



112TH AVENUE STATION AREA MASTER PLAN

MARCH 2017



SPONSORED BY: MAYOR DOWNING

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-28
Series of 2017

17-29
Series of 2017

A RESOLUTION APPROVING THE 112TH AVENUE STATION AREA MASTER PLAN AS PART OF THE CITY'S COMPREHENSIVE PLAN

WHEREAS, the City of Northglenn is a home rule municipal corporation organized under and pursuant to Article XX of the Colorado Constitution and the City of Northglenn Home Rule Charter; and

WHEREAS, by virtue of such authority, and as further authorized by State statutes including but not limited to C.R.S. § 31-23-206 *et seq.* and Section 11-40-9 of the Northglenn Municipal Code, the City has authority to make and adopt a comprehensive plan for the physical development of the municipality; and

WHEREAS, the Denver Regional Transportation District (RTD) will open its North Metro electric commuter rail line with a stop at 112th Avenue and York Street located in Northglenn, called the Northglenn at 112th Station; and

WHEREAS, the City of Northglenn, in partnership with the City of Thornton, desired to develop a vision for the future land use and coordinated transportation infrastructure in proximity to the Northglenn at 112th Station; and

WHEREAS, using funds awarded by the Denver Regional Council of Governments (DRCOG) Transportation Improvement Program (TIP) and local match provided by the Cities of Northglenn and Thornton, the City of Northglenn, as project lead, commissioned a consultant team, Leese & Associates, to engage the stakeholders and facilitate consensus to realize this vision; and

WHEREAS, the consultant team, named above, drafted a 91 page document entitled "112th Avenue Station Area Master Plan", that aims to provide a vibrant, walkable, mixed-use community in and around the station;

WHEREAS, the Planning Commission conducted a public hearing on the Plan on March 7, 2017, and following said hearing the Commission, by a majority vote recorded in its official minutes, adopted the 112th Station Area Master Plan as an amendment to the Comprehensive Plan;

WHEREAS, because the meeting of March 7, 2017 was not properly posted in accordance with the Colorado Open Meetings Law, the Planning Commission took further action on March 21, 2017 to ratify its actions that occurred on March 7, 2017; and

WHEREAS, the City Council has reviewed the 112th Station Area Master Plan and has determined that it is in the public interest that the plan be adopted for the purpose of guiding new development and infrastructure improvements proposed within the Station area inside the City of Northglenn.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN, COLORADO, THAT:

Section 1. The City Council hereby ratifies the adoption by the City of Northglenn Planning Commission of the 112th Station Area Master Plan as an amendment to the Comprehensive Plan, attached hereto as **Exhibit 1**, and incorporated herein by this reference, and the attached 112th Station Area Master Plan pursuant to C.R.S. § 31-23-208 and Section 11-40-9 of the Northglenn Municipal Code.

Section 2. The City Manager is directed to cause an attested copy of the attached 112th Station Area Master Plan to be filed with the Offices of the Adams County Clerk and Recorder in accordance with C.R.S. § 31-23-208.


DATED at Northglenn, Colorado, this 27th day of march, 2017.


JOYCE DOWNING
Mayor

ATTEST:


JOHANNA SMALL, CMC
City Clerk

APPROVED AS TO FORM:


COREY Y. HOFFMANN
City Attorney

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ACKNOWLEDGEMENTS

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GLOSSARY OF ACRONYMS

CDOT	Colorado Department of Transportation
DRCOG	Denver Regional Council of Governments
HEAL	City of Northglenn Healthy Eating and Active Living Committee
NURA	Northglenn Urban Renewal Authority
PMA	Primary Market Area
RTD	Regional Transportation District
SOV	Single-Occupant Vehicles
STAMP	Station Area Master Plan
TDM	Transportation Demand Management
TIF	Tax Increment Financing
TMA	Transportation Management Association
TOD	Transit-Oriented Development
UDFCD	Urban Drainage Flood Control District

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CHAPTER ONE: INTRODUCTION

1.1 Background

In 2018, the Denver area Regional Transportation District (RTD) will open its North Metro electric commuter rail line, the culmination of years of planning and inter-governmental cooperation between the agency and the communities along the 18.5-mile line. The North Metro line is focused on serving the rapidly growing northern suburbs of the Denver metro area, including the cities of Northglenn and Thornton. One of the North Metro line's stations is located at 112th Ave., on the east side of the city of Northglenn adjacent to the city of Thornton's municipal limits at 112th Ave. and York St.

Station Area Vision (developed by project team and stakeholders):

Create a station area that serves the surrounding neighborhoods as a vital and vibrant community hub, that provides enhanced connectivity between the station and surrounding neighborhoods, and that strengthens and sustains the diverse industrial uses to the south.

This Station Area Master Plan (STAMP) is focused on creating a vision of future land use and coordinated transportation infrastructure in proximity to the Northglenn at 112th Station. This vision will guide future land use decisions in proximity to the station to ensure that land uses and transportation network improvements are transit-supportive and coordinated between the cities of Northglenn and Thornton. This coordination and planning will provide a vibrant, walkable, mixed-use community in and around the station.

1.2 Project Overview and Scope

This STAMP will focus on the traditional ½-mile radius direct station influence areas and the broader, indirect influence or market areas (comprised of people and businesses that are not located in direct proximity to the station but still interact with the station area). These influence areas will incorporate pedestrian, bicycle, and roadway network connections to provide access to the station in addition to transportation services such as forms of paratransit that are critical to station access and ridership. Indirect influence areas could be up to one mile from the station or could be determined by the influence of other stations to the north (Eastlake at 124th Ave.) or south (104th Ave.).

This project relied on a coordinated planning effort between the cities of Northglenn and Thornton to ensure the optimization of potential **transit-oriented development (TOD)** opportunities around the station and to aid in maximizing the utility and usefulness of the planned transit infrastructure.

General Characteristics of Transit-Oriented Development (TOD):

- A vibrant mix of land uses.
- A well-connected street-network and a menu of mobility services.
- Compact and compatible development.

1.3 Guiding Principles

Assuming near-term development will occur, the cities of Northglenn and Thornton would like to maximize the property's development potential, ensure a sense of place, and reflect the cities' values and interests and those of their partners. The following are guiding principles, based on the two cities' planning guidelines and aspirations that summarize their interests:

- **Diversify housing:** The majority of the housing in the area was constructed in the middle of the last century, and the area currently fills the role of providing starter housing or housing that is attainable for residents of the region. The city of Thornton in particular aims to diversify its housing stock with development of the Northglenn at 112th Station area through a mixture of residential products. This mix of housing products should provide emerging styles of housing not currently found in Northglenn and Thornton, should leverage the advantage of the transit infrastructure, and should provide contemporary components of mixed-use placemaking (recently defined by the Urban Land Institute as "combining elements of the built environment in a compelling way that attracts people").
- **Retail:** The two cities' interests are to create a community that includes a small amount of neighborhood-serving retail that is appropriate to levels of demand and that provides convenient and essential retail services to the immediate station area.

Guiding principals for development include...



A diversity of housing types both near the station and in the surrounding area...



Neighborhood-serving retail appropriate to local demand...

- **Build transit-supportive mixed-use development:** The site represents a key opportunity for capitalizing on TOD densities (18+ units/acre) and a mixed-use land program that would maximize sustainable and “sense of place” transit-supportive development. The cities desire to use traditional TOD principles of development that are appropriate to the site context and market area while at the same time ensuring the maximum opportunity for the public partnership between the two cities and RTD.
- **Create a place:** As the Northglenn at 112th Station area develops, the desire to create a “great place” is critically important and vital to the community. From the outset, the cities’ shared interest has been the creation of a place that leverages the unique assets surrounding the site to create a development with special character and a uniqueness all its own. Placemaking and its tenets will be at the forefront of development proposals that the two cities will seek to endorse.

Guiding principals for development include...



Transit-supportive mixed-use development appropriate to the context of the site...



Placemaking that leverages the assets of the site to create a special character and uniqueness...

1.4 Key Goals

Several goals were formulated by the project team and stakeholders as the project proceeded to help guide the initial development concepts for the station area:

City of Northglenn

- Provide good access to the station from the surrounding established neighborhoods and ridershed.
- Ensure a good transition of existing industrial properties along 112th Ave. to better uses.
- Develop a strategy for the opportunity property closest to the station (5.4 acres).
- Focus on the creation of a “place.”

City of Thornton

- Identify optimal land uses based on proximity to the future station, but also be realistic from a market perspective and existing conditions.
- Identify good multimodal connections to the station and surrounding neighborhoods, existing trails, and the Margaret W. Carpenter Recreation Center.
- Recommend design standards that can help create a TOD-feel and sense of place to the extent possible in this area.

Overall Transportation and Mobility Strategy

- Examine mobility to and from the station, for all forms of transportation in an effort to promote transit use and enhance access to the station.
- Outline operational improvements to existing transportation services and innovative approaches to alternative strategies that would provide the highest levels of accessibility.
- Provide pedestrian and bicycle connections to the transit station.
- Connect existing trail and open space networks.
- Create a safe and convenient environment to walk and bicycle through and between activity centers and neighborhoods.
- Improve pedestrian access across regional thoroughfares.

Overall Land Use and Development Goals

- Examine and promote land use policies, urban design standards, and development strategies that will assist the cities of Northglenn and Thornton in fostering high-quality development and active and vital neighborhoods.
- Understand the future market demands for development and conditions that may foster Transit Oriented Development.
- Build community consensus around a long-term vision for the station area that leverages RTD’s investment and promotes transit-supportive uses.
- Promote a mix of housing types, with higher densities located closer to the station.

1.5 Project Area Background

The North Metro Line

The North Metro commuter rail line is part of the RTD FasTracks regional transit system expansion program to build more than 100 miles of rail transit throughout the Denver region. The Northglenn at 112th Station is part of the 18.5-mile North Metro line that is proposed to run from Denver Union Station in downtown Denver, through Commerce City, Thornton, and Northglenn to just north of Highway 7 in north Thornton. Currently, the line is funded to the Eastlake at 124th Station, as shown in Figure 1-1, and is expected to open in 2018. This means that, under current plans, the Eastlake at 124th Station is assumed to be the end-of-line station when the line opens in 2018.

Figure 1-1: North Metro Rail Line

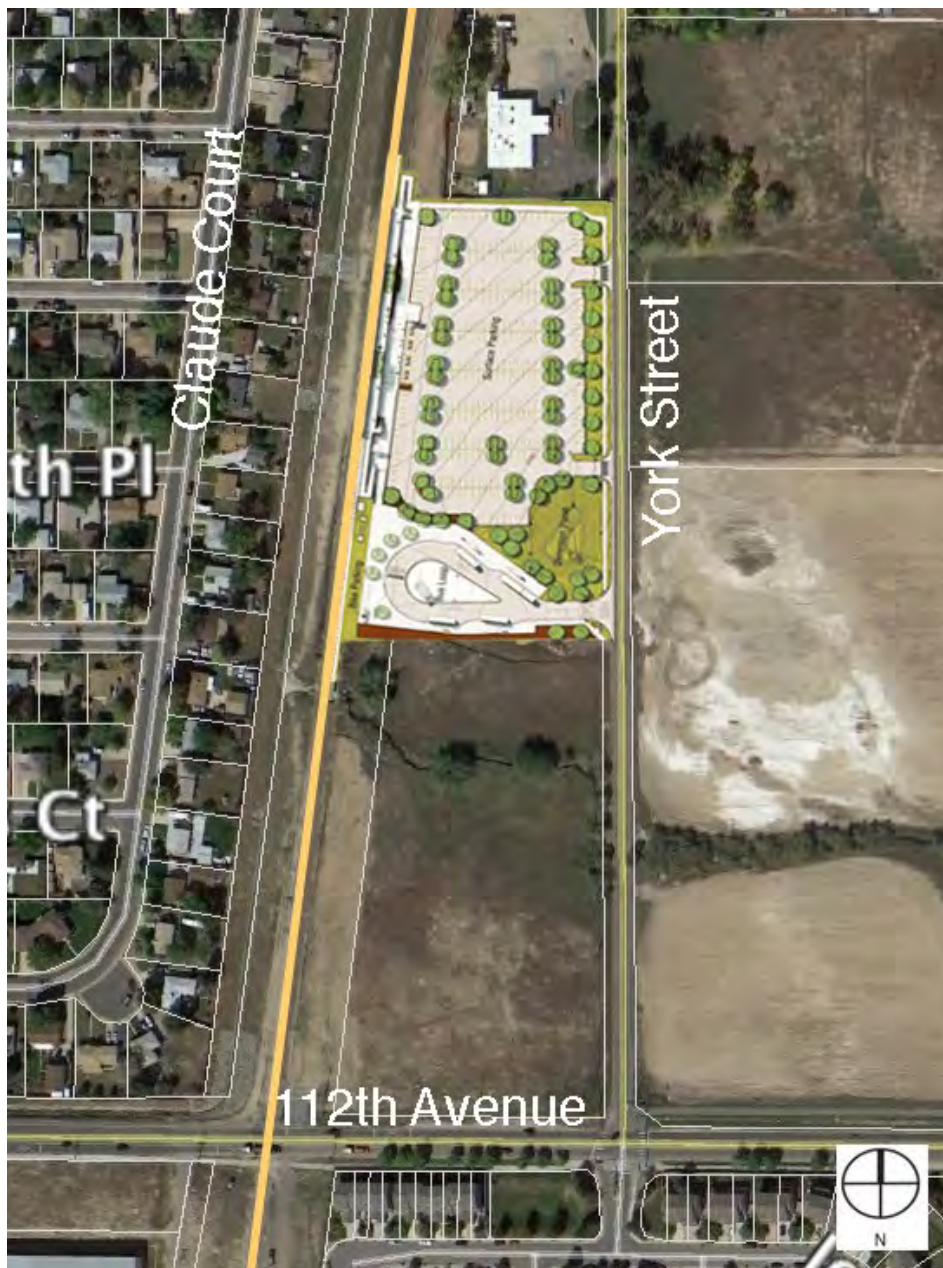


Source: RTD

Northglenn at 112th Station

The Northglenn at 112th Station and Park-n-Ride will be located just north of 112th Ave. along York St., with the station located east of the former Union Pacific railroad tracks. Figure 1-2 shows details of the proposed station. The project shows the 316 parking spaces currently planned for the Park-n-Ride at the station on opening day (according to RTD's fact sheet for the station), with bus circulation planned for the south end of the station footprint. When the line opens in 2018, rail service is anticipated to be every 20 minutes during peak periods (6-9 a.m. and 3-6 p.m. on weekdays), and every 30 minutes during off-peak periods.

