



# Land Use / Socio-Economic Data Review

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## 1.0 LAND USE REVIEW

The purpose of this document is to summarize the land use review and socio economic input utilized in the traffic demand forecasting model for CDOT's C470 Environmental Assessment (EA).

The C470 EA land use review area was from I-25 on the south to I-70 on the north. This expansive area, although not the official study area of the EA, was considered relevant in terms of existing and proposed land uses and its affects on travel demand within the corridor. An extensive land use review was performed for the entire area illustrated in Figure 1.

Existing and proposed land uses along the C470 corridor fall under the purview of the nine local jurisdictions; Douglas County, Lone Tree, Littleton, Greenwood Village, Arapahoe County, Jefferson County, Morrison, Golden and Lakewood. Each local jurisdiction maintains the decision making authority to zone the use of the lands located within its jurisdictional boundaries and determine its future developed use. Local tools supporting land use planning include master or comprehensive plans, sub-area plans, specific site plans and zoning regulations for each of the participating jurisdictions. The C470 consultant team met with each agency to discuss future land use development plans for areas adjacent to C470. These discussions, field review and the collection of planning documents and development plans were the basis for the mapping of existing and proposed land uses within the C470 land use review area. The following section contains existing, 2010 and 2025 land use maps developed for the C470 EA process. A wide variety of land uses exist within each jurisdiction and, for purposes of this study, are represented in the categories of single family residential, multi-family residential, commercial, industrial, institutional and recreational/open space. The existing land use is illustrated in Figure 2.

Land use development along the C470 corridor has changed dramatically over the past twenty years. The undeveloped lands formerly part of the area have been replaced with a significant increase in residential, commercial and office uses adjacent to the highway corridor, especially in the southern portion of the corridor. Much of the corridor is nearing build-out under existing conditions. The developed land use patterns have been primarily suburban in nature with low density planned developments and an auto orientation.

The greatest intensity of existing development has been residential or commercial in nature and has occurred between I-25 and Wadsworth, including Lone Tree, Highlands Ranch and areas south along Santa Fe. Between 1990 and 2000 Douglas County's population changed by 191% and its employment changed by 278%, according to 2000 Census Data provided by the US Census Bureau. While Douglas County should continue to experience future growth, much of the land area adjacent to the C470 corridor is currently developed. Therefore, the existing land use map for the corridor portrays a substantial amount of the land use development that will exist on this corridor in the next twenty years. Figures 3 and 4 illustrate both the 2010 as well as the 2025 land use.

Much of the current and projected growth relevant to this corridor is slated for the area closer to the I-25 corridor in Douglas County. East of I-25, office development continues to be pervasive, driving the majority of employee commuter trips in the area. The Denver Tech Center area is

roughly 60% built-out and the Meridian office park south of the Tech Center at Lincoln and I-25 is just over 30% built-out, so that strong future growth is still anticipated. The Ridgeway development, located south of Lincoln and I-25, is a 40-year master planned community that includes residential, commercial, office and medical services. The first of this development including a hospital, commercial use and some residential is already being implemented along Lincoln Avenue, west of I-25. The future extension of the Southeast Light Rail line to the Ridgeway area could increase density of development at particular locations and drive higher traffic patterns to station and parking locations.

Lone Tree, located west of I-25 on C470, has experienced substantial residential and retail growth in and around the Park Meadows mall and entertainment district. This commercial densification is anticipated to continue, with some remaining single family residential growth. The Highlands Ranch development is considered to be approximately 80% built with the remaining residential and retail/office growth projected to occur by 2010. The dispersed land use patterns in this suburban area along the C470 corridor reflect a fairly low density mix of residential development with pockets of commercial or office use.

The cities of Littleton, Centennial and Greenwood Village are mature communities with strong residential bases and some projected growth in the Tech Center/I-25 area, around future light rail services. These communities are now experiencing moderate infill and redevelopment, as opposed to substantial amounts of new growth. The Santa Fe Corridor north of C470 within Littleton is part of a redevelopment effort on the part of Littleton to increase mixed-use development and create stronger connections between land uses and light rail service. The southern portion of Santa Fe falls within Douglas County and poses opportunities for future industrial development and increased commuter traffic from residential areas further south in Douglas County.

