

TRANSPORTATION

Like many growing western counties, Douglas County focuses on one of the most integral elements in land-use planning: transportation. The primary purpose of a transportation network is to allow for the movement of people and goods. Transportation also provides access to resources, places, and events that fulfill the needs of daily living while playing a significant role in the quality of our individual and collective lives.

An inseparable relationship exists between transportation and land use. For instance, in rural areas with little development, the establishment of a new regional road provides better, more convenient access to urban services and employment. In urban areas, transportation demands are derived from, and must support, specific land uses and their associated activities.



VISION FOR TRANSPORTATION PLANNING

A transportation network comprised of diverse types of transportation facilities supports improved access and mobility; it shapes the way we travel and the development of our communities. The integration of the transportation network and land use provides important benefits, including:

- Improved travel choices and options.
- Reduced road network demands, vehicle miles traveled, and time spent driving.
- Improved community health and active living.
- Improved economic vitality.
- Improved air quality.
- Energy and natural resource conservation.

SECTION 7

The transportation network is a vital community investment in economic development and sustainability. As the transportation network reflects and supports balanced land-use policies, it also assists in the preservation and creation of a sense of place while conserving energy resources.

RELATIONSHIP TO OTHER ELEMENTS OF THE PLAN AND COUNTY REGULATIONS

The CMP establishes the community's vision regarding transportation for consideration through land-use review and other decision-making processes. The County develops and adopts a separate element, the Douglas County Transportation Plan (DCTP), which is incorporated herein by reference. The Transportation Plan is revised and adopted on a regular basis.

The DCTP augments policies and values as established by this Plan. It is intended to advance the discussion of multi-modal transportation as one of several means to support and improve access for transportation system users within a balanced transportation network, and will provide guidance for strategic decision making. The 2030 Transportation Plan will also integrate and support land-use policies as established by this Plan.

While the following goals, objectives, and policies reflect the County's general interest in how and where road and other transportation facilities are designed, the CMP is not intended as a technical guide. For detailed technical guidance on road design and other engineering-related issues, refer to the adopted DCTP, Douglas County Roadway Design and Construction Standards, and the Douglas County Storm Drainage Design and Technical Criteria manual.

ROAD NETWORK

An efficient and safe road network is essential to address increasing demands from local and regional growth and development. Roadway network improvements anticipate

and respond to the varying land-use demands and infrastructure of different areas within the County.

The development of the road network faces physical, funding, and programming constraints. These include the often diverse physical characteristics of the County, such as varying topography, historic transportation corridor alignments, and established settlement patterns.

Funding sources for Federal and State highway improvements are limited and must be maximized. Collaboration with other County and non-County jurisdictions must be pursued, even as different priorities and programs drive decision making. Non-County jurisdictions may have enormous impacts on the road network if their land-use policies direct vehicle trips into relatively sparsely populated areas within the County or onto portions of the road network which were not intended as regional facilities.

PAYING FOR ROAD CONSTRUCTION AND MAINTENANCE

Douglas County's Comprehensive Master Plan, as well as its Zoning and Subdivision Resolutions, directs that development pay its fair share of required road improvements, including those internal and adjacent to the development. In some cases, off-site road improvements are also required. The County's Concurrency Management System requires that proposed new residential development demonstrate that road capacity is available, or alternately, that the capacity will be enhanced through developer-funded improvements. A development proposal may be phased, deferred, or recommended for denial if these requirements cannot be met.

Road network capacity is described under the term "Level of Service (LOS)," which generally describes relative traffic movement or congestion in an identified time frame, as measured at intersections. LOS A, B, and C represent conditions where traffic volumes are

below the capacity of an intersection. LOS D and E represent conditions where volumes are near the capacity; LOS F represents conditions where the demand for travel exceeds the capacity of an intersection and severe congestion occurs during portions of the day. Within the Concurrency Management System, Douglas County has designated LOS D to be the minimum acceptable level of service in urban areas, and LOS C for rural areas.



Douglas County supports road development and construction programs in part through revenues received through voter-approved sales and use tax initiative. This revenue source supports paving of gravel roads, shoulder safety improvements, road widening, and intersection improvements and signalization.

TRANSIT DEMAND

Transit is defined as any vehicle or transportation system, public or private, used for the mass transport of people. The provision of transit facilities is often only feasible in areas where there is a high concentration of people. Population in the County is mostly concentrated in the northern tier of the County and within the municipalities of Lone Tree, Castle Rock, Parker, and Castle Pines, as well as the Separated Urban Areas of Roxborough and The Pinery.

County transportation demand is based, in part, on commuting patterns to and between the major employment centers of Denver and

Colorado Springs. Continued reliance on the automobile is anticipated, as is increased demand for public transportation from senior citizens, people with disabilities, youths, and non-driving residents.