Figure 1-2: Northglenn at 112th Station



Source: RTD

Station Area

Figure 1-3 illustrates the station area under study for this project (roughly a half-mile radius from the station platform). York St. comprises the municipal boundary between Northglenn and Thornton. The station site itself is adjacent to single-family residential development to the west and southeast, and an industrial park to the southwest (west of the railroad line). On the Thornton side, the station is adjacent to vacant parcels, drainage ways, and a horse ranch immediately to the east, with single-family residential to the northeast and east.

Figure 1-3: Project Station Area

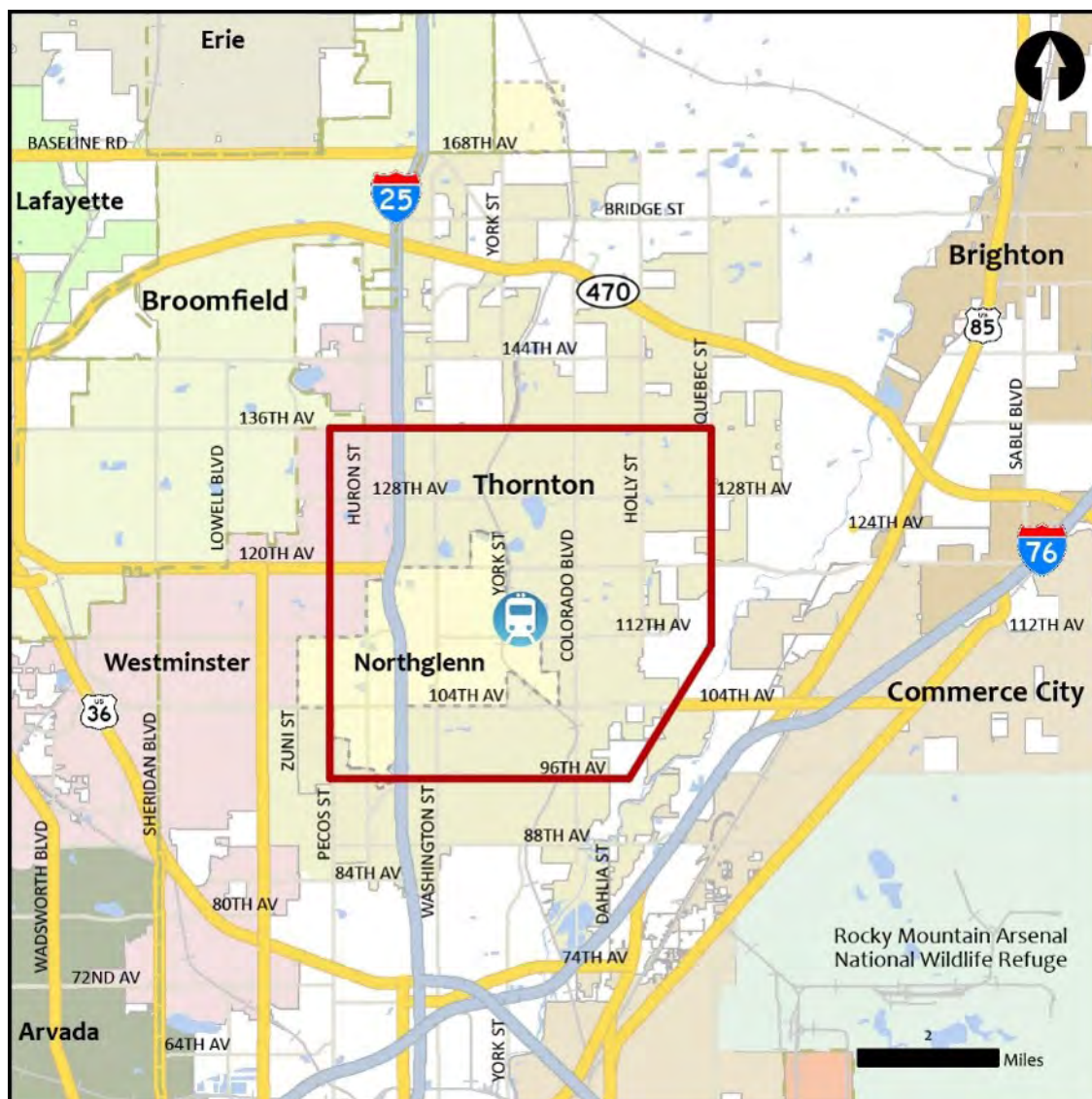


Source: Project Team

1.6 Key Station Area Data Summary: Demographics

This section summarizes the major demographic information included in this report's Station Area Market Analysis, the full text of which is included in Appendix 1. The analysis is focused on the station area as well as what is called a Primary Market Area (PMA), which is the area from which a project will draw the majority of its residents (housing), patrons (retail), employees (office, industrial, institutional) and visitors. These areas will also likely be a source of competition/ demand. A real estate market area is an area with generally comparable population and household characteristics. In the case of residential projects, it is typically a two-to-three mile radius. The boundaries of the PMA generally represent a three-mile market area and extend just west of I-25, north to 136th Ave., south to about 96th Ave., and east to the current edge of development in Northglenn/Thornton (see Figure 1-4).

Figure 1-4: Primary Market Area



Source: Northglenn at 112th Station Area Market Analysis, ArLand Land Use Economics

Population and Household size: Table 1-1 summarizes the population and household size data for the station area, the PMA, and local jurisdictions. Approximately 3,400 people live within the station area. Average household sizes in the station area are about 2.7 persons per household and slightly higher throughout the PMA. The city of Northglenn has an average household size of 2.58, while the city of Thornton has 2.93 persons per household.

Table 1-1: Population and Household Size

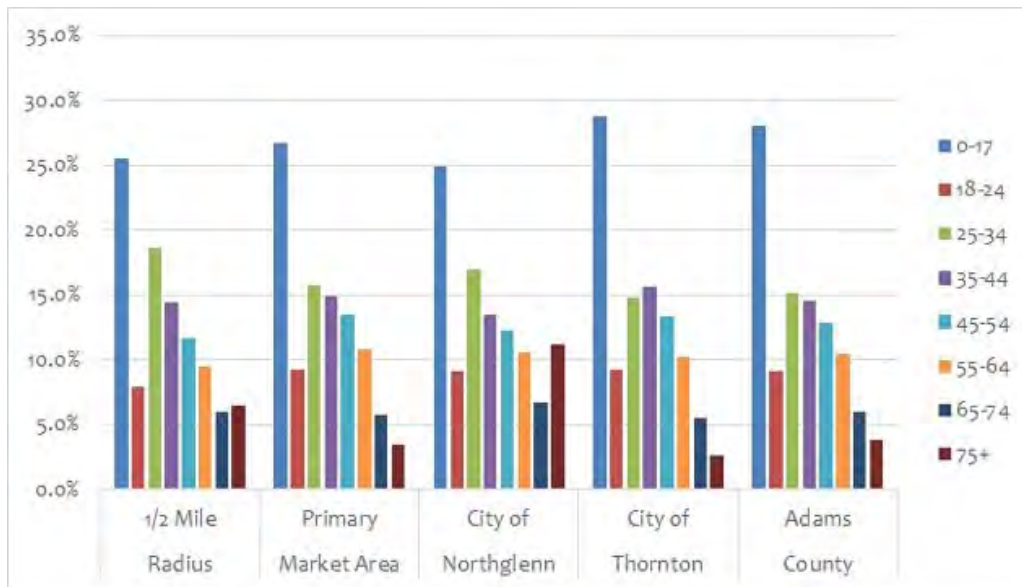
2015 Estimates			
	Persons	Households	Persons / Household
1/2 Mile Radius	3,400	1,262	2.69
Primary Market Area	129,825	47,217	2.75
City of Northglenn	37,016	14,349	2.58
City of Thornton	132,388	45,209	2.93
Adams County	481,372	166,988	2.88

Source: Claritas, ArLand

Source: Northglenn at 112th Station Area Market Analysis, ArLand Land Use Economics

Age: Figure 1-5 illustrates the age breakdown of the station area, the Primary Market Area, and local jurisdictions. There is a concentration of seniors in Northglenn (with persons 65 and over comprising more than 15% of that city’s population, compared with Thornton at 9%), while the ½-mile radius around the station and the city of Northglenn have a relatively higher percentage (17-20%) of millennials (25-34 years) compared with Thornton (at 15%).

Figure 1-5: Age Distribution



Source: Northglenn at 112th Station Area Market Analysis, ArLand Land Use Economics

Why is this important? The age analysis shows that the station area and the two cities have healthy proportions of the key demographic groups that traditionally both ride transit and take advantage of mixed-use developments around transit stations – millennials and seniors.

Ethnicity: The Primary Market Area and the comparative areas are predominantly White, although a significant percentage of the population is of Hispanic origin. Residents of Hispanic origin comprise 31% of the population within a ½-mile radius from the station, compared with 38.9% of the population in Adams County (as shown in Table 1-2).

Table 1-2: Ethnicity

Race/Ethnicity	1/2 Mile Radius	Primary Market Area	City of Northglenn	City of Thornton	Adams County
White	74.9%	77.9%	74.8%	75.7%	72.3%
Black	2.2%	2.0%	2.4%	1.9%	3.1%
American Indian	1.9%	1.2%	1.5%	1.2%	1.4%
Asian/Pacific Islander	4.9%	4.8%	4.0%	5.2%	4.0%
Other / Two or more	16.1%	4.4%	17.2%	16.1%	19.2%
Hispanic Origin*	30.7%	27.6%	31.7%	33.5%	38.9%

Source: Claritas, ArLand

* can be of any race

Source: Northglenn at 112th Station Area Market Analysis, ArLand Land Use Economics

Household income: Residents in the ½-mile radius from the station have a median household income of \$64,100, compared with the city of Northglenn at \$49,400 and the city of Thornton at \$65,400 (see Table 1-3).

Table 1-3: Median Household Income

2015 Estimates		
	Median HH Income	Avg HH Income
1/2 Mile Radius	\$64,103	\$68,092
Primary Market Area	\$63,568	\$72,308
City of Northglenn	\$49,377	\$57,883
City of Thornton	\$65,437	\$75,386
Adams County	\$57,751	\$69,066

Source: Claritas, ArLand

Source: Northglenn at 112th Station Area Market Analysis, ArLand Land Use Economics

Why is this important? This information shows that the station area has a relatively high median household income compared with Adams County overall, indicating the potential for relatively strong economic support for new development around the station.

Household growth in the PMA is forecast at less than 0.5% per year through 2040. Most of the forecast population growth in the northern metro region is anticipated to take place along the E-470 corridor. Employment in the PMA is also anticipated to grow at 0.7% per year, with most of the growth occurring near the I-25 and E-470 interchange area.

Why is this important? Household growth is relatively low in the market area, especially compared with other areas of the metro region. This indicates stable neighborhoods but also could limit the residential demand around the station.

CHAPTER TWO: LAND USE CONSIDERATIONS

2.1 Introduction

This chapter provides an overview of the project station area and its relationship to the RTD North Metro station and previous studies and analyses that have been conducted in the area, and other relevant data. As the project team began exploring key issues related to new development and redevelopment of the station area, it documented several key principles for decision-makers to consider.

2.2 Transit-Oriented Development Principles

The Northglenn at 112th Station area presents a unique opportunity for a Transit Oriented Development (TOD). TOD has many definitions, but it generally has three major characteristics:

- TOD includes a **vibrant mix of land uses** to allow people to comfortably live, work, and enjoy amenities in and around the station area. Instead of land being designated for just one purpose such as single-family housing, commercial or industrial, TOD allows a mix of uses within a station area. Often this means having retail or office uses on lower floors of buildings, with residential above. Alternatively, it could mean having different uses located within comfortable walking distance of each other. While most transit patrons will use the North Metro line to travel inbound to Denver in the morning and outbound to Northglenn and Thornton during the evening, TOD can help to foster more balanced two-way travel so that riders have a reason to travel to the station area for jobs, school or shopping.

Key TOD Principles



A vibrant mix of land uses...



A walkable street network...



Compact and compatible development...

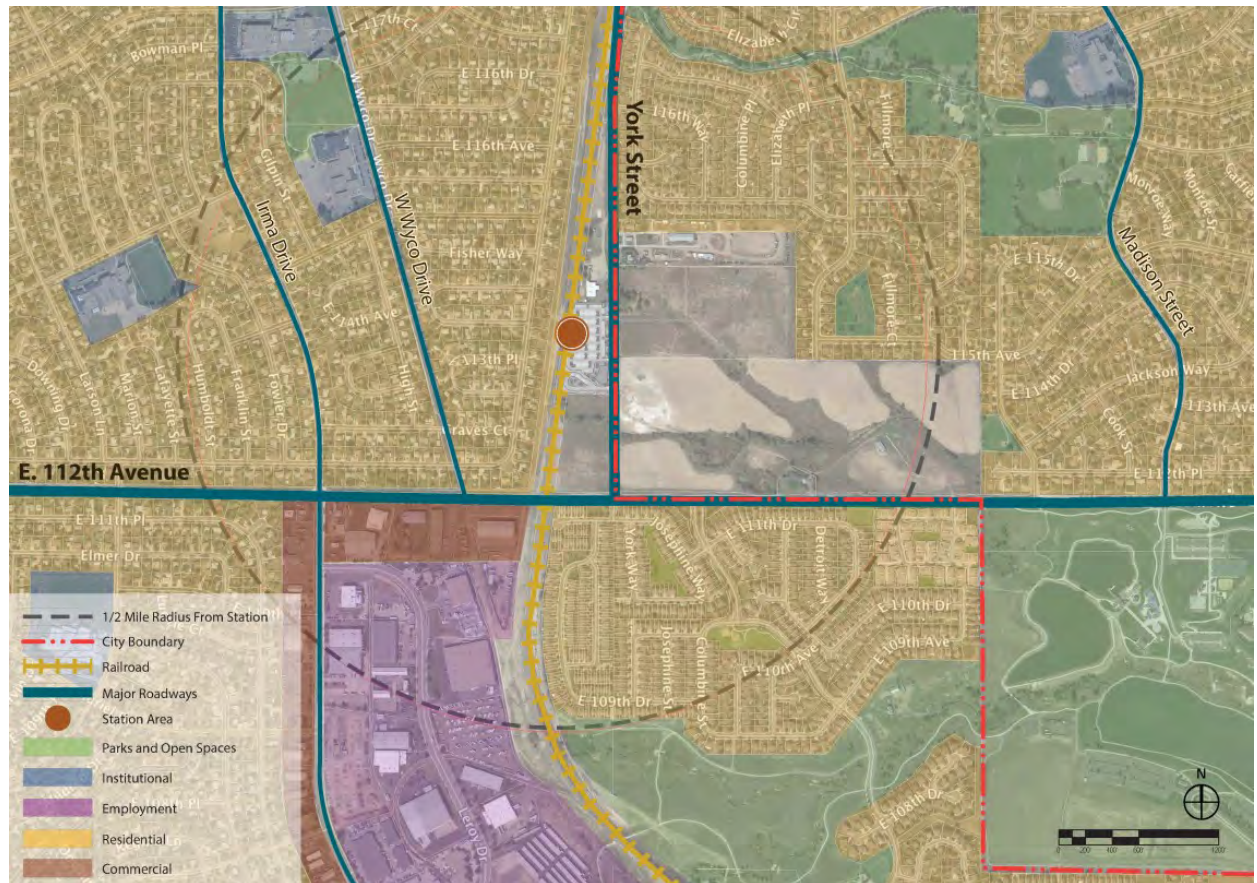
- **TOD includes a well-connected street network that makes it easy and convenient to get around on foot, by bicycle, car and on transit.** TOD is generally located within walking or biking distance of a transit facility and provides the ability for residents or employees to walk to and from their origins and destinations, reducing the need for driving. For example, local residents might have easy walking access to the transit station, stores, and restaurants, or employees and students who arrive at the station by commuter rail could easily walk or bike to their places of work or school. A key goal of TOD is to reduce the need to drive and encourage the use of alternative travel modes such as rail, bus, bicycle and walking. The idea of TOD fostering travel by means other than private autos goes hand-in-hand with the two cities' goals of encouraging bicycle and pedestrian mobility.
- TOD includes compact and compatible development. TOD allows higher density development – or more units and square footage per acre – than other traditional neighborhoods. It might include both horizontal and vertical mixed uses, meaning that more and different types of development could occupy a smaller 'footprint' of land than traditional development. This type of compact land use pattern promotes easy pedestrian connections and comfortable access to the transit station and surrounding uses. To do so successfully however, and to garner support by the local community, TOD must be designed to complement the existing character of surrounding areas, so that the scale of higher density and compact development is seamlessly integrated into the predominantly single-family, lower density character of the surrounding communities.

