

## Summary of Planning Commission Concerns

Project: Anderson Ranch

### 1. Roadway capacity and plans for it

- Kimley-Horn & Associates performed a Traffic Study for the master-planned residential community, Anderson Ranch, located on the southwest corner of the 100th Avenue and Chambers Road intersection in Commerce City, Colorado. Anderson Ranch is proposed to include detached and attached single-family housing and a public park. It is expected that Anderson Ranch will be completed in the next several years; therefore, analysis was conducted for the 2025 and 2045 horizons. The purpose of the traffic study was to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with the City of Commerce City scope:
  - 104th Avenue and Sable Boulevard (#1)
  - 104th Avenue and Chambers Road (#2)
  - 100th Avenue and Chambers Road (#3)
  - 98th Avenue and Chambers Road (#4)
  - 96th Avenue and Chambers Road (#5)
- In addition, the future project connected intersections of 102nd Avenue and Sable Boulevard (#6), Dillon Circle and Sable Boulevard (#7), and 99th Avenue and Chambers Road (#8) were evaluated. The existing intersection of 99th Avenue and Chambers Road (#8) is currently restricted to right-in/right-out movements on the east leg of this intersection. Regional access to Anderson Ranch will be provided by Interstate 76 (I-76) and E-470. Primary access will be provided by Sable Boulevard and Chambers Road. Direct access will be provided from 98th Avenue, 100th Avenue, 102nd Avenue, Sable Boulevard, and Chambers Road. Anderson Ranch is expected to generate approximately 5,014 weekday daily trips, with 357 of these trips occurring during the morning peak hour and 491 of these trips occurring during the afternoon peak hour. Based on the analysis presented in this report, Kimley-Horn believes Anderson Ranch will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following conclusions and recommendations:

#### 2025 Recommendations:

- To comply with City of Commerce City Engineering Construction Standards and Specifications, it is recommended that 235-foot with 180-foot taper northbound and southbound left turn lanes along with a 135-foot plus 180-foot taper southbound right turn lane be constructed at the intersection of 100th Avenue and Chambers Road (#3). It should be noted that the northbound and southbound left turn lanes should have previously been constructed and are needed based on existing traffic conditions. Further, as the southwest corner of the 100th Avenue and Chambers Road (#3) intersection is improved with development of the project, an eastbound left turn lane should be provided which is consistent with the east leg of this intersection.
- To comply with City of Commerce City Engineering Construction Standards and Specifications, it is recommended that 235-foot with 180-foot taper northbound and southbound left turn lanes

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be constructed at the intersection of 98th Avenue and Chambers Road (#4). It should be noted that the southbound left turn lane should have previously been constructed and is needed based on existing conditions.

- It is recommended that the eastbound left turn lane at the intersection of 96th Avenue and Chambers Road (#5) be extended from 75 feet to 125 feet by 2025.
- With development of the project, an east leg is proposed to be constructed at the intersection of 102nd Avenue and Sable Boulevard (#6). When this east leg is constructed, it is recommended that the westbound approach operate with stop control and an R1-1 "STOP" sign be installed for this approach. It is believed that one lane shared for all movements will be sufficient on the westbound approach of this intersection.
- With development of the project, an east leg is anticipated to be constructed at the intersection of Dillon Circle and Sable Boulevard (#7). When this east leg is constructed, it is recommended that one lane be designated for all movements on the westbound approach.
- With development of the project, a west leg is anticipated to be constructed at the intersection of 99th Avenue and Chambers Road (#8). When this west leg is constructed, it is recommended that an R1-1 "STOP" sign be installed, and that one lane be designated for right turn movements only on the eastbound approach. To further designate the west leg of this intersection exiting right turn movements, it is recommended that an R3-2 "No Left Turn" sign be installed underneath the STOP sign. In addition, a raised median pork chop island should be provided on the west leg of this intersection (similar to the east leg) restricting movements to right turns only at this intersection. To further restrict entering northbound left turn movements at this intersection, a R3-2 "No Left Turn" sign could be installed on the northwest corner of this intersection visible to northbound drivers.