Transit opportunities and needs must continue to inform land-use decisions by Douglas County and its constituent jurisdictions. Future light rail service within the City of Lone Tree, and in the western and central portions of Highlands Ranch, provides strong opportunities to guide land-use decisions, and to integrate other transit opportunities, including automobiles, buses, bicycles, and pedestrians. One example of the integration of land use and transit is Transit Oriented Development (TOD), which establishes a higher density and intensity of land use, as well as a variety of different uses, in proximity to transit centers.

Additionally, commuter rail, on the existing Union Pacific and Burlington Northern Santa Fe Railroad corridors, may one day open up significant opportunities for convenient regional transit solutions within existing transportation corridors.

CURRENT SERVICE PROVIDERS

- The Regional Transportation District (RTD) operates light rail service on the I-25 corridor, as well as bus service to the northern tier of the County. Highlands Ranch also has Call-n-Ride service.
- The Southeast Public Improvement Metropolitan District (SPIMD) is a special district that provides shuttle services and enhancement to light-rail facilities.

Special service providers offer transportation to special populations, including seniors and the disabled. These include:

- The “Senior Shuttle” within Castle Rock.
- “Neighbor Network” transportation services, which is a volunteer effort coordinated by the Douglas County Human Services Department.
- “Access-a-Ride,” a service of RTD, an on-demand service for people with disabilities.

The 2030 Transportation Plan is currently programmed to include a role for transit within the County.



TRANSPORTATION PLANNING AND LAND USE

The coordination of transportation planning and land-use planning enables effective utilization of transportation resources, and helps to create and preserve desirable living environments. Such coordination provides multiple benefits:

- Road network demand can be reduced at the scale of both urban and rural densities. Opportunities for non-vehicular transportation and recreation can be realized within urban and rural settings.
- Savings are realized by individuals as investments in automobile transportation are re-directed towards less expensive, alternative transportation choices.

The continued investment of financial and physical resources in our automobile-dominant transportation system has become increasingly expensive, damaging to air quality, discourages physical activity, and is a factor in world-wide resource depletion and the observed climate change. While the primacy of the automobile is likely to continue, land-use decisions can alleviate the demand for road network improvements, while helping to create and sustain communities that function effectively under a more balanced transportation program.

Coordinated land-use and transportation planning provides a comprehensive approach to reducing automobile use through community design, programs and policies that support a wider variety of transportation choices. For example, a reduction in road network demand can be effectively supported through development which creates walkable communities designed to support bicycle, bus, pedestrian and other travel options.



This Plan supports the provision of travel facilities for all potential users within transportation corridors. Multi-use transportation corridors can positively affect community and personal interaction, reduce time spent driving, and increase access opportunities for non-drivers like young people and the elderly.

The methods, programs and strategies to reduce peak automobile travel demands within a road network are referred to as Transportation Demand Management (TDM). These are implemented at the individual and institutional level, and include focused concepts such as telecommuting and parking management practices.

AIRPORTS

Centennial Airport is owned and operated by the Arapahoe County Public Airport Authority. Located on the Douglas-Arapahoe County line, approximately one-half mile east of Interstate 25, the facility serves general aviation aircraft. The airport provides regionally significant access and transportation services for major businesses and employers within the southern portion of the metropolitan area, and is therefore an important asset in attracting and retaining major employers.

As general-aviation travel demands are anticipated to grow, noise and safety issues associated with airport operations must be considered through the land-use review process. Douglas County has adopted regulations known as the Centennial Airport Review Area-Overlay District (CARA). The CARA ensures improved land-use compatibility through the establishment of noise and safety-zone restrictions. These zone districts generally direct residential uses away from airport operations, while permitting non-residential and open-space uses in proximity to the facility.

RAILROADS

Two major rail corridors, the Union Pacific Railroad and the Burlington Northern Santa Fe Railway Company, provide freight and coal transport services along the Front Range. In Douglas County, these corridors are located along the US Highway 85 and Interstate 25 corridors. As some of the earliest transportation infrastructure within Douglas County, these facilities were primary factors in the creation of many communities, and so are located within the center of our communities and developed areas, as well as in proximity to riparian corridors.

These facilities are a significant resource for light industrial and industrial users. Again, challenges are presented by noise, safety, vibration, and air-quality impacts. The use of train warning whistles creates significant disturbance within affected communities. Existing at-grade crossings pose threats to automobile passengers, disrupt vehicular movement, and potentially impact emergency service providers. Grade-separated crossings are very desirable in situations where they can be developed without significant disruption to existing communities. However, such facilities require an extensive lead-time for planning as well as substantial funding resources.

Local communities should be closely involved in any planning process to identify future grade-separated crossing improvements. Owing to the significant impacts of railroad operations, major land-use applications should be carefully reviewed for compatibility.

