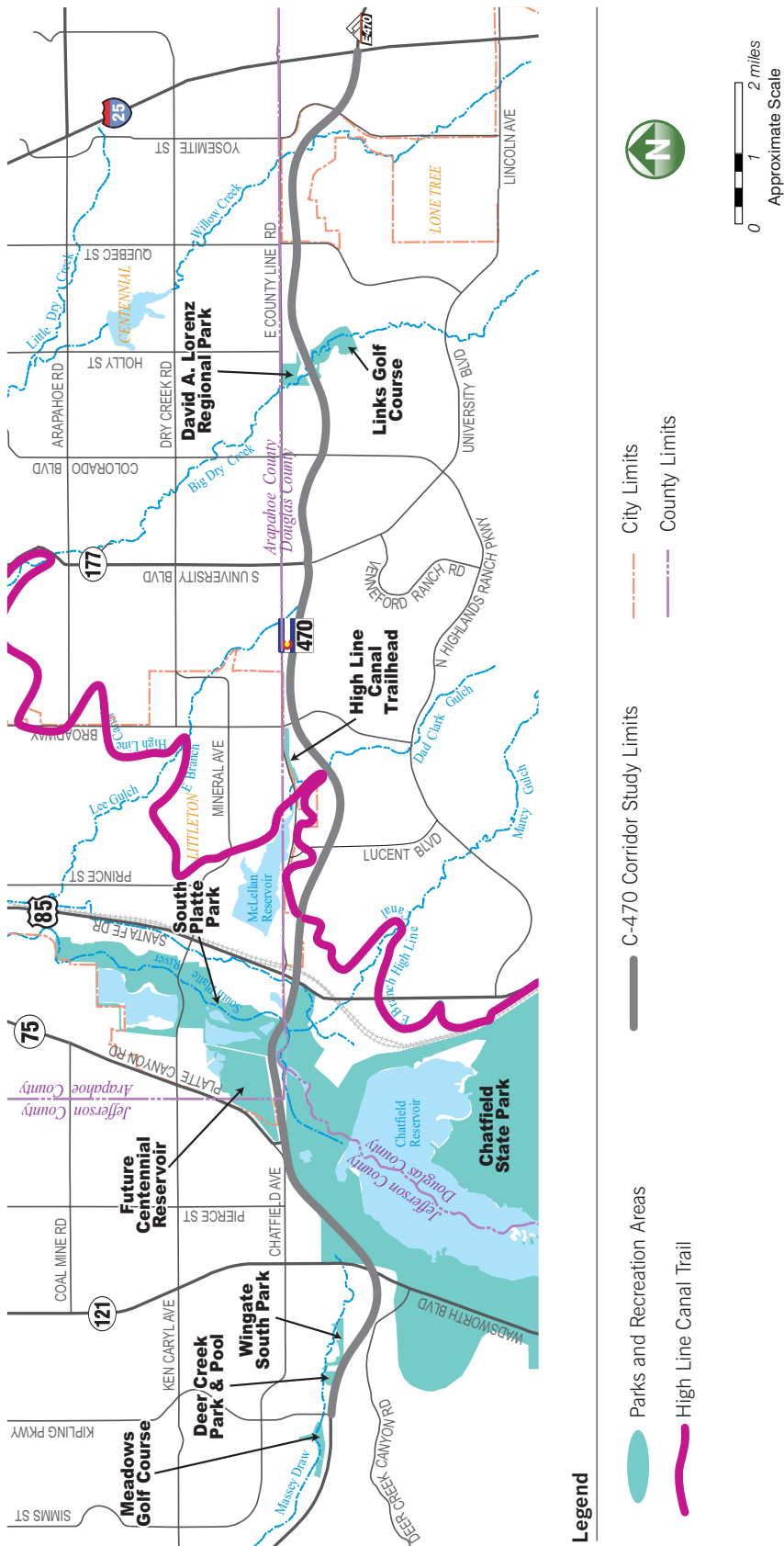


**Figure 3-6  
Parks and Recreation Resources**



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1 indicated that the noise levels at these  
 2 locations would increase between two and  
 3 five decibels over the No-Action Alternative,  
 4 as shown in **Table 3-10**. Two of the locations  
 5 evaluated are projected to have higher noise  
 6 levels than the established impact threshold,  
 7 based on CDOT noise abatement criteria.  
 8 These locations include the USACE office  
 9 buildings east of Wadsworth Boulevard and  
 10 a portion of the C-470 trail. Therefore, in  
 11 accordance with *CDOT Noise Analysis and*  
 12 *Abatement Guidelines*, these locations would  
 13 be considered for mitigation. Additional  
 14 detail on noise analysis is discussed in  
 15 **Section 3.3.3**.

