

1.0 PURPOSE AND NEED

The National Environmental Policy Act (NEPA) of 1969 established a mandate for federal agencies to consider the potential environmental consequences of their proposed actions, document the analysis, and make the information available to the public for comment prior to implementation. In accordance with NEPA and its related regulations, the Federal Highway Administration (FHWA), as the Lead Agency and in cooperation with the Colorado Department of Transportation (CDOT) as the Applicant Agency, has prepared this Environmental Assessment (EA) for proposed improvements to the Interstate 70 (I-70)/32nd Avenue interchange (the Proposed Action). The project is proposed by the City of Wheat Ridge.

The primary goal of an EA is to determine if there will be significant adverse impacts associated with the Proposed Action. If there are no significant impacts, a Finding of No Significant Impact (FONSI) document will be prepared. If the EA indicates that there will be significant adverse impacts, an Environmental Impact Statement (EIS) document must be prepared.

The City of Wheat Ridge has identified the area southwest of the I-70/State Highway 58 (SH 58) interchange as an urban growth area with potential office, commercial, and retail land use to begin development in the next several years (City of Wheat Ridge 2005). Land use in the area southwest of the I-70/SH 58 interchange is in the process of changing from an aggregate mine to retail and commercial use, as identified in the *City of Wheat Ridge Comprehensive Plan* (City of Wheat Ridge 1999), as amended in 2005. The proposed change in land use, in conjunction with regional growth, will affect traffic operations at this interchange and on the local arterial streets in the vicinity of the interchange.

To address the issue of traffic congestion due to regional growth and the proposed development, improvements to the following transportation facilities are being considered by FHWA and CDOT as part of this I-70/32nd Avenue Interchange EA:

- ▶ I-70/32nd Avenue interchange
- ▶ SH 58 from McIntyre Street to I-70
- ▶ Adjacent portions of 32nd Avenue between Alkire Street and Xenon Street, Youngfield Street between 27th Avenue and 44th Avenue, the Youngfield Street/27th Avenue intersection, and a proposed Cabela Drive from 32nd Avenue to approximately 40th Avenue and from just north of Clear Creek to 44th Avenue.

This chapter presents the purpose of and need for improvements to these transportation facilities, as considered in this EA.

1.1 Study Location and Description

The I-70/32nd Avenue interchange project is located in the western part of the Denver metropolitan area, as shown on **Figure 1-1**. The study area falls partially within the Cities of Wheat Ridge and Lakewood (both in Jefferson County), and partially within unincorporated Jefferson County. The City of Arvada is located north of the study area, and the City of Golden is located west of the study area. The study area is shown on **Figure 1-2**.