Much of the western portion of the corridor in Jefferson County is dedicated open space, or is partially constrained from development by topographical features. The County has specific area plans to develop new or more intense mixed-use development at key interchanges, including Bowles and Belleview over the next five to ten years. Additionally, the property at Rooney Valley is planned for future residential and pockets of commercial development at the future Alameda interchange with C470.

Due to the nature of the land use forecasting process, actual development in the future may vary from the land use plans in type, density, or schedule. With the high rate of change and growth experienced in Douglas County, for example, it can be difficult to determine exactly what future growth opportunities will emerge. Development plans can change for a variety of reasons including improved transportation access, varying market conditions, and overall economic opportunity factors, among others. Minor variations in some areas including higher or lower densities or different mixes of uses could be anticipated. In particular, changes in the plans to provide LRT service to the Ridgeway area, economic conditions and market demand could modify the specific development plans for this 40-year master planned community in terms of build-out schedule and housing and commercial types. Along the southern portions of Santa Fe, water supply and transportation infrastructure improvements could result in modifications to the plans for industrial and/or residential development potential.

## 2.0 SOCIO ECONOMIC DATA REVIEW

Based on the land use data review, assessment and mapping of corridor land use growth, a socioeconomic data review was performed within the land use review area established for the C470 EA. Specifically, the process began with the DRCOG conformed data set for 2001, 2010, and 2025 that utilizes the 1530 zone TAZ system. Because of the rapid pace of change in some areas of the corridor between 2001 and today, it was necessary to update the "existing" land use data to accurately reflect current conditions on the ground. This was done by utilizing the DRCOG 2001 dataset and comparing it with conditions on the ground in the area of influence to develop an accurate existing dataset. This allowed the travel demand model to be more accurately calibrated to land use inputs and provided a higher level of correlation between land use and traffic data.

The consultant team met with all the local agencies in the study area to gather their land use plans, ideas for change, and all other information relevant to potential land use changes in their areas of jurisdiction. This included not only magnitude of the developments but also potential timeframe of build out of the developments. This data was used to develop land use scenarios for 2010 and 2025 that included the existing development and all development that was slated to occur by those timeframes. This was done via an inspection of every TAZ in the land use review area for both 2010 and 2025 to determine the amount of development in each. The process was reviewed and confirmed with the local agencies along the corridor.

**Arapahoe County** – The consultant team met with Arapahoe County twice during the process and collected the Arapahoe County 2020 Transportation Plan which contained the most recent land use projections. Arapahoe County felt that there were few differences between DRCOG's conformed data set and their plans since the majority of Arapahoe County within the land use review area was already built out. The County agreed with the land use scenarios developed in this process.

**Douglas County** - The consultant team met with Douglas County three times during the process and collected the Douglas County Comprehensive Master Plan, specific Highway 85 projected land use information, subdivision summary information, the Population and Development Report, and shared platte maps for approved development. Douglas County felt that DRCOG's 2020 conformed dataset was too low in portions of the County. The County agreed with the land use scenarios developed in this process.

**Jefferson County**- The consultant team met with Jefferson County twice during this process and collected the C-470 Corridor Plan, sub-area plans for future mixed-use developments, and several other relevant plans for the area of influence in Jefferson County. The County also discussed the Open Space program and its influence on potential development along the C-470 corridor in Jefferson County. The County estimated 7,000 acres of dedicated open space and 2,000 acres of developable land in the C-470 corridor in Jefferson County. In addition, the developable land is divided among approximately 70 different owners so large scale development is difficult. Jefferson County felt that DRCOG's conformed datasets were generally

acceptable in their area. The County agreed with the land use scenarios developed in this process.