17 Improvements to the Santa Fe Drive inter-  
 18 change require the closure of the southbound  
 19 right-in right-out access from Santa Fe Drive  
 20 to the Chatfield State Park permit office  
 21 located in the southwest quadrant of the  
 22 interchange. This existing access currently  
 23 requires a sharp right hand turn into the  
 24 driveway to the park permit office, and must  
 25 be closed due to proximity to the new inter-  
 26 change. The signalized Blakeland Drive  
 27 intersection would operate better due to  
 28 increased capacity at the Santa Fe Drive  
 29 interchange. This would result in better  
 30 operational access to the permit office. The  
 31 Blakeland Drive intersection would improve  
 32 from a level of service (LOS) E to C in the PM  
 33 peak hour, while the AM peak hour opera-  
 34 tions would remain the same at LOS C.

36 The addition of four retaining walls along  
 37 portions of the northern and eastern  
 38 perimeter of the park would alter the views  
 39 from inside Chatfield State Park looking out.  
 40 An example of one of these walls is shown in  
 41 **Figure 3-31**. These walls would be most  
 42 closely visible from the park permit office in  
 43 the southwest quadrant of the Santa Fe Drive  
 44 interchange and from bicyclists and pedes-  
 45 trians traveling on the C-470 trail that passes  
 46 through Chatfield State Park parallel to  
 47 C-470.

**HIGH LINE CANAL TRAIL.** The High Line  
 51 Canal trail runs coincident with the C-470  
 52 trail from the point at which it crosses under  
 53 C-470 east of Santa Fe Drive to the trailhead  
 54 on County Line Road, west of Broadway.  
 55 Due to the widening of the roadway, the box  
 56 culvert through which the High Line Canal  
 57 trail passes under C-470 would have to be  
 58 lengthened as a result of this alternative. This  
 59 action would not alter the trail itself.  
 60 However, the distance the trail would be  
 61 covered under C-470 would increase.  
 62 Construction activity at this location would  
 63 require a temporary detour around the work  
 64 site.  
 65

**LINKS GOLF COURSE.** The GPL Alter-  
 67 native design requires acquisition of 0.16 acre  
 68 of the private Links Golf Course property for  
 69 additional right-of-way to construct a water  
 70 quality pond. Water quality ponds are  
 71 necessary part of the roadway design to help  
 72 filter pollutants from stormwater runoff  
 73 before the water flows into nearby  
 74 waterways. The function of these ponds is  
 75 discussed in more detail in **Section 3.3.4**.  
 76

### Express Lanes Alternative

78 The EL Alternative would have the same  
 79 impacts to recreational properties as those  
 80 described for the GPL Alternative, with a few  
 81 minor exceptions. As shown in **Table 3-10**, the EL  
 82 Alternative would result in slightly higher noise  
 83 levels at the interpretive off-leash area and on  
 84 the C-470 trail in Chatfield State Park. The  
 85 culvert extension for the High Line Canal would  
 86 likely be longer for the EL Alternative, due to the  
 87 slightly wider typical section through this area of  
 88 the Corridor. The EL Alternative would require  
 89 acquisition of 0.03 acre more of the private Links  
 90 Golf Course property than the GPL Alternative.  
 91

### 3.2.6.3 Mitigation

93 Of the area within Chatfield State Park that is  
 94 directly adjacent to C-470, the only fixed use  
 95 facility that would experience noise impacts  
 96 would be portions of the bike/pedestrian trail.  
 97 In determining mitigation feasibility and reason-  
 98

1 ableness, several factors are considered in  
 2 CDOT's procedures. Overall, while mitigation  
 3 measures could be constructed that provide a  
 4 substantial noise reduction on the trail, the total  
 5 cost of those mitigation measures would be very  
 6 high when compared to the overall benefit that  
 7 would be provided. This is primarily due to the  
 8 fact that the use of the trail is intermittent and  
 9 that there are no fixed facilities along the trail,  
 10 such as picnic areas. As a result, noise mitigation  
 11 is not reasonable for the bike trail and is not  
 12 recommended. The USACE offices east of  
 13 Wadsworth Boulevard are commercial use facil-  
 14 ities and do not have any active outdoor use  
 15 areas. Thus mitigation of this location is not  
 16 considered reasonable and is not recommended.