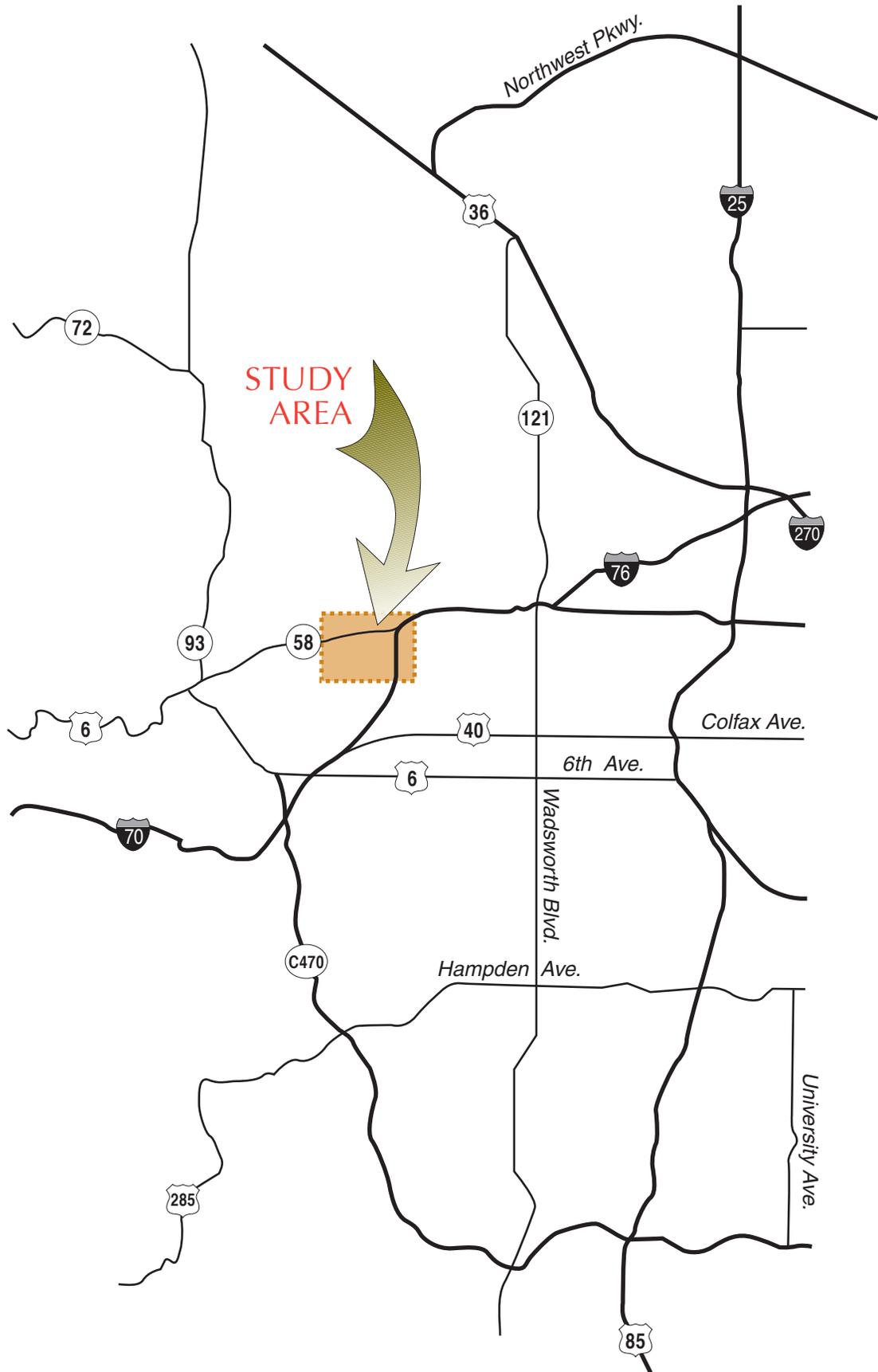


Figure 1-1

Project Location

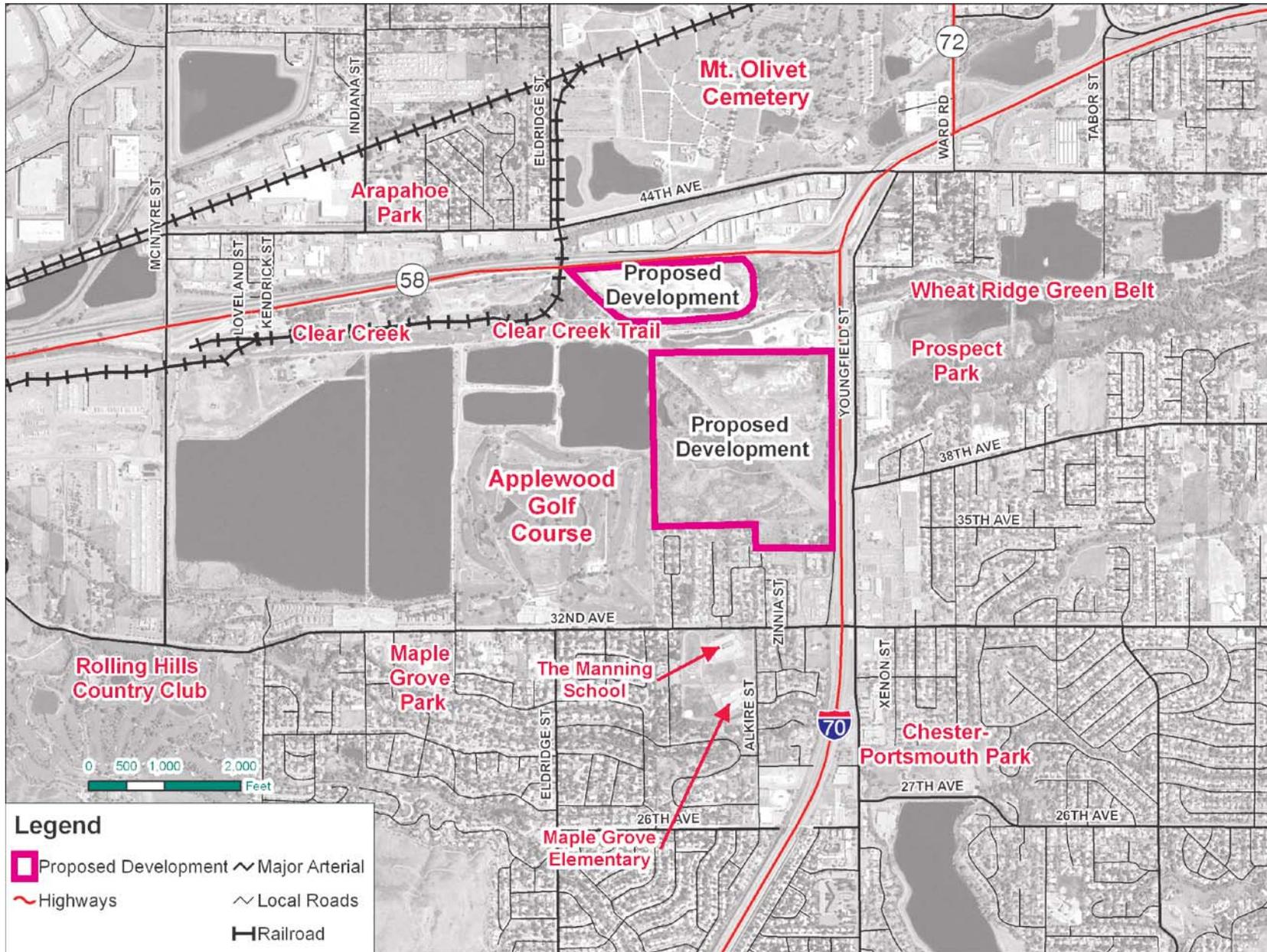


Figure 1-2
Study Area



SH 58 is located in the northern portion of the study area and extends west from the I-70/SH 58 interchange. I-70 generally has an east-west orientation to the east of the interchange and a north-south orientation directly south of the interchange. Clear Creek parallels SH 58 to the south through the study area, crossing underneath I-70 south of the I-70/SH 58 interchange. The Clear Creek Trail parallels Clear Creek through the study area. On the east side of I-70, the trail is located within the City of Wheat Ridge Green Belt, while the trail falls within an easement and is maintained by Jefferson County Open Space west of I-70. The local streets of 32nd and 44th Avenues extend east-west through the study area. Youngfield Street parallels I-70 on the east through the study area from 44th Avenue through 26th Avenue, and beyond.

Retail, commercial, industrial, and residential land uses are located along 44th Avenue, east of I-70, in the study area. Retail uses on the north side of 44th Avenue between Youngfield Street and Tabor Street include several recreational vehicle sale centers, restaurants, public storage units, and a truck stop. Additional retail and commercial uses are located south of 44th Avenue near Tabor Street with a residential area located near Ward Road and Youngfield Street.

The Mount Olivet Cemetery occupies a large piece of ground north of 44th Avenue and east of Eldridge Street. On the north side of 44th Avenue between Eldridge Street and Indiana Street is a residential area and Arapahoe Park. South of 44th Avenue and north of SH 58 is a mixture of commercial and industrial land use with a small residential area between Kendrick and Loveland Streets.

Retail and commercial land uses are present along the east side of Youngfield Street between 44th Avenue and 32nd Avenue. Northeast of the I-70/32nd Avenue interchange, along Youngfield Street, is a large retail center, which contains a Wal-Mart, King Soopers grocery store, several restaurants, and various other retail uses. The City of Wheat Ridge has identified this area as a community commercial center (City of Wheat Ridge 1999). Other retail uses exist immediately southeast of the Youngfield Street/32nd Avenue and northwest of the I-70/32nd Avenue interchange. Land use beyond these retail areas along 32nd and 27th Avenues is primarily residential. Chester-Portsmouth Park is located north of 27th Avenue and east of Youngfield Street, and a pedestrian bridge crosses I-70 at 26th Avenue.

