

METRO VISION

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Incorporating various amendments and reflecting adoption of the Regional Open Space Plan, the Clean Water Plan, the Fiscally Constrained Regional Transportation Plan and the Urban Growth Boundary Map.



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Regional Plan Certification Statement

Pursuant to Sections 30-28-105 through 30-28-110, C.R.S., the Denver Regional Council of Governments (DRCOG) adopted by Resolution No. 2, 1997 (March 19, 1997), amended by Resolution No. 9, 1997 (July 16, 1997) and amended by Resolution No. 15 (September 16, 1998) and amended by Resolutions No. 18 and No. 20 (November 17, 1999), this *Metro Vision 2020 Plan* for the area described in the plan. The plan is part of DRCOG's regional master plan for the Denver region. The plan, as so adopted, supersedes any regional master plan for said area previously adopted by DRCOG.

By:  November 17, 1999
Chairman
Denver Regional Council of Governments

By:  November 17, 1999
Secretary-Treasurer
Denver Regional Council of Governments

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Abstract

TITLE: Metro Vision 2020 Plan

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DATE: Incorporating various amendments and reflecting adoption of the Regional Open Space Plan, the Clean Water Plan, the Fiscally Constrained Regional Transportation Plan and the Urban Growth Boundary Map.

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ABSTRACT: The Metro Vision 2020 Plan is the Denver region's plan for addressing the future growth of the metropolitan area. It outlines strategies and implementation steps to preserve the region's quality of life while also positioning it to benefit from growth. The plan is organized around six core elements dealing with the development pattern of the region, the necessary transportation system and the actions needed to preserve air and water quality.



Preface

The Denver Regional Council of Governments (DRCOG) is a voluntary association of local governments in the Denver metropolitan area. The association serves as the regional planning commission under state law and is charged to prepare a plan for the development of the region. It is the federally designated Metropolitan Planning Organization (MPO) for transportation planning and the areawide Water Quality Management Planning Agency. Its members include Adams, Arapahoe, Boulder, Clear Creek, Douglas, Gilpin and Jefferson counties and the City and County of Denver plus 41 cities and towns. Within its boundaries resides more than half the population of Colorado.

DRCOG is responsible for developing three major regionwide plans: the *Regional Development Plan*, looking at overall growth patterns; the *Regional Transportation Plan*, focusing on transit, highway, bicycle and pedestrian facilities; and the *Clean Water Plan*, outlining how the metropolitan area will handle water quality and wastewater issues. These plans are being updated and integrated under the **Metro Vision** process to create the region's long-range plan for growth, development, environmental quality and transportation.

In 1992, the DRCOG Board of Directors adopted this vision statement for Metro Vision:

"With regional cooperation as its keystone, the Metro Vision plan promotes a high quality metropolitan setting within which its people will live, work, and recreate. To advance and sustain this future, the region must function as an association of interrelated communities. Recognizing this, the economic, cultural and geographical significance of downtown Denver to the region must be acknowledged.

"The health of downtown Denver, urban cores and the surrounding communities is necessary for, and synergistically linked to, the success and vitality of the region. To promote the health of all communities in the region, an equitable sharing of the costs and benefits of regional development is needed. This sharing could provide every community the resources to respond to the impacts of growth consistent with a vision for itself, while giving each a stake in quality planning and development for the health of the region as a whole.

"Effective and efficient cooperative use of limited resources, whether financial, societal or natural, is essential to achieve the goals of the plan and progress toward a sustainable future. Through the implementation of the regional plan, the region can be a place where its people live close to where they work and play, where a balanced transportation network connects mixed-use urban centers, where urban communities are defined by significant open space, and where cultural diversity and respect for the natural environment are celebrated.

"The physical and cultural diversity of the many communities which comprise the Denver region creates the opportunity for a wide variety of economic development initiatives and living styles. Individual communities should prosper by contributing to regional efforts in regional facilities, transportation, air quality, water quality, water supply, waste management, provision of open space and land use mix. In turn, a stronger, more "livable" region will serve to strengthen and sustain its individual communities."



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Executive Summary

Growth has been a major issue of the 1990s. Slightly more than two million people now live in the eight-county region served by the Denver Regional Council of Governments (DRCOG). By 2020, approximately 900,000 new people are expected to settle in the area--enough people to make a new Denver, Aurora and Arvada combined. Such an increase guarantees that the region's look and shape will undergo dramatic changes. The challenges of growth *require* the region to plan and be visionary about the future. By combining previously separate plans for growth, development, transportation, and water quality management into a single integrated plan, Metro Vision (MV) serves as a comprehensive guide for the future development of the region.

The implications of growth are substantial, and raise significant questions, such as:

- u Where will people live and work?
- u How will their travels affect road conditions and congestion levels?
- u How will new development affect the region's open space?
- u What infrastructure needs might be prompted by growth?
- u How will growth affect the environment?

Metro Vision aims to answer these questions and proposes strategies and implementation steps that would preserve the region's quality of life while also positioning it to benefit from economic growth.

Metro Vision is the long-range growth strategy for the Denver region. It examines both the current and

preferred pattern of development for the Denver region to the year 2020. Considering key growth issues from a regional perspective is essential. At the same time, local control over the decisions that determine where growth will occur should be retained. Metro Vision recognizes the variety of communities and living environments in the Denver region, and the myriad issues with which they are confronted. It attempts to complement communities' visions, while offering a regional context in which to make more effective decisions about growth and development.

The convergence of key factors compels the region to view and conduct planning from a different perspective:

- u More than 161,000 people moved to the region between 1990 and 1996.
- u There are fewer financial resources available today, with little prospect of significant increases in the future from federal, state or local sources.

- u Today the majority of the region's transportation dollars go toward maintaining current investments, leaving fewer dollars available for system expansion.
- u People must increasingly rely on private vehicles to travel between home and job, shopping and recreation. The result: longer commute times, more traffic congestion and an increase in vehicle pollutant levels.
- u Growth in vehicle miles of travel (VMT) between 1990 and 1996 increased faster than population growth. By 1995 daily VMT reached 48,600,000. As the region has grown it has spread out and people are traveling farther. Because of the greater number of workers per household, other demographic changes, and an increase in non-work related trips, people are also traveling more often.
- u The further development spreads, the more it will cost to deliver needed facilities and services--such as water and sewer, roads, drainage, schools, police and fire protection, and public transit--and the more open lands are lost.
- u Construction of new public projects, such as roads, water treatment plants and transit stations, requires an increasing amount of time and more complex planning than ever before.

Recognizing the shared costs and benefits of growth and the difficulties local governments face in addressing issues which transcend their municipal boundaries, DRCOG initiated Metro Vision 2020 in 1990 with a task force composed of representatives from local government, business, environmental groups and other segments of the regional public. The group was charged with developing a set of principles and policies to guide development of the regional transportation, land use and water plans. A new approach to regional growth, development, environmental and transportation planning emerged.

A preferred development scenario was identified by a subsequent task force, based on an extensive analysis of alternatives. This scenario became the *Metro Vision 2020 Framework* accepted by the Board of Directors in November 1995. The framework defined six core elements needed to address regional goals for the future, and these, in turn, form the long-range growth and development plan for the region. The core elements are:



Extent of development--urban development will occur within 747 square miles by 2020 to accommodate expected population growth. The conversion of land should prevent the unnecessary extension of infrastructure, reduce regional vehicle travel, maintain air quality standards, and help preserve open space.



Open space--a regional open space system that shapes the region's form, protects environmental resources, and provides recreational opportunities. The recreational, environmental, visual and agricultural qualities of the region are of great value to residents and visitors. As the region continues to develop, it will be increasingly important to identify and protect this valuable asset.



Free-standing communities--Boulder, Brighton, Castle Rock and Longmont to be separate from the urban area, with an adequate employment/housing balance and internal transportation systems. These communities should retain their visual and physical separation and strive to meet the employment, service and facility needs of their new residents.



Balanced, multimodal transportation system--includes rapid transit, a bus network, regional beltways, bike and pedestrian facilities, and improvements to the existing system. The primary goal of transportation is to provide mobility and accessibility to support the physical, social and economic development of the region. Metro Vision promotes an efficient transportation system by increasing capacity through public transit, system management and providing for alternative modes, in addition to roadway widening.



Urban centers--a range of activity centers in the region that serve as transit destinations; support retail, employment and housing; contain higher densities than the regional average; and encourage pedestrian-oriented travel. They will be pedestrian-oriented, mixed-use locations of high intensity, providing a range of retail, business, civic, cultural, and residential opportunities for their surrounding trade areas. Ranging from the Denver Central Business District (CBD) to the neighborhood supermarket, centers can serve as focal points for social, business and community activity, while enabling transit to better serve the community.



Environmental quality--acknowledges that the location and type of growth and land development have significant effects on the region's air and water. Environmental issues such as air and water quality are truly regional in nature. Water quality will be addressed through the *Clean Water Plan*, an integrated watershed approach to managing regional water quality. Air quality is linked with population growth, travel behavior and technology improvements. Metro Vision reflects desired development and transportation patterns recommended by the

Regional Air Quality Council (RAQC) to help curb increases in air pollution.

Each of the core elements is linked--each affects the other. Metro Vision recognizes the fundamental link between land use, growth and development patterns, transportation, and environmental quality, and that regional issues can only be addressed by individual jurisdictions acting together.

Each core element provides a natural focus for addressing a wide variety of issues. While they are broad in scope, each has a set of policy objectives that more fully describe how they provide for growth while striving to protect the regional qualities residents value.

Implementation strategies

To implement the six core elements, specific strategies are needed. The following recommended strategies recognize the need for local control over the decisions that determine where growth should occur and would not require new state legislation. Strategies are based on the **voluntary, flexible, collaborative and effective** local implementation of Metro Vision.

- u *Voluntary* means jurisdictions will choose to meet the core elements without mandate from other government entities.
- u *Flexible* applies to plan review and revision as well as to the use of the plan.
- u *Collaborative* means the region's communities not only recognize the value of the core elements to guide growth and development in the region, but also that regional goals cannot be met by communities working in isolation.
- u *Effective* means that the plan must be *operative* and have a definite impact in influencing the region's growth and development.

Plan consistency

This strategy helps reconcile the regional effects of local growth and development decisions by ensuring consistency between local comprehensive plans and regional development and infrastructure goals.

Integration of regional development and transportation plans

A challenge for the Denver region is to sustain a high level of integration between significant regional investment decisions and local actions that support the core elements of Metro

Vision. A key mechanism to implementation is the Transportation Improvement Program (TIP) evaluation criteria, in which regional transportation funds are scheduled and budgeted in six-year cycles.

Air quality integration

In Colorado, local governments have many of the responsibilities for implementing environmental protection activities. The State Implementation Plan (SIP) for air quality, prepared by the Regional Air Quality Council, cannot be implemented without local government assistance. DRCOG will work with RAQC to address air quality in the regional development and transportation plans.

Water quality integration

While water quality management is a regulatory program, DRCOG's role is not regulatory but one of planning. Metro Vision recognizes the local role in making water quality management an effective and efficient process, while striving to address broader, watershed quality issues. DRCOG's *Clean Water Plan* is used in state and federal decisionmaking and will be consistent with the regional development and transportation plans. But it is within local jurisdictions that decisions regarding the relationship of site design, urban form and water quality can be defined and local actions supported.

Tax policy and revenue sharing

Municipalities' heavy reliance on sales tax revenues has a significant role in local development decisions. The current tax policy structure encourages competition for sales tax revenues among jurisdictions, and works against the regional cooperation needed for optimal implementation of Metro Vision. The challenge to local leadership--in both the public and private sectors--is to overcome traditional approaches that exacerbate intense local competition for short-term gains.



Next steps

It is important to realize that Metro Vision is a work in progress. It is a dynamic plan and continues to be refined. A Metro Vision Policy Committee has been established to advise the Board of Directors on decisions regarding Metro Vision policies and implementation of the core elements. The following items are ongoing efforts that help to define actions or steps that will be taken over the next few years.

- u **Communication** - An outreach and communications strategy is being developed to convey Metro Vision to the public and other appropriate audiences and to link the plan to regional efforts.
- u **Extent of development** - Links among the extent of development, the *Regional Transportation Plan* and the *Clean Water Plan* will continue to be refined. In both cases, staging growth to 2020 is a major element in identifying needed facilities over the next 18 years. Metro Vision recognizes that developing and implementing staged growth boundaries will take time and require strong political commitment to regional cooperation.
- u **Open space** - The regional open space system is being addressed by DRCOG. This effort includes coordinating and consolidating information, facilitating discussion and developing preservation and financing strategies collaboratively with local governments across the region. In July of 1999, the DRCOG Board of Directors adopted the Open Space Element of the Metro Vision 2020 Plan, which also establishes goals, strategies and policies for various components of the open



space system. The Board is asking local governments to review these goals and report on their own goals that can address these important needs.

- u **Transportation** - The Metro Vision transportation element proposes a desired network. DRCOG, however, must ensure that decisions for use of federal funds are based on the regional development plan and expected revenues. The DRCOG Board of Directors adopted the Regional Transportation Plan in September 1998 as the fiscally constrained transportation plan. Both the Metro Vision element and the fiscally constrained plan have been amended since adoption.
- u **Candidate regional centers** - The identification and implementation of this type of urban center is another continuing effort. Local commitments to center development will need to be clarified. Commitments will help to establish extension of transit into those communities where subsequent ridership could best support it.



Metro Vision recognizes the impacts of continued expansion on the provision of infrastructure, water supply, air quality and the environment, and strives to protect and improve quality of life. It calls for a more efficient development pattern that encourages transit use, addresses congestion, protects valuable recreation and open space, and provides a choice of living environments.

To advance toward these goals, however, the region must function as an association of interrelated and interdependent communities, with cooperation and collaboration as its keystone.



Introduction

Growth has been a major issue of the 1990s. Slightly more than two million people now live in the eight-county region. By 2020, approximately 900,000 new people are expected to settle in the area--enough people to make a new Denver, Aurora and Arvada combined. Such an increase guarantees that the region's look and shape will undergo dramatic changes. The challenges of growth *require* the region to plan and be visionary about the future. By combining previously separate plans for growth, development, transportation, and water quality management into a single integrated plan, Metro Vision serves as a comprehensive guide for the future development of the region.

The implications of growth are substantial and raise significant questions, such as:

- u Where will people reside and work?
- u How will their travel needs affect road conditions and congestion levels?
- u How will new development affect the region's open space?
- u What infrastructure needs might be prompted by growth?
- u How will growth be affected by regional infrastructure investments?
- u How will growth affect the environment?

Metro Vision aims to answer these questions and to develop strategies and implement steps to preserve the region's quality of life while also positioning it to benefit from economic growth. It is the long-range growth strategy for the Denver region. Metro Vision examines both the current and preferred patterns of development for the Denver region. While it could take many decades to achieve the preferred future, the year 2020 has been selected to define facility demand.

The need for considering key growth issues from a regional perspective is essential; at the same time, however, local control over the decisions that determine where growth will occur should be retained. Strategies have been developed that enable a voluntary, flexible, collaborative and effective approach to implementation.

Metro Vision recognizes the impact of continued expansion on the provision of infrastructure, water supply, clean air, and the environment. It also recognizes that building significant, additional, highway capacity to address congestion and air pollution issues is not financially feasible nor publicly acceptable. It places greater reliance on public transportation and non-motorized modes.

Metro Vision calls for a more efficient development pattern that supports transit, protects valuable recreation and open space, and provides diversity of communities and choices of housing. Through mixed-use centers and a strong, economically vital downtown Denver, rapid transit can be supported and congestion reduced.



Metro Vision recognizes the diversity of communities in the Denver region and the myriad issues with which they are confronted. From Longmont to Larkspur and from Denver to Deer Trail, Metro Vision attempts to complement the communities' visions--whether an expanding suburban fringe community or a "land-locked" interior community focusing on redevelopment. Some communities have experienced their growth cycles and are looking for stability. Others, are seeking to greatly expand to overcome relatively slower growth and development over the past few years. Metro Vision offers a regional context in which to make more effective decisions about growth and development.

The convergence of key factors compels the region to view and conduct planning from a different perspective:

- u More than 161,000 people moved to the region between 1990 and 1996. By the year 2020 the region is forecasted to reach 3.2 million people and add nearly 500,000 jobs (Figure 1).
- u Fewer financial resources are available today due to budget cutbacks or tax limitations, with little prospect of significant increases in the future from federal, state or local sources.

- u Funds available for improving the region's transportation system have not kept up with the dramatic increase in the use of our roadways (Figure 2). Today the majority of the region's transportation dollars go to maintenance, leaving few dollars available for system expansion.

- u Employment and residential locations continue to grow separately, requiring extensive use of the automobile and offering few alternatives in travel. Even the rural portions of the region have experienced growth pressures, with large-lot residential growth which is neither urban nor rural. People must increasingly rely on private vehicles to travel between home and job, shopping and recreation. The result: longer commute times, more traffic congestion and an increase in vehicle pollutant levels (Figure 3).

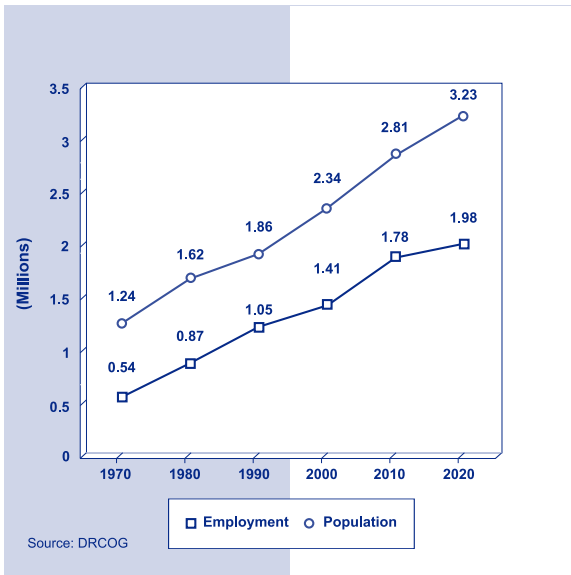
- u As the region has grown, it has spread and people are traveling farther. Because of the greater number of two-wage earner households and other demographic changes, and an increase in non-work related trips, people are also traveling more often. As a result, growth in vehicle miles of travel (VMT) between 1990 and 1996 increased faster (36 percent) than population growth during the same period (14 percent). By 1995, daily VMT reached 48.6 million miles.

- u The further development spreads into the countryside, the more it will cost to deliver needed facilities and services--such as water and sewer, roads, drainage, schools, police and fire protection, and public transit--and the more open lands are lost.
- u Construction of new public projects, such as roads, water treatment plants and transit stations, requires an increasing amount of time and more complex planning than ever before.

Metro Vision recognizes the diversity of communities in the Denver region and the myriad issues with which they are confronted.

- u Overall, air quality has improved despite dramatic growth in automobile use. Implementation of wood-burning bans, enhanced auto inspection and pollution control maintenance programs, oxygenated fuel requirements during winter, reduced winter street sanding, and improvements in automotive technology have all contributed to improved air quality. These efforts will need to be continued and increased as future growth and

Figure 1
**Population and Employment Past
 Trend and Future Forecast**



new pollutant standards have the potential to reverse the trend.

- u Regional water quality has also improved. Wastewater treatment facilities now meet state and federal water quality standards and are discharging cleaner effluent. Improved prevention and control of stormwater runoff through the use of best management practices have also contributed to enhanced water quality. With sustained population growth expected over the next 20 years, however, the region will need to continue to make new commitments to protect water quality.

Recognizing the shared costs and benefits of growth and the difficulties local governments face in addressing issues which transcend their municipal boundaries, DRCOG initiated Metro Vision in 1990 with a task force composed of representatives from local government, business, environmental groups and other segments of the regional public. The group was charged with developing a set of principles and policies to guide development of the regional transportation, land use and water plans. Spurred by visionary thinking, the new direction provided by the Intermodal Surface Transportation Efficiency Act (ISTEA) and requirements of the Clean Air Act, DRCOG moved forward with a new approach to its regional growth, development, environmental and transportation planning responsibilities.

In 1993, a new, broadly representative, 40-member task force was convened to create and analyze alternative future growth scenarios for the region. It examined 11 preliminary alternatives which described a broad range of possible future scenarios with policy and investment strategy combinations

and chose four alternatives for further study: Dispersed, Compact, Corridor and Satellite Development. Figure 4 presents a chronology of the Metro Vision planning process.

