

1.0 EXECUTIVE SUMMARY

Jones District Redevelopment is a proposed mixed-use development to be located on both the north and south sides of Mineral Avenue between Chester Street and Interstate 25 (I-25) in Centennial, Colorado. For purposes of this study, the project is anticipated to include 1,500 multi-family housing units, a 200-room hotel, 3,000,000 square feet of office space, and 130,000 square feet of retail to be completed within the next 10 years. Therefore, analysis was conducted for the 2030 short term horizon as well as the 2040 long term horizon.

The purpose of this study is to identify project traffic generation characteristics, to identify potential project traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following intersections, labeled intersections 1 through 19, were incorporated into this traffic study in accordance with the City of Centennial and State of Colorado Department of Transportation (CDOT) standards and requirements:

1. Dry Creek Road and Yosemite Street
2. Dry Creek Road and Chester Street
3. Dry Creek Road and I-25 Southbound Ramp
4. Dry Creek Road and I-25 Northbound Ramp
5. Panorama Drive and Yosemite Street
6. Panorama Circle and Chester Street
7. Mineral Circle and Chester Street
8. Mineral Avenue and Chester Street
9. Mineral Avenue and Yosemite Street
10. Willow Way and Yosemite Street
11. Nichols Avenue and Yosemite Street
12. Nichols Avenue and Chester Street
13. Mineral Drive and Yosemite Street
14. Otero Avenue and Chester Street
15. County Line Road and Quebec Street
16. County Line Road and Yosemite Street
17. County Line Road and Chester Street
18. County Line Road and I-25 Southbound Ramp
19. County Line Road and I-25 Northbound Ramp

In addition, 11 future internal intersections, labeled intersections 20 through 30, surrounding and within the Jones District Development were also included for evaluation. Further, nine (9) proposed parking access intersections, labeled intersections 31 through 39, were studied.

Regional access will be provided by I-25, E-470, Dry Creek Road, County Line Road, and Yosemite Street. Primary access will be provided by Chester Street while direct access will be provided by nine (9) parking access entries and on-street parking.

The proposed mixed-use development is expected to generate approximately 28,556 daily external weekday trips, with 2,640 of these trips occurring during the morning peak hour and 2,859 of these trips occurring during the afternoon peak hour.

Based on the analysis presented in this report, Kimley-Horn believes the proposed Jones District Redevelopment will be successfully incorporated into the existing and future roadway network. The existing traffic volume analysis, proposed project development, and expected future traffic volumes resulted in the following conclusions and recommendations:

Existing Improvement Recommendations:

- The eastbound and westbound approaches of the County Line Road and Quebec Street intersection (Intersection #15) should provide three through lanes in each direction. Further, a northbound channelized free right turn lane should be constructed at this intersection. It should be noted that traffic counts at this intersection were performed while C-470 was under construction, and it is believed that a lot of traffic is currently utilizing County Line Road as a relief route. It is anticipated that this intersection may likely operate better than reported once construction of C-470 is complete.
- A southbound channelized free right turn lane should be provided at the intersection of County Line Road and Yosemite Street (#16).
- Southbound triple left turn lanes should be considered at the intersection of County Line Road and Chester Street (#17) due to existing vehicle queuing issues. It is recommended that the inside southbound through lane at this intersection be converted to a continuous left turn lane for a third left turn lane. Three receiving lanes currently exist on eastbound County Line Road for the implementation of triple left turn lanes. The northbound approach of this intersection should operate with protected lead or lag left turn phasing while the southbound approach operates with the opposite left turn (lag or

lead) phasing because the left turn movements on these approaches will cross paths if southbound triple left turn lanes are implemented.

- A southbound channelized free right turn lane is also recommended at the intersection of County Line Road and Chester Street (#17).

2022 Interim Improvement Recommendations:

External Intersections:

- The eastbound approach of the Dry Creek Road and Yosemite Street (#1) intersection should provide three through lanes.
- A westbound left turn lane should be striped with 100 feet of length at the intersection of Panorama Circle and Yosemite Street (#5). Sufficient pavement width exists, and this improvement only requires pavement striping.
- The substandard eastbound left turn lane at the Mineral Circle/Jones Drive and Chester Street (#7) intersection should be extended from 50 feet of length to 100 feet of length. The westbound left turn lane at this intersection (#7) should be extended to provide 150 feet of length.
- The 25-foot substandard eastbound left turn at the Mineral Avenue and Chester Street (#8) intersection should be extended to provide 75 feet of length.