**City of Centennial:** The consultant team met with the City of Centennial during this process to gather data and discuss appropriate land use scenarios. The City did not have a transportation or comprehensive master plan at the time, and used data from Arapahoe County accordingly. They had no way to compare their land use data with DRCOG's datasets since they had no adopted land use information for future development. They shared anecdotal information about development opportunities in their area which was included in the developed land use scenarios. The City agreed with the land use scenarios developed in this process.

**Greenwood Village –** The consultant team met with Greenwood Village twice during this process and collected the Greenwood Village Transportation Plan (1998) and a copy of DRCOG's Metro Vision urban corridor analysis for the area. Greenwood Village also shared potential transit oriented development plans related to the SE Corridor LRT expansion in their area. Greenwood Village does not have a set of their own projections for land use in their area but felt that the majority of the Village was built out and expected few differences between DRCOG's datasets and their plans. The City agreed with the land use scenarios developed in this process.

**City of Littleton -** The consultant team met with the City of Littleton twice during this process and collected the Santa Fe Corridor Plan, information on their downtown redevelopment efforts, demographic data developed internally at the City by their GIS department, and a Comprehensive Policy Planning Document. The City of Littleton does not have their own set of forecasts so had no comparison data for DRCOG. The City agreed with the land use scenarios developed in this process.

**City of Lone Tree -** The consultant team met with the City of Lone Tree twice during this process and collected plans for the Ridgeway development, a zoning map, population projection information contained in the Lone Tree Comprehensive Plan, sub-area plans and other information on their boundaries and development plans. The City stated there are currently 6 square miles of undeveloped land within Lone Tree. While Lone Tree does not have its own land use forecasts, the City has been working closely with DRCOG on its forecasts for the Lone Tree area. The City provided refinements to the draft developed land use scenarios and agreed with the final land use scenarios and timeframes developed in this process.

The socio economic forecast developed for the C470 corridor land use review area is identified below:

**Table 1  
C470 Corridor EA Socio Economic Forecast**

Projections	Population	Households	Employment
2010	622,782	240,860	348,614
2025	708,576	277,476	424,842

The new socio economic data set was compared to DRCOG's conformed data sets for 2010 and 2025 to assess differences by RSA. Potential land use, while compared, was not constrained by the values in the DRCOG conformed datasets. The DRCOG 2010 and 2025 data set adequately represented the level of growth projected in much of the study area. There were particular areas of new development or expanded development that were refined within the socioeconomic data. It was determined that the developed datasets were generally similar to the DRCOG conformed datasets except in the southern portion of the area of influence, south of C-470 in Douglas and Arapahoe Counties. DRCOG's conformed datasets underrepresented potential development in RSAs 601, 602 and 603 primarily. The only other RSAs which had a greater than 10% difference between the developed datasets and the DRCOG conformed datasets were in RSA 509 (north on E-470 and east of I-25) where population was underrepresented by 12% and households were underrepresented 14% in 2010 and in RSA 507 (Santa Fe Corridor) where employment was underrepresented by 19% in 2025.

The table below shows highlighted differences between the developed datasets and the DRCOG conformed datasets.

**Table 2**  
**Percent Difference between Developed Land Use Scenarios**  
**and DRCOG Conformed Datasets**

Year	For Total C470 land use review area			For RSAs 601 602, 603		
	Population	Households	Employment	Population	Households	Employment
2010	4%	5%	2%	23%	27%	29%
2025	4%	4%	6%	19%	21%	28%

*RSAs 601, 602 and 602 represent the southern portion of the land use review area in Douglas County*

The developed datasets more accurately reflected the local jurisdictions' current and planned development in the C470 land use review area than the DRCOG conformed datasets, although these modifications were minor. The developed datasets were then used for travel demand modeling for the project.



