

2060 Comprehensive Plan Transportation

Can you get there from here? No other community feature influences land use decisions, city design, and function more than its transportation system. With as much as twenty-five percent of the City's land area devoted to the roadway system, it also represents both a significant community investment, expense, and design opportunity.

There are multiple factors to consider with a transportation system: is it functional in moving people, goods and services efficiently to, from and through the city? Is the system "complete", that is, do the streets accommodate all modes of travel: pedestrians, bicyclists and transit? Is the system comprehensive and continuous, providing good interconnectivity between neighborhoods, key destinations, and other forms of travel, such as rail, air and interstate systems? How well does the system interface with other area and regional transportation? Does it serve all residents, especially those who are transportation dependent such as youth, the elderly, and those persons with disabilities? Is it expedient without promoting speeding and, alternatively, effective at calming traffic without frustrating drivers? Is it futuristic in contemplation and accommodation of alternative travel options? Finally, but not the least of the considerations, is it attractively designed promoting a positive community image and pleasant travel experience?

Roadways serve multiple functions with safe movement ranking as a primary objective. With so much of the community's land area devoted to transportation, streets need to be functional and attractive. Entryways welcome visitors and convey community values and priorities. Major corridors advertise not only adjacent businesses and housing developments, but also the community's self-concept and quality of life standards. The creative design of a city's corridors, medians, traffic lights, street signage, intersections, bicycle lanes, and sidewalks is a powerful way to add significantly to a positive community image.

There's a thought
for keeping if I
could. It's got to
be the going, not
getting there,
that's good.
– Harry Chapin



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TRANSPORTATION CHAPTER
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INTERCONNECTIVITY

Cutting Edge

SAFE

Introduction & Perspective

Past

The community's early growth was heavily dependent upon rail transportation. Railroads offered a form of inexpensive travel and transportation for produce, livestock, and other materials and goods needed for living in this remote area. The first railroad line, built by the Denver Pacific Railway and Telegraph Company, was privately financed in 1868 by Gov. John Evans and several Denver businessmen. This line was built to encourage a resurgence of Denver and linked Cheyenne and Denver, with a stop in Greeley en route. The first train arrived in Denver in 1870. The automobile, or "skunk wagon" as it was called by Greeley residents, numbered 336 in Greeley in 1910. Greeley's first female doctor, Ella Mead, drove a 1906 two-cylinder Maxwell, the first electrically lighted car in Weld County. She used hair pins and tape to make repairs. By 1915, the hitching posts were gone from Downtown Greeley, as the automobile took the place of travel by horseback or horse-drawn wagon. The blacksmith shops and stables that were close to Downtown Greeley along 8th Avenue became auto dealerships and service stations and the area was known as "Motor Row".

The Denver and Greeley Railroad (DGR) began operation in 1910 as the only electric mass transit system, or street car system, in the community. A car barn fire in 1917 and the rise of automobiles led the DGR to close by 1922, making Greeley the last city in Colorado to get street cars and the first to abandon them. By 1926, there were seven private bus companies operating in town. The City's transit system, known as The Bus (now "**G.E.T.**" – Greeley-Evans Transit) began operation on January 1, 1960 using buses bought from the private bus companies.

Aviation traffic was first accommodated at the Greeley Municipal Airport, which opened in 1928 and was located at 8th Avenue and 25th Street. The second airport location, Crosier Field, was named for Clarence F. "Red" Crosier, who was instrumental in establishing the airport. He was killed during a D-Day invasion raid and the airport was renamed in 1944 in his honor, when it opened. The airport, now known as the Greeley-Weld County Airport, is on East 8th Street, east of U S Hwy 85.

The City's 1963 Comprehensive Plan report included an off-street parking plan. This plan was intended "to keep the crowded, nerve jangling metropolitan atmosphere to a minimum" by providing ample parking spaces "available for both shoppers and employees." The Plan also included a Street and Highway Plan and a Traffic Engineering Plan. In 1996, the *Greeley Comprehensive Transportation Plan* was adopted to address transportation needs out to 2015. In 2002, the City adopted the *2020 Greeley Comprehensive Transportation Plan*. This Plan included an overview of the existing transportation systems and proposed improvements, as well as transportation planning criteria and policies.

The circulation routes of the city, whatever the city's size, become its functional urban structure. If that structure breaks down, the city as a functioning whole ceases to exist.

– David Lewis



COMPREHENSIVE TRANSPORTATION PLAN - a long-range transportation plan for the City of Greeley to the year 2015, adopted in 1996.

G.E.T. –the Greeley-Evans Transit system.

Present

Transportation systems are necessary in order to move people, goods, and materials to and from and throughout the community. These systems include bicycle and pedestrian trails and pathways; a network of streets and roadways; rail and air systems; and mass transportation or transit systems. The level of traffic congestion, as well as the appearance and design of transportation systems, significantly affects community image. As these systems become more congested, the level of air pollution and driver frustration also increases and tends to result in an increased number of traffic accidents. Providing a variety of modes of travel reduces congestion. Walking, bicycling, car pooling, and mass transit, all are alternatives to driving.

Travel Behavior and Modes

The continued reliance on **automobiles** in Greeley and Northern Colorado has resulted in a related increase in the number of **vehicle miles traveled (VMT)**. The most recent Community Indicators Report notes that the Weld County per capita private vehicle use was 60.0% greater than in Adams, Boulder, and Larimer counties. Some of this increase is due to the urban growth patterns in southwest Weld County, as well as the rural communities of eastern Weld County, but it is also indicative of the increasing amount of commuting that is taking place in northern Colorado. The majority of trips being made in and around Greeley are in single occupancy vehicles (SOVs). Efforts have been made by the City of Greeley to manage transportation demand by using strategies such as ride sharing or car pooling, use of the bus system, use of flexible work schedules, **telecommuting**, and encouraging land use patterns such as transit-oriented development (TOD) and more dense development. These strategies are intended to help reduce congestion on the roadway system and also help reduce air pollution. While these kinds of transportation demand management (TDM) techniques rely heavily on educating and engaging the public, the volatile price of gasoline has probably done more to affect driver behavior than most TDM techniques combined.

The 2020 Transportation Plan included a Pedestrian and Pedestrian Facilities Plan. These plans focused on pedestrian districts, such as the Downtown and UNC; activity centers, such as shopping centers; school walking routes and parks; and transit corridors, or areas within ¼ mile of future and existing bus routes. A key point identified in these plans was the lack of continuity of sidewalks and pedestrian routes in the community. A new element of the Plan was a suggested “Level of Service” standard to address such things as accessibility, connectivity, safety and appeal of the pedestrian facilities.

Bicycling, once viewed as a recreational activity, is now moving to the forefront as an alternative mode of transportation for commuting to work or school, or for doing errands. Greeley’s first Bicycle Plan was adopted in 1979 and the plan addressed

TELECOMMUTING OR TELEWORKING – a work arrangement for performing work electronically, where employees work at a location other than the primary work location, such as at home or in a subordinate office.

VEHICLE MILES TRAVELED (VMT) - the total distance traveled by all motor vehicles.

bicycle access, safety, security, and environmental quality. An update to the plan was done in 1992 and also looked at creating a bicycle corridor between the Downtown and the campus of UNC. While these plans had great vision for the future of bicycling, the implementation needed did not always follow. As a result, many of the bicycle routes and trails are located along arterial roadways, which tends to diminish the quality of the biking experience and many routes and trails are not connected throughout the community.

The 1996 Comprehensive Transportation Plan included a Bicycle Plan, as did the most recently adopted 2020 Transportation Plan. Adopted in 2002, the 2020 Transportation Plan included a Bicycle Plan that identified the location of needed facilities and included new shared use paths and bicycle lanes; amenities to enhance connections to other travel modes, such as bus stops and pedestrian pathways; and striping standards, to increase driver awareness of cyclists at intersections.

Transportation System

There is a strong linkage between successful land use and transportation planning and access. The type of access allowed is determined by the road classification which controls the number of access points (driveways and street intersections) their spacing and turn lane design for a particular site will drive the feasibility of different land uses for that location. As traffic increases, particularly on arterial streets, access becomes even more limited to maintain traffic flows and safety levels. When development was proposed in the past, the emphasis on access and circulation was typically placed on the automobile and pedestrian while bicycle access and circulation were not given much consideration. In recent years, the importance of designing for pedestrians and bicyclists has become more of a priority, as increased numbers of residents look for alternative transportation.