Residential land use is located west and east of I-70 along 32nd Avenue. The Manning and Maple Grove schools are located south of 32nd Avenue, and west of I-70. Applewood Golf Course is located north of 32nd Avenue at Eldridge Street, and several water storage ponds, owned by the Coors Brewing Company, are located west and north of the golf course.

Southwest of the I-70/SH 58 interchange between I-70 and approximately Eldridge Street is a former aggregate mine with a proposed land use of a business park (north of Clear Creek) and community commercial center (south of Clear Creek). Both of these land uses include retail, office, or commercial development and will benefit from proximity to I-70, as identified in the *City of Wheat Ridge Comprehensive Plan* (City of Wheat Ridge 2005).

1.2 Project History

In the mid-1990s, the City of Wheat Ridge identified an urban growth area west of the city limits that encompassed the study area. The identified urban growth area was generally bounded by 52nd Avenue to the north, 32nd Avenue to the south, McIntyre Street to the west, and I-70 to the east (City of Wheat Ridge 2005). In 2005, the City of Wheat Ridge refined their urban growth area by moving the northern boundary from 52nd Avenue down to 44th Avenue and identifying potential future land use (City of Wheat Ridge 2005). The City of Wheat Ridge annexed two large tracts of land on the west side of I-70, which are slated for development (see **Figure 1-2**). The proposed development area includes approximately 800,000 square feet of commercial and retail use, including the construction of a 225,000 square foot Cabela's store (which has recently been reduced to 185,000 square foot store) and an additional 575,000 square feet of retail and commercial development.

All properties within the City of Wheat Ridge are zoned. Zoning regulates what land uses are allowed and establishes rules for how property can be developed. In 1969 when the City of Wheat Ridge was incorporated, the zoning from Jefferson County was adopted for all properties that became a part of Wheat Ridge. The current zoning ordinance became law in the City of Wheat Ridge on February 26, 2001 (City of Wheat Ridge 2001). The zone change process is a City of Wheat Ridge process per Municipal Code Chapter 26 Zoning and Development (City of Wheat Ridge 2001). Approval of the proposed development southwest of the I-70/SH 58 interchange is a separate process from the Categorical Exclusion and EA processes. All proposed commercial, industrial, and residential applications for property exceeding one acre in size must follow the zone change process, in accordance with the City of Wheat Ridge zoning ordinance (City of Wheat Ridge 2001).

On August 14, 2006, the City of Wheat Ridge City Council approved the revised Outline Development Plan (ODP) for the 178-acre proposed development area southwest of the I-70/SH 58 interchange and approved the Final Development Plan (FDP) for the 36-acre Cabela's parcel (City of Wheat Ridge Council 2006). FDPs will be required for the remaining 142 acres of the proposed development area. As part of the approval process, a condition of approval was added to ensure that the I-70 westbound hook ramps, 40th Avenue underpass of I-70, widening of 32nd Avenue, Cabela Drive, and the SH 58/Cabela Drive interchange are constructed prior to issuance of a certificate of occupancy (City of Wheat Ridge Council 2006).

In 2005, the City of Wheat Ridge, in association with CDOT, conducted a System Level Feasibility Study for the I-70/32nd Avenue and I-70/Ward Road interchanges (FHU 2005), in accordance with CDOT Policy Directive 1601, to address traffic impacts associated with this proposed development, existing system deficiencies, and regional traffic growth. The System Level Feasibility Study evaluated numerous alternatives for improvements to the transportation network. The System Level Feasibility Study was approved by the Colorado Transportation Commission in September 2005.