GOAL 7-1

DEVELOP AN EFFICIENT, MULTIFUNCTIONAL TRANSPORTATION NETWORK DESIGNED TO ENSURE SAFETY, PROMOTE USER ACCESS, AND FACILITATE COST-EFFECTIVE OPERATIONS AND MAINTENANCE.

OBJECTIVE 7-1A

ENSURE CONSISTENCY BETWEEN THE TRANSPORTATION PLAN AND LOCAL AND REGIONAL TRANSPORTATION PLANS.

POLICY 7-1A.1

Coordinate planning and development review efforts with municipalities and other agencies to ensure integration and continuity of the transportation network.

POLICY 7-1A.2

Support partnerships at the local and regional level, and between the public and private sector, to improve the transportation network.

OBJECTIVE 7-1B

INTEGRATE ALL APPROPRIATE MODES OF TRAVEL WITHIN THE TRANSPORTATION PLAN.

POLICY 7-1B.1

Provide a comprehensive multi-modal transportation network plan and prioritization framework within the Transportation Plan.

OBJECTIVE 7-1C

CONSIDER SAFETY A MAJOR ELEMENT OF TRANSPORTATION IMPROVEMENTS IN THE COUNTY.

POLICY 7-1C.1

Design transportation corridors that are safe for all users and sensitive to the community context.

POLICY 7-1C.2

Encourage design solutions to enhance both vehicular and non-vehicular user safety, including, but not limited to pedestrian, bicycle, and wildlife corridor grade-separated crossings, and roundabouts, where feasible, as an alternative to traffic lights.

GOAL 7-2

DEVELOP AND MAINTAIN AN EFFICIENT AND SAFE ROAD NETWORK IN HARMONY WITH NATURAL FEATURES AND EXISTING NEIGHBORHOODS.

**OBJECTIVE 7-2A**

PLAN AND CONSTRUCT AN EFFICIENT ROAD NETWORK.

POLICY 7-2A.1

Consolidate and limit access points along major arterials and major collectors to maintain mobility at a high level of service.

POLICY 7-2A.2

Establish the proper classification and timing for the construction of roads through the Douglas County Transportation Plan.

POLICY 7-2A.3

Through the design process, ensure that collector and arterial road rights-of-way are wide enough to accommodate all identified street users and functions. These may include vehicles, transit, pedestrians, bike lanes, off-street shared use trails, landscaping and roundabouts. Traffic calming features should be included to improve safety and increase pedestrian and bicyclist safety.

POLICY 7-2A.4

Ensure that land area is provided to allow adequate berming for visual relief and noise abatement, outside of the right-of-way, as necessary.

POLICY 7-2A.5

Ensure developers contribute to, and mitigate, impacts to off-site transportation infrastructure. Studies should account for off-site conditions and impacts.

POLICY 7-2A.6

Prior to road widening as a means to improve capacity, evaluate the costs and benefits of alternative capacity enhancement strategies.

POLICY 7-2A.7

Road designs should complement and minimize impact to natural features and landscapes.

POLICY 7-2A.8

Design transportation corridor improvements to carefully minimize impacts to, and allow coexistence with, significant open space, riparian areas, and wildlife movement corridors.

OBJECTIVE 7-2B

PROVIDE ADEQUATE PRIMARY, SECONDARY, AND EMERGENCY CONNECTIONS FOR SUBDIVISIONS.

POLICY 7-2B.1

Provide connections between residential neighborhoods with collector and local roads, and provide for future road connections, where appropriate, to provide alternative travel routes.

POLICY 7-2B.2

Ensure road layouts and connections support desired response requirements for emergency service and efficient school bus service.

POLICY 7-2B.3

Plan major new roads to minimize negative impacts on existing neighborhoods.

POLICY 7-2B.4

Evaluate requests for right-of-way vacation in light of current and future transportation needs, which may include road network modifications, multi-use trail corridors, and other public purposes.

OBJECTIVE 7-2C

DESIGN LOCAL ROADS TO SERVE THE PURPOSE AND SCALE OF THE NEIGHBORHOOD.

POLICY 7-2C.1

Support local road designs that encourage walkable environments and foster sense of place.

POLICY 7-2C.2

Design neighborhood streets to calm traffic and discourage traffic volumes in excess of adopted standards using methods such as shorter street lengths.

**OBJECTIVE 7-2D**

PROVIDE ADEQUATE AND EFFICIENT TRANSPORTATION CORRIDORS COUNTY-WIDE, TO REDUCE VEHICLE MILES TRAVELED AND DRIVING TIME.

POLICY 7-2D.1

Encourage enhanced east-west roadway capacity between US Highway 85 and the Chatfield Basin area.

GOAL 7-3

SUPPORT ENHANCED PUBLIC TRANSIT IN DOUGLAS COUNTY.