Two major highways, US Hwy 34 and US Hwy 85, intersect at Greeley. They offer important routes to and through the community and have had a major affect on how the community has grown over time. Other key roadways in the area are SH 392 north of Greeley and SH 257 west of Greeley. Greeley is part of the regional transportation planning efforts of the **North Front Range Metropolitan Planning Organization (NFRMPO)**. This region includes 15 local governments that are working together to improve regional transportation and air quality. The 2035 Regional Transportation Plan identifies and prioritizes future roadway improvements needed to serve the region. A key goal of the NFRMPO has been to achieve a shift away from the use of single occupancy vehicles to other modes of transportation. Programs designed to achieve this shift include SMARTTrips, park and ride locations, and various roadway improvement programs. **SMARTTrips** provides educational information, as well as carpool and vanpool matching, employer transportation programs, and regional transit

North Front Range Metropolitan Planning Organization (NFRMPO)

- The North Front Range Metropolitan Planning Organization (NFRMPO) is an association of 15 local governments working together to improve regional transportation and air quality.

SMARTTrips - a program for developing travel demand management information and educational programs about transportation alternatives in Northern Colorado.

planning. Park and ride locations have been added along I-25 in several locations, including at US Hwy 34. Roadway improvements in the Greeley area that have or will be funded, in part, through the NFRMPO include improvements to US Hwy 34 and US Hwy 85, sidewalks on key City streets, and operating expenses and vehicle replacements for the transit system. These improvements, as well as future transportation planning efforts, must continue to rely on intergovernmental cooperation and coordination, in order to be successful. Another method of funding transportation improvements was recently proposed. The Regional Transportation Authority (RTA) involving Larimer and Weld Counties, as well as a number of Northern Colorado communities, was intended to address regional and local transportation issues and fund needed improvements. The RTA would have taxing powers to collect sales tax to use for roadway and transit improvements; however, broad support for the creation of an RTA did not exist.

Future street extensions and alignments have been identified on the 2020 Greeley Transportation Plan and include:

- Two Rivers Parkway, a key north/south roadway along the 83rd Avenue alignment, which would eventually tie into SR 392 in Windsor;
- “O” Street is extending westward, to eventually tie into Crossroads Boulevard in Windsor. This corridor would make an east/west connection between I-25 and US Hwy 85;
- An extension of 4th Street to intersect with SH 257 south of Windsor;
- An extension of 35th Avenue south across the Platte River and down US Hwy 85;
- An extension of 23rd Avenue north, using the 25th Avenue alignment north of the railroad tracks, through the area along the Cache la Poudre River, swinging back to the 23rd Avenue alignment at “O” Street;
- The extension of 16th Street west of 83rd Avenue to connect with 16th Street in Promontory.

In the past, right-of-way for future transportation corridors has not always been reserved. As a result, property acquisition costs are higher and in some cases, the land area for such a corridor has been developed and is no longer available. The preferred roadway alignments for these future corridors are shown on the **Land Use Guidance Map**, located in the Appendix of this document.

Another future transportation corridor that may impact Greeley is known as the “Super Slab Highway” (or Prairie Falcon Parkway Express). This highway is proposed as a high speed, private toll road 210 miles in length. The proposed route would intersect with I-25 north of Wellington, then head east of Nunn, where it would then turn southward. Its southward path would put it east of Eaton, Greeley, Kersey, the Denver metro area, Colorado Springs, and Pueblo. The toll road would intersect again with I-25 south of Pueblo. This route would include interchanges with I-76 and I-70

LAND USE GUIDANCE MAP – a map used to guide future land use planning decisions in Greeley, and including such things as employment and industrial uses; parklands and open space; commercial nodes; special uses; and multi-modal corridors.

and the corridor is also proposed to include utility and rail lines. At the present time, its future remains uncertain, as state legislation, funding, land acquisition, and design are necessary in order for the toll road to be constructed and there is a fairly significant amount of opposition to its construction.

The Greeley Comprehensive Transportation Plan projected that by 2020, nearly 400,000 daily trips would take residents out of the community to and from work, school, shopping, or for recreational and leisure activities. The largest number of these trips would be to Loveland, followed by Fort Collins and Windsor. Another 510,000 daily trips would be made by residents traveling within the community. These projections were based on travel demand modeling from the North Front Range Travel Demand Model. While the numbers may seem high, the average single-family home generates about ten trips daily to and from each home.

Transportation, Parking, and Environmental Stewardship

Most transportation-related activities have a direct effect on air quality. The level of air pollutants increases with idling motor vehicles and many drivers have longer trips to make to work, shopping, school and recreational activities. As a result, the effect on local environmental quality has not been positive. Weld County, along with Larimer County and seven other Denver metro area counties do not comply with EPA's **National Ambient Air Quality Standards** for ozone. Ozone comes from auto emissions, as well as from industrial plants, lawn mowers, and oil and gas drilling and storage operations. Noise levels from traffic also increase as traffic increases. Noise from trains and aircraft also add to the level of environmental impacts affecting the community.

Advancements are being made in the use of alternative forms of transportation, as well as alternative fuels. Automobiles are now available that use bio-diesel for fuel and electric vehicles are also in use, with new models forthcoming. Research is focused on other forms of fuel, including the use of hydrogen, natural gas, and ethanol. These fuels create less environmental impacts than fossil fuels; those that are renewable sources of energy also offer greater economic independence. Greater access to vehicles that use these and other alternative fuels as well as other sources of energy is expected over the next few years, as more models are produced and prices reduce over time.

Providing parking for automobiles is of even greater concern now. Providing "adequate" parking is important, but if too much convenient parking is available, it may serve as a disincentive for using other forms of transportation. The City's Development Code allows for parking reductions and shared parking for some land uses. The Code also limits non-residential parking areas to no more than 125% of the required amount of parking, but does allow this percentage to be exceeded with additional landscaping provided to offset the additional amount of hard-surfacing. A common example

For my part, I travel
not to go anywhere,
but to go. I travel
for travel's sake.
The great affair is
to move.
– Robert Lewis
Stevenson



**NATIONAL AMBIENT
AIR QUALITY
STANDARDS** –
standards administered
by the Federal
Environmental Protection
Agency (EPA) for
specified air pollutants,
including carbon
monoxide, ozone and
suspended particulates.

of areas with excess parking is with retail uses, where parking for the holiday shopping season is used as the basis for determining the number of spaces needed. During other times of the year, this parking often remains unused.

Roadway Design

In 2007, there were 388 miles of City streets and roadways and 39.1 miles of highways in Greeley. These areas account for nearly 25% of the land mass within the community and while streets and roadways are necessary to move people and goods from place to place and tie the city together, they also require substantial resources for maintenance. The roadway system also plays a significant role in the image of a community. The older areas of Greeley have a grid street system, which provides connections from one neighborhood to another – whether on foot or in an automobile. As the community grew westward and development trends changed, the grid street system was generally abandoned for a curvilinear street system with dead-end streets and cul-de-sacs. This type of street system makes it very difficult to travel from one neighborhood to another without driving. As a result, greater reliance has been placed on the automobile and the lack of a connected street system has tended to discourage biking and walking.

Street design has typically emphasized efficiency and safety and as a result, the visual appearance of streets has often not been given much consideration. Wide streets promote efficiency and safety, but also encourage driving at higher speeds. Design alternatives, such as reducing street widths, creating the perception of a narrower road using trees or detached sidewalks, or adding medians or boulevards all serve as traffic calming devices. In addition to slowing traffic down, these designs result in much more attractive streets that provide an improved level of comfort and safety for pedestrians. Traffic calming has been used with increasing frequency near schools and other areas where there are higher levels of pedestrian traffic. In addition to narrower streets, traffic calming can be accomplished through the use of speed humps or speed tables, **roundabouts**, **“necking down”** streets near intersections, or using **chicanes**, where the street alignments are offset from one another. The reopening of the Downtown malls on 8th and 9th Streets to vehicular traffic was done by narrowing or necking down the one-way street through these areas and designing in a slight offset in the alignment. Parking remains in some areas along the street, but the resulting effect has been to slow traffic through this area. While roundabouts have been used on a limited basis in Greeley to date, they are being used in other Northern Colorado communities and the results have generally been positive, once drivers have gained experience driving through them.

The number of traffic accidents in Greeley has been dropping since 2002, when a high of 3,917 accidents occurred. Of these accidents, 477 resulted in injuries – a high over the prior 18 years.

CHICANE – a traffic-calming technique where street or road alignments are offset from one another.

ROUNDABOUT – a road intersection where traffic enters a one-way flow around a central island, often known as a “modern roundabout”, to distinguish it from older, larger types known as traffic circles.

NECKING DOWN – the narrowing of a street or roadway typically done to reduce traffic speed.