In addition to these basic principles, successful TOD usually requires the implementation of urban realm design guidelines to focus on all public areas, including parks, plazas, and shared spaces, to ensure quality development and a people-friendly environment. The Northglenn at 112th Station TOD Public Space Design Guideline, included as Appendix 5, provides suggestions for many of those design guidelines.

2.2 Key Station Area Summary: Land Use

Figure 2-1 shows existing land use in and around the station area. The figure shows that the station is surrounded by residential development, with major undeveloped parcels shown in gray immediately around the station (most of which is located in the city of Thornton). To the southwest, there is the industrial park which has commercial (primarily retail-focused) uses along the northern tier fronting on 112th Ave. and along the west side of Irma, and employment-based uses within the remainder of the area. The industrial park represents an opportunity to connect employment to the station and to housing elsewhere along the corridor. Note that there is very little in the way of existing commercial or retail development within walking distance of the station.

Figure 2-1: Current Land Use in the Station Area



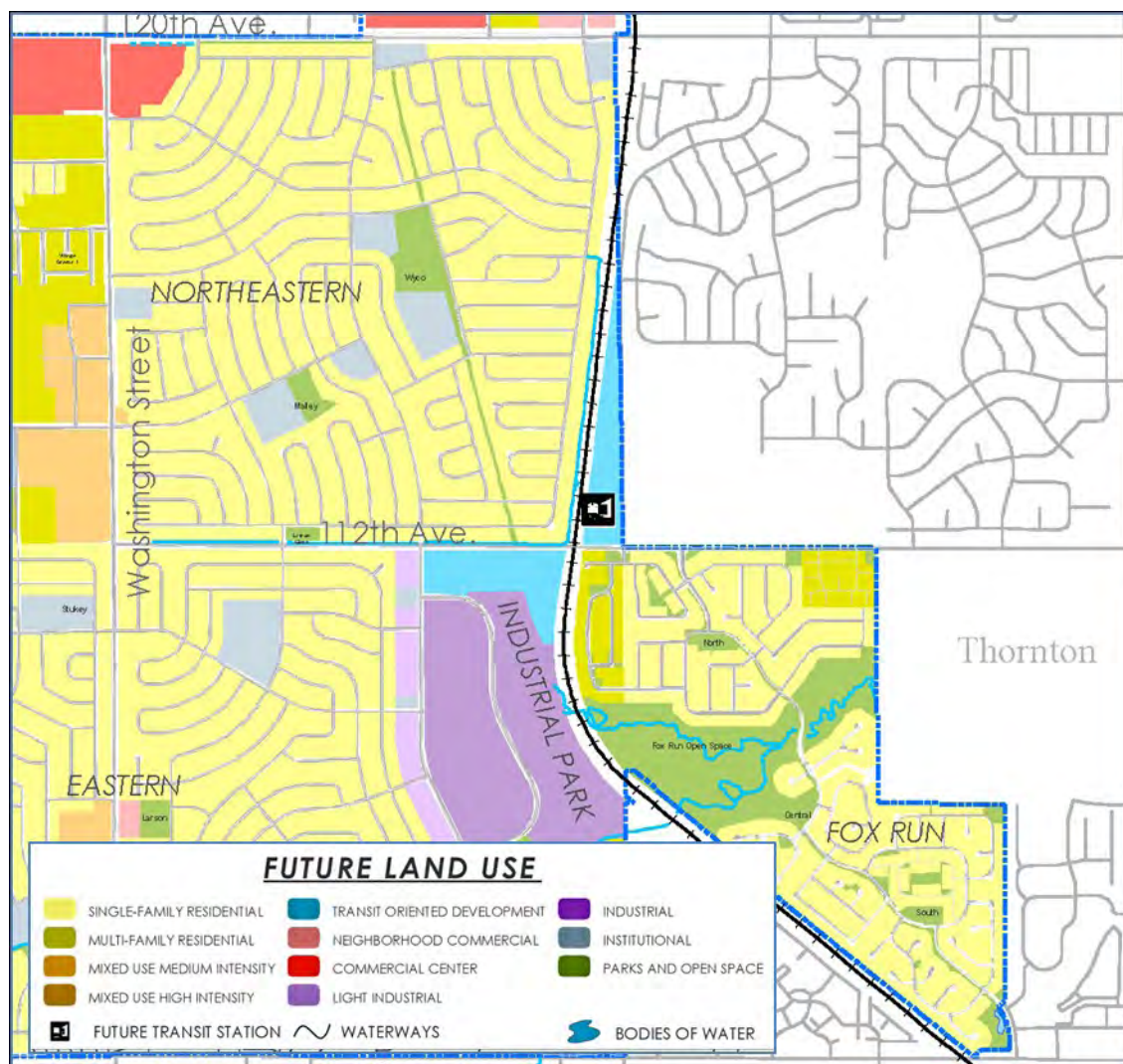
Source: Project Team and cities of Northglenn and Thornton

2.3 Other Project Area Studies and Policies

Northglenn Comprehensive Plan

In 2010, the City of Northglenn approved Imagine Northglenn: The Next 40 Years, the city's comprehensive plan designed to guide future development throughout the city. It is focused on several key principles including upgraded infrastructure, strong and competitive businesses, livable neighborhoods and homes, and working with RTD to maximize the potential of the new RTD North Metro line and its stations. Figure 2-2 shows the proposed future land uses for the station area. It shows the land immediately adjacent to the station and the land along 112th Ave. to the southwest of the station (north of the industrial area) as "Transit Oriented Development."

Figure 2-2: Northglenn Comprehensive Plan Assumptions for Station Area



Source: City of Northglenn

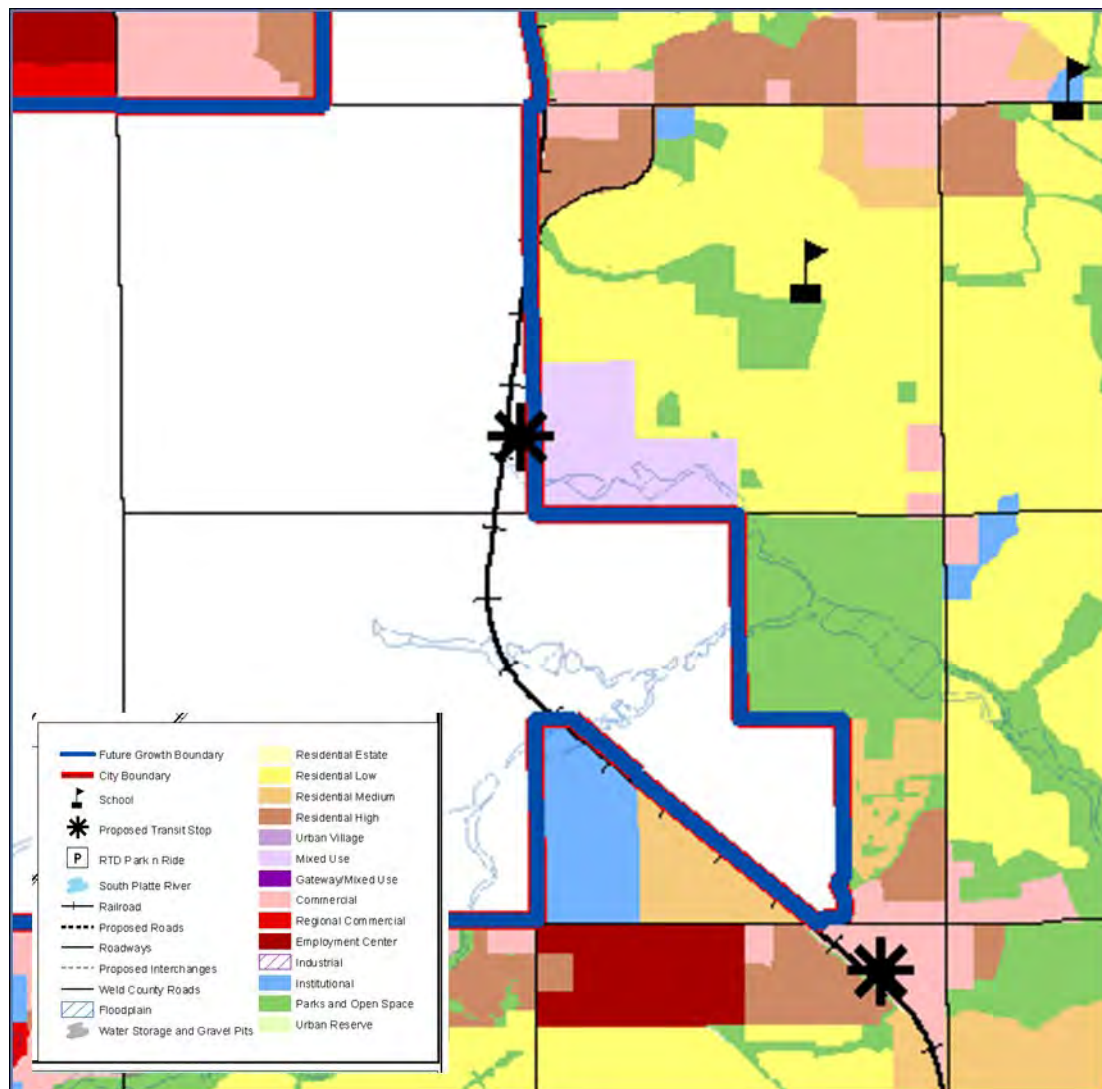
City of Northglenn Development Code

The city of Northglenn is updating its zoning code and subdivision regulations to help the city implement the goals and policies of the 2010 Comprehensive Plan and better accommodate new land uses, changing market and demographic trends, new transit stations, and other infill and redevelopment opportunities. This STAMP will help influence the update of the code and regulations to make specific TOD zoning recommendations for the station area.

Thornton Comprehensive Plan

Figure 2-3 shows future land use for the Thornton portion of the study as reflected in the 2012 City of Thornton Comprehensive Plan. It shows the land immediately adjacent to the station as mixed-use, with residential land uses surrounding it to the east and north.

Figure 2-3: Thornton Comprehensive Plan Assumptions for Station Area



Source: City of Thornton

Figure 2-4 shows parks and open space in the station area. The figure shows that several schools are located within or near the station area, with Hulstrom K-8 School being the closest school to the station (to the northwest along the Wyco Trail). Several parks are located near the station site, with large regional parks such as Stonehocker and Margaret W. Carpenter Park and Open Space located on the fringes of the station area. All of these facilities represent important community investments that could impact – and benefit from – the rail station and its environs.

Legend:

- 1/2 Mile Radius From Station
- City Boundary
- Railroad
- Major Roadways
- Station Area
- Parks and Open Spaces
- Schools

Map Labels:

Streets: E 112th Ave, E 116th Dr, E 116th Ave, E 116th Pl, E 115th Dr, E 114th Dr, E 113th Dr, E 112th Pl, E 111th Dr, E 110th Dr, E 109th Dr, E 108th Dr, E 107th Dr, E 106th Dr, E 105th Dr, E 104th Dr, E 103rd Dr, E 102nd Dr, E 101st Dr, E 100th Dr, E 99th Dr, E 98th Dr, E 97th Dr, E 96th Dr, E 95th Dr, E 94th Dr, E 93rd Dr, E 92nd Dr, E 91st Dr, E 90th Dr, E 89th Dr, E 88th Dr, E 87th Dr, E 86th Dr, E 85th Dr, E 84th Dr, E 83rd Dr, E 82nd Dr, E 81st Dr, E 80th Dr, E 79th Dr, E 78th Dr, E 77th Dr, E 76th Dr, E 75th Dr, E 74th Dr, E 73rd Dr, E 72nd Dr, E 71st Dr, E 70th Dr, E 69th Dr, E 68th Dr, E 67th Dr, E 66th Dr, E 65th Dr, E 64th Dr, E 63rd Dr, E 62nd Dr, E 61st Dr, E 60th Dr, E 59th Dr, E 58th Dr, E 57th Dr, E 56th Dr, E 55th Dr, E 54th Dr, E 53rd Dr, E 52nd Dr, E 51st Dr, E 50th Dr, E 49th Dr, E 48th Dr, E 47th Dr, E 46th Dr, E 45th Dr, E 44th Dr, E 43rd Dr, E 42nd Dr, E 41st Dr, E 40th Dr, E 39th Dr, E 38th Dr, E 37th Dr, E 36th Dr, E 35th Dr, E 34th Dr, E 33rd Dr, E 32nd Dr, E 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2.5 Market Analysis and Industrial Lands Study

Introduction

This section summarizes the key findings and conclusions of the project's Market Analysis, the full text of which is included in Appendix 1.