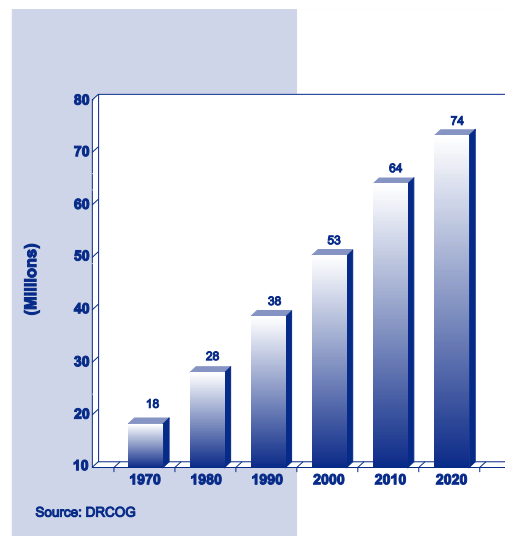
The four alternatives portrayed a range of distinct urban forms and development and transportation scenarios. The differences among the four allowed for detailed evaluation, analysis and comparison of their strengths and weaknesses. They were also evaluated against the vision statement and the principles and policies criteria set in 1992. The infrastructure cost difference, excluding transportation, between the Dispersed and Compact alternatives were significant: Dispersed (an 850-square-mile area) showed the highest cost at \$5.4 billion, while the Compact alternative (a 650-square-mile area) at the other extreme at \$1.1 billion. This evaluation provided support for new development policies and transportation investment strategies.

A preferred development scenario, combining the best features of the four alternatives, became the *Metro Vision 2020 Framework*, accepted by the DRCOG Board of Directors in November 1995. The framework defined six core elements needed to address regional goals for the future; these core elements, in turn, form the basis of the plan for the region. They are:

Extent of development--urban development to occur within 747 square miles by 2020 to accommodate expected population growth. Semi-urban development is recognized as another component of the region's development pattern. (This description reflects a 2002 amendment).

Open space--a regional open space system that shapes the region's form, protects environmental resources, and provides recreational opportunities.

Figure 2
**Daily VMT by
 Decade in Denver Region**



Free-standing communities--of Boulder, Brighton, Castle Rock and Longmont to be separate from the urban area, with an adequate employment-housing balance and internal transportation systems.

Balanced, multimodal transportation system--that includes rapid transit, a bus network, regional beltways, bike and pedestrian facilities, and improves the existing system.

Urban centers--a range of activity centers in the region that serve as transit destinations; support retail, employment and housing; contain higher densities than the regional average; and encourage pedestrian-oriented travel.

Environmental quality--acknowledging that the location and type of growth and land development have significant effects on the region's air and water.

To advance toward these goals, however, the region must function as an association of interrelated and interdependent communities, with cooperation and collaboration as its keystone. Effective and efficient cooperative use of limited resources--whether financial, societal or natural--is essential to progress toward a sustainable future.

In early 1996, the Board of Directors formed a steering committee to address key steps necessary to implement Metro Vision. The implementation and next steps portion of this document reflect the committee's work. Recognizing that implementing the core elements will be an ongoing process, this last section is of critical importance.

Figure 3
Major Roadway Congestion by Year

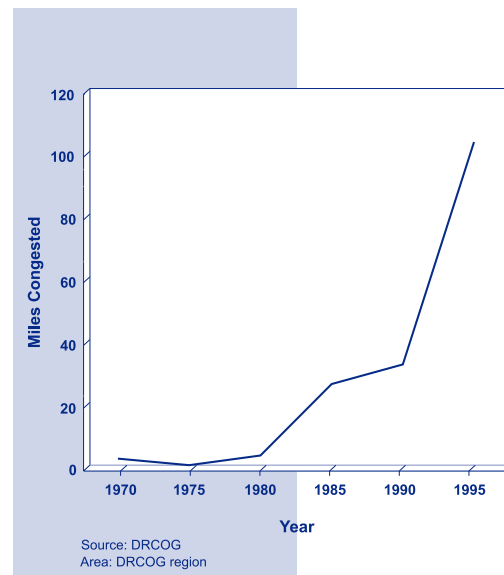
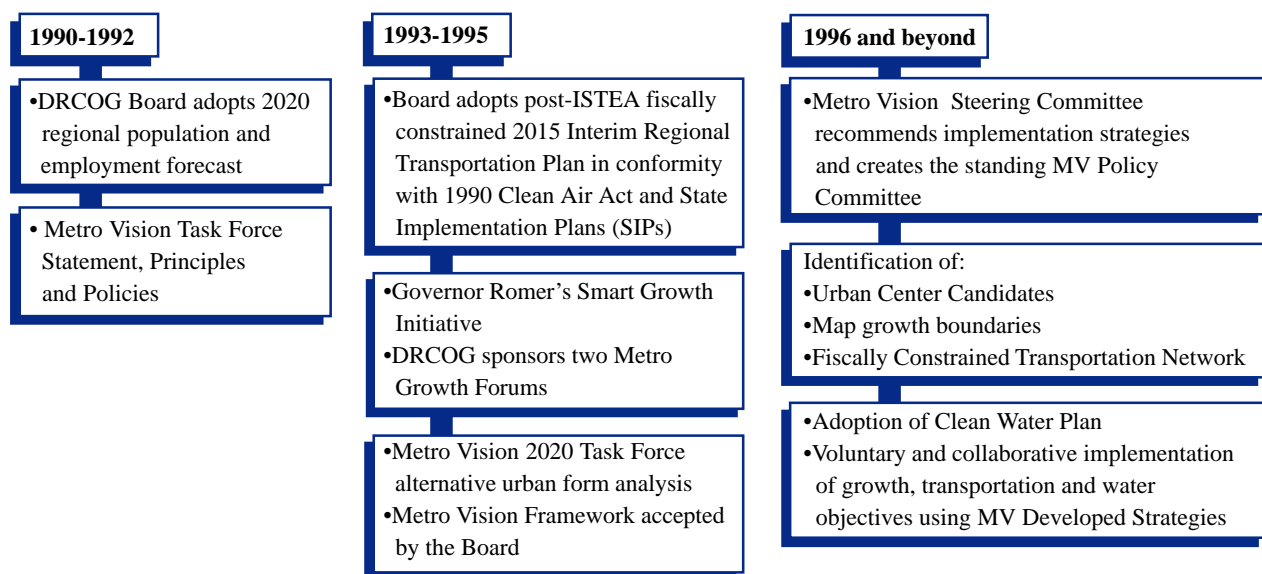


Figure 4
Metro Vision Planning Process



I Core Elements



One of the significant aspects of Metro Vision is that it takes a new look at how the region should grow and develop. Metro Vision recognizes that regional transportation plans, development plans and environmental plans must offer an integrated vision of the future.

A central organizing feature of Metro Vision is the core elements that characterize the desired future development for the metropolitan area. The core elements are predicated on the precepts of efficient and effective provision of urban services and infrastructure. This chapter outlines the core elements and their potential impact on regional development issues. Each element is supported by a number of policy objectives that describe goals inherent in the core elements.



Extent of Development

Extent of urban development will occur within 747 square miles by 2020 to accommodate expected population growth.

Objectives

- u Take advantage of existing capacities in the service system of the urbanized area and design it in a way that allows future service to be provided in a regionally efficient manner;
- u Design the development pattern to maximize and complement the efficiency of the existing and planned transportation network;
- u Anticipate urban development only in areas where significant environmental hazards would not occur or where environmental hazards to development can be safely mitigated;
- u Encourage the development of balanced communities, each characterized by a mix of income and housing types and having a reasonable relationship between the affordable housing supply, employment opportunities and ethnic balance
- u Promote more compact development patterns; and
- u Recognize the different types of land development and reserve appropriate areas for future urban development.

Achieving a development pattern containing urban uses to an area not in excess of 747 square miles will prevent the unnecessary extension of infrastructure, reduce vehicle travel, maintain air quality standards and preserve open space. It is the most essential of the six core elements because of its strong implications for the remaining five. It identifies land which will need urban services, and will be defined by local boundaries created through identification of open space, environmental constraints, prime agricultural lands, and that which is most appropriately rural. Urban centers,

free-standing communities and suburban areas will develop as the population grows to 3.2 million people by 2020.

Urban growth boundaries will define urban development and expected growth areas. Services and infrastructure should be prioritized and staged within these boundaries. Growth boundaries encourage contiguous and orderly growth, and prevent inefficient development and its burdens on infrastructure and service provision. The boundary distinguishes between land that is urban and that which is unimproved or rural.

An urban growth boundary provides predictability in planning for local and regional facilities. It acts as a staging tool, so that the costs of infrastructure and services are reduced and can be managed efficiently. A climate of certainty in development decisions is a positive outcome for both public and private interests. Further, an urban growth boundary fosters the preservation of open space and the protection of environmentally sensitive lands and habitats.

The urban area of the region in 2000 was approximately 500 square miles. Local jurisdictions' long-range plans indicate an aggregate build-out of approximately 1,100 square miles. The goal of

containing development to 747 square miles assumes that the region can accommodate the expected urban population growth from 2.4 to 3.2 million people within this area.

The 747-square-mile target incorporates an analysis of alternative growth patterns and is expected to best accommodate the growth while meeting the other goals of Metro Vision. It is based on a specific set of definitions for urban and non-urban activities that are described in the Metro Vision Glossary. DRCOG worked closely with local governments to prepare the Urban Growth Boundary Map (Figure 4a) to reflect their expectations of growth within the regional context. Table 1 identifies the urban growth areas for each community. The urban areas on the map and table are used by DRCOG to plan for regional infrastructure such as transportation and wastewater facilities.*

* That portion of the Arapahoe County Urban Growth Boundary/Area highlighted on the map is under discussion by Arapahoe County and the City of Aurora to consider common urban design standards and facilities. If Arapahoe County and the City of Aurora reach agreement on such standards for the site by no later than May 2002, the highlighted area will be considered by the Denver Regional Council of Governments as part of Arapahoe County's Urban Growth Boundary/Area. If no agreement is reached, Arapahoe County may request that the Metro Vision Issues Committee recommend to the Board of Directors the recognition of the highlighted area as part of Arapahoe County's Urban Growth Boundary/Area.

Both the forecast and the extent of urban development will be reviewed and updated biennially and subject to major reconsideration every five years. This should provide the flexibility to respond to market conditions and new understandings of the effects of growth on the plan's goals. In addition, the Board of Directors has adopted a flexibility process that provides a mechanism for local updating of the urban growth boundaries and areas.

Metro Vision 2020 seeks compact urban development and a clear distinction between urban and non-urban areas. One key to achieving this goal is to direct urban growth to designated urban areas. The urban growth boundary/area (UGB/A) defines this "extent of urban development" and lower-density semi-urban and rural development should occur outside the UGB/A.

In 1998 the semi-urban development type comprised a relatively small portion of the region's number of households (~ 8%) but occupied a significant amount of the region's land (~ 17%). Semi-urban lands are components of the region's development pattern and reflect the diversity of land uses in the region. Semi-urban development offers an alternative lifestyle for those desiring a low-density residential pattern. When creatively designed, such development can be a viable approach in environmentally sensitive areas.

However, they may incur higher environmental impacts as well as higher costs to provide governmental services and infrastructure such as roads, water, schools, law enforcement and emergency services. Semi-urban development can also negatively affect the logical extension of the urban portion of the region's future growth, contributing to non-contiguous development.

The region contains critical open space areas, including agricultural, scenic and wildlife habitat lands.

Table 1

Urban Growth Boundary/Area Tabulation

Community	2000 Urban Area	2020 Urban Area	2000-2020 Change	Share of Regional Change	Percent Change	Annual Change
Adams County	15.48	21.37	5.89	2.4%	38.1%	1.63%
Arapahoe County	31.00	40.81	9.81	4.0%	51.6%	1.38%
Arvada	23.02	32.19	9.17	3.7%	39.8%	1.69%
Aurora	45.80	83.90	38.10	15.3%	83.2%	3.07%
Bennett	0.71	5.84	5.13	2.1%	722.7%	11.11%
Boulder	23.45	23.74	0.29	0.1%	1.2%	0.06%
Boulder County	6.47	7.12	0.65	0.3%	10.0%	0.48%
BowMar	0.60	0.60	0.00	0.0%	0.4%	0.02%
Brighton	4.32	19.06	14.74	5.9%	341.4%	7.71%
Broomfield	9.08	17.98	8.90	3.6%	98.0%	3.48%
Castle Rock	5.98	21.59	15.61	6.3%	261.0%	6.63%
Cherry Hills Village	5.80	5.80	0.00	0.0%	0.0%	0.00%
Columbine Valley	0.41	0.62	0.21	0.1%	52.5%	2.13%
Commerce City	11.61	28.09	16.48	6.6%	141.9%	4.52%
Deer Trail	0.92	0.92	0.00	0.0%	0.0%	0.00%
Denver	95.72	108.66	12.94	5.2%	13.5%	0.64%
Douglas County	26.56	46.07	19.51	7.8%	73.5%	2.79%
Edgewater	0.69	0.69	0.00	0.0%	0.2%	0.01%
Englewood	6.73	6.73	0.00	0.0%	0.0%	0.00%
Erie	1.38	6.23	4.85	1.9%	350.1%	7.81%
Fed Heights	1.59	1.76	0.17	0.1%	10.8%	0.51%
Glendale	0.56	0.56	0.00	0.0%	0.0%	0.00%
Golden	9.94	13.92	3.98	1.6%	40.0%	1.70%
Greenwood Village	7.20	7.63	0.43	0.2%	5.9%	0.29%
Jefferson County	23.10	34.24	11.14	4.5%	48.2%	1.99%
Lafayette	5.18	11.84	6.66	2.7%	128.7%	4.22%
Lakeside	0.18	0.18	0.00	0.0%	0.0%	0.00%
Lakewood	39.81	45.27	5.46	2.2%	13.7%	0.64%
Larkspur	0.33	0.45	0.12	0.0%	38.0%	1.62%
Littleton	9.74	11.26	1.52	0.6%	15.6%	0.73%
Lone Tree	1.35	6.56	5.21	2.1%	385.9%	8.23%
Longmont	15.19	22.87	7.68	3.1%	50.6%	2.07%
Louisville	4.62	8.41	3.80	1.5%	82.2%	3.05%
Morrison	0.14	1.30	1.16	0.5%	862.3%	11.99%
Mountain Subregion	6.09	8.95	2.86	1.1%	46.9%	1.94%
Mountain View	0.09	0.09	0.00	0.0%	0.0%	0.00%
Northglenn	5.50	6.13	0.63	0.3%	11.5%	0.54%
Parker	4.69	11.90	7.21	2.9%	153.6%	4.76%
Sheridan	2.12	2.12	0.00	0.0%	0.0%	0.00%
Superior	1.71	3.41	1.70	0.7%	99.4%	3.51%
Thornton	13.86	29.70	15.84	6.4%	114.3%	3.88%
Westminster	18.70	27.66	8.96	3.6%	47.9%	1.98%
Wheat Ridge	10.59	11.19	0.59	0.2%	5.6%	0.27%
Regional Total	497.99	745.70	247.41	100.0%	49.7%	2.04%

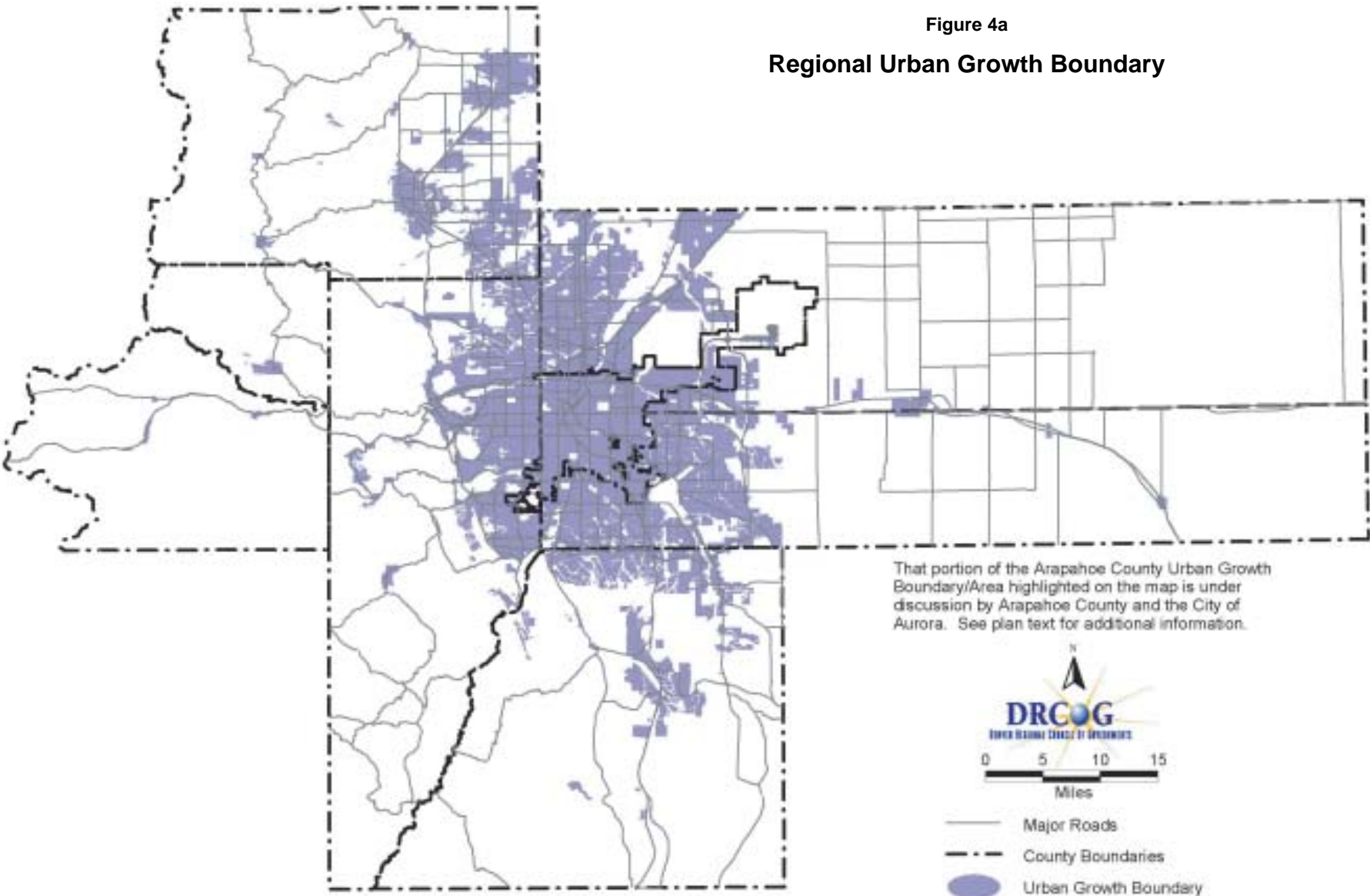
Area in square miles

*This area does not include the 1.7 square miles under discussion with the City of Aurora.

Semi-urban development affects the region's open space system. Rural, agricultural development can contribute to the region's open space resources. On the other hand, semi-urban development often substitutes private open space for public and/or functional open space. Unless these areas are creatively designed, agriculture, scenic values, and wildlife habitat are diminished, thereby contributing less to the region's open space system.

Policies for the protection and management of open space in the region are addressed in the *Regional Open Space Plan* (1999).

Figure 4a
Regional Urban Growth Boundary





Open Space

A regional open space system that shapes the region's form, protects environmental resources and provides recreational opportunities will be planned.

Objectives

- u Develop a regional open space system as a key part of the regional plan;
- u Protect viable agricultural resources of state or national significance as a valuable asset and an integral part of the region's heritage and economic and cultural diversity;
- u Conserve and protect important natural resources, including environmentally sensitive lands, wetlands and wildlife habitat;
- u Use environmental features, constraints, and impacts to guide development into areas that minimize environmental degradation and avoid natural and man-made hazards;
- u Provide for the physical and aesthetic enjoyment of the out-of-doors;
- u Shape the region's pattern of growth and development by buffering and defining communities; and
- u Protect prominent visual features such as the Rocky Mountain Front Range.

Open space is a limited, natural resource of great importance to the region. As the gateway to the Colorado Rockies, the Denver region is known for its outdoor activities, spectacular natural setting and open spaces. For residents and visitors to the region alike, the recreational opportunities and quality of life offered by these open spaces is a major attraction. The environmental, visual and agricultural values of these areas are an important component of a healthy urban area. As the region's population grows and more land is developed, it is increasingly critical to identify and protect open spaces. In July 1999, the Board of Directors adopted the Open Space Element of the Metro Vision 2020 Plan to more explicitly define the existing status of regional open space, to identify the issues confronting open space and to set regional goals and strategies.

Figure 5 identifies the existing parks and open space in the region as of 1997. Entities responsible for open space are as diverse as the resource itself. Cities, counties, special districts, land trusts, private land-owners and state and federal agencies all plan and manage open space in the Denver region. Non-federal entities have protected more than 300 square miles of open space and the federal land holdings

constitute another 1,000 square miles. However, to meet regional objectives, another 100 to 500 square miles need to be protected before 2020.