By 2007, the total number of accidents had dropped to 2,808 and 157 resulted in injuries. The average number of fatalities has remained at about five per year since 1990 and 2007 saw three traffic-related deaths. In the past year, there has been a noticeable increase in the number of motorized scooters and bicycles on local streets and roadways in northern Colorado and the number of accidents involving these modes of travel is also increasing.

City street design standards include standards for local, collector, and arterial streets. All collector and arterial streets are designed to have on-street bike lanes. Local streets are used in residential and commercial/industrial areas. There is also a local low-volume and a major local street classification. Collector street designations are for minor and major collectors. Arterial streets include minor and major arterials, as well as parkway arterials. The parkway arterial is a **multi-modal corridor**, intended to offer more than one form of transportation. The City's Development Code includes performance design options for local streets, which allows a reduction in width in exchange for the construction and maintenance of detached sidewalks and trees adjacent to the street, or for a boulevard or median in the street. There has been support from the development industry for this design option. Similar design options don't yet exist for collector or arterial streets and as a result, these streets tend to have broader expanses of pavement, particularly at the intersection of two arterial streets.

Entryways into the community and major roadways to key community destinations are highly visible areas that play a key role in establishing the image of the community for the traveling public. The 1994 Greeley Entryway Master Plan identified a number of key interchanges and entryways and recommended design treatments for several of these areas. The City's citizen Entryway Committee further refined the areas deserving particular attention. Many of these important entryways have been improved over the past decade, adding greatly to Greeley's unique "sense of place" and attractiveness with design features such as landscaping, signage, and street furniture. The concept of entryways has also been used for establishing neighborhood identity in areas such as the Arlington neighborhood near the UNC campus, and is expected to be used elsewhere throughout the community. The University has also undertaken substantial improvements to enhance the approaches to the campus, further enhancing the image of the travel corridors in the area.

Level of Service

The level of service (LOS) of a street is a measurement of the quality of the traffic flow on that street. Like a grade card, LOS "A" is the highest measure of free-flowing traffic, while LOS "F" means the traffic flow has broken down and is failing. The City's 1996 Transportation Plan formally established level "C" as acceptable for transportation planning during peak hour travel and this performance level was continued with the 2020 Transportation

MULTI-MODAL CORRIDOR – a transportation corridor that offers different types or modes of transportation.

Plan. At off-peak times, streets and roadways are expected to operate at higher levels of service. Traffic impact studies are required with most development applications. These studies are based on vehicular traffic and in the past, have not taken into account pedestrian and bicycle activity. They are used to determine if the street system can handle the additional traffic that would come with a proposed development and if there are improvements needed as a result of the development.

The 2020 Transportation Plan also proposed that an **Adequate Public Facilities** Plan (APFP) be developed. An APFP is intended to address the timing of new development and the ability of the existing infrastructure to handle this development. Such a plan would mean that if development impacts exceeded the available capacity of the existing infrastructure, then the development would not be approved until either the needed improvements were made, or a plan for funding the improvements was in place.

Mass Transit

Greeley's bus system, GET (Greeley-Evans Transit), has been in operation since 1960, although it was originally named The Bus. There are six fixed-routes which provide connections to schools, shopping centers, the Greeley Mall, Downtown, recreation and senior centers, medical centers, and major employers. Transfer points are located in Downtown and at the South Greeley Transfer Center, which is at the Greeley Mall. There is also the Boomerang Route, which is a shuttle serving the UNC campus during the fall and spring semesters, Monday - Friday. Bus service generally runs from 5:30 a.m. – 7:30 p.m. depending on the route and day of the week. There is no service on Sundays or national holidays; only a demand response service is offered in the evenings and on Sundays. The new 34-Xpress route links Greeley to Loveland, along US Hwy 34. All buses are equipped with bicycle racks for transporting bicycles at no extra charge.

Para-transit service is also available as an origin-to-destination service for persons with disabilities, and for persons over the age of 60. Riders must qualify for this service by completing an application and having a disability as defined by the Americans with Disabilities Act (ADA). Riders can travel with service animals or with a personal care attendant if unable to travel alone.

Ridership has been increasing steadily in recent years, as shown in Table TR1 below. Para-transit has been increasing each year, with the exception of a drop in ridership in 2006 and again in 2008. Historical fixed-route ridership over the past 25 years showed that peak ridership of 560,875 persons occurred in 1983. The peak usage of para-transit over the past 25 years was in 2005 and this number is generally expected to grow, as the number of persons with disabilities and an aging population also increases.

ADEQUATE PUBLIC FACILITIES – the public facilities and services needed to maintain the adopted level or service standards.

Table TR1 – The Bus/GET Operating History, 2000 - 2007		
Year	Fixed Route Total Passengers	Para-transit Total Passengers
2000	393,769	23,103
2001	471,921	26,247
2002	398,841	27,931
2003	410,299	28,657
2004	411,898	31,192
2005	435,014	33,483
2006	453,699	32,077
2007	471,156	33,331
2008	520,921	28,403

Source: City of Greeley Public Works Department

The 2020 Transportation Plan identified steps to take to increase ridership on what was known then as The Bus (now G.E.T). These steps included such things as increasing the frequency and hours of operation on key routes (16th Street, 28th Avenue, 10th Street, and 4th Street); acquiring more buses; integrating transit with other transportation modes; and increasing the transit system coverage. Para-transit improvements included improving the coordination between the various providers, and implementing a vehicle locator system.

Transit systems typically need a residential net density of between eight and nine units per acre, or about 15,000 persons per square mile, to run a system efficiently. In the case of transit, “efficiency” means that routes operate on frequencies of one-half hour or less. GET is currently operated on one-hour frequencies or “headways”. While transit can operate at this frequency, it is not very efficient for riders who may not be willing or able to wait an hour for the next bus. The average gross developed density city-wide in Greeley is at 5.8 dwelling units per acre. If the undeveloped areas are factored in, gross density city-wide drops to 2.4 dwelling units per acre.

In addition to having efficient bus service, the design of developments with residential, commercial and employment uses also must be oriented to transit to encourage, rather than discourage its use. Transit-oriented development (TOD) is a mixed-use residential or commercial area that is designed to maximize access to public transportation. This form of development incorporates features to encourage transit ridership and typically has a center with a bus or rail station, surrounded by fairly high-density development. The density spreading outward from the development is usually lower, farther away from the center. Greeley does not currently have any transit-oriented development, but with transportation costs increasing, as well as interest in higher density development, it is a logical form of development to promote and encourage.

Air Transportation

Air service is provided for the Greeley area by the Greeley-Weld County Airport, which is located east of Downtown Greeley, with access from East 8th Street (SH 263). It is owned and operated by the Greeley-Weld County Airport Authority, which includes members of the Greeley City Council and the Weld County Board of Commissioners in its membership. Future plans are to widen 8th Street/SH 263 to four lanes, which will provide better access to the airport. The airport is expected to have increased air traffic and to play an important role locally as a major employer. The airport has a 10,000 foot runway which is capable of handling jet traffic from the FAA's Group III Airplane Design, which includes 727 and 737 jets. A new terminal and the 10,000 foot runway, which was the second runway at the airport, were opened in 2000. There is also a military installation at the southwest corner of the airport.

The airport has adopted an Airport Master Plan that details additional facilities and improvements planner for the airport. The first Master Plan was completed in 1978 and has since been updated in 1984 and in 1993. The airport property was annexed into Greeley in 2005 and zoned I-M (Industrial Medium Intensity). There is land area available at the airport for the additional development of hangars and an additional 40 acres of land to the east is expected to be available for aeronautical development in the near future. The City of Greeley has also adopted the Airport Master Plan.

Rail Transportation

The Union Pacific Railroad and the Great Western Railroad operate freight trains through Greeley. Union Pacific ended passenger rail service in the late 1990s. The Union Pacific Train Depot was renovated in 1994 and now serves as the office for the Greeley Chamber of Commerce/Visitors Bureau. In the summertime, the parking area around the depot is home to the Farmers' Market.

Abandoned railroad lines provide good locations for future bicycle and pedestrian trails. The Rails-to-Trails program has been used in many communities to convert abandoned rail lines to use as bike and pedestrian trails. Commuter rail service throughout Northern Colorado and connecting to the Denver area would provide a valuable alternative mode of transportation for many commuters. The Union Pacific line roughly parallels US Hwy 85 into the Denver area and could offer a viable route for commuter rail. The Great Western Railroad is an industrial use rail and runs between Loveland, Fort Collins, Windsor and Greeley. Currently, Great Western averages one train weekly into Greeley, but this is likely to increase as a result of adjacent new industrial growth near the Greeley/Windsor growth boundary. This line runs diagonally into Greeley, intersecting with the Union Pacific main line near 3rd Street and 8th Avenue.