Summary of Site Analysis

- There are almost 90 vacant acres near the station area owned by three parties. The relatively limited number of property owners is potentially helpful in coordinating planning, infrastructure, and financing for development at the station area.
- The station area is surrounded by predominantly residential land uses. The Northglenn Industrial Park is located southwest of the station.

Residential

Background – City and Market Area

- Between 2006 and 2014, the city of Thornton has seen an average of 465 units built annually with 14.6% of the units in a multifamily configuration. Because of the built-out nature of Northglenn, it has seen much less development than surrounding cities. The 228-unit Carrick Bend apartment complex was recently constructed near I-25 and Malley Dr. in Northglenn and has been successfully leasing up.
- Since 2000, the Primary Market Area (PMA) has added a significant number of dwelling units. While 44% of the units were single family detached units, the remaining units were townhomes, condos, and apartments.
- For-sale prices for single family detached homes have generally ranged between \$200,000 and \$400,000. Most of the sales occurred in the 2000's. There have been a few recent sales over \$500,000. Townhomes at \$280,000 and condos at \$190,000 provide more affordable housing options. Average prices per square foot are \$134 for single family detached units; \$147 for townhomes and \$125 for condos.
- There are 940 multifamily and 3,190 single family detached residential units currently being planned for the next 10-15 years in the PMA, primarily in the city of Thornton (according to city staff).

Key Findings and Observations: Residential

- The station area can support between 400 and 1,300 new residential units (single-family and multifamily).
- The area closest to the station could support up to 40 dwelling units per acre.
- The area could support 185 to 220 assisted living/congregate care units.

Neighborhoods Closer to the Station

- There are a number of apartment communities in relatively close proximity to the Northglenn at 112th Station with average rents per square foot ranging from \$1.50 to in some cases \$2.00 per square foot. In comparison, unit rents in downtown Denver (with structured or underground parking) are \$2 to \$3 per square foot.

- In the immediate station area neighborhood, the residences range in age and size with older, smaller units west of the station, and units built in the 1980's through the 2000's to the east and south of the station.

Residential Observations and Conclusions

- While TODs typically focus on higher density multifamily units, in this instance, given the amount of land available and the need to buffer surrounding neighborhoods, the analysis is recommending single-family detached units adjacent to single-family detached neighborhoods surrounding the station.
- Approximately 400-1,300 new single family and multifamily units (townhomes, condos, and apartments) have the potential to be located on the vacant properties at the station area.
- Densities should step up from existing single family residential densities closer to existing neighborhoods up to 40 dwelling units per acre closest to the station. The apartments in the market area range from 13 to 25 dwelling units per acre.
- Prices at this point do not support structured parking, although consideration may be given to phasing structured parking over time should prices rise to support parking structures.
- In addition to market rate residential units, consideration should be given to senior housing and the continuum of care units. There is current demand for 185 to 220 assisted living / congregate care units and a large demand for senior independent units. While they could be included in a high density configuration, another option is to provide these services further from the station in an enclave.
- The city of Thornton conducted a housing needs assessment in 2014. In addition to recommending that more affordable senior continuum of housing services be provided, it identified a need for housing to accommodate low-income family households, persons with disabilities, and veterans.

Commercial

- Most of the PMA retail is located along 104th Ave. and 120th Ave. rather than 112th Ave.
- Retail is always an important activating component at station areas; however, 112th Ave. is relatively less travelled (15,000 vehicles per day) making retail or restaurant uses a challenge.
- To complement a gateway element at 112th Ave. and York St., a modest amount of commercial services can be located at this intersection to accommodate neighborhood oriented services, however, there should be site flexibility in case the market for neighborhood services (such as small-scale retail or offices) doesn't materialize. There may be the potential, as the station evolves into a neighborhood hub, for limited (up to 15,000 square feet) neighborhood services in an office configuration to accommodate medical offices, insurance brokers, etc.

Key Findings and Observations: Commercial

- A modest amount of commercial development could occur at the "gateway" to the station at 112th Ave. and York St.
- The station area could accommodate up to 15,000 square feet of neighborhood-focused commercial development.

Industrial

- There are more than 4.5 million square feet of industrial and flex space in the PMA. There has been relatively little new space constructed in the market area in the last two years. During this time, the legalization of marijuana has had an impact on industrial space inventory throughout the Denver metro area. Large grow operations increasingly occupy this type of space, moving other users to suburban areas.
- The Northglenn Industrial Park accommodates 90 businesses on 36 properties in approximately 870,000 square feet. Automotive repair and construction contractors account for the majority of businesses. There are also businesses providing Professional, Scientific, and Technical Services, and some Fabricated Metal Product Manufacturing.
- Vacancies in the Northglenn Industrial Park are at or near 0%. Demand continues to be strong for this type of space although demand needs to be balanced with the needs of the neighborhoods and desire for residential and commercial mixed uses close to the station.
- At the same time, this land use provides jobs and serves an important niche in the Northern Denver industrial market.
- The priority for the industrial lands in the station area would be to infill with complementary industrial uses. Landscaping, signage, sidewalks and other gateway elements to the station should also be provided to help provide a more attractive gateway element to the station from the western entrance along 112th Ave.

Key Findings and Observations: Industrial

- The primary development in the industrial lands should be infill with complementary industrial uses.
- Landscape and other urban design features should be added to make the industrial area a more attractive gateway along 112th Ave.

2.6 Developer Panel Review of Initial Concepts

On February 16, 2016, seven developers met with the project team to review the overall project's data analysis and initial site planning ideas and make recommendations on future potential development. The meeting's entire summary is included in Appendix 2, and its major findings and conclusions are summarized below.

Summary of Key Findings and Recommendations

- Drainage and the flood plain issues are the key constraints that must be resolved in order to facilitate development of the station area. The drainage solution needs to be a global station area solution and address all of the drainage issues on all of the different properties at once.
- The Northglenn and Thornton city councils should consider addressing the drainage and road alignment issues until resolved and a financing and rezoning approach is agreed to. Cooperation will be needed to solve these and other issues and a process of education and consensus building will be required including workshops, planning sessions, additional public meetings and tours of other station areas
- Each city should consider developing financial incentives and appropriate zoning (commercial/mixed use at 112th Ave. and York St./Fox Run Pkwy., higher-density mixed-use adjacent to station transitioning to town homes and then single family) to be available in the next five to fifteen years when market conditions may be more conducive to development.
- The market today might support market-rate and affordable apartment development. The Market Study found that there are other recent market rate apartment communities that have been built in the immediate area and that these communities have leased-up and are considered to be successful.
- The industrial area should be treated as a gateway to the station but should be considered as a separate area from the Station Area Plan. Instead of creating planning options for residential and mixed-use on the industrial site, attention should be given to improving the appearance and increasing the connectivity between the industrial area and the 112th Station. The industrial site can be viewed as the west gateway to the station area, transitioning to retail, and then the station. The developers present at the forum did not feel that there was a significant market for "creative industrial or creative office space" at this time.

Key Findings and Observations: Developer Panel

- There is a major advantage to the site given that only three property owners own the majority of developable parcels.
- Drainage and floodplain issues need to be resolved.
- Develop financial incentives and appropriate zoning for the station area.
- The area could support market-rate and attainable residential development.
- The industrial area should be a gateway with urban design improvements.
- The realignment of York St. could improve the area's attractiveness to developers.

- One major asset of this Station Area is that just three property owners own the majority of developable parcels on the site. Significant outreach and coordination should continue between Northglenn, Thornton, the three property owners, the surrounding residential neighborhoods, and the light industrial area tenants.
- The realignment on York St. and the proposed intersection would enhance the development feasibility of the parcels on the north side of 112th Ave., and help to create a more dramatic gateway to the station area.

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CHAPTER THREE: LAND USE CONCEPTS AND PREFERRED ALTERNATIVE

3.1 Introduction

Based on an analysis of existing and future conditions, local development principles and guidelines, and the guidance of the developer panel and key stakeholders, the project team developed three initial land use concepts for consideration. These concepts focus primarily on vacant lands in the station area, but they also have been developed to complement and coordinate with established and stable neighborhoods in the station area.

3.2 Alternatives Considered

Alternative 1

This alternative (as shown in Figure 3-1) allows medium-to-high-density housing (8 to 40 dwelling units per acre) adjacent to the station to the east and south of the platform along York St., dropping to medium-to-low density (6 to 12 units per acre) adjacent to the existing neighborhoods to the north and east and along 112th Ave. east of York St., transitioning to low-density (4 to 8 units per acre) as a neighborhood buffer to the east. It includes a park within the core areas of the station, and a greenway (with pedestrian and bicycle trails) along the drainage channel. It also identifies options for pockets of neighborhood-serving commercial/retail at key points, primarily adjacent to the station (south of the platform and to the east of York St.) and at the intersection of York St. and 112th Ave. If commercial does not develop at these identified locations, the land use would instead be residential at the designated underlying density color.

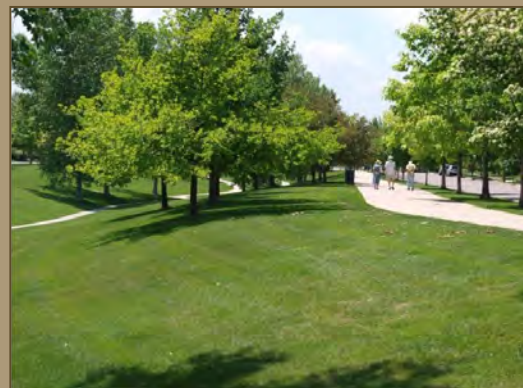
Alternative 1 Key Features



Example medium-to-high residential density closest to the station

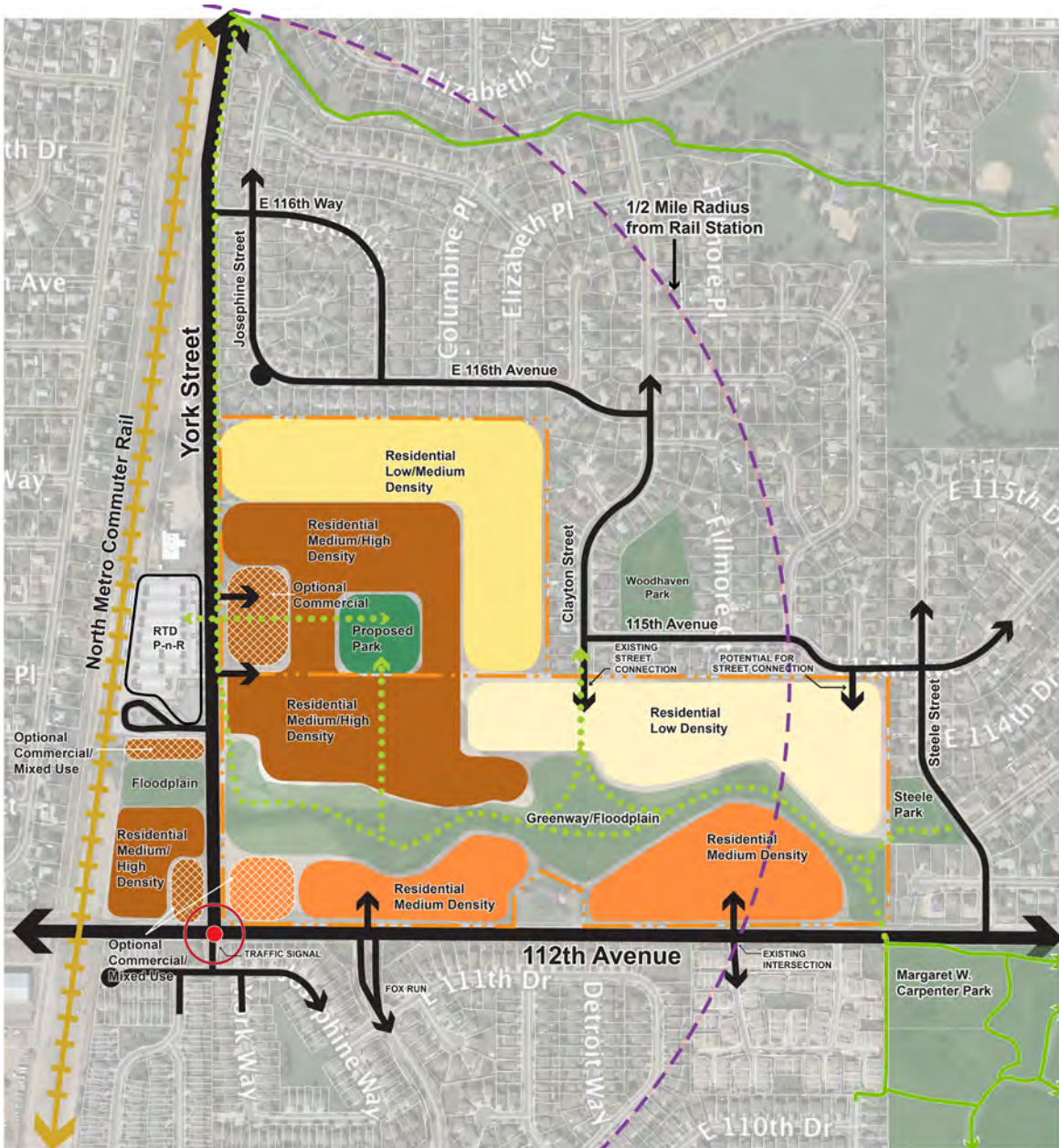


Example neighborhood-serving retail near station and at York St./112th Ave.



Example greenway in drainage channel

Figure 3-1: Land Use Concept Alternative 1



Alternative 1

Source: Project Team

Table 3-1 summarizes Alternative 1's estimated land use acreage, densities, and commercial square footage.