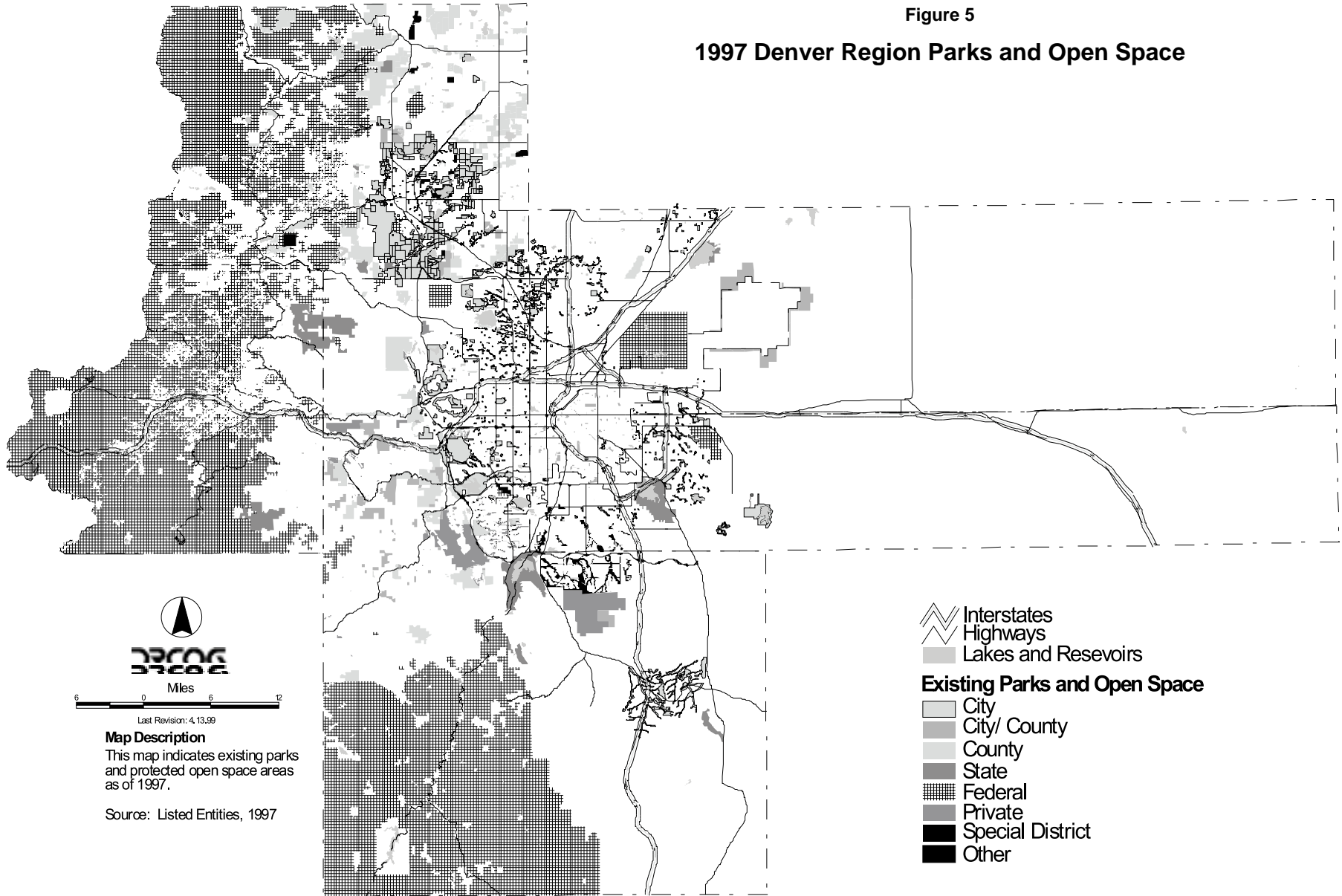
An objective of the open space plan is to identify those lands and resources that could make up a system of interconnected open space across the region. In addition to existing open space, Figure 5 adds a composite map of open space opportunity areas. These opportunities include:

- u surface water (streams, lakes and reservoirs) with a 200-foot buffer area;
- u selected important terrestrial wildlife habitat;
- u environmental hazard and development constraint areas;
- u important farmlands; and
- u prominent geologic and geographic features.

The information in the opportunities layer may be used by local governments to add or change areas recommended for open space uses in the future.

An important part of the Open Space Element is Figure 6, a regional map that indicates the region's open space preservation focus areas. These areas indicate the major regional-scale natural resources and physical features that make up the region's

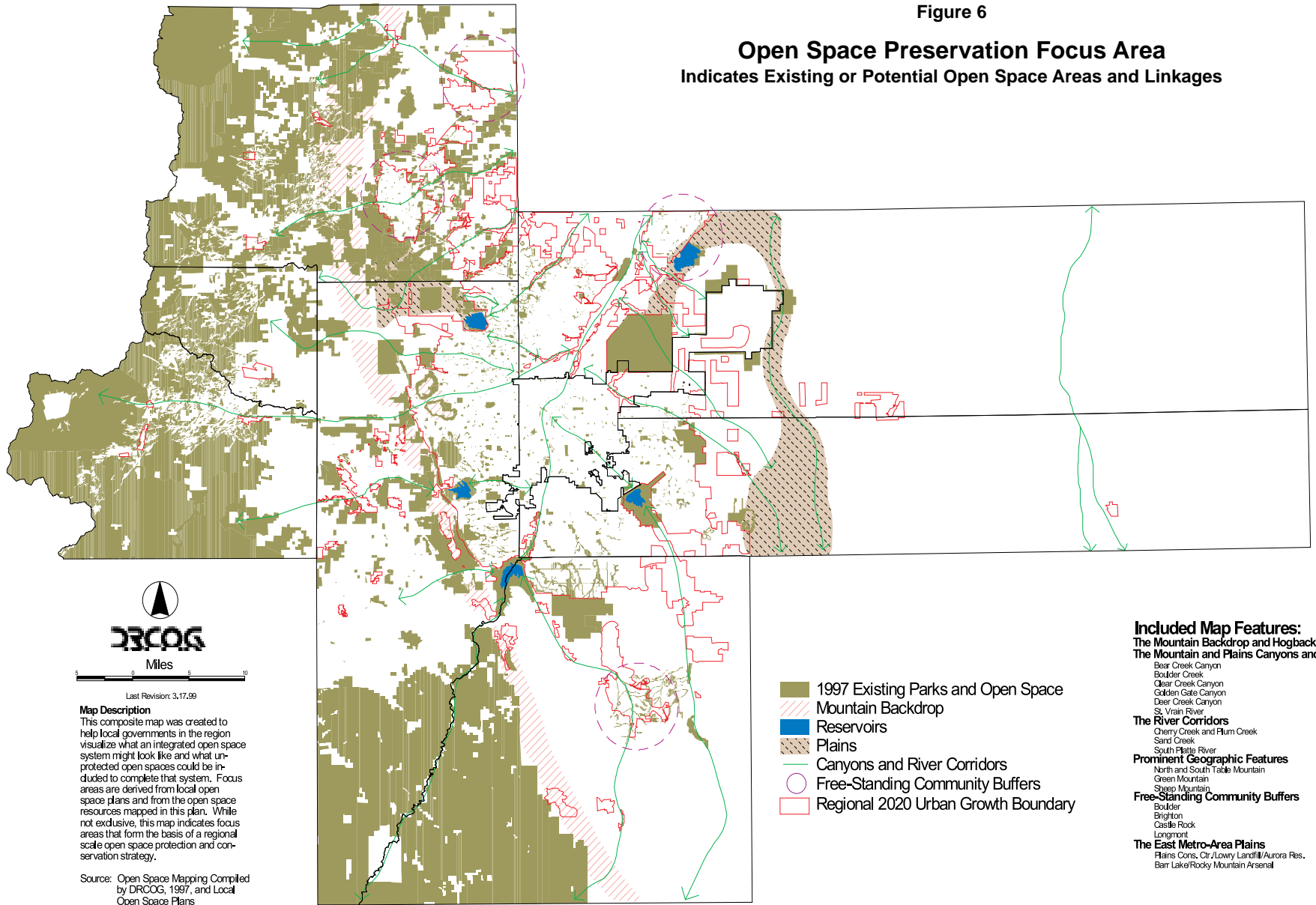
Figure 5
1997 Denver Region Parks and Open Space



Map Description
This map indicates existing parks and protected open space areas as of 1997.

Source: Listed Entities, 1997

Figure 6
Open Space Preservation Focus Area
 Indicates Existing or Potential Open Space Areas and Linkages











 Miles

 Last Revision: 3.17.99

Map Description
 This composite map was created to help local governments in the region visualize what an integrated open space system might look like and what unprotected open spaces could be included to complete that system. Focus areas are derived from local open space plans and from the open space resources mapped in this plan. While not exclusive, this map indicates focus areas that form the basis of a regional scale open space protection and conservation strategy.

Source: Open Space Mapping Compiled by DRCOG, 1997, and Local Open Space Plans

-  1997 Existing Parks and Open Space
-  Mountain Backdrop
-  Reservoirs
-  Plains
-  Canyons and River Corridors
-  Free-Standing Community Buffers
-  Regional 2020 Urban Growth Boundary

- Included Map Features:**
- The Mountain Backdrop and Hogback**
 - The Mountain and Plains Canyons and Rivers**
 - Bear Creek Canyon
 - Boulder Creek
 - Clear Creek Canyon
 - Golden Gate Canyon
 - Deer Creek Canyon
 - St. Vrain River
 - The River Corridors**
 - Cherry Creek and Plum Creek
 - Sandy Creek
 - South Platte River
 - Prominent Geographic Features**
 - North and South Table Mountain
 - Green Mountain
 - Steep Mountain
 - Free-Standing Community Buffers**
 - Boulder
 - Brighton
 - Castle Rock
 - Longmont
 - The East Metro-Area Plains**
 - Plains Cons. Ctr./Lowry Landfill/Aurora Res.
 - Barr Lake/Rocky Mountain Arsenal



desired open space system for the future. While not an exclusive list, these areas, when viewed together, form the basis of a regional-scale open space protection and conservation strategy and a regional open space plan map.

Not all local governments in the region have significant programs to acquire or manage open space. This results in perceived inequities among those governments that provide such resources to the entire region as well as differences in the non-uniform proximity of open space to the residents of various parts of the region.

As regional growth and land development continue in the future, it is essential that consensus be developed about the location, significance, function and value of open space, not only for recreational purposes but also as a means of preserving and protecting our natural environment. There is a high level of public awareness and support for the protection of open space and creation of a regional open space system. To develop this system, however, will require an integrated and coordinated regionwide open space planning process that recognizes current efforts and serves as a catalyst for new initiatives by the government, private and non-profit sectors.



Free-Standing Communities

The existing outlying communities of Boulder, Brighton, Castle Rock and Longmont will remain separate from the larger urban area, each with an adequate employment-housing balance and internal transportation system.

Objectives

Free-standing communities to:

- u Absorb a significant number of new residents;
- u Support job growth in order to create a jobs/housing balance;
- u Retain a town center that focuses on mixed-use activity;
- u Provide a diversity of housing types for a variety of income levels;
- u Create a multimodal transportation network that includes pedestrian and bicycle facilities and internal and external transit services, including commuter rail connections where feasible; and,
- u Create a permanent open space or rural buffer to guarantee separation from the larger urbanized area.

Within the region there are many communities that are separate from the larger urban area. Some smaller communities serve as commuter neighborhoods, and others are economically based on the surrounding mountain, tourist or ranching activities. From this list of communities, four are specifically identified because they meet several important criteria for addressing regional growth. They have

the ability to absorb a significant number of new residents; provide needed services to new households; create employment opportunities for new residents; retain a town center for focused, mixed-use development; and create internal and external transportation systems that address all travel modes. Most importantly they still have the ability and desire to remain separate from the larger urbanized area.

Jobs and housing

The *Metro Vision Framework* estimated that up to 375,000 people, 160,000 households and 223,684 jobs would be absorbed by free-standing communities by the year 2020. These numbers provide for 1.4 jobs per household, conceivably allowing residents to live and work within their towns. Each community would essentially reach between 50,000-100,000 people by the year 2020. Subsequent work with these communities has revised the growth projections to 311,000 people and 221,000 jobs that could be absorbed by the year 2020.

The employment number reflects a high number of jobs in Boulder. Boulder is unique among the free-standing communities in that it is already at its growth target and has historically absorbed a significant amount of regional growth. Between 1970-1990, Boulder experienced job growth of 4.8 percent annually and population growth of only 1.2 percent, creating an imbalance with more jobs than resident workers. Without a change in policy in the three other free-standing communities, the jobs/housing balance would remain at 1.1 jobs per household. While it is recognized that each community is at a different stage of its development and will continue to grow and stabilize at different rates, care should be taken to annually re-examine the 2020 projections to determine the viability of a higher jobs/housing ratio in order to address self-sufficiency.

Town centers

Each of the four communities has an historic downtown. Castle Rock has maintained its "main street" and civic green over the years. Boulder has a well-defined central area that serves as the focus of civic, cultural, economic, educational, entertainment, shopping and medical activity in the Boulder Valley. The downtown, the university, and the Boulder Valley Regional Center constitute three primary activity centers within the core. Brighton is continuing to revitalize its downtown, while attracting new large retailers to its outskirts. Longmont also has a traditional main street that has remained intact over the years. The development of a town center does not need to occur in the historic downtown. Its purpose is to provide a focus for the effective use of transit by providing the needed critical mass of jobs and retail activities.

Transportation

Transportation planning should provide for the development of a multimodal transportation system that promotes accessibility through a variety of modes. Each of the four communities is on a railroad line, though these tracks currently serve freight or are no longer in use. The transportation plan identifies potential intercity rail which, if feasible, could serve these communities and further intraregional travel. The City of Boulder has worked to shift travel away from the single-occupant vehicle (SOV) through innovative programs such as the HOP (a transit loop using small buses), use of the Regional Transportation District's (RTD) EcoPass, and an extensive bike and pedestrian system which could serve as a model for other jurisdictions.

By striving for a balance of jobs to residents, demand for regional commuter travel can be reduced. A more self-sufficient community also retains its retail and service dollars, and maintains a greater sense of community identity.



Open space

As the result of long-standing community policies and actions, the City of Boulder has developed as a free-standing community, separated from surrounding communities by an extensive open space system. Approximately 31,000 acres of lands are protected through the city's open space and mountain parks programs. In 1959 the citizen-initiated "Blue Line" amendment to the city charter protected the mountain backdrop from development and prohibited the city from supplying water to land above a specified elevation. In 1967, Boulder became the first city in the country to tax itself specifically for the acquisition, management, and maintenance of open space.

Brighton, Castle Rock and Longmont have begun establishing policies and plans that will also help them to achieve a community buffer. Longmont is involved with the Boulder County open space system. Castle Rock is working with Douglas County on open space, and has the advantage of many buttes and other geologic features that will work to retain the city's separation and identity. Brighton is framed by the South Platte River to the west and Barr Lake State Park to the east, and has the opportunity to work with Adams County in ensuring protection of valuable agriculture and raptor habitats to the east and south.



Balanced, Multimodal Transportation System

A balanced, multimodal transportation system will include rapid transit, a regional bus network, regional beltways, bike and pedestrian facilities, and improvements to the existing roadway system.

Objectives

- u Restore and/or maintain the designed transportation function of existing and future transportation facilities;
- u Provide high-capital transportation facilities where development actions support the efficient use of those facilities;
- u Implement rapid transit to reduce the need for additional roadway capacity and reconfigure the bus network to serve the rapid transit system;
- u Implement high service frequency on principal bus corridors and alternative bus services for suburb-to-suburb travel and other markets not well served by the rapid transit system;
- u Enhance the attractiveness and convenience of non-motorized modes in serving non-recreational travel;
- u Improve the connection of passenger and commercial transportation systems within modes, between modes, and between the metropolitan area and other areas of the state; and,
- u Demonstrate the need for increased revenues to close the gap between needed facilities and the region's ability to pay for them.

The primary goal of transportation is to *provide mobility and accessibility to support the physical, social, and economic development of the region*. The transportation component of Metro Vision supports and reinforces the development component by providing additional roadway capacity and transit service only within the region's urban growth boundaries, serving urban centers on major facilities, connecting the region to the rest of the state, and by connecting the free-standing communities to the urban area. To protect valuable agricultural land, the environment, and the scenic beauty of the area, the person-carrying capacity of the transportation system will be achieved through public transit and other alternative modes of transportation rather than solely relying on roadway capacity.

An effective transportation system provides the mechanism for people to conduct business, interact with others, and access different parts of the region. It unites the region as a community and provides the

circulation system necessary for the region to participate and compete in national and global economies. On a more personal level, the transportation system widens employment opportunities within the area and provides people with more travel choices for their endeavors.

To achieve these desired outcomes, the transportation system must be as efficient as possible. The system must provide access to necessary goods and services for all the region's citizens, including all economic levels, ages, physical conditions, and racial and ethnic groups. The system should provide citizens the necessary mobility to conveniently reach all parts of the region.

Metro Vision promotes an efficient transportation system that maximizes mobility while ensuring accessibility. However, the effects of providing mobility and accessibility relative to other aspects of quality of life suggest that this transportation system

objective (to reduce congestion and travel delays) must be tempered by mitigating adverse impacts upon the environment and upon neighborhoods. The transportation components of Metro Vision are illustrated in the transportation network maps (Figures 7, 8 and 9).

The current projected need for facility improvements exceeds expected revenues. Given this, measures to increase or leverage available funds must be incorporated into Metro Vision's implementation measures.



Systems management

Metro Vision calls for actions to make the transportation system work more efficiently and preserve prior investment: access to both principal arterials and freeways (spacing of driveways and interchanges) will be limited; traffic signal systems improved; minor capacity-enhancement projects, such as pullout space at bus stops and space on freeways for temporarily disabled vehicle parking built; information systems, such as real-time traffic condition information provided by variable message signs or other media; and ramp meters installed.

Incident management systems, including freeway courtesy patrols, will reduce congestion caused by traffic accidents.

Travel demand reduction measures also will be pursued. Examples include enhanced carpool/vanpool and telecommute marketing efforts and programs to encourage employers to shift to variable work schedules. Achieving Metro Vision's growth and development components will also impact travel demand by reducing the need to travel and by providing alternatives. The Regional Air Quality Council is formulating its long-range air quality plan, and is considering these and other measures.

Mobility and accessibility objectives

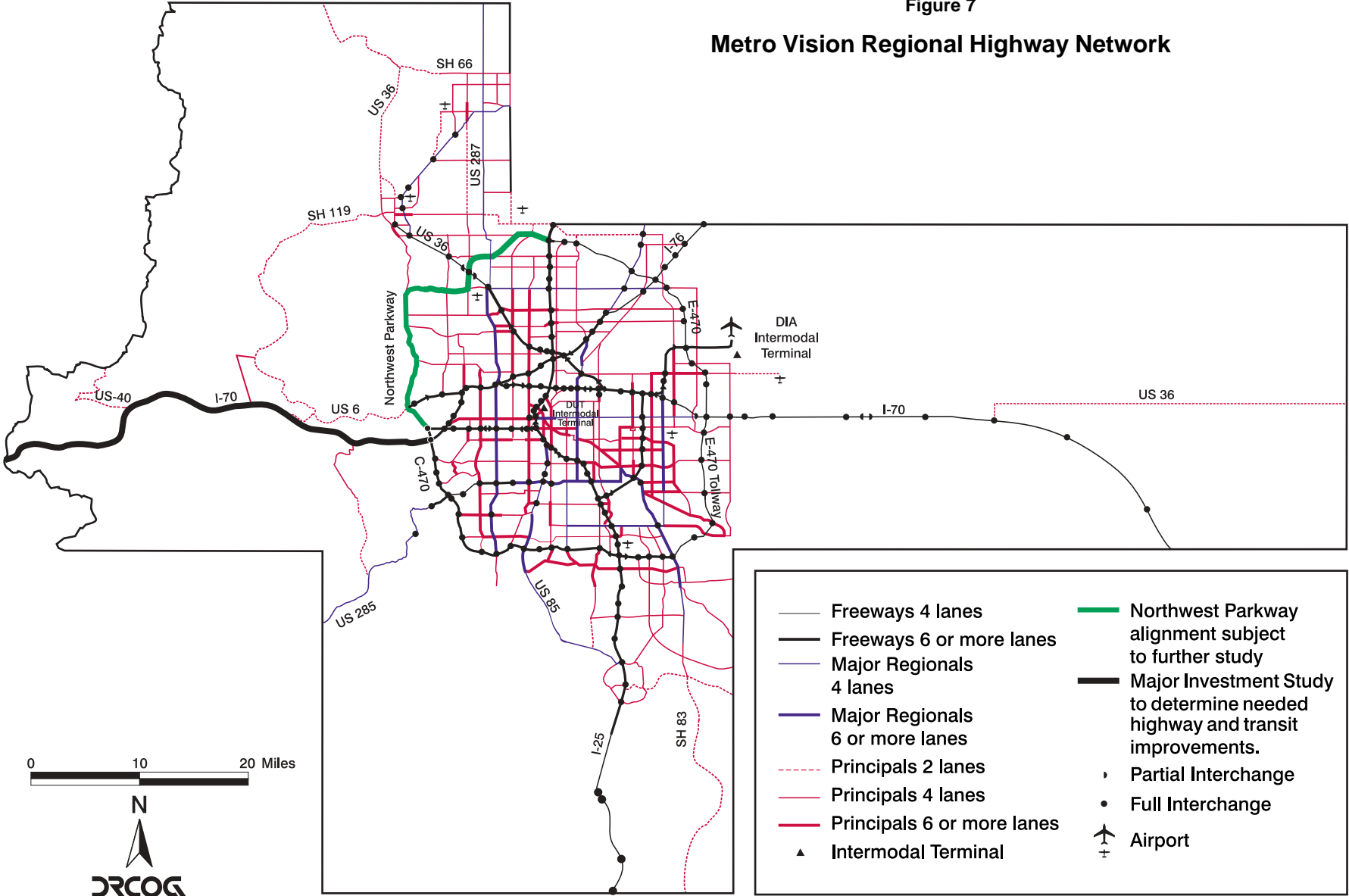
To maintain future levels of service (LOS) approximately equivalent to current conditions would require significant widening of all major freeways and most metropolitan area arterial roadways. Given fiscal, as well as environmental and neighborhood impact considerations, such extensive roadway expansion is neither possible nor desirable. Metro Vision recognizes these realities, and acknowledges lower, peak-period service levels in areas where significant roadway expansion is not possible; in particular, this occurs in the older, more densely developed portions of the region. Where possible, progressively higher, peak-period service levels are envisioned for the suburban and rural portions of the region.