The City and Weld County are jointly working on the North Greeley Industrial Rail Corridor Sub-Area Study. This study is intended to identify the status of a number of conditions in the area, including transportation, demographic, physical, structural, site, land use, social, and economic conditions. This information will then be used to develop future plans for the coordination of infrastructure and land use in such a way that will promote the economic development of the area. This study relies on the continued intergovernmental cooperation that has been established between the City of Greeley and Weld County.

Patterns

The following key trends have been identified relative to transportation:

- Reliance on the single-occupancy vehicle is still significant and if continued, will lead to increased congestion and increased levels of air pollution
- Connectivity does not occur in bicycle and pedestrian routes in many areas of the community
- Greeley will continue to play a key role in regional transportation issues and solutions and has an opportunity to place greater emphasis on alternative modes of transportation and transportation demand management strategies
- Current street design standards focus on safety and function, with less consideration given to bicyclists and pedestrians, or to the aesthetic appearance of streets
- As the community has grown at fairly low density levels, the resulting residential densities have not been high enough to support an efficient transit system
- Establishing east/west arterial connection to regional destinations will continue

Progress

Since the adoption of the 2020 Comprehensive Master Plan, many of the action steps of the plan have been accomplished, or are in process. The following “report card” summarizes some of the key accomplishments. The full Transportation Report Card can be found in the Appendix to this document.

- ✓ Amendments have been made to the City’s Development Code in parking requirements, allowing flexibility through such methods as shared parking and limiting the amount of parking provided for non-residential uses
- ✓ The Development Code encourages and promotes mixed-use development as a way of reducing vehicle miles traveled
- ✓ The City’s 2020 Transportation Plan was adopted in 2002 and addresses the full range of transportation systems: streets and roadways, transit, bicycles, pedestrians, rail and air transportation
- ✓ The Greeley-Weld County Airport was annexed and a new terminal facility constructed

Potential

The following themes describe transportation characteristics as part of a desired 2060 Greeley:

- Intreconnectivity
- Cutting Edge
- Safe
- Eco-friendly
- Fully accessible
- Progressive
- Complete streets
- Attractive
- Well-designed
- Easy to get around
- Affordable mass transit
- Prioritize pedestrians
- Multi-modal
- Smart
- Transportation testing site for air travel
- Well maintained
- Continuum of transportation systems & options
- Progressive
- Attractive
- Regional interface
- Be the destination
- Pleasant travel experience
- Trains, planes & everything in between
- Travel reinvented

Promise

An effective, attractive, complete and interconnected community transportation system

The only way to solve the traffic problems of the country is to pass a law that only paid-for cars are allowed to be on the highway. That would make traffic so scarce, we could use the boulevards for children's playgrounds.

– Will Rogers



II.
TRANSPORTATION CHAPTER
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Easy to Get Around
Affordable mass transit

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Prioritize pedestrians

SMART

Multi-modal

◆ TRANSPORTATION ◆

GOAL: Optimize the safe, efficient, and pleasing movement of people, goods and services into and throughout the community through a comprehensive, attractively designed transportation system that is locally and regionally interconnected

OBJECTIVES

TR1 TRAVEL BEHAVIOR AND MODES

A Provide a transportation system that is safe, efficient and integrated

- 1 Periodically update the adopted **Transportation Master Plan** to incorporate the goals and objectives of this 2060 Comprehensive Plan
- 2 Design, construct, and maintain a transportation system which includes all modes of travel which:
 - Meets the unique needs of each mode of travel
 - Integrates all modes of travel into a comprehensive
 - transportation system
 - Ensures that the system provides efficient links between each mode of travel
 - Provides networks for pedestrians and bicyclists which are equal in priority, design and construction to the system provided to motorists
 - Anticipates future modes of travel by:
 - Researching trends and emerging forms of travel and related support facilities
 - Anticipating how emerging transportation systems might be accommodated such as with the reservation of rights-of-way
- 3 Prioritize pedestrian movements in the design and construction of all public and private development projects (see also CD1D3, CD2A5, and PS2A13)
 - a Install detached sidewalks on both sides of arterial and collector streets to comfortably separate pedestrians from motorists, lessen street noise and the potential for threats or impacts to walkers from vehicles traveling close by at higher speeds. Sidewalks in these areas should be ample in width to support a mix of user types
 - b Consider how best to accommodate pedestrians with disabilities, with care given to remove obstacles and barriers to aid their safe and efficient movement

TRANSPORTATION MASTER PLAN – a long-range transportation plan for the City of Greeley to the year 2015, adopted in 1996.

Be the destination
Pleasant travel experience

- c Retain standards that promote the installation of detached sidewalks in residential areas to induce walking and add safety and ease of movement on sidewalks of a width ample to support a mix of user types
 - d Within industrial settings assure that safe and sufficient pedestrian access is provided via sidewalks where employees are likely to access an area or to provide a link between other logical destinations
 - e Provide sidewalks in areas leading up to and across railroad tracks
 - f Design sidewalks to provide convenient and logical connections to and through a development as well as to the **perimeter public sidewalk**
 - g Pay particular attention to the design of sidewalks in high traffic commercial areas with large parking areas to assure that pedestrians have designated and, where possible and logical, separated access to reach the business areas
- 4 Establish sidewalk design standards which provide safe, attractive and effective pedestrian corridor travel to include, but not be limited to, the following design features (see also CD1D3, CD2A5, PS2A11, and TR4D):
- Detached sidewalks adjacent to arterial and collector streets
 - Adequate width for side-by-side pedestrian travel and opposing pedestrian traffic
 - Special pedestrian identification at intersections and crosswalks, including within parking lots
 - Adequate lighting for safe travel
 - Rest points or refuge islands in street **medians** to allow phased crossing of collector and arterial streets
 - Street crossing sequences and pedestrian signals associated with traffic lights timed to encourage safe pedestrian crossing
 - Amenities for pedestrians, such as benches, kiosks, call boxes, wayfinding signage, and similar public furniture installed where appropriate and practical to promote walking
 - Shortcuts and alternatives for pedestrians to avoid travel immediately next to high-volume streets
- 5 Promote pedestrian and bicycle travel in school routing plans (see also ED1A5g)

MEDIAN – the central area between travel lanes of streets and highways, which may be covered with landscape materials, hard-surfaced, or a combination of materials.

PERIMETER SIDEWALKS – sidewalks around the edge of an area.

- a Work with area schools to provide parents and students with safe and appealing school routes
 - b Work with community partners to explore design features or incentives to induce greater use of pedestrian or bicycle travel to school
- 6 Consistently enforce traffic regulations which favor and protect pedestrians and bicyclists by addressing driver behaviors which threaten the safety of those traveling on foot or bicycle
- 7 Provide detached **bicycle paths** on major collectors and all arterial streets to separate non-commuter bicyclists from high-speed, high-volume traffic wherever possible
- 8 Encourage bicycle travel and an effective bikeway system using standards for on-street bike lane widths which incorporate practical use and multi-modal expectations. Develop the standards with input from local commuter bicyclists and other users
- 9 Promote street design configurations which foster **interconnectivity** between subdivisions and commercial development in order to move all modes of traffic in direct routes and limit extraneous travel on collector and arterial streets (see also EN3A4b)
- a Require proposed residential developments to demonstrate the ability of residents to get to and from their subdivision via at least three different arterial and major collector roadways either directly or by access through other adjacent subdivisions or developments
 - b Discourage the use of dead-end streets and consider alternatives to the extensive use of cul-de-sacs in development of residential areas
 - i Explore the use of a “**coving**” design to limit intersections and promote safe travel within subdivisions
 - ii Consider the utilization of roundabouts (traffic circles) to manage traffic flow and speed
- 10 Explore the use of abandoned railroad rights-of-way, drainage ways and canals for opportunities to serve **alternative modes** of transportation (see also

PR2A1,

PR2A3 and TR7B3)

ALTERNATIVE MODE – a different method or type of transportation than is typically used.

BIKE LANE – an area on a street that is striped and identified as an area for bicyclists, which is generally located between the travel lane and curb.

BIKE PATH – a path for bicyclists that is separated from or located off-street.

COVING – subdivision design characterized by non-uniform lot shapes and home placement, and when combined with winding roads, results in increased lot area, fewer intersections, and decreased road area.

INTERCONNECTIVITY OR CONNECTIVITY – the ability to be linked, such as through transportation systems, between areas.