Internal Intersections:

- With completion of the Jones District Redevelopment project, the site proposes 11 future internal intersections (labeled intersections #20-30) and nine (9) parking access intersections (labeled intersections #31-39). An internal roadway network will be provided to serve the development. The proposed east-west roadways include Road A, Jones Drive, Mineral Avenue, Road B, and Road C. The proposed north-west roadways include Panorama Circle, Dayton Street, and Street 1.
- The four major access roadways for the site will occur from the north using Panorama Circle, the south using Dayton Street, and from two locations from the west using

Mineral Avenue and Panorama Circle (named Jones Drive in this study). Panorama Circle is proposed to be realigned and extend south to Mineral Avenue (#25) while removing the curve located near the north side of the site. Panorama Circle will connect perpendicularly with Jones Drive (formally Panorama Circle). Likewise, the existing curve at the north side of Dayton Street and the east side of Mineral Avenue will be removed to create a four-legged intersection with Mineral Avenue and Dayton Street (#26).

- The intersections of Jones Drive/Panorama Circle, Jones Drive/Dayton Street, Mineral Avenue/Panorama Circle, Mineral Avenue/Dayton Street, and Road C/Dayton Street are recommended to provide all-way stop control (AWSC). The remaining six (6) proposed internal intersections and nine (9) parking access intersections are recommended to provide two-way stop control (TWSC).
- A southbound left turn lane should be provided at the intersection of Road A/Panorama Circle (#20). Eastbound and westbound left turn lanes should be provided along Jones Drive from Chester Street to Panorama Circle. Eastbound and westbound left turn lanes are also recommended along Mineral Avenue from Chester Street to Dayton Street. A westbound right turn lane and a southbound left turn lane should be provided at the intersection of Mineral Avenue/Panorama Circle (#25). Northbound and southbound left turn lanes should be provided along Dayton Street from Mineral Avenue to Road C.
- The existing north access to IKEA located along the east side of Dayton Street is proposed to realign to the north and share access with the proposed east leg of Road C at Dayton Street. The delivery access to IKEA for delivery trucks will be reconfigured and remain.
- All project parking accesses are recommended to have R1-1 "STOP" signs installed for the exiting approaches. One exiting lane should be sufficient at all project accesses while shared movement lanes should be sufficient for vehicles entering all parking access locations with exception of the Jones Drive West Parking Access (#32) which is recommended to include eastbound and westbound left turn lanes.

2025 Interim Improvement Recommendations:

- The northbound approach of the Dry Creek Road and Chester Street (#2) intersection should provide a channelized free right turn lane. An eastbound channelized free right turn lane and westbound triple left turn lanes should also be considered at this intersection of Dry Creek Road and Chester Street (#2). Four receiving lanes will be required on the south leg of this intersection with three for the triple left turns and one for the channelized free right turn. It is recommended that the existing raised median on the south leg of this intersection be modified to provide enough pavement width for an additional southbound lane. The outside of the northbound dual left turn lanes at the intersection of Dry Creek Road and Chester Street (#2) should be extended back to Panorama Circle as a continuous left turn lane.
- In association with the westbound to southbound triple left turn lanes at the Dry Creek Road and Chester Street intersection, southbound dual left turn lanes should be provided at the intersection of Panorama Circle and Chester Street (#6). The existing southbound left turn lane should be extended back to Dry Creek Road as a continuous lane while the inside left turn lane should be provided from within the existing raised median with 125 feet of length. The east leg of this intersection will need to provide two receiving lanes in order to accommodate the southbound dual left turn lanes.
- The following intersections are likely to warrant signalization and should be considered to provide signal control by 2025:
 - Mineral Circle and Chester Street (#7)
 - Mineral Avenue and Chester Street (#8)
 - Otero Avenue and Chester Street (#14)

2030 Buildout Improvement Recommendations:

- The northbound left turn lane at the Dry Creek Road and Yosemite Street (#1) intersection should be restriped and extended from 175 feet of length to 375 feet of length.
- Side-by-side left turn lanes should be incorporated along the eastbound approach of the County Line Road and Yosemite Street (#16) intersection and the westbound approach

of the County Line Road and Willow Street intersection. The westbound dual left turn lanes should provide 400 feet of length per lane.

2040 Buildout Improvement Recommendations:

- The westbound approach of the Dry Creek Road and Yosemite Street (#1) intersection should provide three westbound through lanes. The proposed new westbound right turn lane recommended with the 2030 construction would be absorbed with the addition of the third through lane.

General Recommendations:

- Any on-site and off-site signing and striping improvements should be incorporated into the Civil Drawings and conform to the City of Centennial and CDOT standards as applicable as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).