Other transportation improvements are currently planned or being considered for the vicinity as separate actions. These include:

- ▶ Improvements to the I-70/SH 58 interchange described in an EA conducted by CDOT (CDOT 2002a), and FONSI (FHWA 2004)
- ▶ Local street improvements being planned by the City of Wheat Ridge, including:
 - Widening of Youngfield Street (from two-lanes to four-lanes) between 38th Avenue and 44th Avenue, which includes restriping along 44th Avenue between Youngfield Street and Ward Road to accommodate the turn lane
 - Construction of a new underpass under I-70 at approximately 40th Avenue
 - Construction of a new roadway, Cabela Drive, from 40th Avenue to the proposed development just north of Clear Creek
- ▶ Regional improvements currently being considered in the Northwest Corridor EIS, which was in progress during preparation of this EA. This I-70/32nd Avenue Interchange EA is located in the southern portion of the larger Northwest Corridor EIS study area
- ▶ Improvements by Jefferson County to McIntyre Street and the McIntyre Street/44th Avenue intersection

1.3 Purpose of the Proposed Action

The purpose of the proposed action is to relieve traffic congestion at the I-70/32nd Avenue interchange and to address future transportation demands on the interchange and local street network due to regional growth and expanding local retail/commercial development.

1.4 Need for the Proposed Action

The I-70/32nd Avenue interchange is characterized by a sharp hook ramp, an isolated slip ramp, and several very closely spaced signalized intersections along 32nd Avenue in the vicinity of I-70. The current hook ramps do not have adequate storage lengths to enter and exit I-70. There is inadequate vehicle storage capacity on the ramps, causing back-ups on I-70 and the local street network.

The American Association of State Highway and Transportation Officials (AASHTO) uses the term level of service (LOS) with values ranging from A to F to describe the operational characteristics of intersections and roadways. LOS A represents the best possible operational conditions, while LOS F is characterized by severe congestion and extremely poor traffic operations (i.e. gridlock). In urbanized areas, LOS D is generally considered to be acceptable for peak hour operations during the morning (AM) and afternoon (PM), which coincide with the morning and evening commute. Existing I-70 mainline and ramp operations are marginally acceptable; however, the eastbound off-ramp intersection with Youngfield Street operates at LOS F (or failing) during the afternoon peak hour.

Operations forecasts with 2030 traffic from projected regional growth only (without traffic from the proposed development) show continued degradation to an unacceptable level of congestion during afternoon peak hours for both the I-70/32nd Avenue interchange ramp intersections and

at the Youngfield Street and 32nd Avenue intersection (FHU 2005, FHU 2006a). These projected 2030 traffic volumes show that the I-70/32nd Avenue interchange area will operate at LOS F, resulting in gridlock on the local street network during the afternoon peak hour (FHU 2005, FHU 2006a).

The proposed development, combined with projected regional growth, will place additional traffic demands on the I-70/32nd Avenue interchange that will further degrade operations. Operational forecasts with projected 2030 traffic volumes including the proposed development show that the interchange and local street network would degrade to LOS F, resulting in gridlock during both the morning and afternoon peak hours (FHU 2005, FHU 2006a).

1.5 Objectives for the Proposed Action

The following design and operational objectives have been established for use in evaluating alternatives for improvement of the I-70/32nd Avenue interchange:

- ▶ Provide adequate acceleration and deceleration lengths for the I-70/32nd Avenue interchange eastbound on- and off-ramps to improve traffic weave distance for vehicles entering and exiting I-70
- ▶ Improve vehicle storage for the I-70/32nd Avenue interchange eastbound off-ramp to reduce back-ups onto I-70
- ▶ Reconfigure the I-70/32nd Avenue interchange eastbound on- and off-ramps to reduce driver confusion and meet driver expectancy
- ▶ Reduce future congestion within the I-70/32nd Avenue interchange and at the intersection of Youngfield Street and 32nd Avenue (the primary congested intersection near the interchange)
- ▶ Improve vehicle storage capacity along 32nd Avenue to reduce back-ups through the Xenon, Youngfield, and Zinnia Street intersections, which are caused by close proximity of these signalized intersections to each other (see **Figure 1-3**)

The goal of these design and operational objectives at the above locations is to allow the system to operate at a level considered acceptable for major arterial intersections in the Denver metropolitan area. In traffic engineering terms, this equates to a goal of LOS D or better during peak hours given the year 2030 traffic projections with regional growth and planned development. **Figure 1-3** depicts the current operational deficiencies.