B Create a transportation network that is compatible with the natural, social, and economic environment

- 1 Endeavor to fully implement a **Transportation Demand Management (TDM)** program that provides incentives which encourage alternatives to single-occupancy vehicle trips (see also ED3A2e and TR3Aii). Establish and promote TDM programs at:
 - Employment centers;
 - Educational facilities;
 - Recreational facilities;
 - Large residential complexes or dense residential communities; and,
 - Large retail and community commercial centers
- 2 Ensure that all proposed development projects demonstrate the ability to incorporate pedestrian, public transportation, and bicycling travel into site planning and development (see also CD1D3 and CD2A5)
- 3 Employ best practices to improve programs and management strategies to prevent and reduce contamination of street runoff and storm water (see also EN2B1a, PR2C1a, and TR3A1)
- 4 Coordinate with county, regional, state, and federal agencies concerning air quality maintenance programs and compliance with established and desired standards (see also EN3A1)
- 5 Work with county, regional, and state agencies to identify and employ methods to minimize and mitigate noise impacts that generate from adjacent existing and planned traffic corridors and transit operations and capital improvements (see also EN3B)
 - a Monitor traffic-related noise levels throughout the community to establish baseline standards
 - b Evaluate noise ‘hot spots’ to ascertain mitigation or management alternatives to address noise pollution from transportation activity

C Design and operate a transportation system that optimizes choices and connections between all modes of travel

- 1 Require all new development and redevelopment to incorporate transit-oriented design into projects



TRANSPORTATION DEMAND MANAGEMENT (TDM)

– strategies aimed at reducing the number of vehicular trips, shortening trip lengths and changing the timing trips from peak hours.

(see also TR5A5)

- a Develop a users' manual of locally-approved practices which guide development in transit-oriented design
- b Explore development incentives for those projects which promote transportation efficiency and transit opportunity through density and design elements (see also LU1C3 and TR5A3)

D Research, anticipate and integrate emerging and futuristic forms of travel and transportation technologies

TR2 TRANSPORTATION AND LAND USE

A Ensure that land use and transportation decisions, strategies and investments are balanced, coordinated and complementary in achieving overall community development goals

- 1 Support land use proposals which balance and distribute transportation impacts to maintain and improve current levels of mobility
 - a Encourage a mix of complementary neighborhood businesses, services, and residential uses to foster short trips easily made by walking or bicycling and to spread traffic demand times (see also LU1C3)

B Create a transportation system that supports planned land uses and facilitates the movement of people, goods and services in an effective and desirable manner

- 1 Develop a transportation system which supports planned land uses (see also LU1C3)
 - a Monitor vehicle trips by land use types on a periodic basis in order to measure the accuracy of transportation demand expectations (e.g. daily and peak hour activity)
 - b Revise, as appropriate, traffic design standards to match actual experience with various land use types
- 2 Develop a strategy to achieve and enhance the transportation system to effectively serve people with disabilities (see also HS3A1a)
- 3 Maintain a traffic system that encourages the use of arterial streets for cross-town and regional traffic, the use of collector streets to channel traffic from the neighborhoods to arterial streets, and discourages

- the use of local streets for through traffic
 - a Continue the pattern of locating arterial streets on or near section lines to the degree that area topographical and environmental impacts can also be successfully accommodated
 - b Continue the pattern of locating collector streets at the approximate mid point between arterial roads to move traffic internal to the area out to arterial roads. Collector streets should not be designed as long, wide, straight streets, but developed in such a way to add interest for the traveler, safety for multiple user types, and discourage speed and pass-through traffic
 - c Develop standards which control volume and speed on local streets through pro-active **traffic calming** strategies
 - d Develop and enforce an **Access Control Plan** which supports efficient travel on major roadways through a combination of access management and the number and spacing of driveways and intersections. Such an access control plan should support the efficient, functional and attractive development of land through compatible design measures
 - e Reduce the number of closely-spaced driveways along arterials through shared access and re-location where feasible

- 4 Promote the orderly movement of goods and services throughout the community in order to support economic vitality and efficiency
 - a Establish and enforce appropriate truck routes to and through the city
 - b Develop and enforce a route to and through the city for transport of **hazardous materials** (see also EN5F2, PS2A4a and TR4B2)
 - c Undertake a study to develop a Rail Master Plan which evaluates the safe, compatible and effective use of rail to, from and through the City
 - i Relate the rail objectives to the goals of the adopted Master Transportation Plan
 - d Support the development of the **Greeley-Weld County Airport** for air freight transportation (see also TR6)
 - e Support and expand ongoing programs related to street maintenance
 - i Actively explore the development of a specifically dedicated source of funding to provide a consistent and equitable means of supporting essential street maintenance throughout the community

ACCESS CONTROL PLAN – a plan that identifies the location and type of access for properties along a state or federal highway.

GREELEY-WELD COUNTY AIRPORT – the airport serving the Greeley and Weld County area, owned and operated by the Greeley-Weld County Airport Authority.

HAZARDOUS MATERIALS/WASTE – shall mean any substance or materials that by reason of their toxic, caustic, corrosive, abrasive, or otherwise injurious properties may be detrimental or deleterious to the health of any person handling or otherwise coming into contact with such material or substance, or which may be detrimental to the natural environment and/or wildlife inhabiting the natural environment.

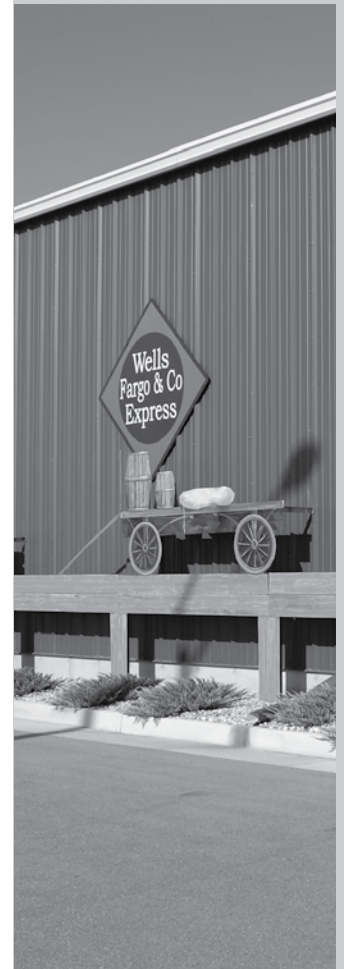
TRAFFIC CALMING – methods and techniques used to slow or “calm” traffic on streets and roadways.

- 5 Review and update City standards for emergency response times and routes related to roadway, air and rail traffic management (see also PS2A10)
 - a Provide regular communication to the community concerning emergency snow removal practices and standards, including active and consistent enforcement
 - b Review and update the City's emergency preparedness standards as they relate to surface and air transportation during other crisis periods

- 6 Work with other transportation agencies to develop and/or update area specific plans with unique traffic patterns and impacts, such as:
 - Downtown
 - UNC
 - Aims
 - US Hwy 85 business and bypass routes
 - S. 23rd Avenue corridor
 - 16th Street hospital corridor
 - US 34 bypass and business routes
 - E.8th Street Corridor (SH 263)
 - Major employment centers
 - Promote unique linkages to key activity centers and other areas of the community and which should be promoted, such as (see also ED1A6c):
 - Aims & UNC
 - Area high school travel to Aims
 - Large employers and high density residential areas
 - Major medical facilities and institutional or senior residential facilities
 - UNC & Downtown

- 8 Forecast locations for emerging major roadways to serve the community and regional destinations; study route alternatives, roadway design, non-vehicular access and movement
 - a Commence negotiations with landowners to reserve adequate rights-of-way to assure that orderly and effective development of the roadways is achieved. Immediate attention needs to be focused on the following roadways:
 - Two rivers Parkway (83rd Avenue)
 - North City east/west bypass routes (SH392 and also "O" Street
 - 4th Street extension from 83rd Avenue to SH 257

- 9 Coordinate with the public and private sectors n



roadway construction and maintenance

- a Review and revise, as appropriate, subdivision regulations relative to roadway development responsibilities
 - i Consider an adjustment to street development standards to require all developers to construct the equivalent of a local street to serve their site and adjust street development fees to pay for the expansion of collector and arterial streets to their ultimate design size
 - ii Evaluate the merits of further developing a fee that charges a development with a surcharge commensurate with the impact their development would have on the arterial and collector street system

C Develop a sustainable transportation system

- 1 Evaluate options related to street development standards and fees that credit and encourage greater infill development, thus promoting more efficient transportation system usage (see also EC1Ai and RE1B4)
- 2 In development of all street systems and networks, balance the size and location of the roadway and its ability to sustain growth with the objective of ‘right-sizing’ roads to promote non-motorized forms of travel and to eliminate unnecessary roadway width construction, perpetual maintenance and impact upon the environment from storm run-off, snow removal management, and air quality impacts

D Establish comprehensive parking standards and systems that are functional and complement environmental and design objectives of this 2060 Comprehensive Plan