Table 3-1: Estimated Land Uses and Densities for Alternative 1

Land Use	Density	Estimated Acres	Range of Dwelling Units	Commercial
Residential Medium/High Density	8-40 DUs/acre	18.2	134-672	
Residential Medium Density	8-18 DUs/acre	13.3	69-155	
Residential Low/Medium Density	6-12 DUs/acre	15	38-77	
Residential Low Density	4-8 DUs/acre	16	28-56	
Optional Commercial		4.6		15,000 square feet
Parks		2.6		
Drainageway/Open Space		13.8		
TOTALS		83.5	269-960	15,000 square feet

Source: Project Team

Alternative 2

This alternative (Figure 3-2) is similar to Alternative 1 but provides less flexibility in density near the transit core. Instead of allowing the possibility for lower density in the transit core area, it promotes slightly higher-density residential development (from 16 to 40 units per acre) immediately adjacent to the station to the east. It also allows medium-density (8 to 18 units per acre) in pockets to the east (north and south of a neighborhood park), along 112th Ave., and south of the platform. It transitions to low-density (4 to 8 units per acre) in most areas adjacent to the existing neighborhoods to the north and east. As with Alternative 1, it incorporates a greenway with pedestrian and bicycle trails along the drainage channel, and options for small pockets of neighborhood-serving commercial/retail at key locations (including immediately adjacent to the platform to the south and east and on 112th Ave. at York.

Alternative 2 Key Features



Example higher residential density closest to the station



Example moderate-to-low density residential as buffers to adjacent neighborhoods



Example interior park/open space

Figure 3-2: Land Use Concept Alternative 2



Alternative 2



Source: Project Team

Table 3-2 summarizes Alternative 2's estimated land use acreage, densities, and commercial square footage.

Table 3-2: Estimated Land Uses and Densities for Alternative 2

Land Use	Density	Estimated Acres	Range of Dwelling Units	Commercial
Residential High Density	16-40 DUs/acre	12.9	96-240	
Residential Medium Density	8-18 DUs/acre	24.5	129-321	
Residential Low Density	4-8 DUs/acre	23.6	23-46	
Optional Commercial		5.1		15,000 square feet
Parks		2.6		
Drainageway/Open Space		14.8		
TOTALS		83.5	248-607	15,000 square feet

Source: Project Team

Alternative 3

This alternative (Figure 3-3) shows a proposed realignment of York St. over to Fox Run Pkwy. and the resulting changes to the land uses that result from the realignment. For example, it provides similar density levels of residential and commercial development as Alternative 1, but with different groupings of development as a result of the York St. realignment. In particular, it provides an opportunity (though not a requirement) for a developer to create a “unified” development parcel to the south of the rail platform, east and west along 112th Ave. west of the realigned York St. (More details on the potential realignment of York St. are included in Section 4.6.)

Alternative 3 Key Features

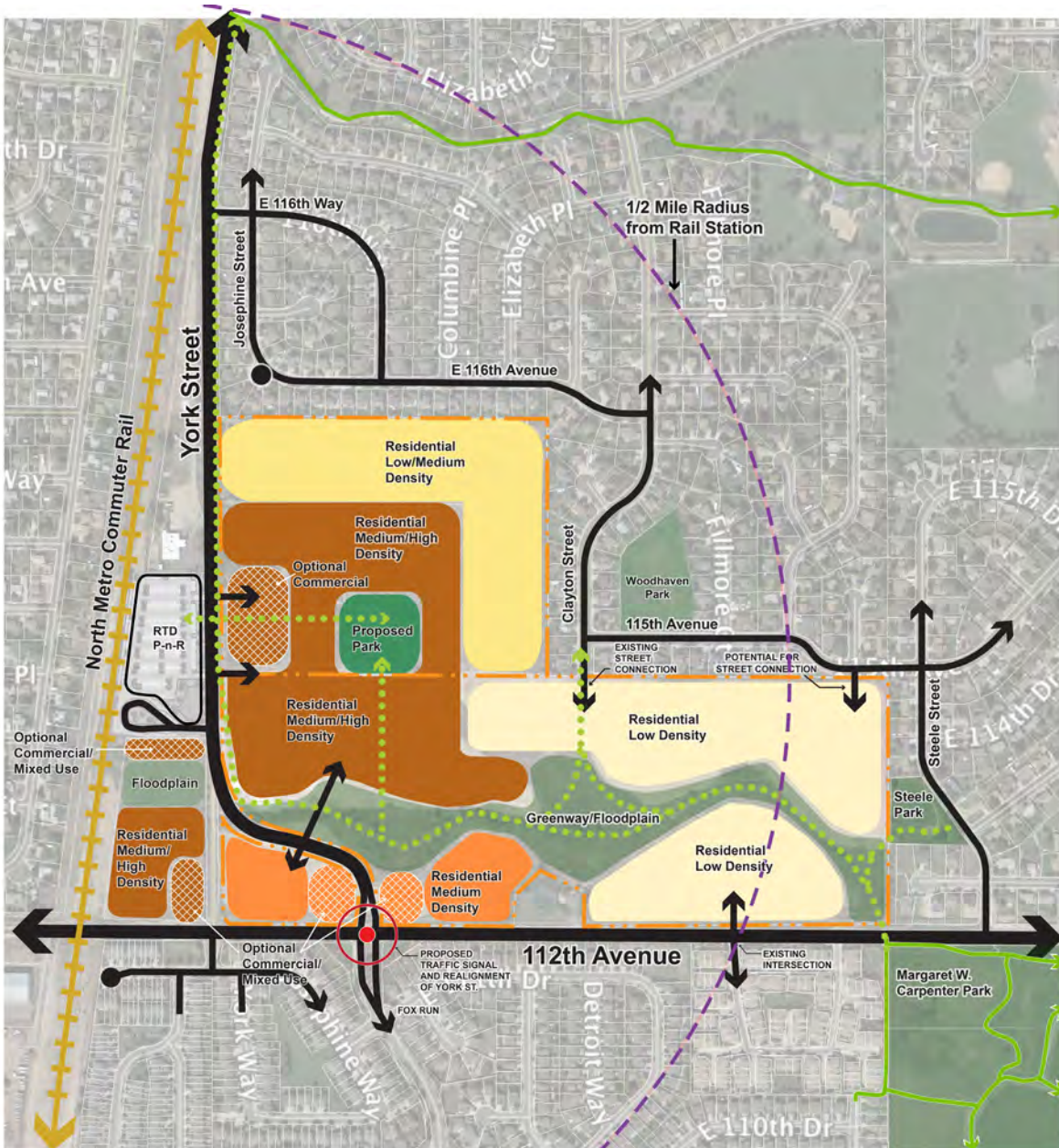


Example for realigned York St. with bicycle lanes

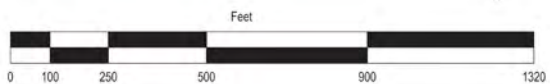


Example low density residential as buffer to adjacent neighborhoods

Figure 3-3: Land Use Concept Alternative 3



Alternative 3



Source: Project Team

Table 3-3 summarizes Alternative 3's estimated land use acreage, densities, and commercial square footage.

Table 3-3: Estimated Land Uses and Densities for Alternative 3

Land Use	Density	Estimated Acres	Range of Dwelling Units	Commercial
Residential Medium/High Density	8-40 DUs/acre	18.7	134-672	
Residential Medium Density	8-18 DUs/acre	6.7	14-32	
Residential Low/Medium Density	6-12 DUs/acre	15	38-77	
Residential Low Density	4-8 DUs/acre	22.9	28-56	
Optional Commercial		5.5		15,000 square feet
Parks		2.6		
Drainageway/Open Space		12.2		
TOTALS		83.5	214-837	15,000 square feet

Source: Project Team

3.3 Preferred Alternative

Figure 3-4a shows the Preferred Alternative for land use in the station area, which is Alternative 1 with the existing alignment of York St. This alternative is preferred because it provides options for higher residential density and commercial development near the station while still being flexible and feasible from a market perspective, and it provides a gradual land use transition between the existing neighborhoods and the station. This alternative also was chosen because it is based on the existing alignment of York St. and therefore is not dependent on an unfunded road improvement.

However, the cities also recognize the potential benefits of realigning York St. as shown in Alternative 3, and if the developer(s) chose to realign York St., the cities would support this option, as shown in Figure 3-4b, if all required development standards for the proposed development and road improvements were met. It is recognized that there is an added cost to development by realigning York St., but that there are distinct benefits to the realignment as described in more detail in Section 4.6. If the developer(s) chooses to realign York St., the development concept would then look like Alternative 3 in that the small amount of neighborhood retail would move to the intersection of York St. and 112th Ave. Final determination on the option to realign York St. will be made at the time of development application.

The Preferred Alternative meets the project's overall guiding principles and goals in a number of ways:

- It provides a **diverse range of housing options and densities** to appeal to large segments of the residential market. It envisions providing newly emerging styles of housing not currently found in Northglenn and Thornton, and it leverages the Northglenn at 112th Station investment by focusing the most high-intensity residential development closest to the station platform.
- It promotes **neighborhood-serving retail** in amounts appropriate for the local market forecast. Options for retail development are identified directly adjacent to the station (to serve commuters) and at the intersection of 112th Ave. and York St., where it would have high visibility and access. This new retail element can serve not only the immediate development area around the station but also the adjacent neighborhoods and their residents.
- It provides a wide range of **transit-supportive development** aimed at ensuring usage of the RTD rail system and leveraging the communities' investment in the RTD station.
- It aims to **create a sense of "place"** around the station by providing walkable, diverse neighborhoods, the potential for unique character and design (while remaining compatible with adjacent neighborhoods), and providing significant amounts of greenspace and open lands that can supplement development and provide major recreational opportunities. This can be implemented in conjunction with suggested transportation infrastructure improvements described in Chapter 4 and the recommended design guidelines included in the Northglenn at 112th Station TOD Public Space Design Guidelines developed as Appendix 5 as part of this report.

Legend:

- Auto Thoroughways:** Solid black line
- 1/2 mile Station Radius:** Dashed purple line
- Commuter Rail Corridor:** Yellow line with cross-ticks
- Existing Ped Lanes & Paths:** Solid green line
- Proposed Ped Lanes & Paths:** Dotted green line
- Traffic Signal:** Red circle with a dot
- Property Lines:** Dashed orange line
- Proposed Parks:** Green rectangle with a dot
- Existing Parks, Open Spaces and Flood Plain:** Light green rectangle
- Optional Commercial:** Orange rectangle with a dot
- Residential Medium/High Density 8-40 DU's/acre:** Dark brown rectangle
- Residential Med. Density 8-18 DU's/acre:** Orange rectangle
- Residential Low/Medium Density 6-12 DU's/acre:** Yellow rectangle
- Residential Low Density 4-8 DU's/acre:** Light yellow rectangle

Map Labels: North Metro Commuter Rail, York Street, E 116th Way, E 116th Avenue, 112th Avenue, 111th Dr, 110th Dr, Elizabeth Cir, Columbine Pl, Elizabeth Pl, Claydon Street, Steele Street, Woodhaven Park, Steele Park, Margaret W. Carpenter Park, Floodplain, Greenway/Floodplain, RTD P-n-R, Optional Commercial/Mixed Use, EXISTING STREET CONNECTION, POTENTIAL FOR STREET CONNECTION, EXISTING INTERSECTION, FOX RUN, SHINE WAY, DETROIT WAY, FILMORE.

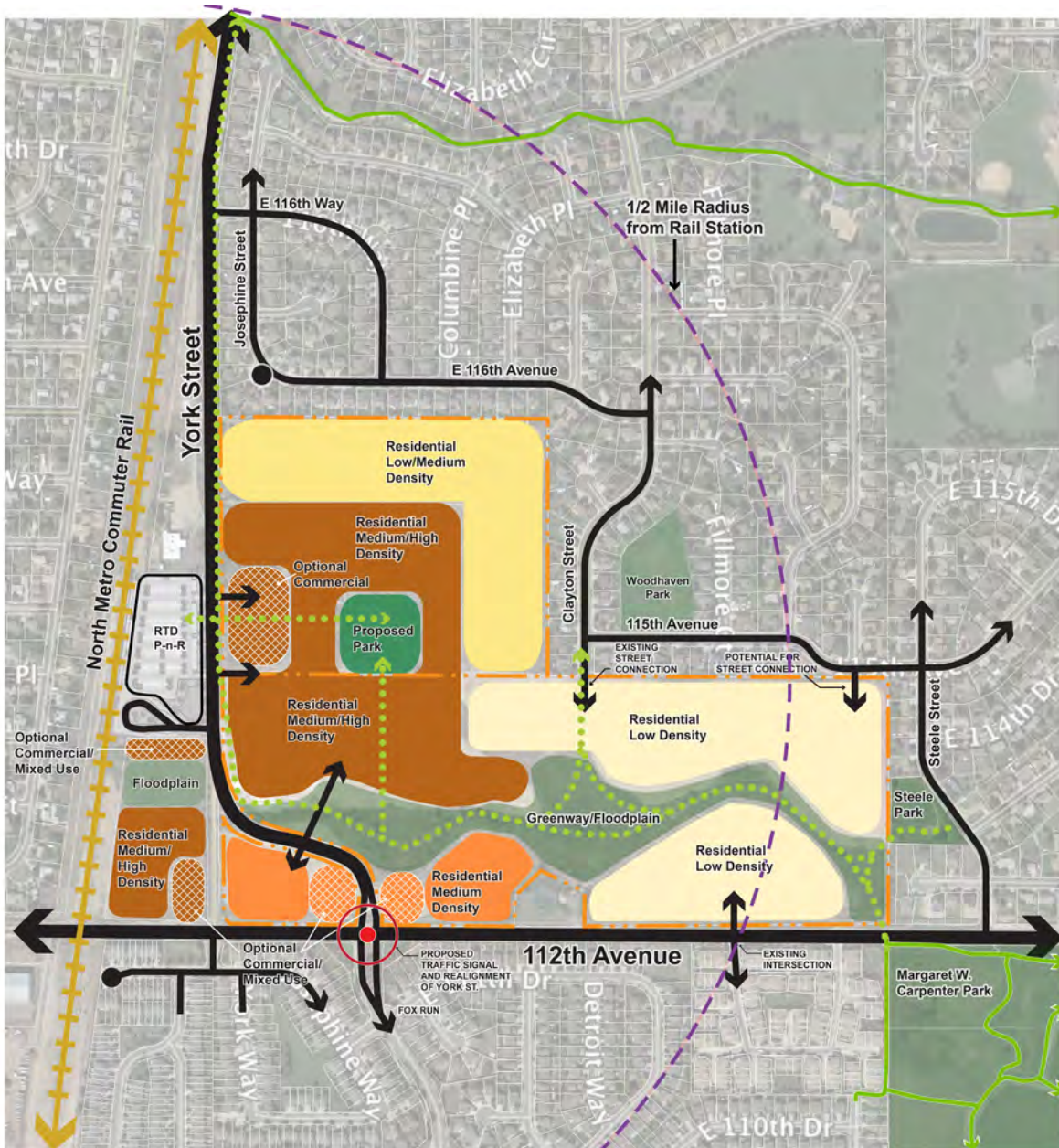
Scale: 0 to 1320 Feet

North Arrow: N

Preferred

NORTHGLENN & THORNTON
 **112TH AVENUE**
STATION AREA MASTER PLAN

Figure 3-4b: Option for York Street Realignment



Optional York Street Realignment

Source: Project Team

Table 3-4 summarizes the Preferred Alternative's estimated land use acreage, densities, and commercial square footage.