17  
 18 While the right-in, right-out access to the  
 19 Chatfield State Park permit office would be  
 20 eliminated with both action alternatives, the  
 21 operational improvements at the Blakeland  
 22 Drive intersection would provide better access  
 23 from all directions. Therefore, no mitigation  
 24 measures are recommended.

25  
 26 Construction activity near the High Line Canal  
 27 trail would require temporary detour routes. A  
 28 minimum two-week notice would be provided,  
 29 and detour routes would be posted and  
 30 presented to trail user groups to keep them  
 31 informed of the construction activity as it relates  
 32 to the High Line Canal trail. The trail would  
 33 remain open during construction.

34  
 35 Right-of-way acquisition at the Links Golf  
 36 Course would be conducted in accordance with  
 37 the *Uniform Relocation Assistance and Real Property  
 38 Acquisition Policies Act of 1970*. This law is  
 39 discussed further in **Section 3.2.7**. CDOT would  
 40 coordinate with golf course owners during final  
 41 design to further avoid and minimize necessary  
 42 acquisition.

### 43 **3.2.7 Right-of-Way and Relocations**

44 ROW is the land on which a highway is  
 45 constructed and includes ramps, medians,  
 46 shoulders, drainage ditches, and adjacent land  
 47 interests owned for highway-related purposes.  
 48  
 49  
 50

51 All highway elements must be located within  
 52 state-owned ROW or other property under  
 53 easement or leased to the state. All land  
 54 necessary for highway improvements must be  
 55 purchased from existing property owners in  
 56 accordance with the Uniform Relocation  
 57 Assistance and Real Property Acquisition  
 58 Policies Act of 1970 (Public Law 91-646), as  
 59 amended, and the Uniform Relocation Act  
 60 Amendments of 1987 (Public Law 100-17),  
 61 hereinafter referred to as the Uniform Act.

62  
 63 The law is designed to ensure just compensation  
 64 for all acquired properties and to minimize  
 65 effects on property owners and tenants.  
 66 Acquisition costs are based on fair market value  
 67 appraisals of the parcels required to accom-  
 68 modate final design limits. Additional infor-  
 69 mation regarding C-470 ROW is located in *Right-  
 70 of-Way and Relocations* (July 2005).

#### 71 **3.2.7.1 Affected Environment**

72 The existing C-470 ROW is generally 300 feet  
 73 wide along the mainline and varies at inter-  
 74 changes to accommodate the wider footprint.  
 75 This entire ROW is owned by CDOT, with the  
 76 exception of the section from Wadsworth  
 77 Boulevard to Santa Fe Drive. In this section,  
 78 C-470 crosses property owned by the USACE  
 79 under an easement granted to CDOT for the  
 80 specific purpose of transportation use.

81  
 82  
 83 The easement on USACE property is approxi-  
 84 mately 300 feet wide, totaling 124 acres. The  
 85 easement allows use of the property for trans-  
 86 portation and requires approval of all activity  
 87 and any proposed changes. As long as the trans-  
 88 portation improvements stay completely within  
 89 the easement, no amendment to the easement is  
 90 required. However, if additional property is  
 91 required, or if the activity within the easement is  
 92 substantially different than the original  
 93 easement, an amendment would be required.  
 94 The USACE has full jurisdiction in determining  
 95 whether an amendment to the easement is  
 96 necessary.  
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**3.2.7.2 Environmental Consequences**

Based on conceptual design, the analysis completed for this EA estimated the necessary ROW acquisition for each of the alternatives under consideration, as shown in Appendix D. The evaluation identified potentially affected parcels. Property owners and tenants were notified of these potential effects to allow them to be involved during project planning. This process was followed to determine whether any encumbrances or liabilities might exist on potentially affected property, which could have an effect on the development or selection of an alternative. Through this ROW evaluation, design decisions were made that avoided and minimized adverse effects to adjacent parcels, thereby reducing the amount of additional ROW acquisition required.

**No-Action Alternative**

The No-Action Alternative would require no ROW acquisitions or modifications to USACE easement.