- 1 Review Development Code standards to evaluate and update parking ratios for various land uses to ensure that excessive parking areas are not created (see also LU1B1)
- 2 Promote shared parking arrangements and co-location of complementary land uses that can effectively share parking facilities (see also LU5B3)
- 3 Consider Alternative Compliance in the Redevelopment District that would provide credit for on-street parking spaces to meet land use needs

- 4 Make effective use of on-stree space for overflow and guest parking while avoiding impacts to neighborhood congestion from such use of streets
- 5 Formulate Alternative Compliance credits for parking where practical and realistic pedestrian, transit, bicycle and other alternative travel can be incorporated into the design and function of a development to reduce on-site parking needs
- 6 Consider the use of parking garages to make more effective use of land and to reduce the parking “footprint” of a site for land uses associated with large activity areas, such as Downtown, the hospital, campus parking or other similar activity nodes
- 7 Reduce ambient air temperature caused by the quantity of asphalt used in street and parking lot design in order to limit environmental impacts from urban heat islands (see also CD2C2 and EN3D1)
 - a Collect data from national studies; analyze and employ this information to develop pro-active standards to minimize urban heat island effects
 - b Adopt standards and methods of replacing traditional asphalt for streets with proven alternatives such as concrete or **hybrid** materials to reduce thermal impact
 - c Retain standards which require effective and attractive parking lot design with tree plantings to break up hot spots and discourage speeding and erratic driving behaviors
- 8 Develop parking criteria which require adequate parking accommodation for patrons to maintain the economic viability of a business while discouraging the use of single-occupant vehicles
- 9 Establish minimum short- and long-term off-street parking requirements for new development which incorporates special vehicles and purposes including areas for those with disabilities, car pools, van pools, and bicycles
- 10 Initiate studies where chronic parking issues exist to review options to accommodate visitors in balance with adjacent land uses

HYBRID - the combination of two or more different things, aimed at achieving a particular objective, and in the case of an automobile, a mixture of power or fuel sources.

TR3 TRANSPORTATION AND ENVIRONMENTAL STEWARDSHIP

A Promote transportation practices and improvements that achieve a high quality of life through sensitive environmental compatibility

- 1 Minimize the use of non-biodegradable chemicals for snow removal in order to lessen the impact to storm water drainage systems (see also EN2B1a and TR2B3)
- 2 Reduce transportation noise and related impacts (see also EN3B1d and EN3B2c)
 - a Rail noise
 - i Fund improvements at railroad/street crossings, such as extended safety barrier arms used to prevent traffic from maneuvering around track barriers
 - ii Work with rail companies to establish “Quiet Zones” along in-city rail lines to allow a reduction in train whistle warnings (see also TR7B4b)
 - b Road noise
 - i Consider options in residential areas for sound wall attenuation to limit adjacent highway noise
 - ii Prohibit the use of **jake brakes** on roads adjacent to predominately residential areas
 - iii Work with the Colorado Department of Transportation to minimize road noise through the use of roadway materials, scoring of drainage cuts, use of landscaping and related measures
 - iv Work with site design of residential areas to configure subdivisions and housing to create buffers from adjacent street noise and commercial uses
 - c Commercial areas
 - i Work with commercial centers to limit routine parking lot sweeping and trash removal to times when it is in least conflict with adjacent residential uses
 - ii Utilize site design standards to minimize and buffer residential areas from delivery noises, such as is related to loading dock areas
 - d Disallow residential uses in the **Airport Overlay Zone** in which sound contours suggest noise impacts (see also EN3B1c)
- 3 When transportation facilities are located in areas of ecological significance, develop over- or underpass opportunities for the uninterrupted and safe movement of wildlife, as well as to minimize the

AIRPORT ZONING OVERLAY DISTRICT – those lands depicted within the airport development area as contained within the Greeley-Weld County Airport Master Plan.

JAKE BRAKES – a device for slowing or stopping heavy vehicles, usually trucks, manufactured by Jacobs Vehicle Systems, Inc., which creates a distinctive noise as it slows the vehicle.

hazards of vehicle/wildlife collisions

B Incorporate energy efficiency into transportation systems and facilities

- 1 Minimize air pollution related to transportation activities by the following measures (see also EN3A2):
 - Promote the use of alternative transportation modes
 - Reduce automobile traffic
 - Support TDM practices (see TR1B)
 - Maintain acceptable traffic flow
 - Review and adjust traffic light synchronization on a regular basis to reduce idling time at traffic lights
 - Promote the use of alternative fuels and energy efficient vehicles (see also EN3A3)
 - Promote car maintenance programs
 - Increase citizen awareness through community education related of the benefits of reduced vehicular use
 - Support the efforts of community groups which provide transportation choices
 - Investigate alternative designs of drive-in and drive-through facilities that minimize the time cars idle
 - Improve all streets, alleys and parking lots to reduce **fugitive dust** associated with automobile use
 - Join with northern Colorado communities and the North Front Range **Metropolitan Planning Organization (MPO)** to reduce the number of single-occupant vehicles in the region to reduce congestion and improve air quality to conform to federal standards
 - Design and implement commuter programs
 - Promote viable alternative transportation options

FUGITIVE DUST – dust particles suspended in the air by wind action and human activities.

METROPOLITAN PLANNING ORGANIZATION (MPO) – a regional transportation planning group consisting of the municipal areas within Larimer and Weld counties.

TR4 ROADWAY DESIGN

A Design roads and other transportation facilities to contribute to a safe, positive, and attractive visual image and community character

- 1 Invite adjacent land owners to participate in the design of major street and transportation improvements, such as roadway expansion or redesign, bridge replacement, traffic calming or similar features to assure the improvements reflect important neighborhood considerations

GREELEY ENTRYWAY MASTER PLAN – a plan for improving the appearance of key entryways into Greeley, including landscaping, signage and street furniture design features, adopted in 1994.

- 2 Use the adopted **Entryway Master Plan** to provide guidance and design themes for the treatment of major entryways and travel corridors to and throughout the city. Establish a strategy for the realistic phasing of defined improvements and, where necessary immediately secure intergovernmental agreements to reserve the use of the right-of-way areas of such development (see also CD3A1a, CD3A4, EC4A5a, and PR2B8)
 - a Update the Entryway Master Plan as soon as practical to provide additional guidance, visual appeal, and consistency in treatment of the community entryways and major street corridors
 - i As appropriate, undertake specific corridor studies to address the needs and opportunities associated with particular areas; incorporate those studies by reference into the Entryway Master Plan
- 3 Locate commercial driveways to promote safe movement of vehicles and reduce congestion and accidents

B Accommodate transportation needs associated with emergency response and the movement of hazardous materials throughout the community

- 1 Consider the movements of emergency vehicles with the design of new subdivisions, commercial and industrial areas
 - a Include emergency responders when considering traffic calming installations, traffic circles and roundabouts, and requests for Alternative Compliance in street and parking designs
- 2 When considering recreational, commercial and industrial land uses, evaluate the routes that will be necessary to move hazardous materials to and from such sites (see also EN5F2d, PS2A4a and TR2B4b)

C Incorporate accommodations within the entire transportation system for persons with disabilities

- 1 Include members from the disabled community to advise and critique transportation improvements and systems to assure their mobility needs are reasonably accommodated

**MONOCULTURE
BLIGHT** – disease and/
or pests that affect the
same species of plant
materials.

D Enhance community appeal by providing safe, pleasing, and efficient travel corridors (see also CD3A1a, EN7C, PR2B8, PR2B2d, and TR4A2)

- 1 Review and update the City’s Street Median Design Standards, including a financial feasibility analysis to further enhance roadway attractiveness; provide visual relief to the traveling public; and, improve safety, traffic progression, and capacity
 - a Median treatments should be incorporated into initial street design and development to facilitate driver patterns, safety, control access to development close to major intersections and increase roadway capacity
 - b Add pedestrian refuge areas to medians on major collectors and arterial roadways to allow the safe crossing of wide, heavily traveled streets (see also TR1A4)
 - c Pursue alternatives to traditional dark material and asphalt roads and streets to reduce the effects from “urban heat islands” (see also EN3D1)
 - d Median treatment should be appropriate for the land uses to which they are adjacent but, in all cases, include xeric landscape which utilizes plant material that is indigenous or appropriate to this locale and which anticipates maintenance aspects relative to landscape growth
 - e A variety of trees species should be used in medians to add visual interest and minimize loss of plant material as a result of **monoculture blight** due to pests
 - f Where possible and appropriate to the setting, install public art in medians to add interest and area identification
- 2 Review, modify, and maintain a street signage program which provides adequate but not excessive, signage for public, civic, and community points of interest and traffic regulation
 - a Promote a standard for consistent public signage on all streets
 - b Develop a specific wayfinding signage set of criteria and standards to promote the effective direction to local points of interest
 - c Establish a vigorous maintenance program to keep signs legible and in good condition (see also PS2A7)
- 3 Update and implement community-wide standards for street furniture, mast arms and traffic signals,