# C-470 Land-Use 2003

- Legend**
-  study limits
  -  single-family
  -  multi-family
  -  commercial
  -  public use
  -  industrial
  -  light industrial
  -  office
  -  office/industrial
  -  agricultural
  -  open space
  -  outdoor recreation
  -  undeveloped
  -  water

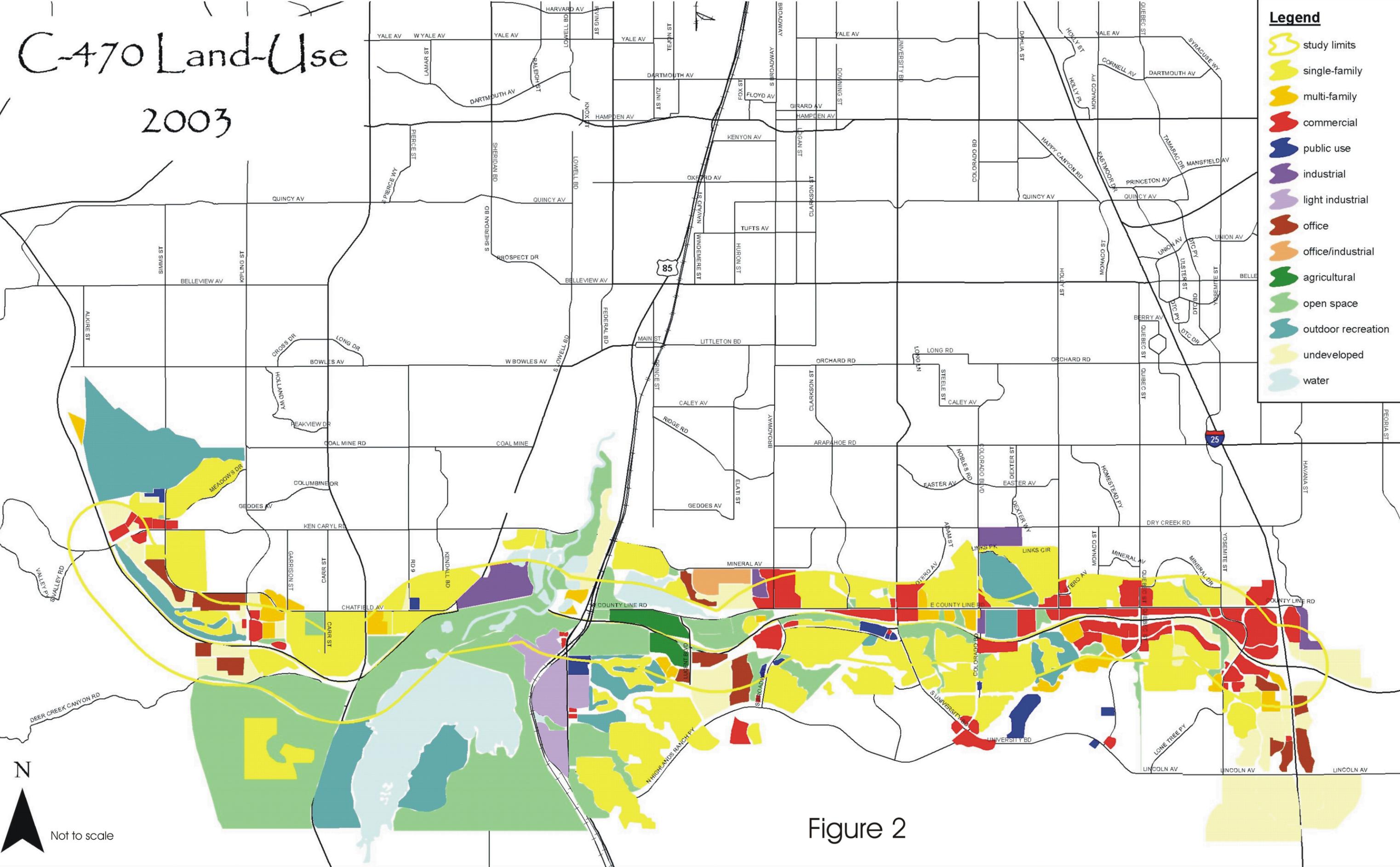


Figure 2

# C-470 Land-Use 2010

**Legend**

-  study limits
-  single-family
-  multi-family
-  commercial
-  public use
-  light industrial
-  office
-  office/industrial
-  mixed use
-  open space
-  present land use
-  water