### 2045 Recommendations:

- The C3 Vision Transportation Plan identifies two and three through lanes in each direction along 104th Avenue by 2035. With future traffic projections, three eastbound and westbound through lanes would need to be provided along 104th Avenue within the study area in order to provide acceptable operations. It is believed that the calculated annual traffic growth rate of 3.4 percent (from DRCOG traffic models) is not sustainable for 24 years and may not be maintained throughout 2045. Therefore, it is recommended that traffic volumes be monitored at the study area key intersections in the long-term future to determine appropriate intersection improvements.
- If future volumes are realized by 2045, the intersection of 104th Avenue and Sable Boulevard (#1) is expected to meet signal warrants and therefore may need to be signalized. Additionally, the northbound right turn lane at this intersection may need to be extended from 75 feet to 125 feet.

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- If future volumes are realized by 2045, the intersection of 100th Avenue and Chambers Road (#3) is expected to meet signal warrants and therefore may need to be signalized.
- Additional turn lane improvements may be needed by 2045 and should be analyzed further in the future.

### Trip Generation for Collector Roads

- Collectors have capacity of 10,000 trips/day.
- 2,700 trips on 100<sup>th</sup> Avenue total. (25% capacity)
- 5,000 trips on Sable. (50% capacity)

### Annexation Agreement - Developer Obligations

- A cash contribution of \$ 200,000 for one quarter of a future traffic signal at 104th and Sable Boulevard. The cash contribution shall be due in accordance with the terms in the development agreement at the time of plat.
- A cash contribution of \$ 200,000 for one quarter of a future traffic signal at 100th Avenue and Chambers Road. The cash contribution shall be due in accordance with the terms in the development agreement at the time of plats. The design and construction of the complete section (64' ROW Minor/Residential Collector) of East 102nd Avenue adjacent to the north boundary of the development from the west limit of the High Pointe Subdivision to Sable Blvd. Owner will use reasonable efforts to acquire necessary ROW to align East 102nd Avenue with the intersection west of Sable Blvd (Approximately 625 sf). In the event that Owner is unable to obtain the additional ROW, Owner will be required to design and construct an alternative that meets City standards.
- The design and construction of the east ½ section (64' ROW Minor/Residential Collector) of the roadway connection of Sable Blvd from East 98th Avenue to East 99th Avenue.
- The design and construction of the north ½ section (64' ROW Minor/Residential Collector) of the roadway connection of East 98th Avenue from Chambers Roads to the first intersection west of Chambers Road
- The design and construction of the north ½ section of a local roadway of East 98th Avenue from the first intersection west of Chambers Road to Sable Blvd.

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### 2. The relationship between street design and crime

- We have tried to “incorporate community spaces such as parks, trails, etc. where regular social interactions occur which can foster a sense of community ownership and vigilance, contributing to the overall security of the area.”
- Areas where there is easy access, movement, and sightlines – crime is less likely to occur in places where there are clear, well defined routes and people can easily enter and leave.
- We have avoided creating concealed or isolated routes which are often predictable routes for potential offenders to corner pedestrians in.
- Use of semitransparent fencing will help control access and encourage surveillance within communities.

#### References:

<https://www.criminallawaz.com/does-neighborhood-design-influence-crime/#:~:text=Factors%20such%20as%20street%20layout,may%20inadvertently%20encourage%20criminal%20behavior.>

<https://www.crimeprevention.vic.gov.au/resources/urban-design-and-crime>

<http://cpted.mapc.org>

### 3. How to better mesh the transition between Harvest Meadows and the proposed Anderson Ranch development

- The design for Anderson Ranch has taken into consideration the neighboring communities by the following.
  - Buffer Harvest Meadows with similar type of housing
  - Address road/traffic concerns
    - Complete collector roads 100th Ave. and 102nd Ave
    - Contribute funding for traffic signals
    - Align project roads with Harvest Meadow
    - Provide roundabouts as traffic calming measures
  - Provide a site for a new elementary school
  - Provide a site for a portion of a future regional park
  - Provide safe pedestrian trails