**General Purpose Lanes Alternative**

Partial acquisition of 49 parcels would be required for the GPL Alternative. The total area of these acquisitions would be 16.68 acres. These acquisitions are needed for roadway widening, water quality ponds, drainage ditches, culvert extensions, ramp reconstruction, trail reconstruction, and the Santa Fe Drive interchange

improvements. The affected parcels consist of five land use types: government, residential, commercial, agricultural, and undeveloped land. No residential or commercial structure relocations would be required. These potential acquisitions are unimproved portions of already-developed land. In some cases the potential acquisitions would include parking spaces or landscaping along the highway. Individually, these acquisitions would range from less than one tenth of an acre to approximately two acres. Table 3-11 summarizes the ROW impacts for the GPL Alternative. The “unknown” land use classification refers to parcels that did not have a land use specified in the county parcel information used for this analysis.

**Express Lanes Alternative (Preferred Alternative)**

Partial acquisition of 55 parcels would be required for the EL Alternative. The total area of these acquisitions would be 20.25 acres. These acquisitions are needed for roadway widening and to construct and maintain water quality ponds, drainage ditches, and culvert extensions, ramp reconstruction, trail reconstruction, the Santa Fe Drive interchange improvements, and direct express lane access at Colorado Boulevard and Quebec Street. The affected parcels consist of five land use types: government, residential, commercial, agricultural, and undeveloped land. No residential or commercial structure reloca-

**Table 3-11  
General Purpose Lanes Alternative  
Affected Right-of-Way Summary**

Land Use Type	Affected Parcels	Affected Owners
Government	13	4
Residential	5	3
Commercial	14	12
Agricultural	3	3
Undeveloped	6	5
Unknown	8	8
Total	49	35

**Table 3-12  
Express Lanes Alternative  
Affected Right-of-Way Summary**

Land Use Type	Affected Parcels	Affected Owners
Government	15	4
Residential	6	4
Commercial	16	14
Agricultural	3	3
Undeveloped	6	5
Unknown	9	9
Total	55	39

tions would be required. These acquisitions are unimproved portions of already developed land. In some cases the potential acquisitions would include parking spaces or landscaping along the highway. Individually, these acquisitions range from less than one tenth of an acre to approximately two acres. **Table 3-12** summarizes the ROW impacts for the EL Alternative. The “unknown” land use classification refers to parcels that did not have a land use specified in the county parcel information used for this analysis.

### 3.2.7.3 Mitigation

Mitigation for the GPL and EL Alternatives would consist of avoiding and minimizing ROW acquisitions. Property owners would be compensated for the value of the land acquired through the ROW acquisition process.

During the concept design process, efforts were made to avoid and minimize ROW effects. This was accomplished by investigating the optimal horizontal and vertical alignment, and by incorporating retaining walls, curbs, barriers, and steeper side-slopes and back-slopes into the design to limit the required ROW width.

Upon identifying potential ROW acquisition, affected property owners and tenants were invited to attend public open house meetings. Owners and tenants were informed of the potential effects to their properties and were given the opportunity to comment on the alternatives under consideration. CDOT ROW staff was available to answer questions about the property acquisition process and their rights under the Uniform Act. All property acquisition would be conducted in compliance with the Uniform Act. CDOT will continue to work with affected property owners through final design to further avoid and minimize the need for ROW acquisition. Adequate lead time for the ROW acquisition process will be planned and programmed into the study schedule. CDOT will allow adequate time to accomplish the steps necessary to negotiate the purchase of the required property needed to build the project.

## 3.3 PHYSICAL ENVIRONMENT

The physical environment of the C-470 project area includes the non-living features of the environment that can be affected by transportation projects. Effects to the physical environment evaluated in this EA include transportation and traffic; air quality; noise; water quality; hydrology and hydraulics; floodplains; historic resources; Section 4(f) properties; archaeological resources; paleontological resources; geology and soils; hazardous materials; visual character; and utilities. The C-470 trail and temporary effects during construction were also evaluated with respect to the three alternatives.

### 3.3.1 Transportation and Traffic

The C-470 mainline, ramps, arterial street network, and the C-470 trail, compose the multi-modal C-470 transportation corridor. This section addresses the existing and forecasted future traffic volumes and operations of these elements of the transportation system.