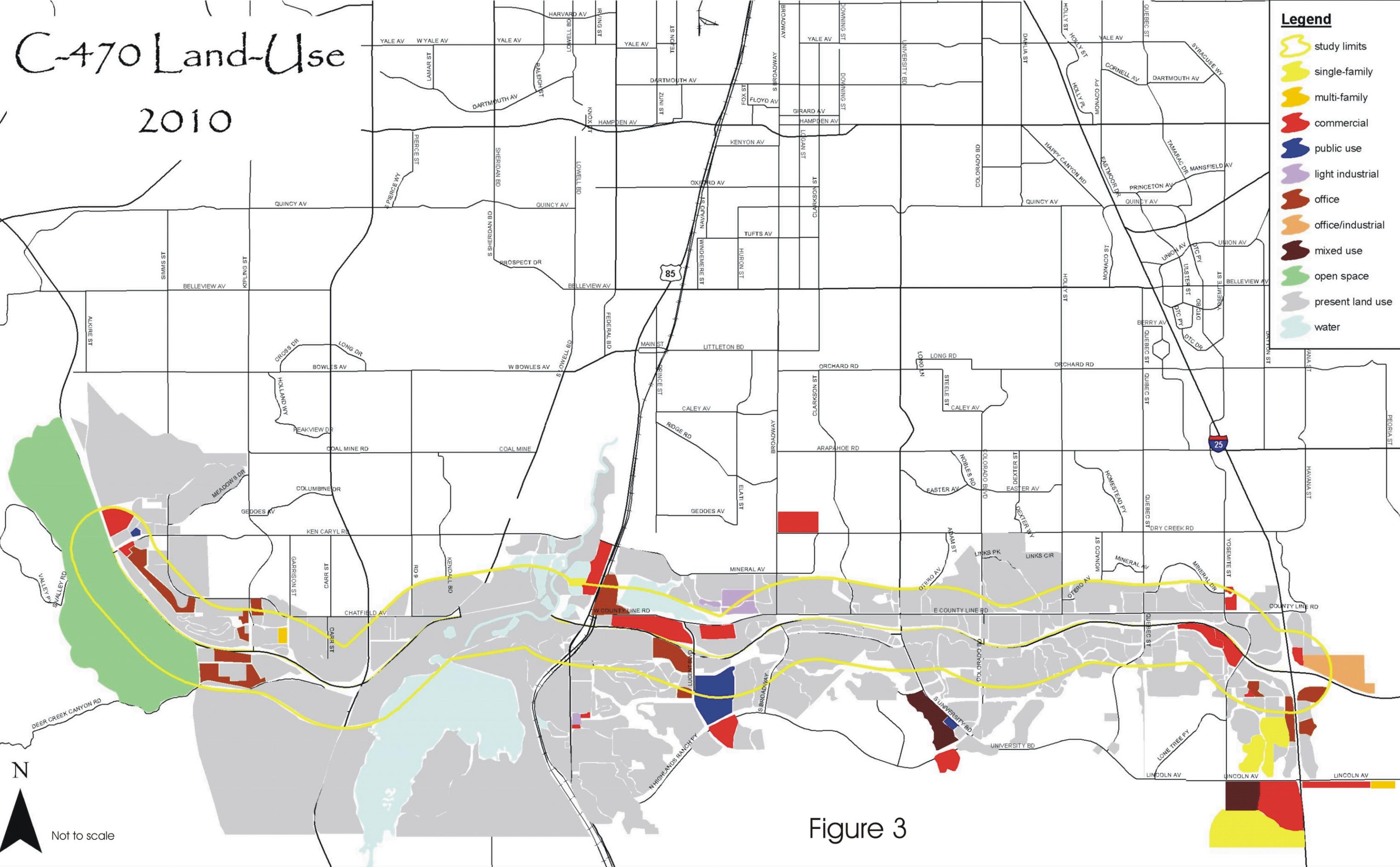


Figure 3

# C-470 Land-Use 2025

**Legend**

-  study limits
-  commercial
-  public use
-  light rail
-  office
-  present land use
-  2010 land use
-  water
-  mixed use