**WELL maintained
Continuum of transportation**

trash containers, bus benches and shelters, signs, street lights and related infrastructure which is attractive and contributes to overall community design elements (see also CD3A and CE3C1)

- a Where consistent with overall City design standards, allow new and established neighborhoods to set forth individual character elements in the design of street improvements
 - b Integrate overall City design elements into the entryway and special corridor plans and improvements
- 4 Install and maintain landscape edges along rights-of-way for which the City has control and responsibility, such as adjacent to drainage areas, ditches, bridges, parks and other public facilities
 - a Utilize a bio-swale concept where practical to accommodate storm drainage as a functional component of the landscape
 - 5 Re-evaluate City standards related to minimum street width. Narrow motor vehicle width on streets as much as possible without compromise to public safety to reduce impervious cover and environmental impact, lessen initial construction and long-term maintenance costs, and slow traffic in order to limit accidents and pass through traffic (see also CD3A2)
 - a Revenue saved from reducing street width should be devoted to bicycle lanes, if they do not already exist, as well as median improvement and another aesthetic enhancements
 - 6 Review and revise, as feasible, design standards for intersections in a manner which prioritizes pedestrian and bicycle comfort and safety and alerts motorists to travelers on foot and bicyclists
 - 7 Work with adjacent jurisdictions in the design and construction of streets to assure a logical and smooth connection occurs for travelers between communities

E Minimize tendencies for errant traffic behaviors through effective transportation design (see also PS2A11)

- 1 Develop a menu of pre-approved traffic calming improvements which must be installed with the initial construction of a subdivision or development to direct traffic movements appropriately and pattern driver behavior as early as possible (see also CD3A5)

Transportation testing site for Air travel

- 2 Design new street alignments leading to major roads in a way that deters cut-through traffic, such as with street off-sets and circuitous routes

F Provide a comprehensive and interconnected transportation system that supports community environmental objectives and includes all affected parties in its location and design

- 1 Include a full complement of users in the development of standards, transportation linkages, and routes when developing the Transportation Master Plan and its attendant elements
 - a Consider the impacts to existing land owners adjacent to proposed transportation systems and work with such parties early in the development process to consider alternatives, trade—offs and treatments to accommodate existing conditions and uses

TR5 TRANSIT

A Promote an efficient, effective and comprehensive transit system for public use

- 1 Regularly review and periodically update the **Strategic Transit Master Plan** to assure it is as efficient and responsive as possible to meet user needs
 - a Engage users, non-users, employers and special destination representatives in this assessment and update
 - i Specifically include the transportation dependent population in this evaluation
 - b Explore transit options to serve the Greeley-Weld County Airport
- 2 Analyze and designate the transit priority network that optimizes bus routes for greatest efficiency and service
 - a Monitor bus **headways** and operation along the network routes on a regular basis
 - b Evaluate options to improve bus headways and reliability
 - c Coordinate the Transit Plan’s land use objectives for access, density and mobility with the transit network
 - d Evaluate the ability to incorporate transit stops and services in a meaningful way into all land use decisions, provide allowances to credit transit as a form of Alternative Compliance to meet neighborhood amenity requirements or to lessen parking standards, where appropriate and realistic

HEADWAY – the time between two vehicles passing the same point traveling in the same direction on a given route, used for public transit and rail transportation.

TRANSIT STRATEGIC MASTER PLAN – a plan for the Greeley Evans Transit System.

- 3 Encourage private and institutional participation in mass transit and car pool systems (see also TR1C1b)
 - a Analyze options to contract with other area transit providers to expand the transit options available to special populations, such as with Assisted Living Centers and Child Care providers that provide transportation services to their clients
 - b Review options with the local schools to cost share or provide single administration of the larger bus service system
 - i Investigate ways to expand the UNC shuttle bus service to accommodate a Downtown route, as well as to other shopping and activity areas
- 4 Actively market and inform residents about transit, including the use of incentives and promotions to acquaint residents with its function and applicability to their mobility throughout the community
- 5 Promote **Transit Oriented Design (TOD)** along major transportation corridors to foster the success of those corridors in sustaining transit use (see also TR1C1)
 - a Identify TOD corridors in City maps and through the Development Code to alert developers and landowners to the desired intensity of development in these areas

B Provide mobility and access to community services, employment, educational opportunities, shopping, medical, recreational, and other destinations

- 1 Explore steps to provide high-capacity transit service links in Regional Activity Centers and districts within the community and the region
- 2 Provide features essential to encourage transit use, such as lighting and weather protection at bus stops, security, pedestrian amenities, and similar improvements (see also CD3A2, CD3C1, and PS2A12)
 - a Work with community partners, adjacent businesses and housing complexes to help provide amenities to promote transit use
 - b Integrate transit stops, stations, and hubs into existing and new neighborhoods and business districts to add to the convenience of using transit
 - c Minimize negative impacts of bus stops and facilities on adjacent areas

TRANSIT-ORIENTED DESIGN – design intended to encourage and facilitate the use of public transit and which may include a mix of land uses, as well as such things as the spacing of collector streets, location and nature of sidewalks and pedestrian paths, and transit stop location and design.

MULTI-MODAL – offering a number of different types or modes of transportation.

C Improve environmental quality through the reduction of single-occupant vehicles on the road and related traffic congestion

- 1 Utilize a wide variety of public service messages to encourage the use of transit, carpooling and the other forms of travel as identified in this 2060 Comprehensive Plan as an alternative to single-occupant travel
- 2 Include information concerning Greeley’s status relative to air quality and emissions to encourage prudent use of vehicle trips

D Provide all residents with transportation choices and support to be as self-reliant as possible

- 1 Especially consider those residents who are transportation dependent when devising and/or amending transit routes and services. Poll that client population to stay current on trends, patterns, and services and their significance to this population
- 2 Work with area employers to establish a bus-to-work shuttle or routes to help facilitate employee use of the bus system

E Foster regional transit through intergovernmental agreements

- 1 Facilitate development and expansion of an integrated, **multi-modal**, regional transportation system that includes pedestrian, commuter rail, buses, taxis, car pools, vanpool, bicycles, and support facilities
 - a Design and operate the facilities and services to make inter-modal transfers easy and convenient
- 2 Continue to explore the development of a progressive regional transit system
 - a Work with Weld County and communities adjacent to US Hwy 85 to promote the development of comprehensive, effective, efficient and attractive travel along this transportation and entryway corridor
 - b Foster relationships with other northern Colorado communities in Weld and Larimer Counties to explore interconnectivity and cost effective and equitable funding options to support an effective system of travel throughout northern Colorado

TR6 AIR TRANSPORTATION

A Support the ability of the Greeley-Weld County Airport to reach its full potential in providing competitive air transportation services to the area

- 1 Through this Plan, re-adopt the **Greeley-Weld County Airport Master Plan** to guide design, orientation and construction of runways, air traffic control and related support facilities
 - a Promote adoption of the Airport Master Plan by other area jurisdictions, such as Weld County, to unify the vision for the development of the airport and to direct area development to avoid land use conflicts with other adjacent properties
- 2 Promote the Airport as an integral component of the Greeley area transportation system (see also LU8A)
- 3 Coordinate with the **Airport Authority** in the implementation of an Airport Infrastructure Plan to install capital improvements needed to realize the full development of the airport as a regional air transportation facility
- 4 Promote the development of ancillary airport property as a related business and industrial park to complement area economic development programs and opportunities (see also EC4A1)
 - a Promote a range of complementary land uses and services at the airport, such as restaurant, aircraft sale and service and other support functions
- 5 Promote the existing and expanding programs for pilot, air traffic control and other related air transportation fields available through the Airport and area educational institutions, to support the community's image as a leader and resource in such education and training programs (see also EC2A9)
- 6 Consider support for corporate or personal travel services that complement the range of flight choices available at the airport and offer viable shorter range trips
 - a Promote such alternate air transportation systems as a unique, viable option and attraction for Greeley travelers
- 7 Support the capability of the Airport to support the existing and expanded use of the facility for complementary military purposes

AIRPORT AUTHORITY
– the governing body of the Greeley-Weld County Airport.

AIR TRANSPORTATION
– the transportation of passengers and freight using aircraft such as airplanes and helicopters.

GREELEY-WELD COUNTY AIRPORT MASTER PLAN
– a plan for future development of the Greeley Weld County Airport, adopted in 1978 with subsequent amendments in 1984 and 1993, and 2004.