Table 3-4: Estimated Land Uses and Densities for Preferred Alternative

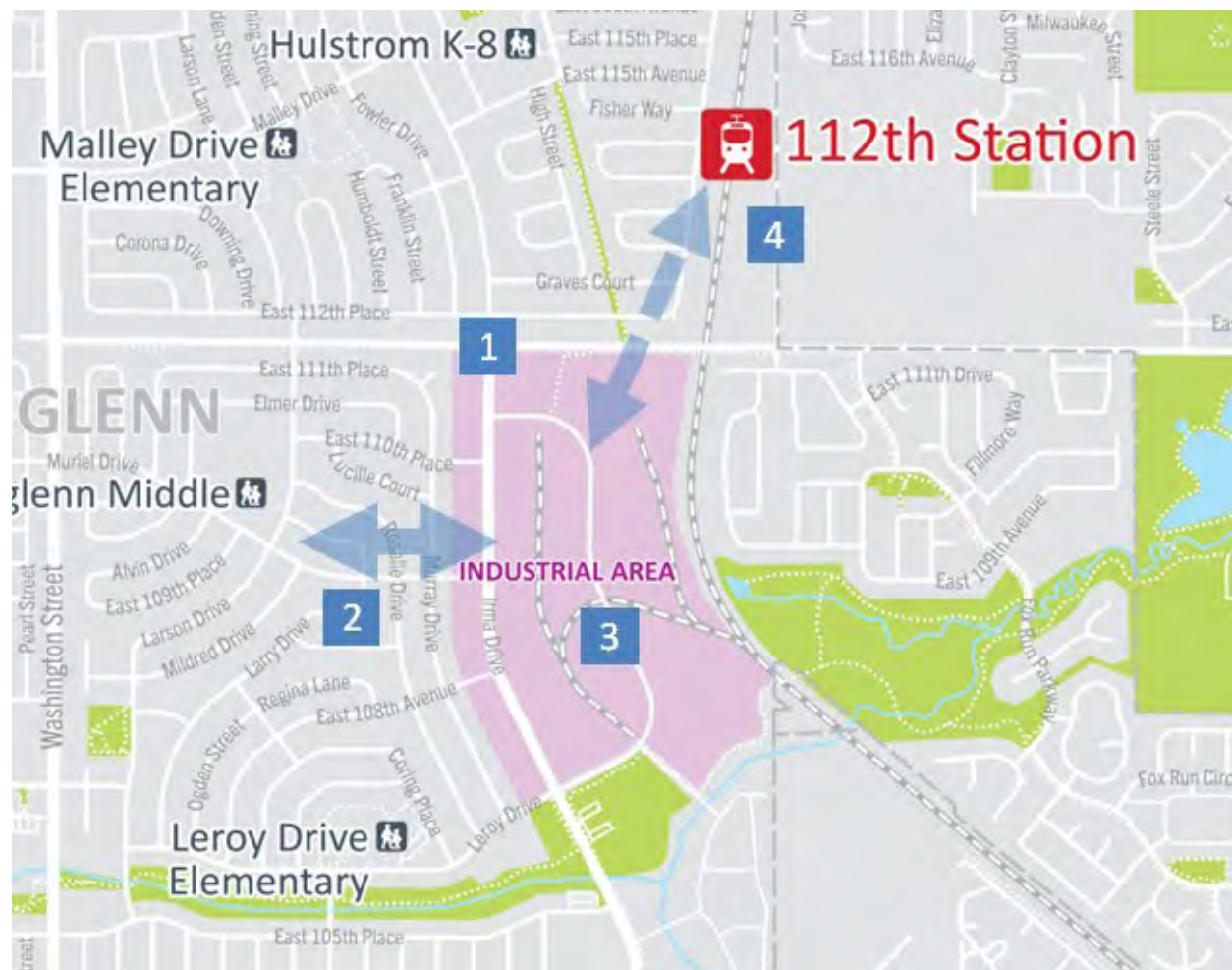
Land Use	Density	Estimated Acres	Range of Dwelling Units	Commercial
Residential Medium/High Density	8-40 DUs/acre	18.2	134-672	
Residential Medium Density	8-18 DUs/acre	13.3	69-155	
Residential Low/Medium Density	6-12 DUs/acre	15	38-77	
Residential Low Density	4-8 DUs/acre	16	28-56	
Optional Commercial		4.6		15,000 square feet
Parks		2.6		
Drainageway/Open Space		13.8		
TOTALS		83.5	269-960	15,000 square feet

Source: Project Team

3.4 Industrial Area Southwest of the Station

In addition to the focus on the primary station area north of 112th Ave., the project team developed land use and development strategies for the industrial area southwest of the station. Figure 3-5 illustrates some of the key issues and goals associated with that area.

Figure 3-5: Key Goals for Industrial Area Southwest of Station



Source: Project Team

Those goals (corresponding to the numbers on the figure) included:

1. Evaluate ways to increase the mix of uses along 112th Ave. to better respond to the TOD opportunity the station represents.
2. Create opportunities for the industrial park to utilize the city of Northglenn's economic development incentives to invest in current businesses and employment opportunities.
3. Create opportunities for the industrial park to better serve the regional demands for industrial uses over the long term.
4. Create opportunities for industrial park employees to use transit to get to and from jobs.

Strategy Framework

Figure 3-6 illustrates some of the key issues related to a strategy framework for developing the industrial area, with additional details on these strategies described below.

- The priority for the industrial lands in the station area should be to provide infill development in appropriate locations with complementary industrial uses. This can be accomplished by the city of Northglenn through several actions, including:
- Working with property owners to facilitate new tenants or owners for the vacant buildings/tenant spaces. This could include updating the industrial zoning performance standards to allow existing industrial buildings to be updated to meet new trends and adapt to new industries. It could also include looking for external organizations or grants that could provide opportunities for developing new industrial facilities in existing buildings, such as innovation districts, educational or medical-related uses, live-work spaces, or other newly developing options.
- Working with the owner of the parcel immediately west of the railroad tracks and fronting on 112th Ave. (as shown in Figure 3-7) to develop the property or sell it to someone who would. Efforts in this direction are already ongoing through the city of Northglenn's economic development programs and should be continued and supported.
- Supporting the owners of the Rocky Mountain Soccer Center if they are interested in expanding or selling the facility.
- Work with the Northglenn Urban Renewal Authority (NURA) to invest in infrastructure improvements, such as streetscape elements, landscaping, signage, sidewalks and other gateway elements to the station to provide a more attractive gateway experience to the station from the western entrance along 112th Ave. from Irma Street to the east side of the RTD right-of-way.

Key Policy Directions/Recommendations: Industrial Area

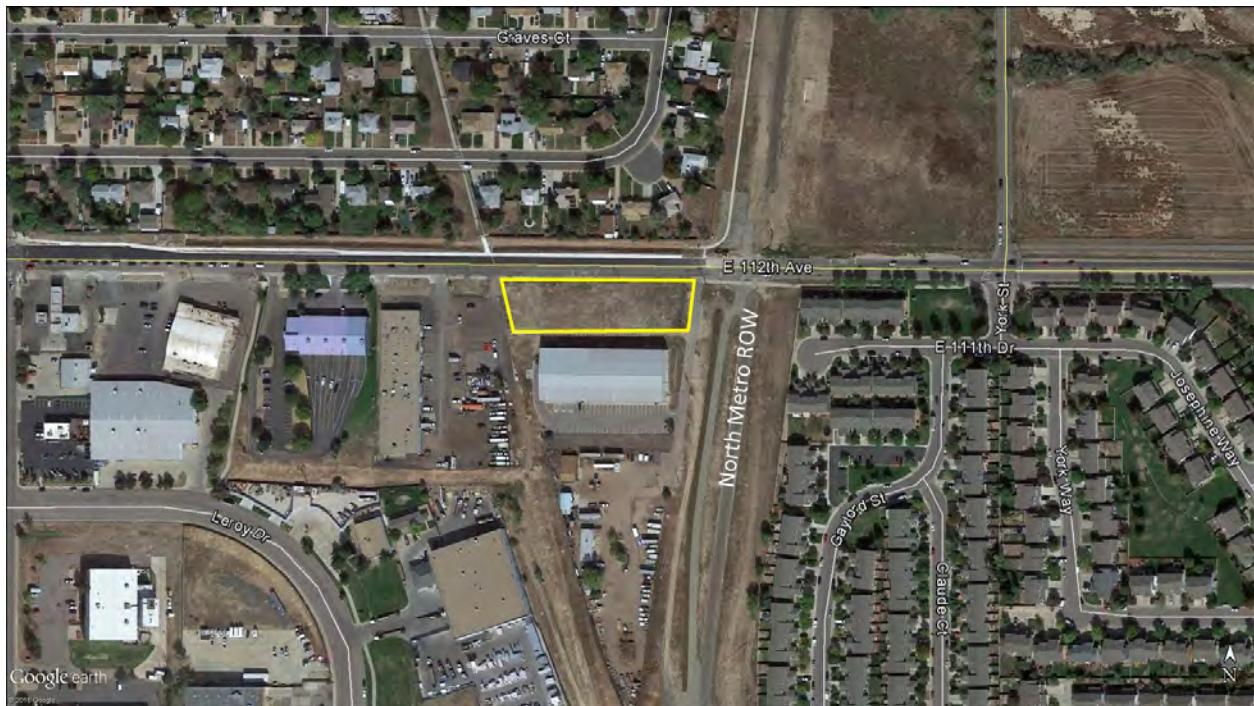
- Focus on infill development.
- Provide infrastructure and urban design improvements.
- Provide pedestrian access across 112th Ave. to the industrial area.
- Improve wayfinding throughout the area.
- Assist and encourage existing businesses.

Figure 3-6: Strategy Framework for Industrial Area



Source: Project Team

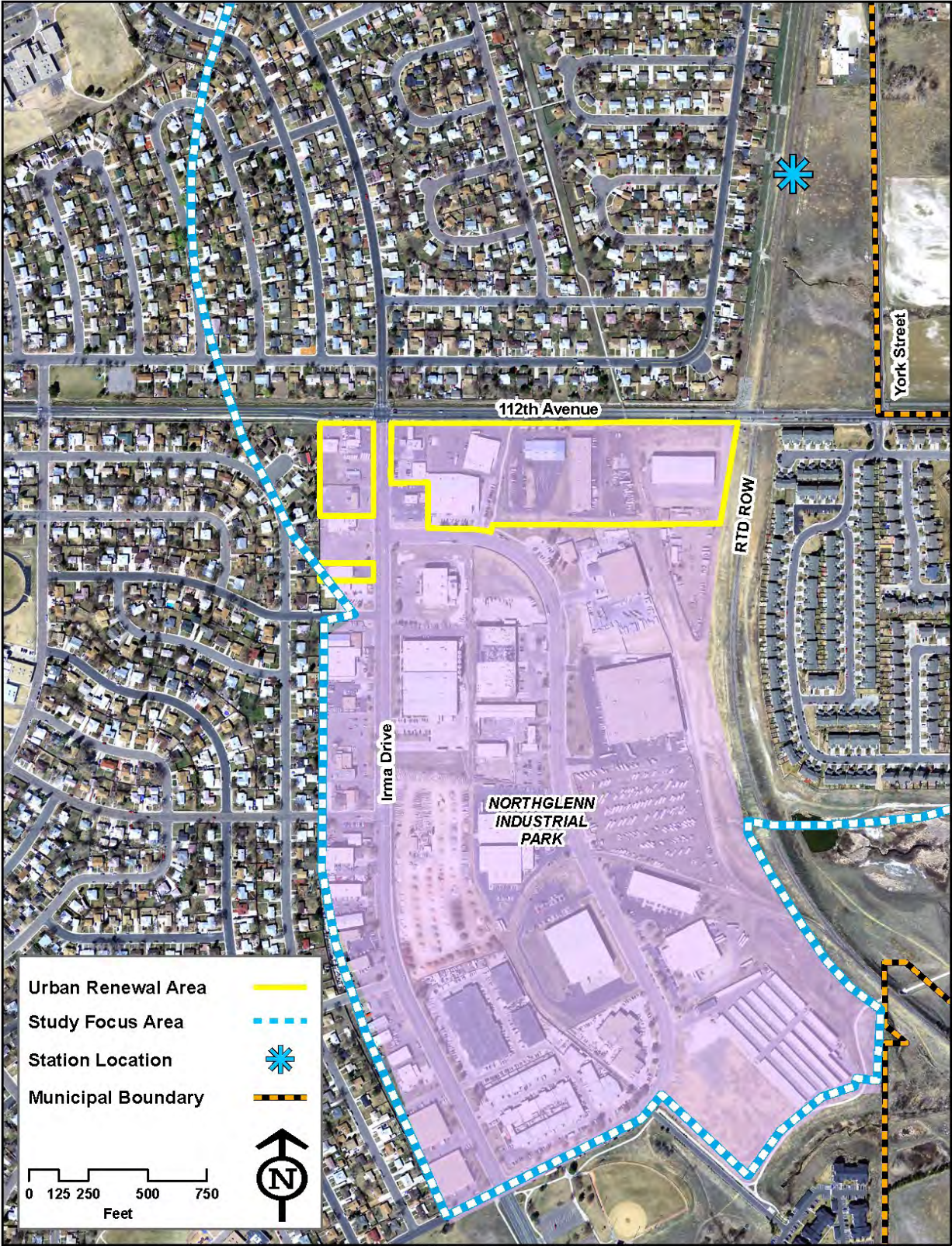
Figure 3-7: Vacant Parcel Fronting E. 112th Ave.



Source: Project Team

- Work with RTD and others to consider providing a pedestrian crossing across 112th Ave., either at the Wyco easement or at the RTD railroad crossing, and a pedestrian/bicycle trail connection to the North Fork Grange Hall Creek trail, either along the west side of the RTD right-of-way or within the Wyco right-of-way. This would include investment in safety improvements such as pedestrian-activated signals, raised pedestrian tables/crosswalks, and other high-visibility safety upgrades.
- Work with the Northglenn Arts and Humanities Foundation to install works of art as wayfinding as part of an area-wide system of wayfinding art/signage.
- Work with NURA on other business assistance programs to assist existing industrial businesses within the urban renewal area with their expansion needs. Figure 3-8 shows the properties in the station area within the NURA boundary.