In implementing Metro Vision, several important actions will be taken to support the planned service levels. System maintenance will be a high priority. A grid roadway configuration is emphasized as it best provides for continuity of travel across the region and access to all parts of the metropolitan area. Rehabilitation and maintenance to preserve the substantial investments made in the region's transportation system will require a significant portion of the region's future transportation funds. This also ensures the roads, viaducts and freeways are safe.

Roadway improvements

Providing transportation facilities in an efficient manner, while balancing the competing priorities of adding capacity to the transportation system and maintaining healthy neighborhoods, has resulted in a plan which emphasizes certain transportation modes in various parts of the region. Metro Vision emphasizes rapid transit and bus services in the central portion of the region. New roadway lanes will be provided primarily in the suburban areas. Selected interchange improvements are also included in the plan. The plan adds significant roadway capacity to serve suburb-to-suburb trips, a fast-growing sector of the travel market. It includes the completion of the regional beltway system, including E-470 and the Northwest

Figure 7
Metro Vision Regional Highway Network



Parkway. The alignment of the Northwest Parkway, as shown on Figures 7 and 8, is subject to change, based on further detailed planning studies. Widening of a number of other suburban freeways and arterials is also included.

Road connections between Denver International Airport (DIA) and all parts of the region will also be improved. In addition to the construction of the E-470 tollway, arterials such as Tower Road and 104th and 120th avenues will be completed and/or expanded.

Roadways to the free-standing communities of Boulder, Brighton, Castle Rock and Longmont will be improved. For example, capacity improvements between Longmont and I-25 are planned. Examples of roadway improvements serving Boulder include the completion of the Pearl Parkway in the Gunbarrel area, and the widening of SH-93 south to its connection with the Northwest Parkway.

Boulder County, the City of Boulder, and other Boulder County governments are engaged in discussions concerning the nature of improvements to the above transportation corridors, including a comprehensive review of six regional transportation corridors in Boulder County as part of the Boulder County consortium of cities' regional transportation task force. These discussions will entail the evaluation of various transportation alternatives in the subject corridors. Amendments to the Metro Vision Plan may be needed in the future which correspond to the conclusions from these countywide discussions.

In the vicinity of Brighton, interchange improvements on US-85 are planned. Buckley Road, Tower Road, and the connection between them will also be completed and improved. A number of upgrades in Douglas County are part of the plan, such as widening I-25 from Lincoln Avenue to just south of Castle Rock and widening SH-85 to four lanes between North Highlands Ranch Parkway and the Meadows Parkway.

Improvements in three major travel corridors--east I-70, southeast I-25 and US-6--will help increase safety and facilitate travel. Improvements to I-70 from I-25 to Pena Boulevard include widening for standard inside and outside shoulders from Brighton Boulevard to Colorado Boulevard (additional through-lanes may be considered during the Environmental Impact Statement process); widening between I-270 and I-225 to ten through-lanes; widening between I-225 and Pena Boulevard to eight through-lanes; the elimination of the York/Josephine interchange and the rebuilding of interchanges at Vasquez/Steel, Colorado Boulevard, and Havana Street; and rebuilding bridges at Havana Street (railroad), Peoria Street, Yosemite and Sand Creek.

New travel lanes will be added to I-25 between Broadway and Lincoln Avenue in Douglas County.

Improvements to southeast I-25 also include provision of full shoulders and drainage improvement between Broadway and Evans, auxiliary lane additions at various locations, interchange improvements at Broadway, University, Colorado, and I-225. I-225 will be widened from I-25 to 6th Avenue.

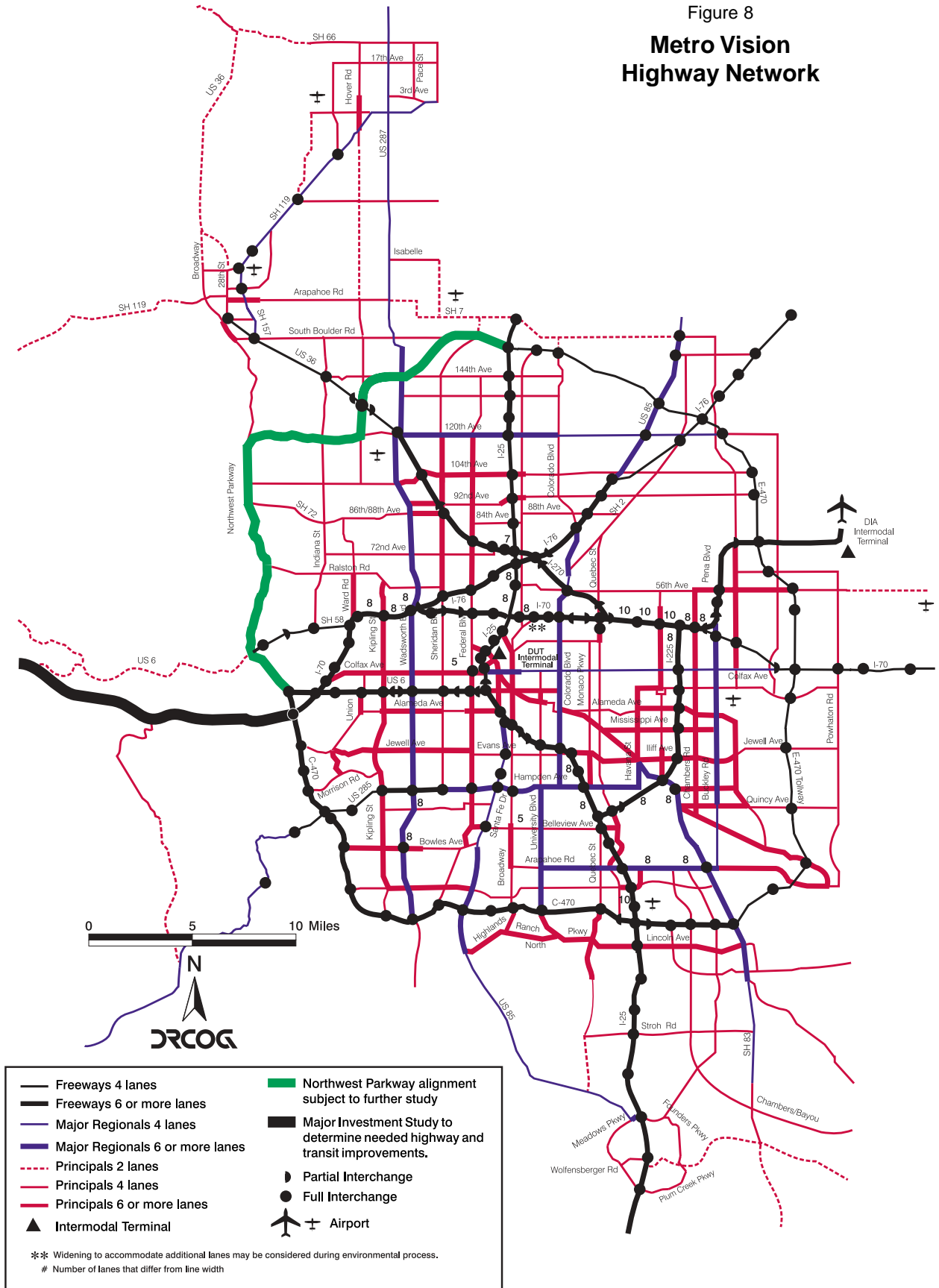
Improvements to US-6 include safety improvements from Knox Court to Sheridan Boulevard, and safety improvements to the US-6 interchanges at Sheridan, Wadsworth and Simms.

A number of roadways are designated as major regional arterials. These roadways are expected to carry a substantial number of regional trips, and as such, are given regional attention with respect to traffic improvements and system management efforts. In the mountains and plains portions of the region, which are predominantly undeveloped, the plan emphasizes primarily maintaining the existing network, rehabilitating the roads and increasing road capacity to accommodate greater volumes of tourist traffic and gaming travel. A new road connecting Central City and I-70 is included in the plan. The Colorado Department of Transportation (CDOT) is conducting an inter-regional and multimodal I-70 west corridor study which will consider options to ease congestion and environmental impacts in that corridor. The study's recommendation will be considered for incorporation into the plan. In the eastern portions of Adams and Arapahoe counties, existing roadway capacity is sufficient to meet projected demand, so improvements focus on reconstruction of I-70 and paving selected unpaved roads.

Numerous freeway interchange improvements are included in the plan, including upgrade and reconstruction of existing interchanges and construction of new interchanges. A number of interchange reconstructions are planned to eliminate substandard configurations which cause delays; the I-25 at I-225 interchange and I-25 at Colfax and US-6 are examples. Additional interchanges are planned in many locations, in particular to serve increased suburban development within areas of planned growth. This includes Alameda Parkway at C-470, Alameda Avenue at I-225, Simms at US-285, 92nd and 98th Street at US-36, many interchanges on the regional beltway system, and two new arterial interchanges on I-25 between 120th and E-470.

In addition to freeway interchanges, some high-volume arterial intersections may be candidates for interchanges or separation of selected traffic movements. Parker Road at Arapahoe Road and Wadsworth at Bowles are currently included in the plan, and other intersections will be considered for this treatment where traffic volumes warrant and area residents and businesses find them necessary and desirable. In addition, consideration will be given to needed railroad grade separations at critical crossings such as the Wadsworth and Grandview Avenue railroad crossing.

Figure 8
**Metro Vision
 Highway Network**



Rapid transit

As the efficient provision of transit service is not one size fits all, Metro Vision includes different transit technologies and services to serve various travel markets in different parts of the region. At the same time, the selection of these technologies is governed by the importance of providing service requiring a minimum of transfers by passengers. In general, the plan includes rapid transit technologies (HOV, light rail, commuter rail) to serve high-volume travel corridors and long distance trips, while several types of bus service are applied in lower-volume areas, typically serving shorter trips.



Transit technologies select from travel corridors are depicted on Figure 9. Light rail transit is called for in the southeast corridor, Broadway to Lincoln Avenue, and on I-225 from I-25 east to Parker Road; the southeast corridor from the Denver Central Business District to south of C-470; and the west corridor from the Denver Central Business District to south of Golden

Commuter rail is identified for the east corridor, from the Denver Central Business District to Denver International Airport. Existing light rail at 30th and Downing is extended north to intersect with the commuter rail line at about 40th Avenue and 40th Street.

Yet to be determined are technologies in the other "rapid transit" corridor which includes I-25 north to 120th Avenue; US-36 to Boulder; Speer, First Avenue and Alameda from the Denver Central Business District to Aurora; along Wadsworth Boulevard from Southwest Plaza (Bowels) north to US-36; a connection on Hampden between Wadsworth and Santa Fe; I-225 from Parker Road to I-70; and the Denver Central Business District through Arvada to Golden.

Several intercity rail corridors are also included in the plan for further consideration: a line extending northwest from downtown Denver through Arvada, then along the I-70 corridor to the west slope; service in the existing railroad corridor south to Castle Rock and Colorado Springs; and the North Front Range Corridor, serving communities such as Commerce City, Brighton, Fort Collins, Boulder, Longmont and Greeley. The Colorado Springs and North Front Range lines were recommended in the CDOT *Passenger Rail Corridor Study*. There are many alternative alignments for providing the northeast commuter rail services, including (1) the Union Pacific Railroad line in Northglenn and Thornton,

(2) the Burlington Northern Railroad line in Westminster and Broomfield, and (3) the Union Pacific Railroad line through Commerce City and Brighton, as well as I-25 north of 120th Avenue.

Bus and other transit services

A variety of bus service is included in the plan according to the specific requirements of areas. Express service will continue to be an important part of the bus network, principally serving commute trips to downtown Denver, Boulder, and the Denver Technological Center (southeast employment corridor). Capacity at existing park-n-Ride lots will continue to be expanded as appropriate, and new lots will be established, particularly in newly developed areas.

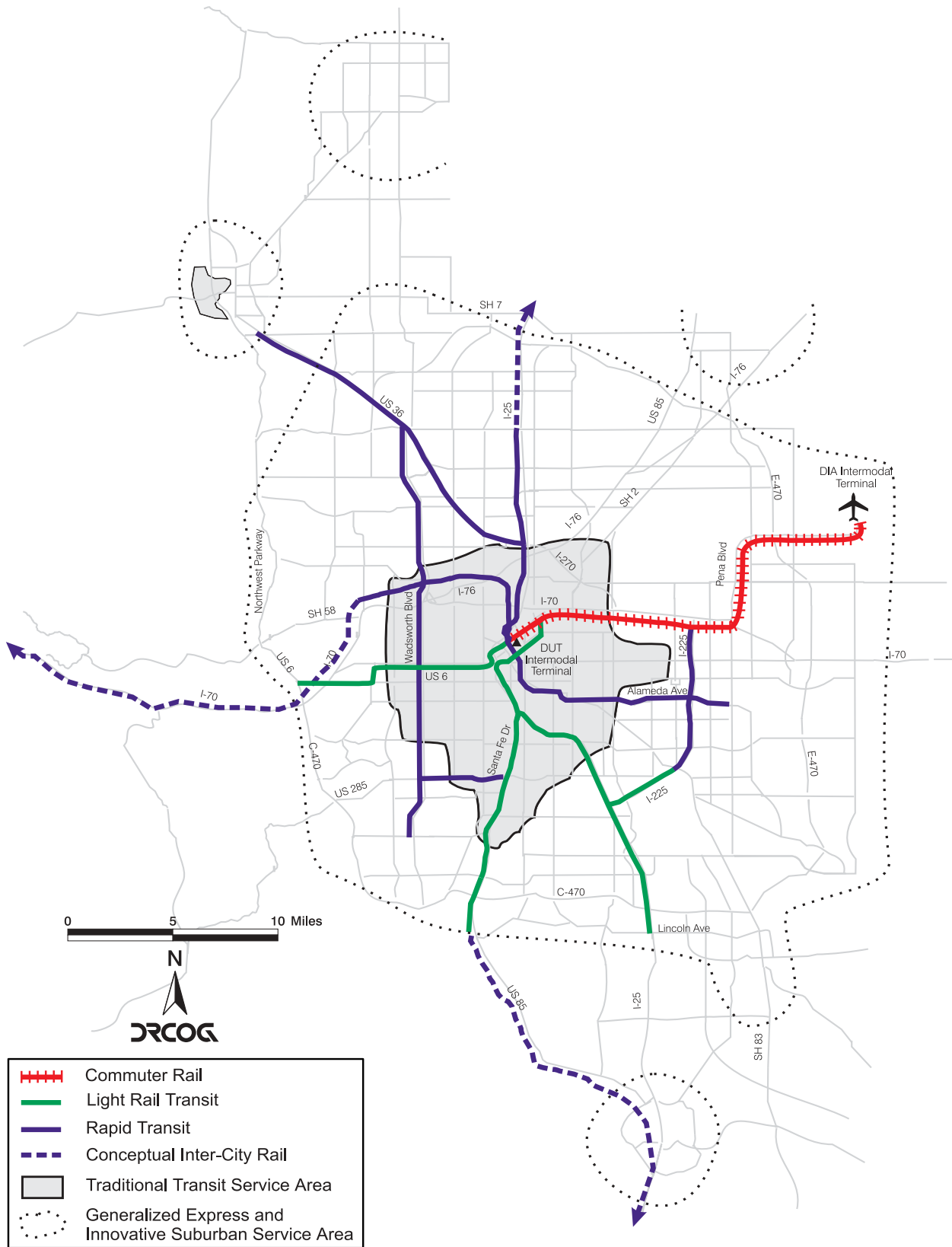
Traditional fixed-route bus service is expected to continue to dominate in the more densely developed portions of the region, particularly the urban areas in and immediately adjacent to the City and County of Denver (see rapid transit map, Figure 9). Neighborhood circulator service will be provided in many of the suburban areas and free-standing communities. A variety of modes will serve major destinations, such as regional shopping centers and airports. In lower density areas, greater use will be made of small buses and demand-responsive (dial-a-Ride) transit and other innovative services. The majority of transit in the mountains will consist of private carriers serving the gaming areas of Central City and Black Hawk as well as ski resorts, and private, non-profit carriers to provide additional service for elderly and disabled people in mountainous and plains areas.

Metro Vision provides policy direction regarding the provision and delivery of transportation services to the region's elderly and disabled population. The transit needs of older adults and the disabled are estimated to be in excess of nine million trips per year; this will grow significantly in future years as the region's population ages. The plan calls for service improvements, such as the provision of wheelchair lift-equipped buses, and compliance with the Americans with Disabilities Act (ADA) in retrofit and design criteria for sidewalks and public buildings, for example, and in transit provision.

Non-motorized modes

The continued development of pedestrian and bicycle facilities--combined with alternative, mode-sensitive, land development design--can reduce the growth of motor vehicle travel and lead to reductions in air pollutant emissions and energy consumption. Under Metro Vision, the provision of these facilities is

Figure 9
Metro Vision Rapid Transit Network



encouraged with a primary focus on non-motorized travel for work, personal trips, business and shopping. Metro Vision sets priorities and broad characteristics for the system of non-motorized facilities and leaves the specifics to be addressed at the local level.

Priority in providing these facilities should be given to the more densely developed portions of the region, as such areas have a higher proportion of short trips and are thus best suited to non-motorized travel. Such areas should, in particular, include higher-density regional centers, downtown Denver and adjacent neighborhoods. Priority should also be given to providing non-motorized facilities where they improve the connections between pedestrian and bicycle networks and between non-motorized modes and transit.

Aviation

Air transportation is an important element of the regional transportation system. The region's airports sustain a significant portion of the area economy and include Denver International, Boulder, Centennial, Erie, Front Range, Jeffco and Vance Brand airports. A central business district heliport is also envisioned as part of the regional aviation system. In addition to these facilities, Buckley Air National Guard base is included in the region's aviation system.

Each of these airports has a primary function which ensures that all general aviation needs are addressed within the system. Denver International Airport serves as the region's air carrier airport. Boulder, Vance Brand and Erie are basic general aviation airports, primarily serving smaller aircraft for recreational and business purposes. Centennial, Front Range and Jeffco airports are transport facilities which serve higher volumes of business and recreational activities and heavier aircraft. It is essential to maintain the aviation capacity at each of these airports so the investment in them will not be degraded. Land development adjacent to these airports must also be managed to protect this investment.

System connection: intermodal and inter-regional

The regional transportation system is composed of a number of parts (different modes, passenger and commercial facilities, surface and air transportation, etc.) which together make up a system serving the Denver region and connecting it to other parts of the state and the world. The system includes rail service

to enhance the unity of the overall network and improve service within the region and between this region and others, including an examination of the feasibility of rail service along the Front Range and connections with population centers to the north and south.

Upgrades of regional intermodal terminals are envisioned in cases where expected additional traffic may warrant the improvement. Denver Union Terminal (also known as Union Station), for example, has the potential to become a major intermodal terminal. It currently serves intercity rail traffic and the Winter Park Ski Train, and could serve as the

Denver terminus for intercity rail lines included in this plan, as a bus terminal to replace or supplement the Market Street Station as it reaches capacity, and as the hub of intercity bus operations.

Denver International Airport is the most important intermodal transfer

point in the region, serving surface and air passenger traffic, and air and truck freight operations. It is a gateway for freight and passengers to national and international markets and destinations. The region has committed significant resources to the construction of this facility, and the plan includes surface transportation connections to the airport to ensure its efficient use. Surface transportation facilities are also included to provide efficient access to the region's general aviation airports, and development of all airports is designed to be compatible with the region's goals for land-side access and land development.