- 8 Support the Airport’s capabilities to support promising advances in alternative and new air transportation means
 - a Foster research and development of air transportation alternatives in such areas as transport, fuel efficiency, weather and climate devices, air traffic control, maintenance and service components, flight communication and safety program, medical and emergency air transportation services and related fields
 - b Reinforce Greeley’s work toward leadership in education as it relates to air transportation
 - i Offer training and promotional linkages with area schools to promote science and math careers
 - ii Promote airport/business associations with hospitality accommodations, communication, and special programming
 - iii Facilitate the airport environment as an air transportation “laboratory” to provide learning opportunities for the community on this valuable community service and asset

B Support the effective interface of air travel with other transportation systems to assure all movements to and from the community are safe, well-understood, easily accessed, efficient, and effective

- 1 Work with the Airport Authority, the Colorado Department of Highways, and Weld County government to assure that surface transportation to and around the airport is effective, adequate and maintained
- 2 Enhance the main travel corridors used to reach and travel from the airport as key community entryways with special attention to way-finding signage, well-defined and complete roadway systems, and attractive landscaping, public art or other distinctive community features
 - a Particular attention should be paid to the improvement, appearance and function of the following road corridors:
 - State Hwy 263 (E. 8th Street), which should also be considered for expansion to meet the diverse and growing number of industrial users in the area
 - US Hwy 85
 - 8th Street from US Hwy 85 to Downtown
 - b Consider carefully the types of land uses in these corridors and promote those which provide compatible and complementary uses to the airport

- 3 To the degree practical provide a trailhead or loop trail from the Poudre Trail Corridor to the airport

C Promote land use compatibility in sensitive airport runway approach zones (see also LU2A7eii)

- 1 When considering land uses in the vicinity of the Airport, use the Airport Master Plan to guide and promote the establishment of compatible development in areas prone to noise and air traffic impacts
 - a Disallow uses which carry obvious incompatible uses to the airport such as residential
 - b Amend the City's Development Code to incorporate structure height limitations in restricted **Airport Influence Areas** as may be necessary
- 2 Continue to promote the Airport's "Fly Friendly" program which promotes pilots to follow air traffic patterns that minimize noise in populated areas of the community (see also EN3B2d)
- 3 Facilitate airport safety through development of the site with appropriate cautions related to fuel storage, design of vehicular patterns to and through the airport, effective air traffic, weather and emergency communications, and attention to homeland security matters
 - a Consider options to locate a fire station on the Airport property to serve the surrounding area of the community with fire and rescue services, in addition to the airport itself

TR7 RAIL TRANSPORTATION

A Promote the use of existing and planned area rail corridors to meet the safe and effective movement of freight as well as future passenger rail travel

- 1 Work with area rail services to provide compatible freight and, optimally, passenger services to and through the community which are effective and work in conjunction with area surface transportation systems
- 2 Work with rail users to minimize delays for other travelers at railroad crossings
 - a Work with emergency responders to identify alternate routes when roads are blocked due to rail use



AIRPORT INFLUENCE AREA – the area affected by noise and/or safety considerations, as identified on the airport layout plan drawings as contained in the Greeley/Weld County Airport Master Plan.

- b Install adequate safety arms and railroad crossings to limit conflicts with pedestrian, bike and vehicular traffic. Periodically assess the roads with railroad crossings to eliminate crossings whenever practical
- 3 At high-use rail and street crossings utilize “best management practices”, such as through the use of concrete or rubberized railroad crossings to move traffic effectively and comfortably over rail lines
 - a Extend pedestrian crossings over railroad tracks in the safest manner possible
- 4 Position the City to be an integral part of any northern Colorado commuter rail study or service. Pursue commuter rail possibilities as an integrated part of the of the overall transportation system
- 5 Anticipate the needs of passenger rail as a form of travel
 - a Review the logistical requirements associated with providing passenger rail options, such routes, transfers, and whether existing rail or expressway corridors can be adapted for such use
 - i Where possible and complementary to planned area land use, secure defined passenger rail rights-of-way concurrent with area development in anticipation of providing this transportation system in the future

B Carefully plan land uses adjacent to rail corridors to minimize conflicts with other land uses, and transportation movements

- 1 Continue support of the Union Pacific Train Depot as a structure of local historic significance, relating the role of rail transportation in the settlement of the area (see also CU1A2)
 - a Promote the Greeley Freight Station as an educational, historic and interactive amenity
 - b Create attractive and safe pedestrian points across adjacent rail and major roadways
 - c Improve the quality of the private development on both sides of the railroad tracks, especially near Downtown
 - d Identify a Downtown site for use as a multi-modal transportation hub station
- 2 Minimize the risk to the public as to rail use and related hazards; provide on-going education, signage and related communications on this subject to the public

- 3 Where rail lines have been abandoned, explore the potential for reuse of the rail right-of-way for another public transportation purpose, such as with the Rails-to-Trails program (see also PSDR2A1&3 and TR1A10)
 - a Retain rights-of-way to accommodate potential future transportation corridors, such as light rail capacity
- 4 When establishing land uses adjacent to railroad tracks, consideration should be given to safety issues, particularly as it relates to noise and attractive nuisance concerns with small children and special needs populations (see also EN3B2e)
 - a Establish minimum design standards for land use adjacent to rail lines to assure compatibility between uses
 - b Pursue the installation of “**Quiet Zones**” in sensitive rail corridors where the train whistles are incompatible with and disruptive to adjacent uses (see also TR3A2a)

LEVEL OF SERVICE (LOS) – an indicator of the extent or degree of service provided by, or proposed to be provided by a facility based on and related to the operational characteristics of the facility.

QUIET ZONES – areas established under federal rules where the use of railroad locomotive horns at crossings will be discontinued or minimized to reduce noise levels.

TR8 LEVEL OF SERVICE

A Adopt and implement target *level-of-service* standards for all components of the transportation system, such as pedestrian, bicycle, and vehicle movement

- 1 Establish, adopt and implement a ranking system for level of service standards to judge performance of the transportation system (see also ED1C1a, HS3A1a, and LU1C4)
 - a Identify minimally acceptable conditions for pedestrians and vehicular movements on all roads and for transit service (see also HS3A3)
 - i Strive for a Service Level of ‘B’ for pedestrian and bicycle movements throughout the city
 - ii Design and maintain vehicular movement on roads to attain a minimum of a Service Level of ‘C’, and strive for a higher service level in key corridors, such as near adjacent to major shopping, medical and large industrial and public developments
 - b Measure performance against standards over which the City has some influence and control
- 2 Identify areas of the community which do not accomplish level-of-service objectives and formulate a strategy of land use considerations and transportation improvements which could be undertaken to improve such conditions

- 3 Accommodate mobility for the disabled, such as through transit services, continuous sidewalks and ramps, which facilitate the independence for this community population

B Incorporate level-of-service standard expectations and performance into the development review process

- 1 Evaluate the impact of zoning and land use actions on desired level-of-service operations for adjacent roadways. Disallow zoning amendments or land uses which would negatively impact desired level-of-service standards to unacceptable levels unless addressed or mitigated by the development with related improvements

TR9 INTERGOVERNMENTAL COOPERATION

A Maximize the public benefit from a coordinated transportation system through cooperative public and private initiatives

- 1 Pursue development of intergovernmental and agency agreements to maximize public funding invested in transportation infrastructure and delivery including, but not limited to:
 - a Construction and maintenance of roads
 - b Annexation and jurisdictional responsibilities to assure transparency in system safety, continuity, and performance
 - c Street naming conventions
 - d Transit
 - e Access control
 - f Traffic control
 - g Air transportation
 - h Rail services

- 2 Incorporate private carriers into the overall transportation delivery system to promote a comprehensive network that is available to serve the public. Such system would consider the following:
 - a Taxi service
 - b Park-and-ride facilities
 - c Shuttles (e.g. Assisted Living Center transport, volunteer vans & services)
 - d Private buses

- 3 Seek opportunities to accommodate and employ futuristic transportation modes which might include:
 - a Robotic vehicles
 - b Highway sensors
 - c **Global Positioning Systems (GPS)**
 - d Seg-ways
 - e Hybrid fleet options
 - f **Personal Rapid Transit (PRT)**
 - g Electric and solar vehicles
 - h Commuter-rail

GLOBAL POSITIONING SYSTEM (GPS) – a global navigation satellite system developed by the U. S. Department of Defense, to transmit precise signals for navigation purposes.

PERSONAL RAPID TRANSIT (PRT) – a public transportation concept offering on-demand, non-stop transportation, using small vehicles on a network of specially-built guide way, also called personal automated transport (PAT) or podcar.