8 |  | 0 |  | 0 |  |
| HCM LOS | A |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Minor Lane/Major Mvmt |  | NBT | NBRWBLn1 |  | SBL | SBT |
| Capacity (veh/h) |  | - | - | 773 | 1453 | - |
| HCM Lane V/C Ratio |  | - | - | 0.036 | - | - |
| HCM Control Delay (s) |  | - | - | 9.8 | 0 | - |
| HCM Lane LOS |  | - | - | A | A | - |
| HCM 95th \%tile Q(veh) |  | - |  | 0.1 | 0 | - |






## Conceptual Site Plan




[^0]:    ${ }^{2}$ Transportation Research Board, Highway Capacity Manual, Sixth Edition, Washington DC, 2016.

[^1]:    Study Area Key Intersection