There are numerous truck and rail facilities in the region which are important to the area's economic health. The transportation component of Metro Vision includes numerous highway access improvements to these facilities to improve freight operations within the region and between the region and other parts of the country. Improvements to the freeway network, especially I-70, are of particular importance to these operations.

Funding resources

Metro Vision addresses transportation facilities, unconstrained by the region's ability to fund them with existing funding sources. However, the plan also seeks to address the disparity between available funding and the cost of needed facilities by supporting actions to be taken to increase available funds or to leverage existing dollars through, for example, the use of private-sector monies.





Urban Centers

A range of urban centers will serve as transit origins and destinations that support retail, employment and housing, and contain higher densities than average that encourage pedestrian-oriented travel.

Objectives

- u Focus a major portion of future growth into urban centers to reduce land consumption and the loss of open space while increasing transit ridership;
- u Create compact, mixed-use centers thereby making transit, bicycle, carpooling and walking more feasible alternatives to single-occupant auto travel;
- u Locate employment, services, housing and other development in close proximity so that walking between activities is easier and multipurpose trips are encouraged, thereby reducing auto travel and auto emissions;
- u Develop a network of urban centers so that jobs, entertainment, public spaces and retail services are in closer proximity to a greater number of residents;
- u Create urban centers designed for pedestrians to achieve a sense of place and community identity; and,
- u Promote a network of connected streets and sidewalks, with buildings oriented toward sidewalks rather than parking lots, to create more usable public spaces and amenities.

Urban centers are envisioned as high-intensity, pedestrian-oriented, mixed-use locations providing a range of retail, business, civic, cultural, and residential opportunities for the surrounding trade area (see Figure 10). Current suburban development patterns typically place residences, retail and employment in separate locations and rely on the automobile to connect them. The resulting auto dependency has increased air pollution, traffic congestion, and commuting times and distances. The accompanying low-density development pattern has also resulted in increasing land consumption for urban and semi-urban development and the loss of agricultural lands and open space. This auto-oriented development pattern makes walking between locations, as well as pedestrian access to transit, difficult to achieve.

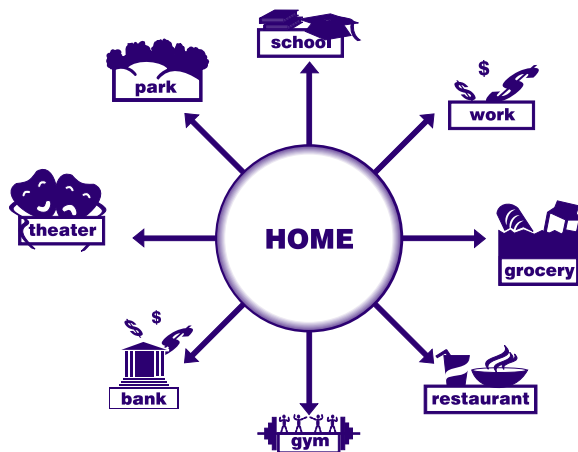
Illustrative of this is the significant regional concentration of employment, retail, and residential uses in the Southeast Corridor which present a unique opportunity to reinforce an urban center with multiple

regional centers. With the existing base of uses, major freeway access and planned rapid transit, the area is a prime candidate for such development. The existing proximity of development in the district suggest that the area should be viewed and planned in a holistic manner. Of a unique scale, and more suburban in character than the Denver Central Business District (CBD), the area along I-25 between 1-225 and C/E-470/Lincoln Avenue should be planned as a cohesive urban center emphasizing support for transportation and land use patterns that reduce dependency on the single-occupant automobile and provide a common development focus for local and regional decisionmaking. Key in these considerations will be maximizing the utilization and effectiveness of multiple stations on the southeast rapid transit line.

Planning such an urban center will require a coordinated and collaborative public-private plan involving the several cities and counties in the area, the various

special districts, including the Joint Southeast Public Improvement Association (JSPIA), development interests and residents of the area. Such a planning effort should be closely coordinated with the Metro Vision Policy Committee to relate its planning with the continuing refinement and update of Metro Vision. Further, DRCOG staff is available to provide technical assistance and facilitate liaison with Metro Vision and local planning efforts.

Figure 10
**Mixed-use Activities
 Within Walking Distance or Transit
 Accessible of Home**



Metro Vision envisions that primary regional centers will occur within the central suburban and urban areas of the region. As the physical and population center of the region, it is vital that Denver retain a strong downtown for the overall economic stability of the region. Some communities have seen population and employment losses, so it is expected that some of the transit corridors will benefit these communities by acting as a major incentive for redevelopment. Growth will add 65,000 households and 100,000 jobs in the central urban communities. The suburbs will continue to experience the highest growth, capturing at least 60 percent of all new households and employment in the region. By focusing much of this growth into urban centers, transportation and other infrastructure and service investments can be maximized.

A range of urban centers based on function, level of development, density, and trade area is envisioned. From the CBD to the neighborhood supermarket, these centers can serve as focal points for social, business and community activity, and as transportation origins and destinations. They

complement the compact development pattern encouraged by Metro Vision. Figures 11 and 12 present and illustrate in greater detail the guidelines for classification.

Central Business District

The Denver CBD is the most dense, mixed-use, pedestrian-oriented center in the region, containing more than 100,000 jobs in 1996 and expected to grow to about 150,000 jobs by 2020. The center also contains a full complement of residential, retail, cultural, civic, recreation and government uses. Residential development would also grow from almost 7,000 dwelling units in 1996 to roughly 26,000 by the year 2020.

Regional Centers

The second tier of urban center is the Regional Center, combining many features of a traditional downtown with a mix of uses and densities that support transit ridership. A limited number of regional-size centers will occur along established transportation corridors to assist in organizing the development pattern of the region. Such centers are essential to the region's transportation system and its configuration. They function like downtowns, concentrating retail, service, employment and housing in an accessible location to serve a portion of the growing region. On the transportation side, they concentrate density and uses, providing a critical mass of mixed-use development as a logical destination or origin for transit lines.

Regional Centers are designed to encourage and promote alternative modes. Ideally, these centers should be evenly distributed throughout the region at a reasonable distance from the Denver CBD and act to create a focus in suburban locations. A Regional

Figure 11
Urban Center Categories

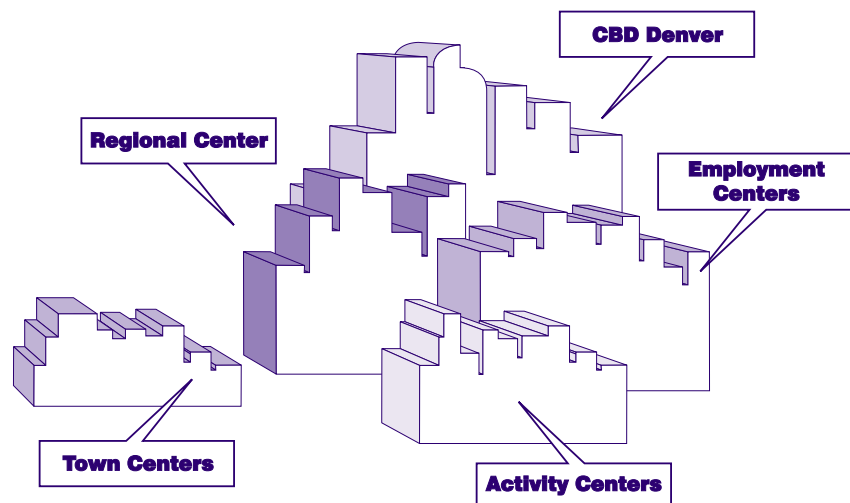


Figure 12
Urban Center Classification Guidelines

Desired by 2020

Centers	Growth Focus	Land Use	Transportation	Net Employment Density (Emp/AC)	Total Employment	Core Residential Density (DU/AC)
Central Business District	Regional	-Mixed use employment -Higher density residential -Civic/cultural facilities -Pedestrian and transit oriented design	-All modes -Hub transit system	80+	150,000+	50/U/AC+ 26,000 units in Impact Area
Regional Center	Subregional	-Mixed use employment -Higher density residential -Civic/cultural facilities -Pedestrian and transit oriented design	-All modes -Served by rapid transit line -Freeway connections	50+	20,000+	40 U/AC+ 8-10,000 units in Impact Area
Town Center Boulder Brighton Castle Rock Longmont	Subregional	-Mixed use employment -Higher density residential -Civic/cultural facilities -Pedestrian and transit oriented design	-Served by regional transit and local circulators	20-50+	10,000+	15 U/AC+ 500-4,000 units in Impact Area
Employment Center-Mixed Use Regional Center	Single-purpose employment center-by 2020, mixed use	-Employment concentration -May have retail or business focus -Support services -Residential development	-Served by highway and bus transit -May be transit served	20-50+	5-10,000	5-20 U/AC in impact area
Activity Center	Subregional	-Mixed use employment -High density residential -Pedestrian oriented transit	-Pedestrian and bike accessible -Served by highway and bus transit	25	2,000	20/U/AC+ in Impact Area
Community Center	Community retail growth	-Retail concentration -May contain other employment uses	-Served by major arterials -Served by bus transit -Pedestrian and bike accessible	25	2,000	5-12 U/AC+ in Impact Area
Neighborhood Center	Neighborhood development	-Retail concentration -May contain other employment uses	-Served by minor arterials -Served by bus transit -Pedestrian and bike accessible	25	500	5-12 U/AC+ in Impact Area
Neighborhood Nodes	Neighborhood development	-Special retail and services functions	-Served by minor arterials -Pedestrian and bike accessible	25	100	5-12 U/AC+ in Impact Area

Center would ideally have the following characteristics:

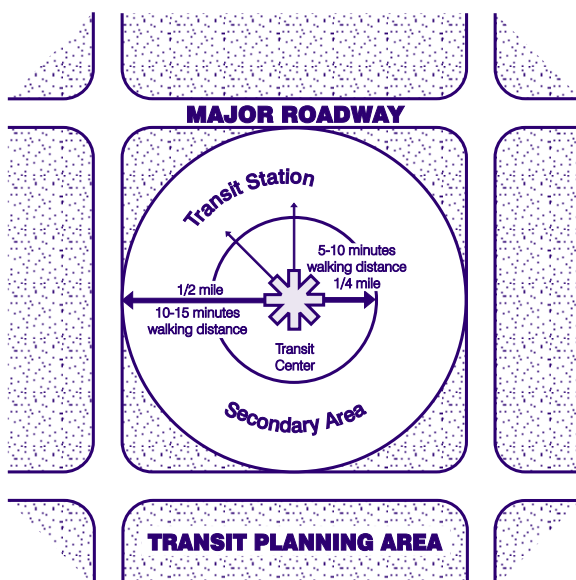
- u 20,000 jobs within an approximate two-square-mile area (Figure 13);
- u 1,000,000 square feet of retail space;
- u 1,000,000 square feet of office space with a minimum 1.0 floor area ratio (FAR) (floor area space is the total floor space in a building or proposed building divided by the area of the site);
- u 1,500 higher-density housing units at an average density of 40 units per acre, up to 8,000 units in the two-square mile impact area;
- u significant entertainment/dining attractions to support evening activity;
- u pedestrian-oriented core area, at a minimum 1.0 FAR to encourage alternative travel modes; and
- u location on a regional transit corridor and commitment to transit station development through joint actions.

Town Centers

Town Centers will be locations of pedestrian-oriented, mixed-use, higher-density employment, service, and housing that serve free-standing communities. Their densities will be enough to support regional transit service and to provide a focal point for intra- and interurban transit. Planning for Town Centers would also help reduce the demand for travel outside the community and retain community retail dollars.

Figure 13

Impact Area up to Two Square Miles in Regional Size Centers



Employment/Mixed-Use Centers

This type of center recognizes the existing major concentrations of office, manufacturing, industrial, or medical employment serving the entire region such as the Health Sciences Complex, portions of the southeast I-25 district or Denver International Airport. A critical mass of commuters exists at these locations, but a greater concentration of housing and retail at the center would support greater transit use and potentially create true, mixed-use regional centers. Such areas may currently have the critical mass to support circulator and, with land use changes and other improvements, could support additional transit service. Improving pedestrian connections, employing travel demand strategies or adding transit service would be the first steps. The single-use district of the 1980s could evolve into a mixed-use center by 2020. Major employers should locate where they can be best served by transit and within mixed-use centers that permit employees to use alternative modes to commute to work.

Activity Centers

Activity Centers are the focus of growth on a sub-regional basis. Existing centers typically are single-use (retail) and auto-oriented and lack the pedestrian scale and density of Regional Centers. Most regional shopping centers (such as Southwest Plaza) currently meet this definition. New growth would be designed for more balanced, alternative mode circulation. Existing centers would work to consolidate their market share by infill development and pedestrian and transit improvements, and to strive for mixed-use.

Community centers, neighborhood centers and nodes

Commercial districts serve a smaller market area than Regional or Town Centers. They include the traditional downtown of suburban or rural communities such as Golden, Idaho Springs or Evergreen. They can have many of the characteristics of Regional Centers, such as a mixed-use environment and pedestrian scale, but serve a smaller trade area. Neighborhood shopping districts are typically centered around a supermarket and/or other local consumer needs.

The differences between a center and a node are location, scale, orientation and market area. Nodes are a minor commercial center providing a focal point of neighborhood development. Commercial nodes are also being promoted in neo-traditional town planning to serve the functions of traditional neighborhood shopping districts. Often these nodes offer specialty goods and services with residents traveling to a larger center for groceries and other necessities.



Environmental Quality

Metro Vision acknowledges that the location, type of growth and land development have significant effects on the region's air and water quality.

The integration of air, transportation, development patterns, and water resources is crucial in protecting environmental quality in the region.

Water resources and aquatic environment

In the semi-arid Denver region, every body of water is an especially valuable asset. To maintain, restore and protect this resource requires coordinated efforts among local, regional, state and federal agencies, along with citizen groups and other interested entities. Local governments have recognized that water pollution is both caused by and has negative effects on regional development. The water quality goal for the region, which will be addressed in the new *Clean Water Plan (CWP)*, is to *restore and maintain the chemical and physical integrity in order to assure a balanced ecological community in waters associated with the region.*

Objectives

- u Achieve a locally defined, balanced, ecological community through implementation of water quality protection and appropriate water resource management initiatives, provided that a balance will be maintained between the natural environment and those designated uses of the resource;
- u Restore and maintain the chemical and physical integrity of the region's aquatic environments through a coordinated watershed management process;
- u Identify effective wastewater treatment through a regional process, with local implementation of wastewater management strategies;
- u Achieve effective and balanced stormwater and nonpoint source management through local implementation processes; and,
- u Develop integrated resource management programs to provide effective and cost-efficient water quality management and water supply.

The management planning process is designed to maintain water quality standards, address water quality and related environmental issues associated with regional growth and recommend implementation strategies to restore impaired water resources. It is recognized that water quality and availability of water supplies influences, and is influenced by, development patterns. Solving water resource issues through an integrated process requires innovative, cooperative and affordable solutions.

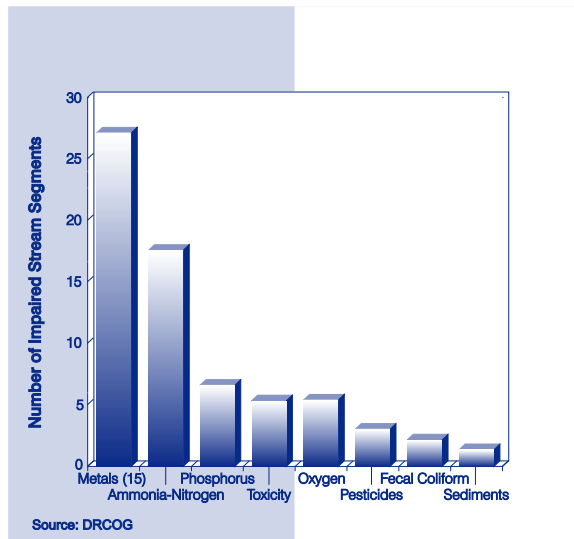
In 1970, more than 60 percent of all waters in Colorado had quality problems, and much of the environment associated with these water resources was damaged. This trend is still evident by the number of

impaired stream segments in the DRCOG region (Figure 15). Potential pollutant types causing impairment are illustrated in Figure 14. Federal and state laws allow the continued use of these resources while requiring restoration and protection from further degradation. Any use of a resource can cause problems; the best solution is to find an *acceptable* level of change that keeps the environment healthy without losing those uses (water supply, agricultural irrigation, aquatic life, fisheries and wildlife) which are important to the region.

The definition of these acceptable levels of change is a basic part of all water resource management planning. Since local funding and resources will be

required to maintain balanced communities, locally developed criteria should be used to identify acceptable levels. The *Clean Water Plan* involves local entities in establishing acceptable levels. As a result, one key element of the plan establishes “acceptable” balanced communities in aquatic environments that continue to promote the beneficial uses of regional water resources.

Figure 14
Impaired Streams by Identified Potential Pollutants



Over the last few years, interest has increased in Colorado and across the country in a more complete and integrated approach to environmental and natural resource management. Solving water resources problems through watershed management can result in better long-term solutions, be more cost effective, and involve all of the interested communities. The plan is organized by watersheds and includes locally recommended solutions and strategies. DRCOG has adopted a watershed approach with nine identified watersheds (Figure 16).

The water quality plan addresses the following issues:

- u an integrated watershed approach for all nine watersheds in the region;
- u stormwater, construction and urban runoff assessment and management;
- u nonpoint source pollution and best management practices;
- u the system of wastewater treatment works or facilities needed through 2020;
- u biosolids management;

- u wasteload allocations and the total maximum daily load;
- u groundwater quality and protection;
- u water quality-based standards, biological and physical criteria and classifications of bodies of water;
- u restoration of beneficial uses;
- u water quality monitoring; and
- u regionally significant wetlands.

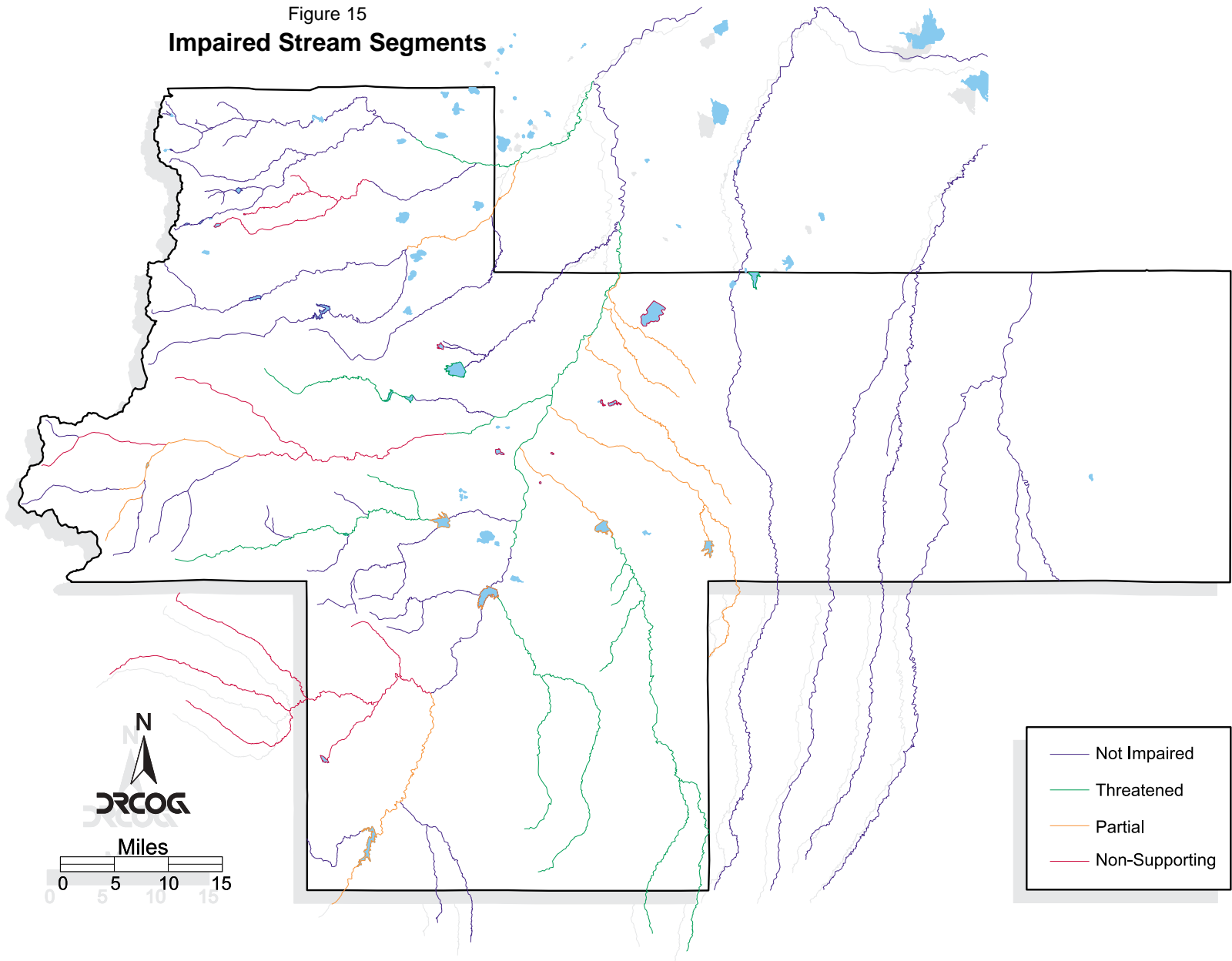
The region is expected to face an unmet demand for more than 90,000-acre feet of water by 2020. Solving this supply dilemma without causing new water quality problems will require coordination and cooperation between the water providers and the water quality management groups. A good watershed program, which considers both the quantity of available water supply as well as the quality of the water resource, can be used to develop long-term supply strategies integrated with water quality management.