Figure 3-8: Properties in Station Area Within NURA Boundary



Source: Project Team

3.5 Key Station Area Data: Utilities

This section summarizes the key findings of the utilities memo included in Appendix 3.

City of Northglenn

The city of Northglenn provides water, sanitary sewer, and storm sewer service to the area west of York St., and will be the service provider for the undeveloped area at the northwest corner of York St. and 112th Ave., south of the RTD station. The city of Northglenn also provides service to the Northglenn Industrial Park.

City of Thornton

The city of Thornton provides water, sanitary sewer, and storm sewer service to the area east of York St., and will be the service provider for the undeveloped area at the northeast corner of York St. and 112th Ave. Existing facilities are generally sized appropriately to accommodate future development. The major system lines are already in place, including a 24" water main in York St., 8" and 12" water lines in the surrounding residential areas, and 8" sanitary sewer lines in the surrounding residential areas.

Overall Assessment

Based on the area investigated for this utility evaluation and the criteria used to identify major utilities, additional water and sewer mains will need to be designed and constructed to serve future development needs. It is the responsibility of the local water and/or sewer agency to provide service to undeveloped parcels within the station area. It would be the developer's cost responsibility to install any necessary water and sewer lines within their development. These anticipated water and sewer infrastructure costs are considered within the realm of the standard and expected cost of development.

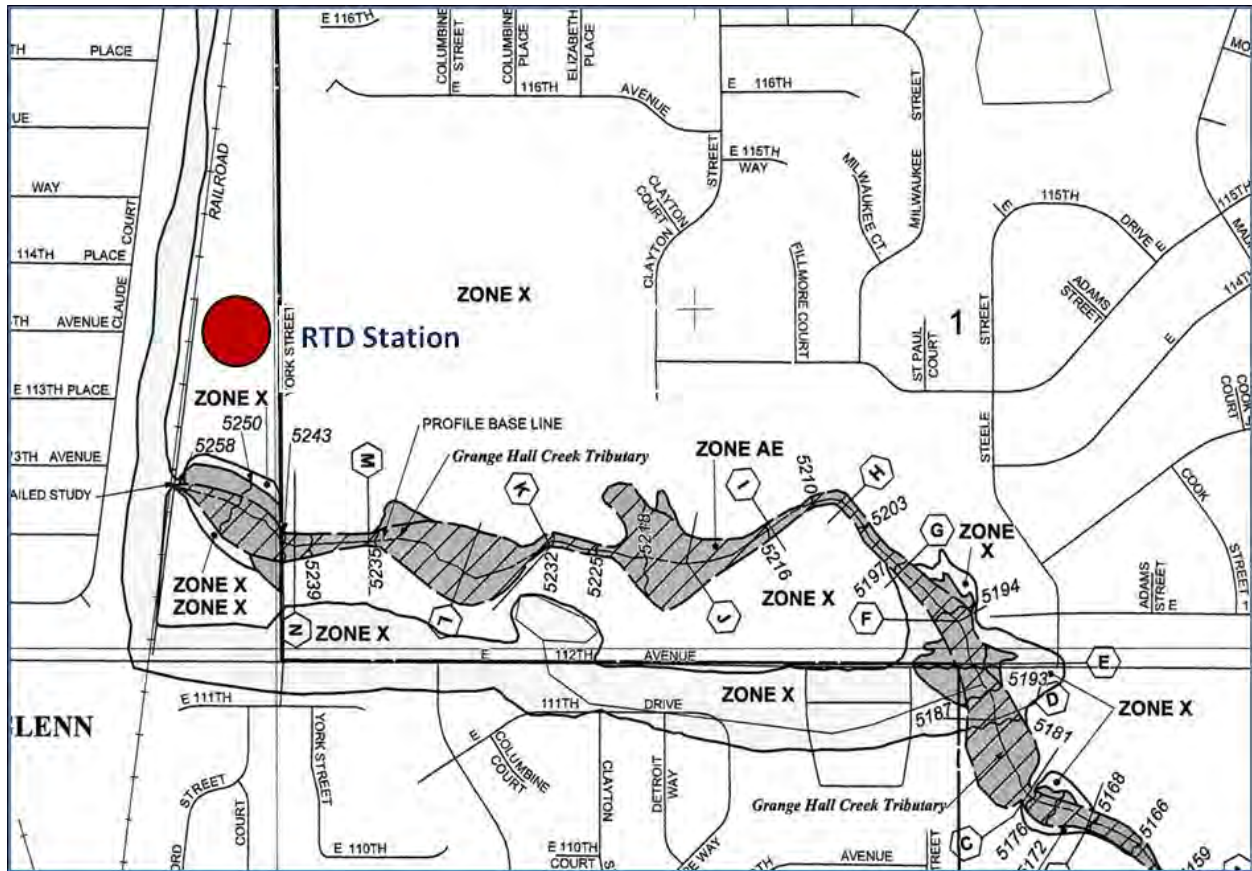
There appears to be sufficient water and sanitary sewer capacity in both the Northglenn and Thornton infrastructure to serve the future development of this project area. As development progresses, the cities of Northglenn and Thornton will need to monitor their existing infrastructure to ensure adequate capacity is available to accommodate growth.

Additional improvements to the drainage channel that runs through the station area (see Figure 3-9) will need to be addressed to maximize the development area. This includes upgraded drop structures and possible channel depth modifications. These drainage improvements will be consistent with recommendations made by Urban Drainage Flood Control District (UDFCD) in their final master plan update. Development within the drainage channel area will likely be prohibited unless and until improvements within the drainageway are made, either as part of new development that may occur around the station or as a separate project. In addition, for future development to occur (and for assistance from the UDFCD to be available), the drainageway will need to have adequate assurances as required by UDFCD.

Key Policy Directions/Recommendations: Utilities

- The cities will need to monitor development and make appropriate investments as needed.
- Additional drainage channel improvements will be needed to serve new developments, and it will need to be under public ownership.

Figure 3-9: Drainage Channel in Station Area



Source: Project Team (verify - looks like FEMA flood plain map - AS)

CHAPTER FOUR: STRATEGIC MOBILITY PLANNING

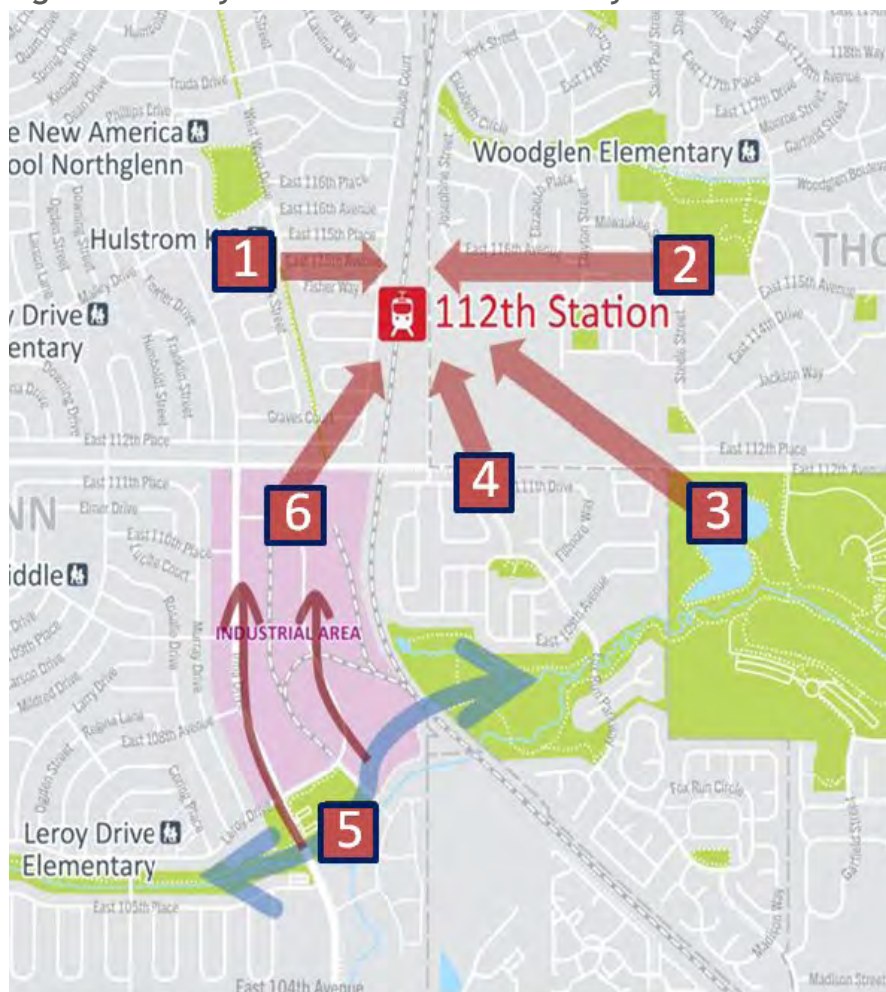
4.1 Introduction

This chapter summarizes the key mobility considerations related to the Northglenn at 112th Station and related development. It focuses on the street and roadway network, bicycle and pedestrian connections, and future potential transit connections and service options and strategies to improve access and mobility to and through the entire station area as related to the project's overall goals.

4.2 Overall Station Area Connectivity Goals

Connectivity within the site, to the station, and the network of streets beyond the development is imperative for the creation of a livable, walkable community. One of the project goals is to connect to the existing street network surrounding the development so that the project works within the existing street network of the area and sets a future framework for development. Figure 4-1 illustrates the key connectivity goals of the project, with more detailed descriptions provided below.

Figure 4-1: Key Station Area Connectivity Goals



Source: Project Team

As shown in the figure, the key connectivity goals for the station area include:

1. Access for the neighborhoods to the west of the railroad line and north of 112th Ave. to the station.
2. Access for the Thornton neighborhoods to the north and east of the station.
3. Connecting Margaret W. Carpenter Park and Open Space to the station and to future development areas north of 112th Ave.
4. Access from the Fox Run neighborhood to the station.
5. Connecting the open space pieces south of the industrial park to the station and other regional connections.
6. Access for the industrial park to the southwest to the station.

4.3 Key Station Area Data: Roadway Network

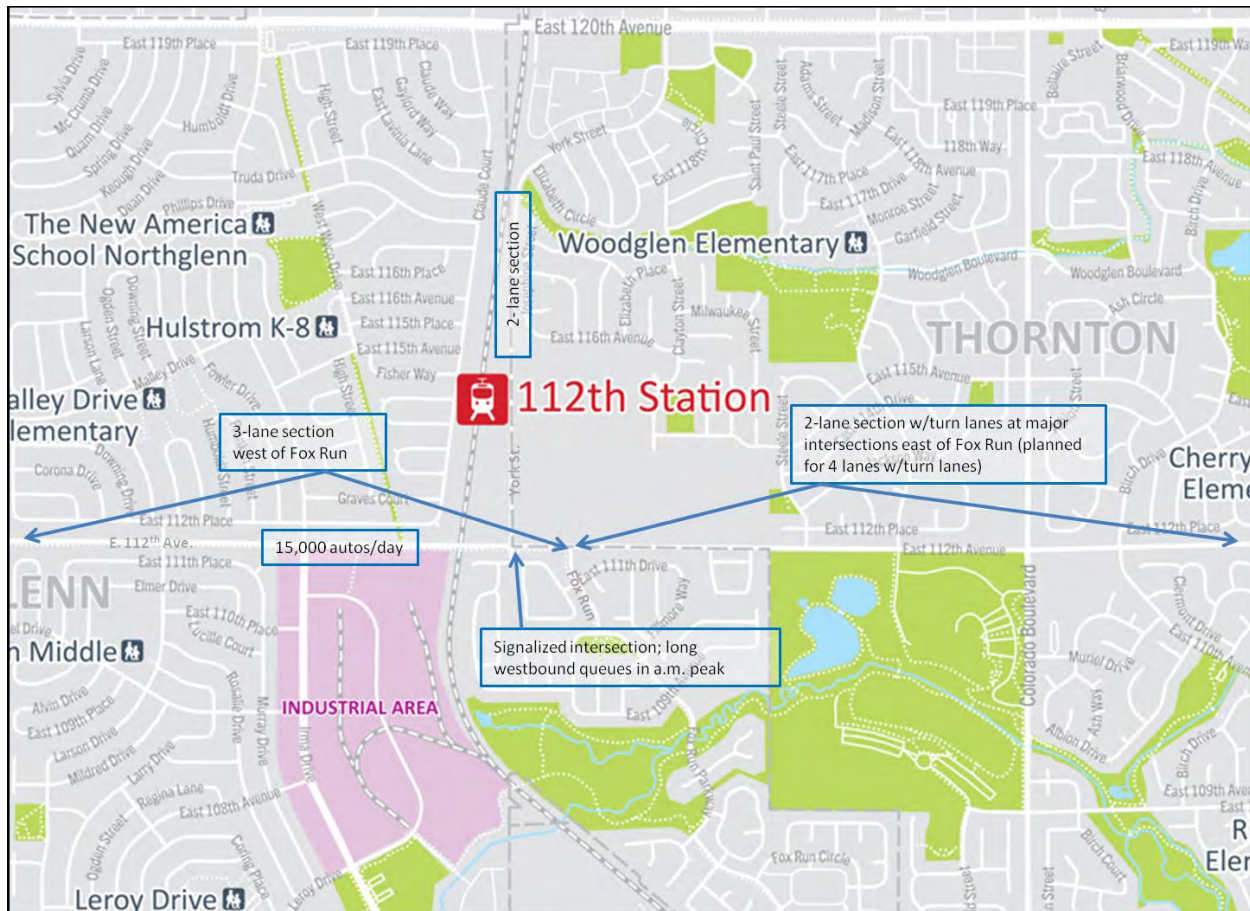
The primary roadways serving the station area are 112th Ave. and York St. 112th Ave. is an east-west minor arterial roadway with continuity from Washington St. on the west to Riverdale Road on the east. As illustrated in Figure 4-2, in the vicinity of the station, the roadway has a three-lane cross-section from west of York St. to approximately Fox Run Pkwy., and a two-lane cross-section east of Fox Run Pkwy. with turn lanes at major intersections. 112th Ave. currently carries approximately 15,000 vehicles per day west of York St. and 9,000-10,000 east of York St.