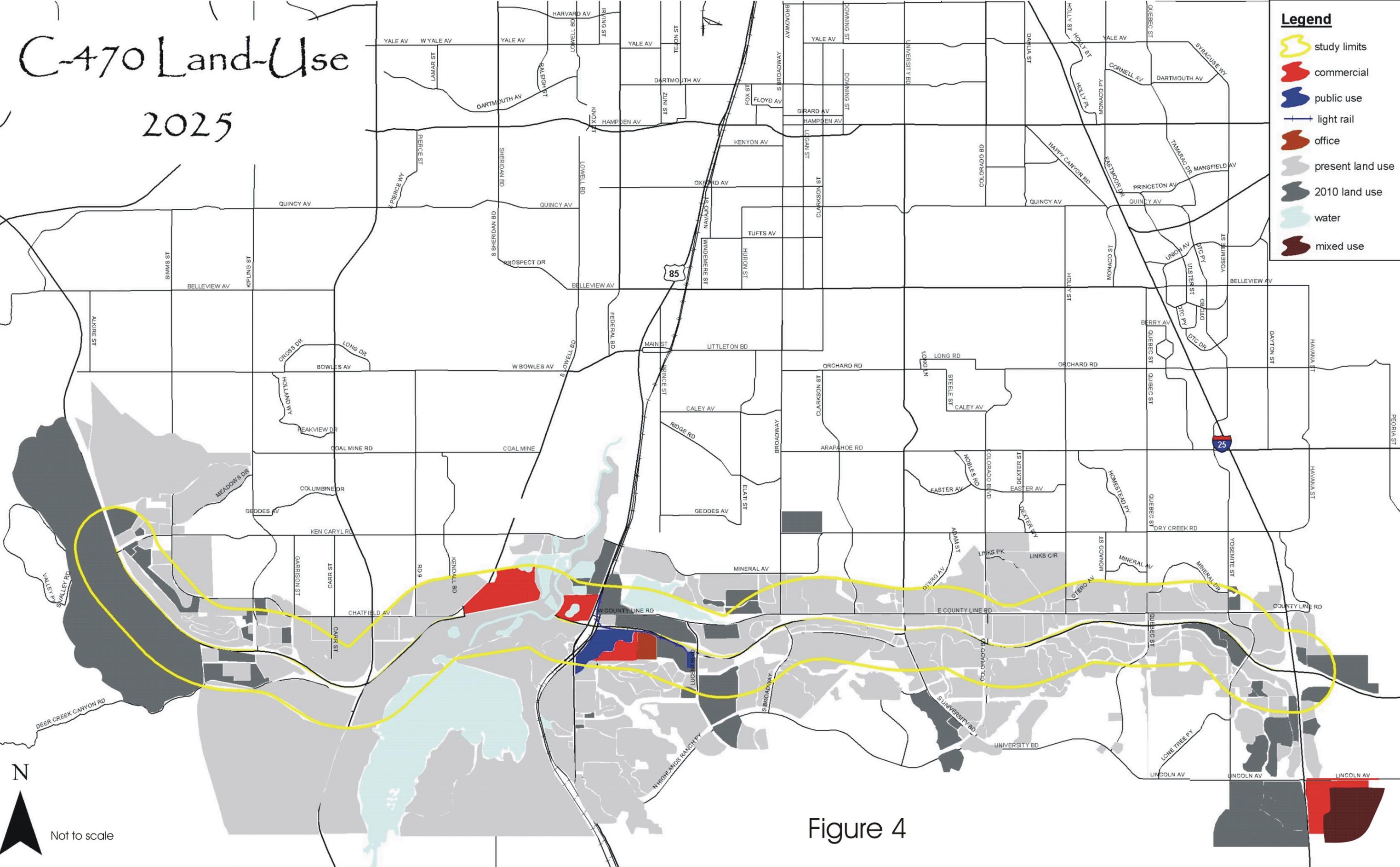


Figure 4