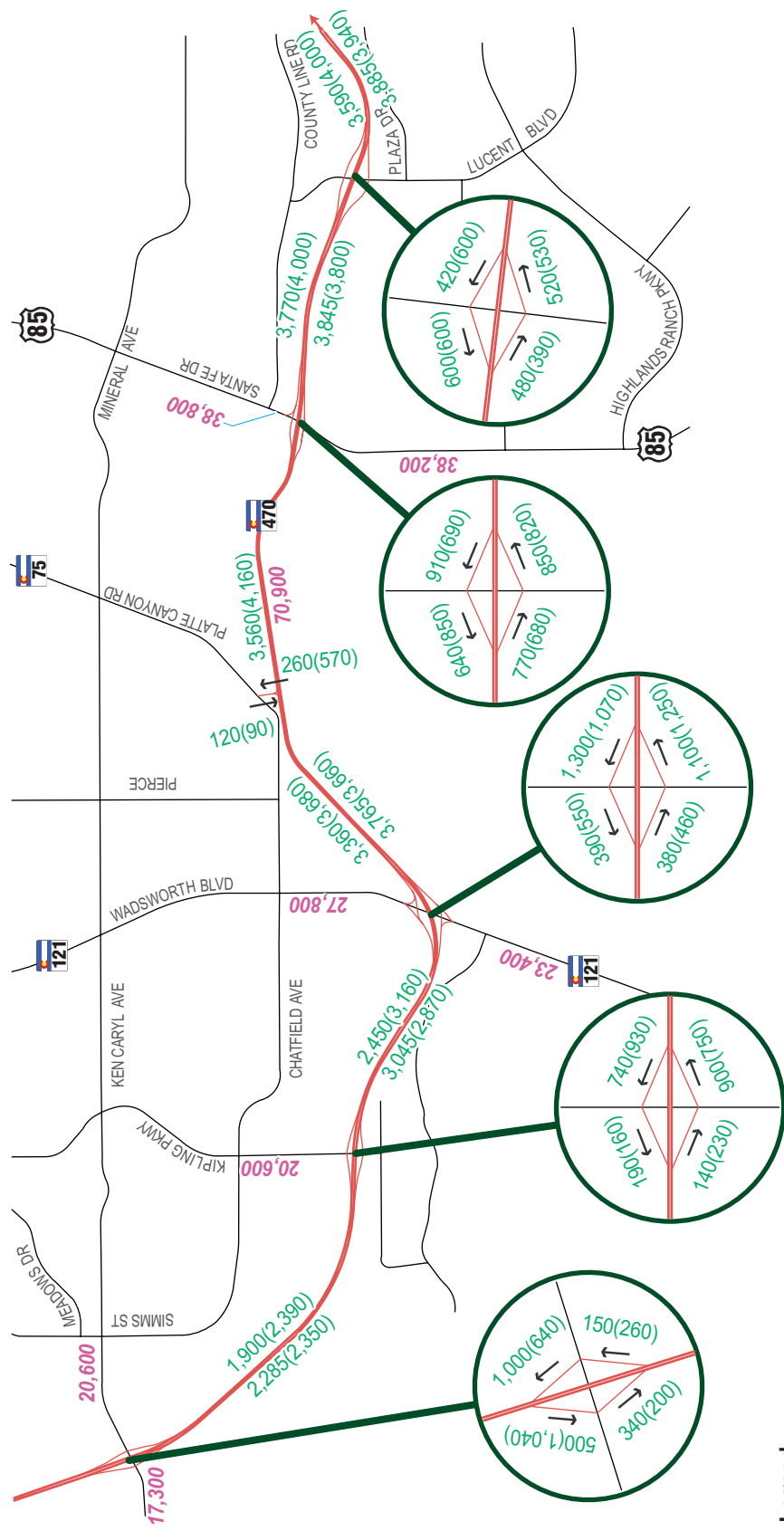
Traffic forecasts were performed using the 2025 DRCOG travel demand model. Traffic, circulation, and safety aspects of the three alternatives were evaluated using a traffic micro-simulation model. Potential capacity improvements to the C-470 mainline were evaluated with respect to their potential to affect the ramp terminal intersections and other arterial streets. As more traffic is accommodated by mainline C-470, the potential exists to increase traffic on the arterial street system.

In the interest of conserving space in the document, much of the analysis and data is summarized in this section. Detailed methodologies, analysis, data, and conclusions can be found in the *Alternatives Screening Technical Report* (March 2005).