Conservation and wastewater reuse programs are essential strategies that will be used to help meet the future unmet water supply demand. These programs have the potential to alter (for better or worse) surface water and groundwater quality. Some treated effluent-dominated streams may change into urban-runoff and return-flow dominated streams. The quality of return flows to either streams and lakes or groundwater sources is a concern to many communities in the metropolitan region. The plan identifies methods to maximize reuse of available water without damaging existing uses.

The treatment of wastewater is required by federal and state law. Many streams now flow year-round because of treated wastewater discharges. The location, type of treatment quality of the discharge and total number of treatment plants can greatly affect the quality of water in this region and beyond. The plan identifies more than 110 treatment plants needed to meet the current needs and expected growth in wastewater flow (Figure 17). These facilities discharge into hundreds of miles of streams and cause a cumulative impact to water quality (Figure 15). The management strategies are designed to minimize these impacts from specific pollutants (Figure 14). Since many portions of wastewater treatment systems are built to last more than 20 years, careful long-term planning is needed to keep these systems cost effective. Wastewater infrastructure is matched with growth expectations to more efficiently use the region’s limited public monies.

Runoff from urban areas during storms and other events, called nonpoint source pollution (from non-urban land areas and generally not carried in a pipe), cause water quality problems in the region.

Figure 15
Impaired Stream Segments



Stormwater runoff in the region's large cities is now regulated and all cities may be required to obtain stormwater permits. Treatment of runoff at the end of drainage pipes or channels of stormwater runoff can be extremely difficult and cost-prohibitive. The preferred approach is locally-based, implementation programs using common sense to improve the quality of runoff.

Other nonpoint sources, besides stormwater, include mine water discharges, agricultural return flows and water changed by diversions or impoundments. Local control (e.g., zoning regulations, subdivision ordinances, building permits, development code) and implementation of best management practices, is the most effective, least expensive way to prevent runoff pollution problems. The *Clean Water Plan* documents local implementation processes, lists appropriate best management practices for this region and prioritizes watershed programs.

the satisfaction of all residents of the region is probably not achievable by the year 2020. However, the quality of the region's bodies of water and adjacent lands will be preserved and enhanced through the implementation of Metro Vision.

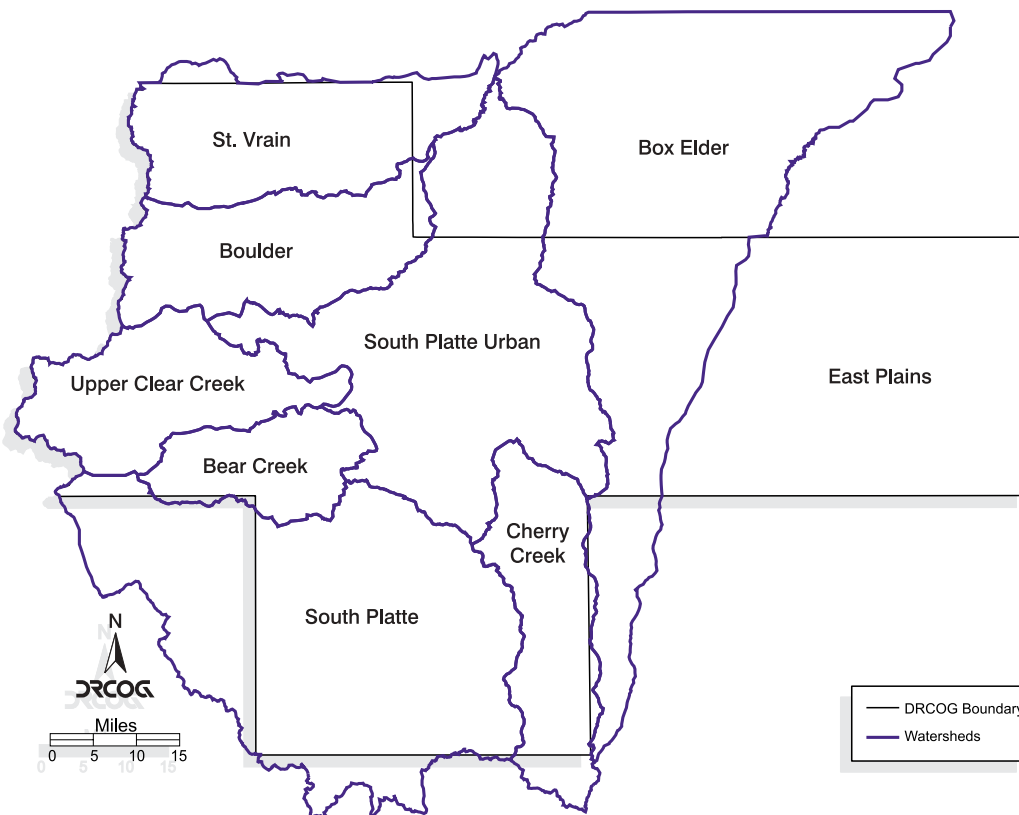
Regional air quality

Objectives

- u Protect human health and environmental quality into the future by achieving and maintaining national ambient air quality standards;
- u Reduce growth in mobile source air pollution emissions by changing key features of the pattern of urban and semi-urban development to reduce the dependence on auto travel;

Figure 16

Clean Water Plan Regional Watersheds



Various interested parties within the region have a wide variety of interpretations of the meaning of restoring and maintaining the chemical and physical integrity, and achieving a balanced ecological community. As a result, meeting the regional goal to

- u Modify local comprehensive plans and zoning ordinances to provide greater community accessibility and pedestrian, bicycle and transit travel opportunity; and
- u Provide pedestrian and transit transportation facilities as needed adjuncts to automobile travel in the future.

Figure 17

Existing and Planned Wastewater Treatment Facilities

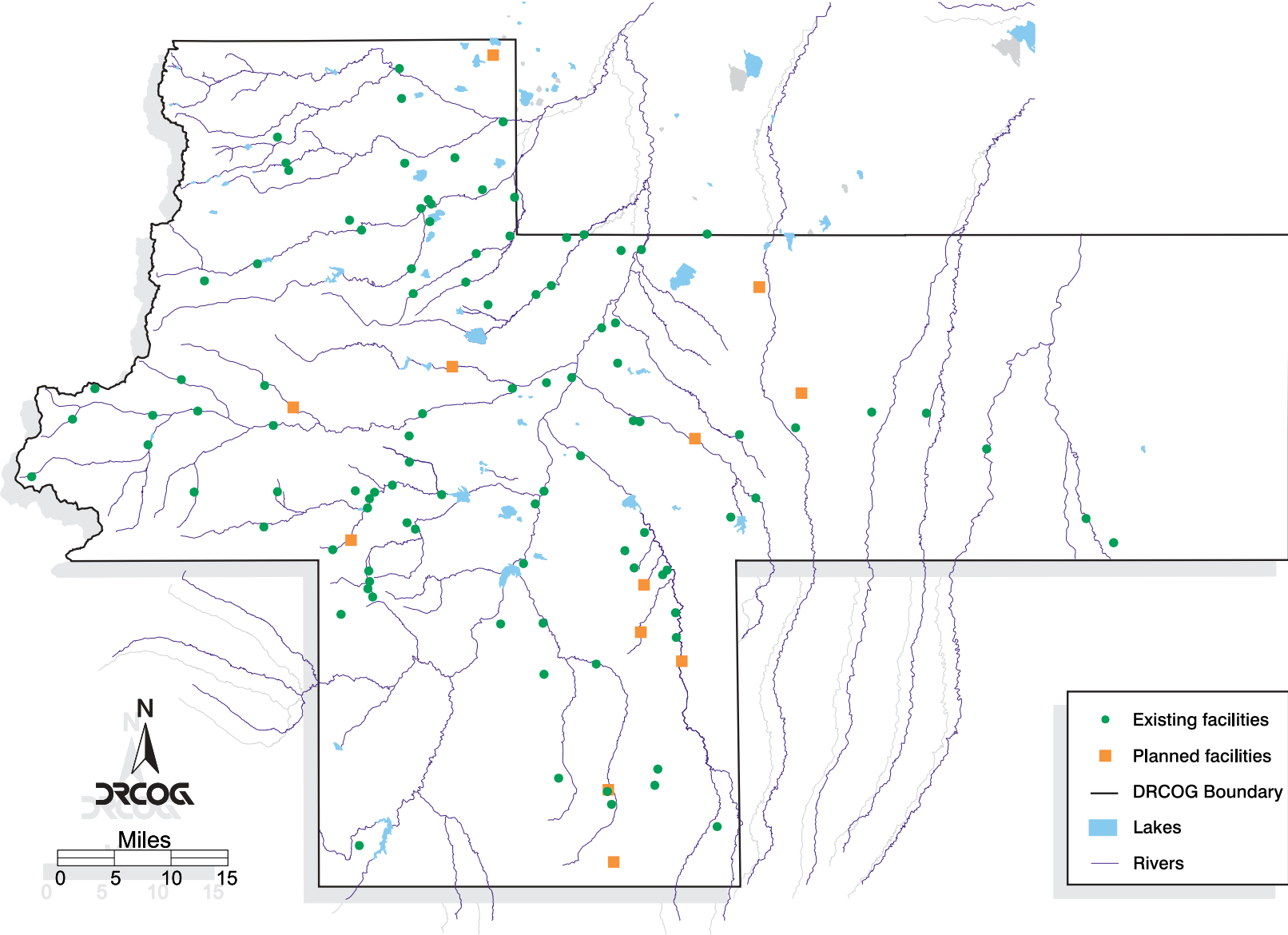


Table 2

Criteria Pollutant Emission Estimates for 1995, 2005 and 2020

Pollutant	1995	2005	2020	% Mobile Sources	% Other Sources (Stationary and Area)
	Mobile Source				
	Tons per Day	Tons per Day	Tons per Day		
Winter Day CO	1372	753	853	81%	19%
Winter Day PM ₁₀	60	70	87	66%	34%
Summer Day VOC	130	93	108	40%	60%
Winter Day NOx	174	143	166	49%	51%

Source: APCD

Note: Data includes southern Weld County which is not a part of the Denver region nor the non-attainment area.

Metro Vision focuses on regional air quality because it is linked to population growth, the urban development pattern, its supporting transportation system and corresponding travel activity. Mobile sources--cars, buses, motorcycles and trucks--contribute significantly to regional air pollution, emitting hundreds of tons per day of air contaminants. Even stationary and area sources are related to urban development since the location of a power plant or the density of boilers in apartment complexes has some effect on air quality.

The emission of carbon monoxide (CO), small particulate matter (PM₁₀), nitrogen oxides (NOx), and volatile organic compounds (VOCs), is monitored and regulated by the Colorado Air Quality Control Commission. Planning for the control of these pollutants is carried out by the Regional Air Quality Council which prepares State Implementation Plans (SIPs) for the control of each pollutant in the metro area. There are three categories of air pollution sources: mobile sources (primarily automobiles); stationary sources (large, fixed sources of emissions such as power plants; chemical and processing plants); and area sources (small stationary and non-transportation sources such as space heating, woodburning stoves, dry cleaners and windborne dust). Table 2 describes the relative contributions of the different sources.

Over the last two decades regional air quality has improved dramatically. Implementation of periodic woodstove-burning bans, enhanced auto inspection and pollution control maintenance programs, winter month oxygenated fuel requirements, and manufacturing improvements to new automobiles have all contributed. For mobile sources, these laws and programs have significantly reduced tailpipe emissions. With expected significant increases in vehicle miles of travel, technological improvements will continue to be essential to address air quality. In addition, however, stricter federal standards and

efforts to address the "brown cloud" will require continuing emphasis on reducing the growth in vehicle miles of travel.

The Metro Vision plan plays an important role in RAQC's SIP development by providing the assumptions about location and amount of growth and estimating the resulting future travel demand. DRCOG must also demonstrate that the emissions generated by the region's transportation plan and programs conform with the SIP goals of attainment and maintenance of state and federal air quality standards.

The regional plan proposes a development pattern designed to reduce growth in vehicle miles of travel and vehicle trips. Regional travel, largely in single-occupant vehicles, has been in response to an expanding urbanized area and widely separated land uses and limited design sensitivity to non-motorized modes of transportation. Slowing the expansion of the urban area, supporting mixed-use, higher-intensity land uses in select locations, creating transit- and pedestrian-oriented urban centers and helping free-standing communities become more self-sufficient are all urban development strategies that, if employed, could help contain the growth of VMT.

Because regional air quality is closely linked to automobile emissions, it is critical to provide alternative circulation systems to the private passenger vehicle. Marketing strategies and pricing and educational measures all should be used to increase non-motorized mode share of regional travel. Comprehensive plan and zoning modifications can encourage mixed-use patterns and selective housing densities that support transit and pedestrian access while increasing the quality of the pedestrian and bicycling environment by improving street and sidewalk connectivity, street level amenities and more inviting public spaces in site development.

II

Implementation



To implement the six core elements, specific strategies are needed. The following recommended strategies recognize the need for considering key growth and development issues from a regional perspective while retaining local control over the daily decisions that determine where such growth should occur. In addition, such strategies should not require new state legislation. Thus, the strategies embrace four key tenets of implementation: voluntary, flexible, collaborative and effective.



Implementation Tenets

Implementation tenets recognize the need for local control over the nature and location of growth within jurisdictions while recognizing the value of addressing growth and development issues from a regional perspective. Strategies, therefore, are based on local implementation of Metro Vision.

Voluntary means jurisdictions will choose to meet the core elements without mandate from other government entities. A significant advantage of Metro Vision is the ability to negotiate between local jurisdictions and the regional planning agency to ensure consistency between local comprehensive plans and the regional goals implicit in the core elements.

Flexible applies to plan review and revision as well as to the use of the plan. The regional plan and map, and their components, will be reviewed on a regular basis and revised to reflect regional growth and development while honoring the core elements.

The Integrated Plan Assessment (IPA) process enables annual consideration of amendments to the *Regional Transportation Plan*, *Regional Development Plan*, and *Clean Water Plan* with extensive review by advisory committees prior to Board action. Each of DRCOG's regional plans undergoes major revision approximately every five years.

In addition to plan review and revision, DRCOG considers flexibility in the *application* of its plans. Traditionally a 15 percent range in the application of its population and employment forecasts is incorporated as these affect the service needs of communities planning for regional infrastructure. For example, certain types of infrastructure require longer planning horizons which inherently require less precise forecasts. Current DRCOG policies acknowledge the higher degrees of uncertainty associated with such issues and Metro Vision will continue to accommodate the flexibility necessary for effective implementation.

Collaborative means the region's communities not only recognize the value of the core elements to guide growth and development in the region, but also that regional goals cannot be met by communities working in isolation. As jurisdictions strive together to achieve the goals implied in the core elements, the whole becomes greater than the sum of its parts.

Effective means that the plan must be *operative* and have a definite impact in influencing the region's growth and development. Communities that embrace the goals of the Metro Vision Plan and support them through their comprehensive plans, zoning ordinances and capital investment policies is the best strategy for implementing it. Incentives such as discretionary capital improvement funds, technical assistance and priority list bonuses will encourage participation. Local jurisdictions need to be aware that Metro Vision's advantages to the region include mitigating the high costs associated with leapfrog development, the preservation of open space, the efficient use of limited infrastructure dollars and conservation of tax resources.



Implementation Strategies

The specific implementation strategies suggested can be put into place locally, without new legislation. These strategies will be further refined by the Metro Vision Policy Committee and are described below.

Plan consistency

This strategy helps to reconcile the regional impacts of the growth and development policy decisions of local government by ensuring consistency between local comprehensive plans and regional development and infrastructure goals. Issues in Metro Vision are addressed from a regional perspective, which may be wholly different than the perspective of local governments. If these differences are too great, implementation of either the regional plan or local plans becomes difficult.

This approach suggests distinct roles and responsibilities for both the regional planning entity and local governments. Local governments are the creators and *implementors* of plans. As such, they are responsible for integrating local and regional capital improvement programs--the action mechanism for providing regional infrastructure. They also are responsible for integrating local development policy and zoning ordinances with regional goals and policies--the land use and development action mechanism. Moreover, local jurisdictions should ensure that their plans are compatible with neighboring jurisdictions' plans.

The role of the regional planning organization manifests through *information sharing, facilitation, and negotiation*. It enhances local input into development of the regional plan and its policies. It provides incentives, such as discretionary capital improvement funds and technical assistance, to local governments in their efforts to assist in the implementation of regional goals and policies. It negotiates with local planners and policymakers to move toward plan consistency and offers incentives where possible. The regional planning organization also becomes the catalyst for processes to mediate between communities and facilitates inter-governmental agreements to achieve regional goals by local jurisdictions.

A key barrier to achieving consistency between local plans and regional goals is that they address issues from different perspectives. A city may focus on the design characteristics of specific sites within its jurisdiction while the region's concerns are with the location of major employment centers. A county sets street standards for rural subdivisions while the region identifies corridors for rapid transit. An implementation strategy based on consistency needs to identify the areas of common concern. The process is intended to ensure compatibility of intent and purpose of plans and *does not* mean uniformity or regional direction. This distinction recognizes local goals and desires and the appropriateness of local decisionmaking.



A regional/local consistency process should be designed that provides clear benefits to local governments. Consistent plans would enhance the efficiency and effectiveness of local and regional planning and programming for growth, development and infrastructure. In addition, the process should minimize adverse “spillover” effects of growth of neighboring jurisdictions.

DRCOG has prime responsibility for the preparation of the regional plans. In the effort to develop consistency, DRCOG should emphasize information, facilitation and negotiation. The input of local governments into regional plan and policy development should be enhanced. A strategy that provides a new approach to providing input from the regional level into the local comprehensive planning process should also be developed. To the extent possible, DRCOG should recognize consistent local plans with regional incentives, such as discretionary capital improvement funds and technical planning assistance.

DRCOG has developed a regional/local consistency process that incorporates the negotiated model concepts of cross-acceptance and self-certification. In this process, adopted by the Board of Directors in May 1998, each local government is asked, on a voluntary basis, to accept or incorporate the plan as an element of its own comprehensive plan to address the regional perspective. To carry out this review, DRCOG worked with member governments through the Metro Vision Policy Committee and the Regional Planning Advisory Committee to create a checklist of the major elements in Metro Vision that are relevant to local comprehensive plans. Local governments are asked to work through the checklist and report to DRCOG the areas of consistency and inconsistency. For the areas of inconsistency, the local government is asked to consider revising its plan or it may suggest that DRCOG reconsider that portion of Metro Vision.

Local governments provide a report to DRCOG on their consistency review. The Board reviews these reports as part of its annual assessment of Metro Vision. The Board can take one of two courses of action:

1. The inconsistency may require revision of the Metro Vision Plan. The Board could undertake such changes as part of the assessment; or
2. The Board may wish to work with the local government to suggest revisions in the local comprehensive plan that address regionwide goals.

Integration of regional development and transportation plans

Metro Vision addresses the interrelated goals of transportation and development at the regional level. It is the basis for preparation of the new regional plan which recognizes the fundamental link between land use, growth and development patterns, water resources and transportation. The concept of a more fully integrated regional plan is emphasized by the Intermodal Surface Transportation Efficiency Act and the Clean Air Act Amendments (CAAA) of 1990.

A challenge for the Denver region is to devise a mechanism or process that sustains the level of integration envisioned in ISTEA and the CAAA in which significant regional investment decisions and local actions will support the core elements of Metro Vision. A key mechanism to implement this would be more integrated Transportation Improvement Program evaluation criteria. By incorporating growth and development goals as decision criteria, transportation projects will be prioritized by those that best support the core elements and policy objectives of the regional plan in addition to func-

tional and cost-effectiveness criteria.

The Board has developed criteria for use in the TIP process to provide incentives for the implementation of Metro Vision's core elements and policy objectives. Starting with the 1999-2004 TIP, this implementation has been a gradual process that was expanded in the 2001-2006 TIP. The criteria are based on objective and measurable factors, such as local adoption of the urban growth boundary. With each TIP, the metropolitan planning organization technical committee process reviews these criteria to determine the types of factors and the weight given to each factor.