OBJECTIVE 7-3A

FACILITATE AN INTEGRATED TRANSIT PLAN AS A COMPONENT OF THE DOUGLAS COUNTY TRANSPORTATION PLAN.

POLICY 7-3A.1

Coordinate and support existing and future transit services provided by other agencies to fulfill service demands of County residents, including seniors and people with disabilities.

OBJECTIVE 7-3B

INCORPORATE TRANSIT FACILITIES WITHIN DEVELOPMENT IN URBAN AREAS.

POLICY 7-3B.1

Support land development patterns and practices that strengthen and create multi-modal transportation options and transit-oriented development within the Primary Urban Area, and in the Separated Urban Areas, as appropriate.

GOAL 7-4

COORDINATE TRANSPORTATION AND LAND USE PLANNING DESIGN, PROGRAMS, AND POLICIES TO REDUCE TRAFFIC CONGESTION, PROVIDE ALTERNATIVES TO AUTOMOBILE USE, IMPROVE AIR QUALITY, AND CREATE HEALTHY, DESIRABLE LIVING ENVIRONMENTS.

OBJECTIVE 7-4A

REDUCE TRAFFIC CONGESTION THROUGH IMPLEMENTATION OF TRANSPORTATION DEMAND MANAGEMENT (TDM) AND LAND PLANNING PRINCIPLES.

POLICY 7-4A.1

Encourage employers to establish programs that include the use of staggered work hours that support off-peak travel, four-day work weeks, telecommuting, nontypical work shifts, formal van pool or company ridesharing programs, and transit passes.

POLICY 7-4A.2

Provide incentives to businesses to reduce employee commuting and automobile use, if supported by adopted TDM policies and/or programs, as described in the Transportation Plan.

OBJECTIVE 7-4B

USE LAND-USE PLANNING TO REDUCE TRAVEL BY AUTOMOBILE AND IMPROVE ACCESS TO COMMUNITY RESOURCES.

POLICY 7-4B.1

Ensure all new development and redevelopment projects incorporate bicycle and pedestrian facilities that connect community uses and destinations, including employment centers, residential areas, shopping, parks, transit facilities, schools and other community activity centers, where possible.

**POLICY 7-4B.2**

Encourage mixed-use development, with appropriate scale and pattern of uses, that supports a variety of travel options and connects community uses and destinations.

POLICY 7-4B.3

Coordinate and provide multi-modal links with the County's regional trails system.

POLICY 7-4B.4

Ensure new and existing developments promote connectivity through road and off-street path design to reduce trip lengths, provide multiple alternative travel routes between community uses and destinations, and provide alternatives to automobile use.

GOAL 7-5

REFINE LAND-USE COMPATIBILITY WITHIN THE CENTENNIAL AIRPORT REVIEW AREA OVERLAY DISTRICT (CARA) TO ENSURE AIR AND GROUND SAFETY.

OBJECTIVE 7-5A

ACHIEVE CONSISTENCY IN LAND-USE PLANNING WITHIN THE CARA.

POLICY 7-5A.1

Apply CARA land-use regulations, where applicable, in addition to underlying zoning regulations, to ensure the future operation of Centennial Airport.

POLICY 7-5A.2

Coordinate land-use planning with the Arapahoe County Public Airport Authority and apply principles established in the DRCOG Airport Compatible Land Use Design handbook, where appropriate.

OBJECTIVE 7-5B

COORDINATE LAND-USE PLANNING ACTIVITIES WITH OTHER JURISDICTIONS ADJACENT TO THE CARA.

POLICY 7-5B.1

Develop a regional framework, achieved through consensus, regarding future land-use planning surrounding Centennial Airport.

GOAL 7-6

ACHIEVE COMPATIBILITY BETWEEN THE RAILWAYS, OTHER TRANSPORTATION CORRIDORS, AND SURROUNDING LAND USES.

OBJECTIVE 7-6A

ELIMINATE ALL AT-GRADE CROSSINGS INVOLVING PUBLIC ROADS AS WELL AS PRIVATE ROADS, WHERE POSSIBLE.

POLICY 7-6A.1

Encourage grade-separated crossings for both new and existing development to enhance public safety and efficiency.

OBJECTIVE 7-6B

ACHIEVE LAND-USE COMPATIBILITY BETWEEN THE RAILWAYS AND ADJOINING LAND USES.

POLICY 7-6B.1

Ensure all new land uses located in the vicinity of rail lines are compatible with railway noise, air-quality, visual, fire, and access impacts.

**POLICY 7-6B.2**

Recognize the need for rail-related uses in the County and allow them to make effective use of rail facilities.

OBJECTIVE 7-6C

CONTINUE TO PURSUE PASSENGER COMMUTER SERVICE.

POLICY 7-6C.1

Support commuter rail that links the County with other areas across the Front Range.