#### 3.3.1.1 Existing Traffic Volumes and Operations

During 2003, weekday AM and PM peak hour traffic counts were collected on C-470 and intersecting arterial streets in the project area. The

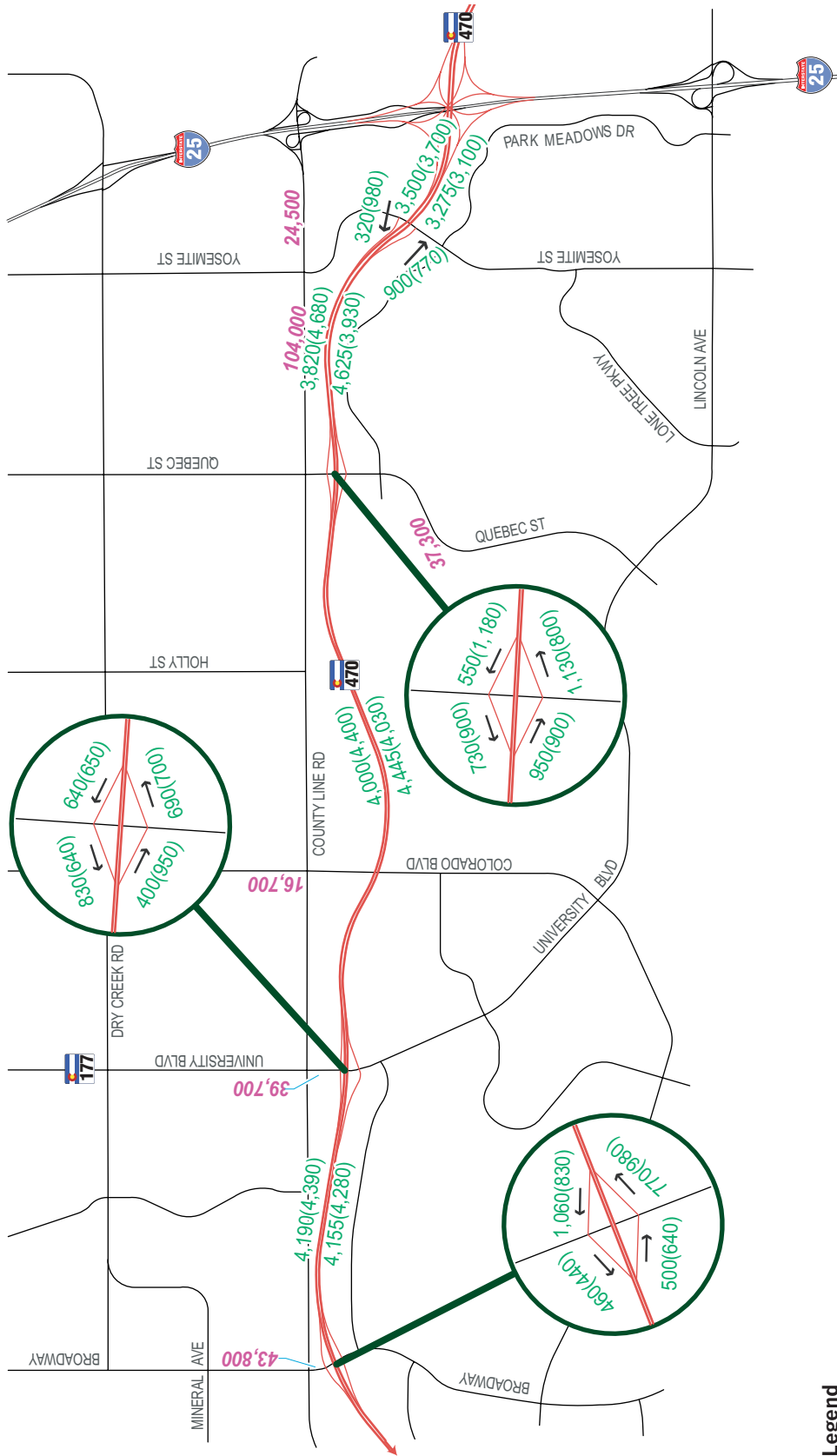
**Figure 3-7a**  
**Existing (2003) Traffic Volumes**



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**Figure 3-7b**  
**Existing (2003) Traffic Volumes**



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