Air quality integration

Environmental issues such as air quality are truly regional. Metro Vision notes that protection and improvement of air quality is inextricably linked to the region's type of growth and land development. Air quality can best be protected by individual jurisdictions acting together. In Colorado, local governments have many of the responsibilities for implementing environmental protection activities. The State Implementation Plans for air quality prepared by the RAQC and approved by the Colorado Air Quality Control Commission and the U.S. Environmental Protection Agency cannot be implemented without local government assistance.



The SIP is used in state and federal air quality regulation and should be consistent with regional development, water resources and transportation plans. While DRCOG does not prepare the SIPs, a direct relationship between Metro Vision and the SIP is essential. The SIPs are intended to address how air quality will be reached and maintained while the region grows, and DRCOG forecasts are the basis for the SIP assumptions about growth.

The RAQC has prepared a comprehensive, long-range air quality plan (the *Blueprint for Clean Air*) as an overarching, integrated, air quality strategy in addition to the pollutant-specific SIPs. This planning process developed new strategies to reduce air

Metro Vision notes that protection and improvement of air quality is inextricably linked to the region's type of growth and land development.

pollution emissions in the metropolitan region. DRCOG worked closely with RAQC in the preparation of this plan. The *Blueprint for Clean Air* recognizes the Metro Vision 2020 Plan as a critical component in achieving the region's air quality goals. Any transportation and development strategies

included in this plan will require local government support and action. There is a need to link local comprehensive plans to air quality actions. It is within the local comprehensive plan that decisions regarding the relationship of site design, urban form and transportation management to air quality can be defined and local actions supported. These actions, linking the air quality plans to Metro Vision and local plans, can be done without becoming regulatory. DRCOG, in cooperation with local officials, will work with the RAQC to assist local governments in addressing air quality in their comprehensive plans. Local plans would evaluate methods for jurisdictions to achieve air quality goals. Such plan elements would be part of any self-certification process or

regional review.

Another possible link between Metro Vision and air quality already exists through the conformity requirements of the Clean Air Act. DRCOG must demonstrate, through a series of computer modeling tests, that the transportation plan and its programs support the air quality goals. Established by federal law and regulation, it is likely that these requirements or something similar will continue for at least several years.

Water quality integration

DRCOG's *Clean Water Plan* is used in state and federal decisionmaking and should be consistent with the regional development and transportation plans. Local comprehensive plans are also a key link between urban development and environmental issues like water quality. It is within the local comprehensive plan that decisions regarding the relationship of site design and urban form can be defined and local actions supported.

While water quality management is a regulatory program, DRCOG's role is not regulatory but one of planning. DRCOG's approved plan provides the

guidance to regulatory agencies in making water quality decisions. The relationship between the planning agencies, approved plans and regulatory agencies is defined in the *Continuing Planning Process for Water Quality Management in Colorado* as maintained by the Colorado Water Quality Control Commission. This process acknowledges the regional role in making water quality management an effective and efficient process. The DRCOG plan reflects the local perspectives for a wastewater management system.

Although future development patterns can affect

The *Clean Water Plan* is intended to address the protection of water quality, with provisions related to wastewater treatment service in light of expected growth of the region.

water management decisions, the focus should be on ensuring protection and maintenance of clean lakes and streams, not using water quality regulation to force specific land use. While the *Clean Water Plan* estimates the number of sewer taps needed in areas expected to urbanize in the future, it should not drive local land use decisions, but rather should support local decisions at a regional level.

The *Clean Water Plan* is intended to address the protection of water quality, with provisions related to wastewater treatment service in light of expected growth of the region. Assumptions about growth are based on the expectations identified in Metro Vision.

The Colorado Water Quality Control Commission, through the Water Quality Control Division, approves sites for wastewater treatment systems (such as treatment plants, lift stations and interceptors) and issues discharge permits. Thus, the commission is the primary regulatory link in the continuing planning process for water quality management. The site



approval process, by state statute, is required to consider recommendations contained in the *Clean Water Plan*. While the division can approve sites that are inconsistent with the plan, it is required to notify DRCOG of this action and provide an explanation of its actions.

The federal Clean Water Act requires that discharge permits also be consistent with water quality management plans such as the *Clean Water Plan*. However, in Colorado the permit system has not defined such consistency. It appears that the division assumes that the site approval and continuing planning processes have addressed any consistency issues and drafts permits without direct reference to the *Clean Water Plan*.

The plan identifies applicable water quality and five wastewater management factors for determining consistency of site applications: location, size, staging, service area and effluent quality. Three of these factors (size, staging and service area) are growth-related. DRCOG has used forecasts from its regional development plan to calculate size and staging needs of treatment facilities and used the extent of expected development to refine locally defined service areas. Flexibility in the facility size has been, and will continue to be, recognized between local project forecasts and regional projections. Differences greater than 15 percent require validation and verification from local governments before use in any regional consistency review process.

Service areas

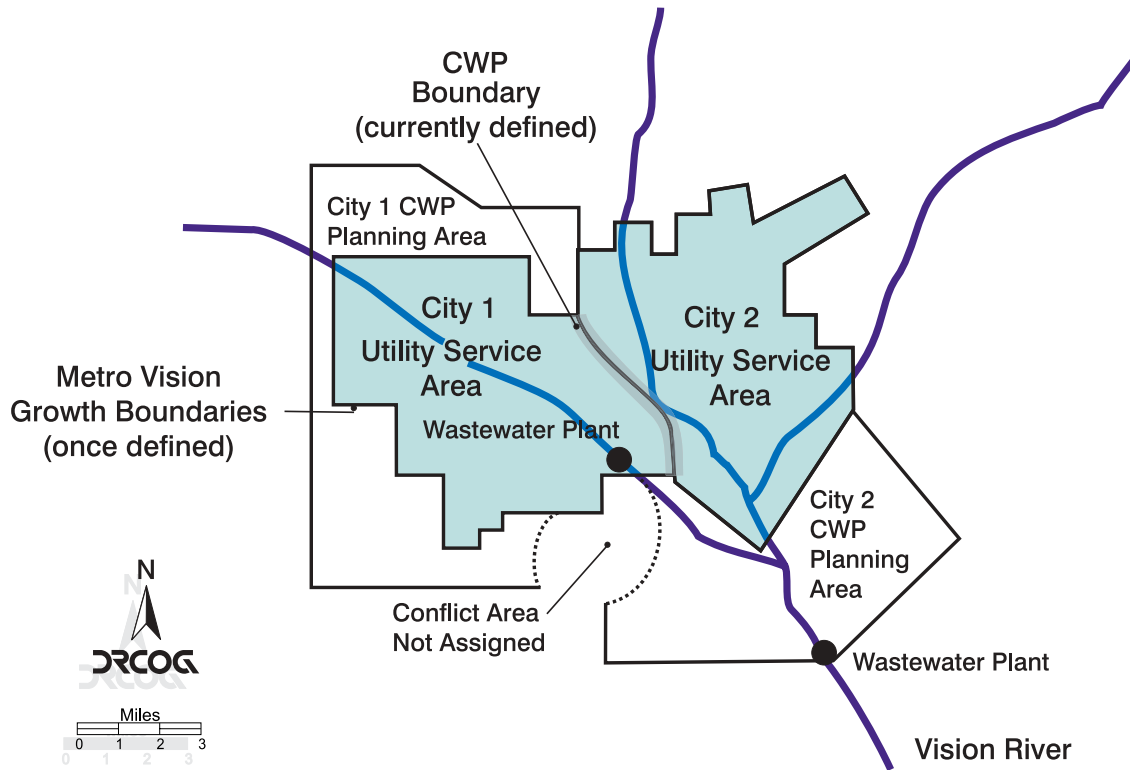
Defining service area boundaries consistent with the regional development plan has been problematic. Service area definitions serve two purposes in the *Clean Water Plan*. First, service areas define the total extent of service expected during the planning period. Second, service areas also identify the

appropriate boundaries between individual wastewater treatment facilities. This enables each facility to conduct its own planning with the assurance that no other facility is planned to serve the same area.

The Metro Vision 2020 Plan generally uses a 20-year planning horizon, while many utility projects have life expectancies of up to 50 years. Prior to the 1998 update of the Clean Water Plan, previous versions recognized multiple service area boundaries, which extended beyond the expected urban boundary defined by the regional development plan. As a result, the water quality plan has been viewed as a driver for development, although this has never been its intended

Figure 18

Conceptual Utility Service and CWP Planning Areas



use.

In the updated Clean Water Plan, DRCOG recognizes two types of service areas: *utility service areas* that are consistent with the Metro Vision extent of urban growth; and *CWP planning areas* which are either equal to utility service areas or are larger. The criteria and use of planning areas is defined in the *Clean Water Plan* and used in regional consistency reviews. Planning areas can be based on existing local comprehensive plans, comprehensive long-range utility plans or the area a wastewater treatment provider intends to serve at ultimate development. The utility service areas map will show the Metro Vision extent of urban growth. The CWP planning area map shows those potential service areas beyond the Metro Vision extent of urban development. Figure 18 illustrates these two utility service concepts. Since CWP planning areas are linked by watersheds, utility planning issues and strategies that overlap between the council's planning region and adjacent planning regions such as Weld, Elbert and Park counties will be addressed in the *Clean Water Plan* and coordinated with the appropriate planning groups.

Wastewater treatment facilities and appropriate management agencies will have consistent planning area designations mapped and maintained through

the *Clean Water Plan*. Overlapping utility service areas or CWP planning areas will not be recognized in the plan. Local resolution of overlap issues will be required before there is regional recognition. The CWP planning area maps will be used by DRCOG in the site application and regional consistency review processes. Interceptors can be certified within CWP planning areas, but no other new treatment facilities designed to fully serve development outside of utility service areas will be recommended.

Detailed utility plans will be prepared for each planning area. Utility plans will document the wastewater management strategy for a wastewater treatment facility (greater than 2,000 gallons per day capacity) and the associated utility service area and planning area. Metro Vision forecasts of employment and population will be included in utility plans to calculate wastewater flows and the resulting impacts on the receiving river, stream or lake.

Using the process outlined and adopted by the Board in the new *Clean Water Plan* will ensure that DRCOG's review of site applications, discharge permits and other water quality reviews are based on growth assumptions that reflect regional/local consistency. Utility service areas can also accommodate the uncertainty associated with the location of



future development through this process. Further, given the annual opportunity established by the Board to review and amend all of its regional plans, significant changes in assumptions or factors influencing regional growth and development can be addressed on an ongoing basis to ensure added flexibility.

Tax policy and revenue-sharing

The heavy reliance of municipalities on sales tax revenues has a significant role in local development decisions. Moreover, the current tax policy structure which encourages competition for sales tax revenues among jurisdictions, works against the regional cooperation needed for optimal implementation of Metro Vision.

DRCOG supports the search for new approaches to

regional tax policy that preserve local fiscal autonomy, and enhance the capacity of local jurisdictions to meet their individual financial objectives while working in partnership with their neighbors to support regional goals.

To this end, a serious examination of retail sales tax policies and practices in the region should be undertaken to give local governments a better sense of the role of tax policy in regional development decisionmaking and the range of options available to local governments to address future revenue needs. Such a study should focus on the choices available to municipalities and counties to take action voluntarily. Local governments should take the lead to determine the scope of any such study and assess the viability of any options for regional or subregional revenue-sharing that emerge from it.

III

Next Steps



It is important to realize that Metro Vision is a work in progress. As a dynamic plan, it continues to be refined. To this end, a Metro Vision Policy Committee has been established to advise the Board of Directors on decisions regarding Metro Vision policies and the core elements. There are numerous issues that have not been specifically addressed in the plan but which the evolving process of Metro Vision will need to consider.

The relationship of development in the non-urban portion of the region to Metro Vision has not been fully explored. Large-lot development in these areas create special problems, both locally and regionally, and policy direction is needed. The transportation and water quality issues in this subregion are also unique.

DRCOG's specific roles with, and responsibilities to, local governments relative to implementation strate-

gies will be determined. Methods to improve information sharing, technical assistance and negotiating capacity will be developed to assist in achieving greater consistency between regional goals and local comprehensive plans. A checklist of key Metro Vision elements relevant to local comprehensive plans will be developed in partnership with local governments.

Metro Vision is an *integrated* regional plan. To this end, transportation and water quality issues will be considered in conjunction with development issues. The goals, policies and direction of Metro Vision will form the basis of the 2020 transportation plans--both for needs-based projects and for fiscally constrained projects. A new *Clean Water Plan* is also being prepared which will be based on the goals and policies in this plan document.

As a regional plan, Metro Vision will be implemented locally. The region's local governments have recognized the value in considering growth and development issues from a regional perspective while retaining local control over the nature and location of growth in their jurisdictions. DRCOG and its member local governments will work in partnership to plan for a future that retains the significant values of the region and enhances the quality of life for its citizens.

Communication

An outreach and communications strategy has been developed to convey the essential Metro Vision tenets and core elements to appropriate audiences. Such audiences include state and local elected officials, regional business leadership, and advocacy groups, such as environmentalists and neighborhood activists. Metro Vision outreach will also include links with other regional efforts such as the Regional Air Quality Council's *Blueprint for Clean Air*, the Regional Transportation District's "Guide the Ride" program, and the Boulder County Healthy Communities Initiative.

Extent of urban development

In addition to outreach and communications, specific aspects of implementing Metro Vision will need to be defined. The economic costs and benefits of urban growth boundaries will be determined as well as detailed economic impacts of Metro Vision implementation--especially the costs of doing nothing to plan the region's growth and development. When the Board of Directors adopted the interim urban growth boundary, it also included a process for making changes. This process reflects the Board's desire to make the plan flexible – a critical factor for plan acceptance. The amendments to the plan by the Board in January 2002 increased the urban area to 747 square miles and added semi-urban development as a feature of the plan. These amendments continued the Board's flexible approach to keeping the plan current.

Communities such as Erie, Broomfield, Brighton, Thornton, Longmont and Parker are also affected by growth occurring outside of the DRCOG eight-county regional planning boundary. Some of these communities include portions in Weld County and will be affected by development in the North I-25 Corridor. In order for Brighton and Longmont to remain free-standing communities and for urban growth boundaries to be effective, this issue will need to be explored further.

The mechanisms and processes to implement growth boundaries must be determined collaboratively and

implemented locally. The presence of other growth management tools, such as adequate public facilities or concurrency ordinances, can help, but there are many tools available that can be used locally to establish and maintain a growth area plan.

The linkages among development, the regional transportation plan and the water quality management plan have already been discussed. In both cases, the definition of the staging of growth for 2020 is a major element in identifying the needed facilities over the next 25 years. As decisions are made about major regional investments in infrastructure, they will help define the areas of urban and semi-urban development. Such decisions should be consistent with the desired picture of future growth outlined in Metro Vision.

Open space

Like many other elements of Metro Vision, development of the open space plan is an evolutionary process. With the assistance of a grant from Great Outdoors Colorado, DRCOG developed a regional



definition of open space, inventoried protected open space in the region and mapped open space opportunities. An additional year of effort by the open space coordination committee resulted in a set of goals and objectives that were adopted by the DRCOG Board as the Regional Open Space Plan Element in 1999. This plan is regional in perspective and establishes a strategic regional open space policy within the context of metropolitan regional planning.

Most opportunities for provision of additional open space lie with local governments. The open space plan identifies alternative approaches for these governments to use in implementing an open space system. The plan defines and analyzes options and mechanisms for both acquisition and non-acquisition approaches to preservation. The next step in this area of the plan is to provide regional priorities for open space protection, which will meet the goals of the currently adopted plan.

DRCOG has committed to several actions for ongoing open space planning. The current effort has assembled a regional inventory of sensitive environmental areas for use in local and regional planning. This data will be updated on a continuing basis. Subregional planning efforts will be supported through mapping and technical assistance. Developing linkages between land use planners and the open space professionals regarding large-scale open space



opportunities is another needed effort. Similarly, the open space plan should be further integrated with the other elements of Metro Vision, such as the urban centers and with transportation planning.

Free-standing communities

The City of Boulder has taken steps to remain “free-standing,” and is now in the process of reviewing several policy alternatives to reduce future job growth and retain affordable housing. Longmont’s comprehensive plan calls for a self-sufficient community that remains free-standing. The cities of Brighton and Castle Rock are committed to retaining their free-standing characters, but will need to monitor and reassess population and employment targets and how they fit in with their community’s “vision” for the future. Each community needs to reestablish for itself its own “vision” and, through the self-certification process, determine how it will contribute to meeting the goals of Metro Vision.

Transportation

In response to requirements of the federal Transportation Equity Act for the 21st Century, the Board must ensure that decisions for use of federal funds must come from a plan based on reasonably expected revenues. To do this, a fiscally constrained transportation plan was completed, based upon Metro Vision, and pursues the following objectives and action strategies.

Objective 1:

Restore and/or maintain the designed transportation function of existing and future transportation facilities.

- u Give high priority in the allocation of available transportation system funds to maintenance, operations, safety, and management improvements of existing facilities to protect previous investments.
- u Emphasize system management techniques to manage, adapt, and improve the region’s existing transportation system to better use available capacity and resources.
- u Give implementation priority to projects which eliminate “bottlenecks” in the existing system over those which increase the overall laneage of system facilities, or which extend the geographic coverage of the system.
- u Limit access to roadways to a level consistent with the design function of the facility type, including the spacing of curb cuts on arterials and of interchanges on freeways, and require that access be granted in accordance with the CDOT Access Management Plan.
- u Pursue mobility and transportation demand management strategies, including funding those adopted in state implementation plans for air quality, and incorporate (where appropriate) such strategies when implementing capital improvements.
- u In prioritizing of transportation projects, consider the results of the Congestion Management System (CMS) as well as other management systems which are developed and incorporated

Each community needs to reestablish for itself its own “vision” and, through the self-certification process, determine how it will contribute to meeting the goals of Metro Vision.

into the regional planning process.

- u Support the provision of incremental capacity enhancements at Denver International Airport in response to air-side travel demand.
- u Support actions to maintain regional general aviation capacity, with particular emphasis on support of compatible land uses in airport environs.

Objective 2:

Provide high-capital transportation facilities where development actions support the efficient use of those facilities.

- u Include in the Transportation Improvement Program projects which add regionally significant, general purpose, highway lane miles only if they support the objectives of the regional plan, and only if sufficient actions are taken to ensure that the integrity of the additional capacity will be maintained.
- u Give priority in the development of rapid transit facilities to corridors in which the affected local governments support transit development and take actions to promote transit-oriented development opportunities in the corridor and around rapid transit stations.
- u Give priority to projects in communities which establish zoning and development regulations that foster development patterns which improve network connectivity, shorten local trip paths, and improve transit access.

Objective 3:

Implement rapid transit and reconfigure the bus network to serve the rapid transit system.

- u Focus rapid transit service on key radial corridors to supplement existing roadway capacity and reduce the need for additional roadway capacity.
- u Include circumferential rapid transit alignments to serve suburb-to-suburb trips where ridership projections are competitive with radial corridors or when such alignments enhance the operation of the rapid transit system.
- u Provide bus feeder and/or circulator service to the rapid transit stations and park-n-Ride lots.
- u Eliminate competing express and regional bus service as rapid transit facilities are opened, and shift those resources to the service of other markets.

Objective 4:

Implement high service frequency principal bus corridors and alternative bus service structures to serve suburb-to-suburb travel and other markets not well served by the rapid transit system.

- u Designate north-south and east-west crosstown principal bus corridors.
- u Designate principal bus corridors in other high transit-demand markets.
- u Provide conventional fixed-route service to other markets in the more densely developed areas of the region.
- u Provide alternative transit service to serve markets in the less densely developed areas of the region, including small buses and demand-responsive service.
- u Provide multimodal transportation options to major destinations such as regional shopping centers, business districts, and airports.

Objective 5:

Enhance the attractiveness and convenience of non-motorized modes in serving non-recreational travel.

- u Provide secure bicycle-parking facilities at rapid transit stations and park-n-Ride lots.
- u Provide facilities and supporting policy to permit bicycles on rapid transit vehicles and buses.
- u Fund bicycle and pedestrian facilities primarily in urban and suburban areas.
- u Give implementation priority to projects which improve bicycle or pedestrian facility continuity and which link bicycle and pedestrian facilities to rapid transit stations or park-n-Ride lots.
- u Give implementation priority to highway and transit projects which have included bicycle and pedestrian facilities in their design.
- u Increase the implementation priority of transportation projects in areas which have instituted development and design actions encouraging bicycle and pedestrian use and access.

Objective 6:

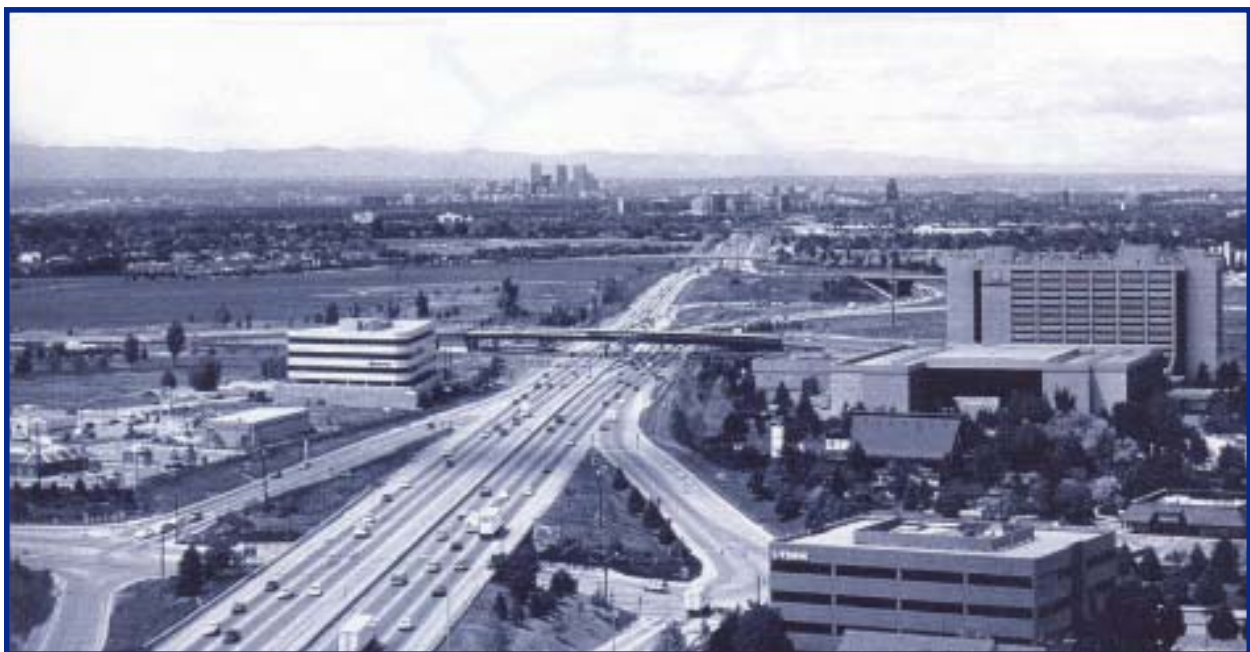
Improve the connection of the passenger and commercial transportation system within modes, between modes, and between the metropolitan area and other areas of the state.

- u Support projects which improve the interconnection of the transportation system, in particular by augmenting or replacing existing intermodal facilities as they approach their capacities or design life spans.
- u Include in the plan cost-effective segments of a Front Range commuter rail system.
- u Include in the plan cost-effective segments of an intercity rail system.
- u Support actions to facilitate goods movement, focusing on major highway and transit facilities which negatively affect goods flow in the region either through congestion, obstruction, physical layout or disconnection.
- u Include in the plan transportation connections between the region and major trip attractors throughout the state, focusing in particular on congested facilities serving such sites, and giving increased priority to projects with private-sector financial support.

Objective 7:

Seek increased funding to close the gap between the cost of needed facilities and the revenues from existing financing mechanisms.

- u Concentrate the expenditure of available federal funds on facilities of regional significance.
- u Encourage the provision of local and private-sector funds to serve local and private development access needs.
- u Seek an equitable distribution of federal and state transportation funds to the region.
- u Support efforts to increase transportation revenues necessary to meet the region's transportation needs.
- u Support, at the state and other levels, measures which would establish a closer link between the cost of provision of highway facilities and economic activity, which gives rise to those costs through encouraging the appropriate use of funding mechanisms such as impact fees and benefit assessment districts.
- u Pursue creation, at the state level, of a dedicated source of transit funds.
- u Actively seek federal discretionary funding for rapid transit facilities and other major capital projects.
- u Pursue flexible use of state Highway Users Trust Fund money.



Candidate regional centers

The identification and implementation of the various types of urban centers is another continuing effort. Local and regional commitments to center development will need to be clarified. Also, the Metro Vision rail network will be refined through the fiscally constrained transportation plan. Ideally, center commitments will help to direct timing and extension of transit into those communities where ridership will support it.

Identifying the various urban centers will involve several steps and will be an ongoing effort. It will require regional efforts and also local government activity. At each level, it will be important to provide opportunities for other interested parties, such as private developers and neighborhood representatives, to become involved in the process (Figure 19). The designation process is concerned with the largest urban centers: the CBD, Regional Centers, Town Centers and Employment/Mixed-Use Centers. The Metro Vision Policy Committee has prepared a process for regional recognition of locally planned urban centers, which was accepted by the Board of Directors on August 20, 1998. The process also calls for DRCOG to provide additional information about

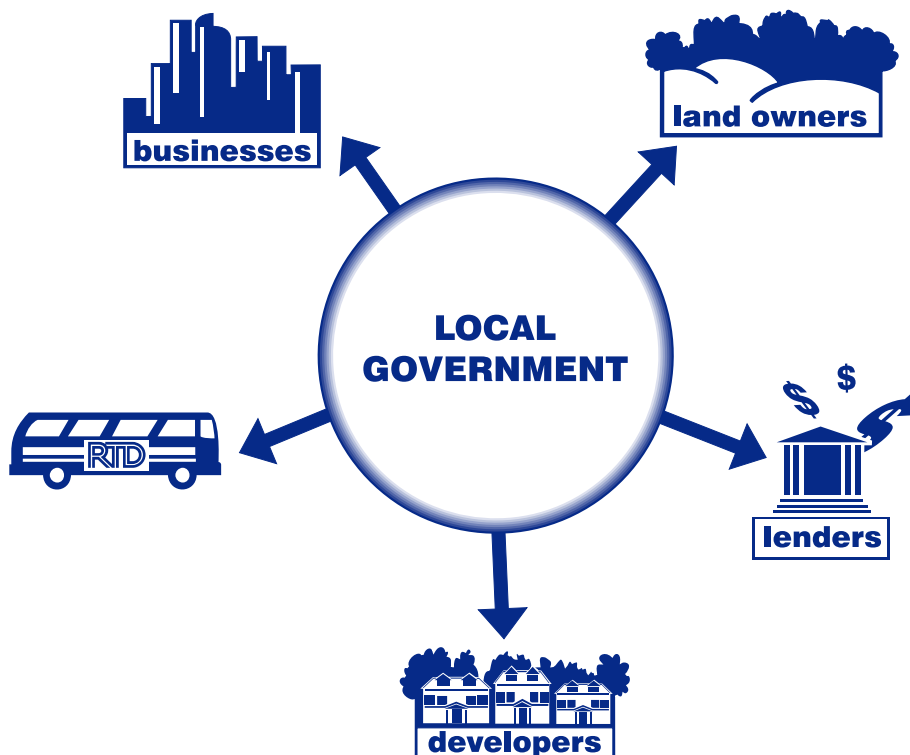
the center concept and assist communities in the center planning.

The CBD has been previously defined in DRCOG plans. Town Centers are being identified through work with the free-standing communities. Employment/Mixed-Use Centers will likely be identified through the Regional Center process. Candidates for Regional Center designation will be identified by local jurisdictions. They will be located on a transportation corridor and meet four of the six selection criteria.

To attract developers, local plans and actions must have consistent political leadership, a flexible review process and flexible, high-intensity, mixed-use zoning. Local governments would prepare Regional Center Development Plans which could include the following elements: the housing, employment, retail component mix; market studies; a multimodal transportation system, including streets, transit, and bikeway and pedestrian networks; design guidelines; and suggested implementation timeframe. The adoption of a center plan and concurrent investments are intended to attract developers with the financial means and ability to design quality spaces and mixed-use environments.

Figure 19

Local Government Activity Involving Partners to Develop a Successful Urban Center



Active participation is essential. Actions can range from active (preparing plans and working with developers) to catalytic (providing seed money for facilities) to comprehensive (forming a renewal authority or public corporation and actively coordinating funding).

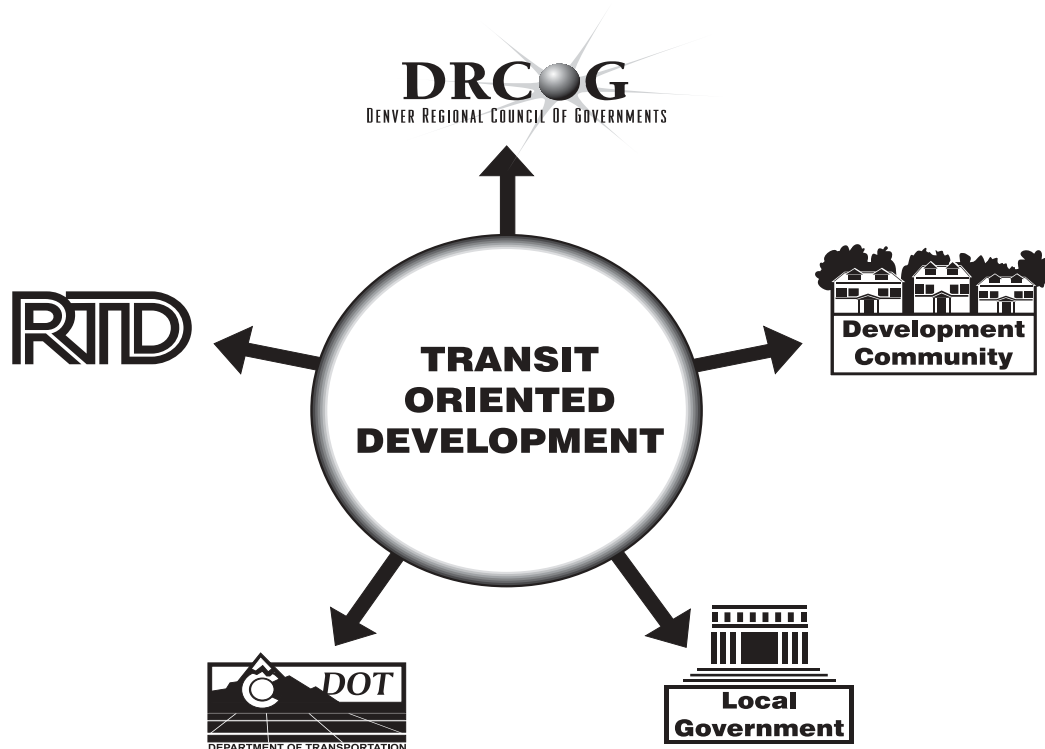
Regional Centers could be developed at the location of a traditional downtown or they could develop at a high-density employment location or a major retail location. However, they would not become a Regional Center until they developed the four critical factors: a transportation corridor; mixed-use, including retail, business, civic, and higher-density residential development; a high-density core with a pedestrian orientation; and overall densities and development levels supporting transit.

The region will be called upon to determine which candidate centers can actually be provided with the necessary transit lines by the year 2020, under the expected financial resources of the region. Since Regional Centers are needed to support transit lines, and transit lines are needed to fully support a regional scale center, planning for centers will, of necessity, be a collaborative exercise.

Most centers will also require additional regional roadway, bus system and other transportation support. DRCOG, RTD and the Colorado Department of Transportation will work with local governments to identify these needs and determine if they can be met by 2020 (Figure 20).

The number of candidate centers will change as commitments are made; the goal is for six to eight centers. Too many regional-size centers could theoretically absorb the majority of growth in the region, resulting in limited expansion into other parts of the region. In addition, it will be difficult to provide both the regional and local support necessary if too many centers are proposed. A corridor study team could be assembled to address the impact of multiple proposed centers on the circulation system, neighborhoods, and the environment as they are assembled along a given line.

Figure 20
**Urban Center Partners
 Needed to Achieve Successful Transit Development**



Adopting Resolution

DENVER REGIONAL COUNCIL OF GOVERNMENTS

STATE OF COLORADO

BOARD OF DIRECTORS

RESOLUTION NO. 2 , 1997

A RESOLUTION ADOPTING THE *METRO VISION 2020 PLAN* FOR THE DENVER REGION

WHEREAS, it is a function and duty of the Denver Regional Council of Governments, as a regional planning commission under the laws of the State of Colorado to make and adopt an advisory regional plan for the physical development of the territory within its jurisdiction; and

WHEREAS, the Denver Regional Council of Governments, as the Metropolitan Planning Organization, is responsible for the operation and maintenance of the continuing transportation planning process designed to prepare and adopt transportation plans and programs; and

WHEREAS, the transportation planning process within the Denver region is carried out by the Denver Regional Council of Governments through a cooperative agreement with the Regional Transportation District and the Colorado Department of Transportation; and

WHEREAS, the Denver Regional Council of Governments is the planning agency for areawide wastewater treatment planning for the Denver region in accordance with Section 208 of Title II of the Federal Water Pollution Control Act Amendments (Public Law 92-500) and the Colorado Water Quality Act; and

WHEREAS, the Denver Regional Council of Governments has prepared a draft *Metro Vision 2020 Plan* which integrates the Regional Development Plan, Regional Transportation Plan, and the Clean Water Plan elements of the Regional Master Plan into a single plan for the future through the year 2020 for the Denver region; and

WHEREAS, the draft *Metro Vision 2020 Plan* is the result of five years of work by the Board of Directors of the Denver Regional Council of Governments and several committees and task forces and incorporates the Board-accepted reports, "Vision Statement, Principles and Policies," "Metro Vision 2020 Framework" and "Steering Committee on Metro Vision Implementation Report to the Board of Directors;" and

WHEREAS, the *Metro Vision 2020 Plan* is a milestone in a continuing regional planning effort to define and achieve local government consensus on key plan issues; and

WHEREAS, the existing Board of Directors' policy for amending all plans, including the *Metro Vision 2020 Plan*, will be reviewed and acted upon by the Board of Directors with local government review and input prior to any amendment of the *Metro Vision 2020 Plan*; and

WHEREAS, the draft *Metro Vision 2020 Plan* has been distributed and reviewed with citizens, local governments and local, regional, state and federal agencies; and

WHEREAS, the Denver Regional Council of Governments has held a public hearing on January 15, 1997 on the draft *Metro Vision 2020 Plan*.

Adopting Resolution

A RESOLUTION ADOPTING THE METRO VISION 2020 PLAN FOR THE DENVER REGION

Resolution No. 2, 1997

Page 2

WHEREAS, the Board of Directors will use all available resources including professional staff efforts to support local governments in undertaking implementation actions throughout the region, to develop new ways to relate regional and local planning efforts and to involve a variety of public and private entities in the ongoing planning process.

NOW, THEREFORE, BE IT RESOLVED that pursuant to its *Articles of Association*, and the authority granted under Sections 30-28-106 of the Colorado Statutes, the Denver Regional Council of Governments hereby adopts as part of the regional master plan of the Denver region, the *Metro Vision 2020 Plan*, for that portion of DRCOG'S jurisdiction described therein. This plan amends and supersedes any Regional Master Plan previously adopted by DRCOG for the described area.

BE IT FURTHER RESOLVED that the Board of Directors of the Denver Regional Council of Governments recognizes that its member governments have adopted Master Plans and/or Comprehensive Plans which are the primary guides for the growth of their communities. The Board of Directors recognizes the need to achieve consistency between local plans and the *Metro Vision 2020 Plan*. Therefore, the Metro Vision Policy Committee is directed to work with the Regional Planning Advisory Committee to develop a voluntary consistency process for coordinating the *Metro Vision 2020 Plan* with local plans for consideration by the Board of Directors.

BE IT FURTHER RESOLVED that the Board of Directors of the Denver Regional Council of Governments recognizes that the *Metro Vision 2020 Plan* can only be implemented through its member governments and intends to pursue such implementation through the voluntary actions of its members, using the coordination process adopted by the Board of Directors, to incorporate flexibility into all aspects of the *Metro Vision 2020 Plan*, and to continue working collaboratively in order to make the *Metro Vision 2020 Plan*, an effective decisionmaking tool.

BE IT FURTHER RESOLVED that the Board of Directors recognizes that the *Metro Vision 2020 Plan* does not contain an Extent of Urban Development Map (Map) and directs the Metro Vision Policy Committee, with assistance from the Regional Planning Advisory Committee and staff, to develop and recommend the Map to the Board of Directors, as well as developing a process for altering said map in the future. The Map recommended by the Metro Vision Policy Committee shall be presented to member governments to solicit local government review, input and support prior to being recommended to the Board of Directors for action pursuant to the *Articles of Association*. This Map should be prepared and presented to the Board of Directors for consideration within the next six months as a proposed amendment to the *Metro Vision 2020 Plan*.

BE IT FURTHER RESOLVED that the *Metro Vision 2020 Plan* provides for the development of additional Transportation Improvement Program criteria as may be required to implement the *Metro Vision 2020 Plan's* core elements and policy objectives. The Board of Directors, therefore, directs that the Transportation Policy Committee, in coordination with the Metro Vision Policy Committee, and with the assistance of the Transportation Advisory

Adopting Resolution

A RESOLUTION ADOPTING THE *METRO VISION 2020 PLAN* FOR THE DENVER REGION

Resolution No. 2 , 1997

Page 3

Committee, recommend criteria to the Board of Directors and propose for Board consideration and action, such new criteria for use in the development of the 1999-2004 Transportation Improvement Program. The goal of such transportation criteria shall be to coordinate transportation projects which are supportive of the *Metro Vision 2020 Plan* and take into account the regional aspects of locally adopted transportation plans. The proposed new criteria shall be presented to member governments to solicit local government review, input and support prior to being recommended to the Board of Directors for action pursuant to the *Articles of Association*.

BE IT FURTHER RESOLVED that the Board of Directors recognizes that the *Metro Vision 2020 Plan* does not identify any specific locations for the various types of urban centers defined in the plan. Therefore, the Board directs the Metro Vision Policy Committee, with assistance from the Regional Planning Advisory Committee, to recommend a process to the Board of Directors to identify and add to the plan the anticipated urban centers and recommend criteria which analyzes the fiscal and service impacts to the region, and which identify the local and regional actions needed to support such centers. The process and criteria recommended by the Metro Vision Policy Committee shall be presented to member governments to solicit local government review, input and support prior to being recommended to the Board of Directors for action pursuant to the *Articles of Association*.

BE IT FURTHER RESOLVED that the Board of Directors recognizes that the process defined for integrating the *Clean Water Plan* with the *Metro Vision 2020 Plan* needs additional clarification. The *Clean Water Plan* component is scheduled for consideration by the Board of Directors later in 1997 and, therefore, the Board directs the Metro Vision Policy Committee, with the assistance of the Water Resources Management Advisory Committee to develop and recommend policies, which include but are not limited to, the extension of service to areas outside of the Urban Development Map to the Board of Directors. Until the Extent of Urban Development Map is adopted by the Board of Directors, the current DRCOG Clean Water Plan and policies shall remain in effect. The policies recommended by the Metro Vision Policy Committee shall be presented to the member governments to solicit local government review, input and support prior to being recommended to the Board of Directors for action pursuant to the *Articles of Association*.

BE IT FURTHER RESOLVED that the *Metro Vision 2020 Plan* will provide the basis for preparation of a regional open space plan and fiscally constrained regional transportation plan element of the Regional Master Plan. The fiscally constrained regional transportation plan element will be derived from the Balanced Multimodal Transportation System section contained in the *Metro Vision 2020 Plan* and will continue to consider locally adopted transportation plans.

BE IT FURTHER RESOLVED that the Chairman of the Denver Regional Council of Governments is hereby authorized to certify copies of this plan to all counties and municipalities lying wholly or partly in the Denver region.

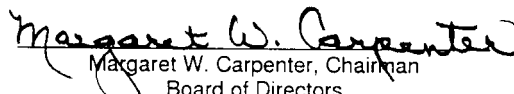
Adopting Resolution

A RESOLUTION ADOPTING THE *METRO VISION 2020 PLAN* FOR THE DENVER REGION

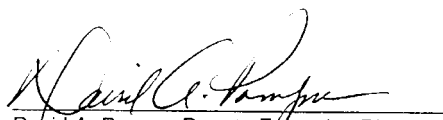
Resolution No. 2 , 1997

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RESOLVED, PASSED AND ADOPTED this 19th day of MARCH , 1997 at
Denver, Colorado.


Margaret W. Carpenter, Chairman
Board of Directors
Denver Regional Council of Governments

ATTEST:


David A. Pampu, Deputy Executive Director



Acknowledgments

Taking a regional vision, finding the words and terms to express it, and gaining acceptance of the vision is no easy task. That's what's been done with *Metro Vision 2020* and, as everyone who has been involved knows, developing *Metro Vision 2020* over the past five years has been a long, challenging and important process.

It would be an impossible task to list all of the individuals who have contributed to *Metro Vision 2020*, but the following groups were actively involved in preparing the plan: the Economic Forecasting Task Force, the Regional Development Plan Task Force, the Vision 2020 Task Force and the Metro Vision Steering Committee.

The DRCOG Board of Directors was assisted in reviewing the plan by the Regional Planning Advisory Committee, the Transportation Advisory Committee, the Water Resources Management Advisory Committee, the Transportation Committee and the Transportation Policy Committee.

The Denver Regional Council of Governments (DRCOG) would like to thank and acknowledge the many individuals and groups whose hard work, commitment and energy have helped move *Metro Vision 2020* forward.



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March 19, 1997

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