York St. is also a minor arterial roadway with limited continuity between 112th Ave. and 120th Ave., where it continues north as Steele St. The roadway has a narrow two-lane cross-section in the vicinity of the RTD station with no sidewalk facilities. The Fox Run subdivision is located south of 112th Ave. and its primary access is provided via Fox Run Pkwy., a two-lane collector roadway which intersects 112th Ave. approximately 500 feet east of York St.

The intersection of 112th Ave./York St. is currently signalized. Based on field observations during the weekday peak periods, the intersection experiences long queues in the westbound direction during the morning peak hour. The queues can extend far enough to the east to block the Fox Run Pkwy. intersection, which is northbound stop-controlled. This makes it difficult to execute northbound left-turn movements, which encourages traffic to shift to the south leg of the 112th Ave./York St. intersection by traversing internal roadways. However, the south leg at this intersection has a very short approach and therefore does not provide adequate storage distance.

The city of Thornton is proposing to widen 112th Ave. between York St. and Colorado Blvd. to a five-lane cross-section when funding becomes available, therefore providing two travel lanes in each direction. The city of Northglenn recently improved 112th Ave. between Washington St. and York St., although the number of through travel lanes remains at one in each direction. As a result, when the city of Thornton widens 112th Ave., the westbound outside travel lane is proposed to become a right-turn lane at York St. This should ease some of the existing congestion at the westbound approach, particularly during the morning peak hour.

Figure 4-2: Station Area Roadway Current Conditions



Source: Project Team

According to the North Metro Station Area Traffic Impact Statement – 112th Ave. Station prepared by David Evans and Associates, Inc, in December 2010, RTD is planning some improvements at the intersection of 112th Ave./York St. to improve access to the station by 2035. Specifically, the eastbound left-turn lane will be extended and a new southbound right-turn lane will be added. No improvements are planned at 112th Ave./Fox Run Pkwy. With these improvements, the intersection of 112th Ave./York St. is anticipated to operate at an acceptable Level of Service “D” during both the weekday morning and evening peak periods through the Year 2035. However, it is anticipated that the poor operations for the northbound left-turn movement at the Fox Run Pkwy. intersection will continue.

4.4 Key Station Area Data: Transit Network

Fixed-Route Service

RTD bus service currently is focused on the major arterials surrounding the station and station area, with no direct bus access to the station area itself being currently provided. Figure 4-3 shows current bus routes in the station area, and Table 1-1 describe the routes.

Figure 4-3: Current Bus Routes in the Station Area



Source: RTD

Table 4-1: RTD Fixed-Route Service in Station Area

Route	Description	Service Frequencies
AA	Wagon Road Park-n-Ride (I-25 and 120th Ave.) to Denver International Airport via 104th Ave.	Generally hourly, with short periods of 30-minute service.
12	Wagon Road Park-n-Ride to Englewood, primarily along Washington & Downing streets	30-minute service throughout most of the day.
39L	136th Ave. and Colorado Blvd. to downtown Denver, using 104th Ave. for east-west travel through the area.	Limited 30-minute service during peak hours.
92	East-west service from 136th Ave. and Colorado Blvd. to Westminster along 100th Ave.	30-minute service throughout most of the day.
120	Brighton to Broomfield along 120th Ave.	30-minute service throughout most of the day.

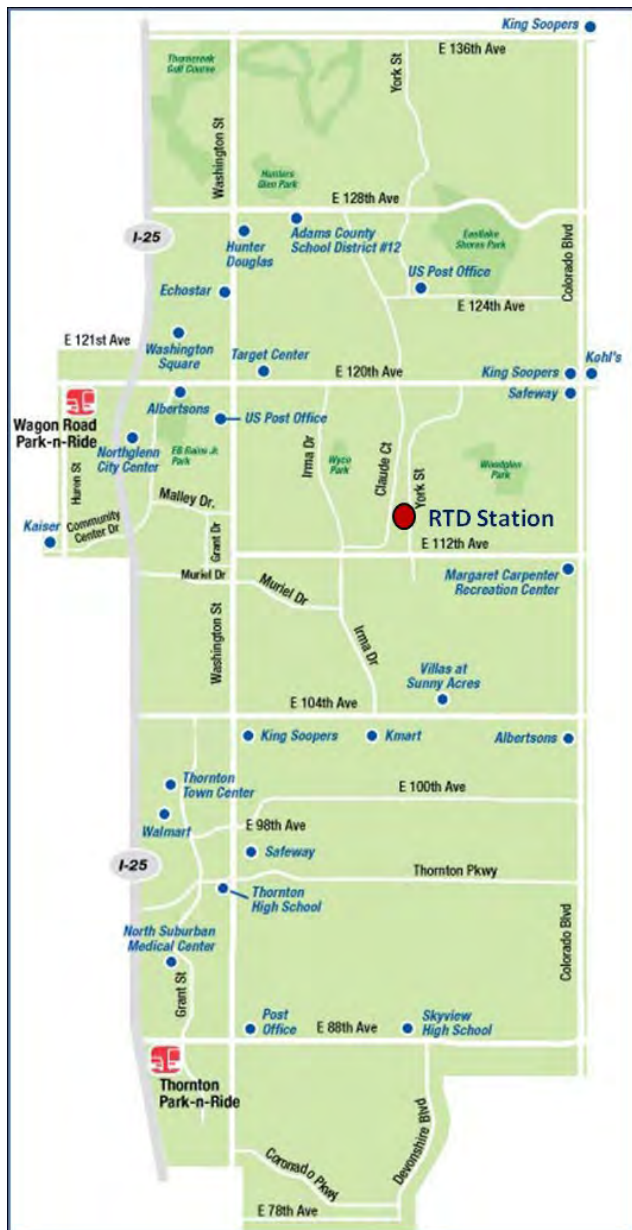
Source: RTD

It is likely that, once the Northglenn at 112th Station goes into service in 2018, RTD will reorient some of its bus service in the area to directly serve the new station. However, as of the preparation of this report, RTD has made no specific plans for those types of service changes. Traditionally, such changes are planned with local jurisdictions beginning roughly one year before implementation, so those discussions with Northglenn and Thornton can be anticipated as occurring beginning sometime in 2017.

Call-n-Ride Service

In addition to fixed-route service, the area is served by an RTD Call-n-Ride network. Call-n-Ride is a personalized door-to-door bus service that travels within select RTD service areas. Riders can make appointments for Call-n-Ride pickups by phone or online; appointments can be made from two hours to two weeks in advance of a trip, and subscription or recurring appointments are allowed. The Thornton Call-n-Ride zone (see Figure 4-4) serves the cities of Thornton and Northglenn, including the Wagon Road Park-n-Ride and the Thornton Park-n-Ride. Service extends north to 136th Ave., east to Colorado Blvd., south to 78th Ave., and west to I-25. Service hours are Monday through Friday from 5:30 a.m. to 7 p.m., with no weekend or holiday service.

Figure 4-4: Thornton RTD Call-n-Ride Zone

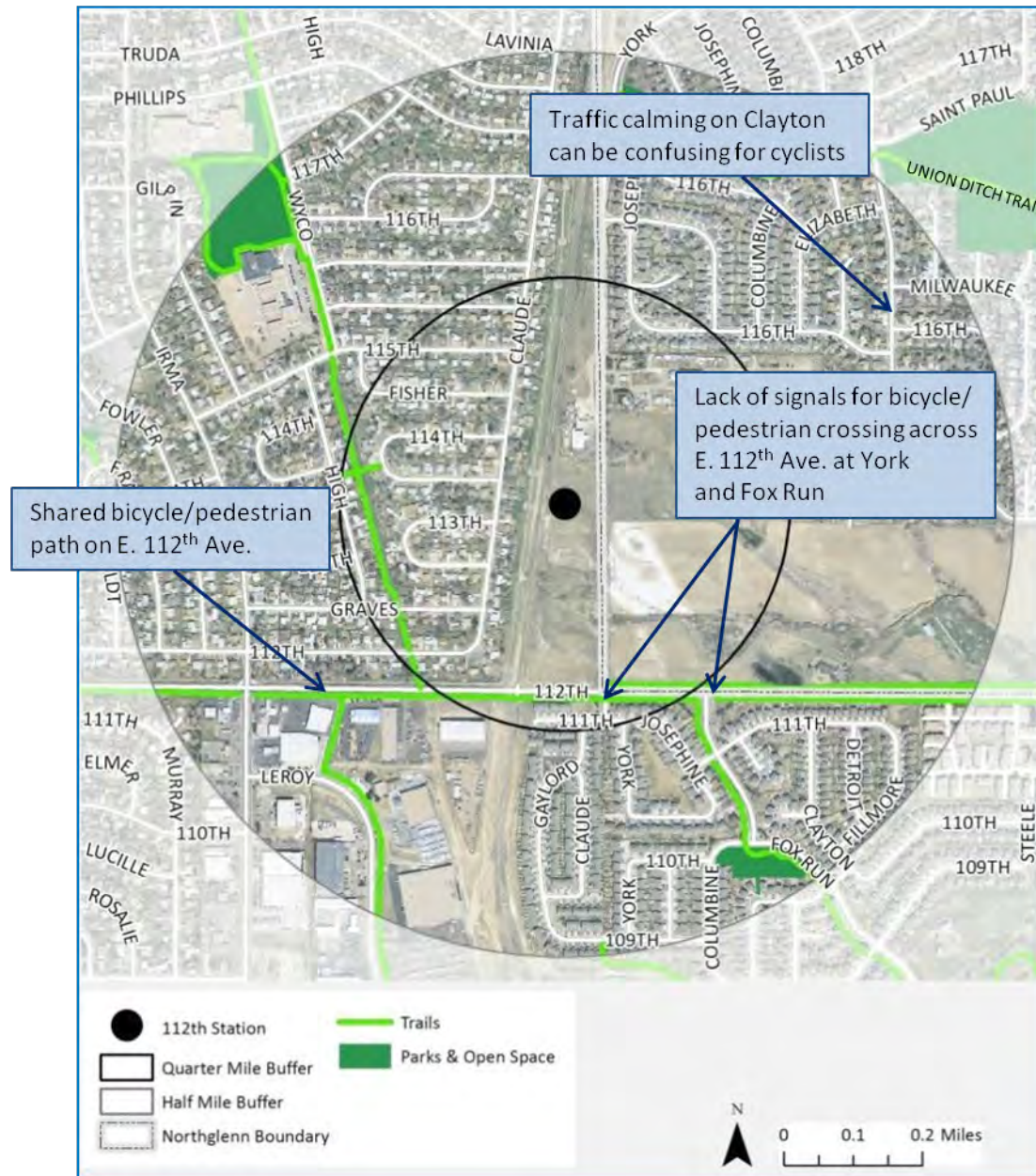


Source: RTD

4.5 Key Station Area Data: Bicycle/Pedestrian Infrastructure

All facilities for cyclists and pedestrians in the station area are off-street on paths and sidewalks. There are no on-street facilities for cyclists in the ½-mile radius surrounding the future station location. Figure 4-5 shows the current trails and paths in the station area, along with problem areas described in the following sections.

Figure 4-5: Current Trails in Station Area and Problem Areas



Source: Project Team and cities of Northglenn and Thornton

Figure 4-6 is an aerial photo from DRCOG showing the current state of sidewalks in the station area. Streets coded green are those with adequate sidewalks; orange signifies existing sidewalks that are deficient (such as extremely narrow and/or needing repair); and red signifies areas where sidewalks are missing entirely.

Figure 4-6: Current Sidewalks in Study Area



Source: DRCOG

The figure shows that most of the sidewalks in the Thornton portion of the station area are adequate and that most in the Northglenn side are deficient, with pockets of streets with no sidewalks at all (including York St. north of 112th Ave.).

Off-Street Paths

An off-street path currently connects Wyco Park/ Hulstrom K-8 School to 112th Ave. The north side of 112th Ave. also has a path that runs roughly from York St. to Steele St., just east of the station area. Two other paths exist south of 112th Ave. and give access to businesses along Leroy Dr. and through the Fox Run neighborhood, which provides connections south to Stonehocker Park and east to Margaret W. Carpenter Park and Open Space. Sidewalks are present all around the area, including the residential streets, except the north side of 112th Ave. between the railroad tracks and York St. as well as both directions of York St.

On-Street Facilities

While bicycles are allowed on station area streets, there are no dedicated cycle facilities, with many narrow streets and relatively high vehicle speeds often creating unsafe and uncomfortable conditions for cyclists.

Two streets in particular provide a challenging environment for cyclists. Traffic calming measures on Clayton St. in Thornton slow traffic but also complicate the roadway for cyclists, with the combination of planters and parking creating an often-confusing environment for bicycle travel.

Even though 112th Ave. functions as a major connection for vehicles traveling east-west, cyclists will share an off-street path with pedestrians once improvements are made on that roadway. This gives access to the southern part of 112th Ave., but limits cyclists' ability to access areas north of 112th Ave. Potential conflicts could arise with cyclists and pedestrians on the off-street path given the different speeds and potential for high usage.

Problem areas for bicyclists and pedestrians...



Traffic calming on Clayton St. in Thornton can be confusing for cyclists...



Shared bicycle/pedestrian path on north side of 112th Ave. can create conflicts for both types of users....

Intersections

The intersection of 112th Ave. and Fox Run Pkwy. has stop signs instead of signals and does not have crossing markings. While cycling along Claude Ct. to 112th Pl. is a relatively comfortable ride, turning south on Irma Dr. can be difficult due to traffic coming from the north. Crossing 112th Ave. at York St. does not require a long wait, although no automatic detection system for cyclists is present. However, if on-street bicycle facilities are provided at this location, the current video detection system at 112th Ave. and York St. can be modified to provide bicycle detection. Given the turning movements at 112th Ave. and Fox Run Pkwy., continuing on the path on the south side of 112th Ave. requires attention and communication with vehicles to prevent conflicts.

Additional Conclusions and Observations: Northglenn HEAL Committee

The city of Northglenn's Healthy Eating and Living (HEAL) Committee conducted walking audits of several neighborhoods in the Northglenn portion of the station area to determine their safety and walkability for pedestrians and bicyclists. Their major findings concur with the project team's findings and provided additional insight on the overall walkability of the station area. Those findings and recommendations are in Appendix 4 and included:

- Fox Run Neighborhood: Using a walkability evaluation tool, this neighborhood scored 76 out of a possible 100 points for walkability. Comments included:
 - Fox Run Pkwy. is a very wide road, often with no markings or signs for pedestrian crossings.
 - Fox Run Pkwy. and other neighborhood streets have good shade from tree canopies in many places.
 - The intersection of Fox Run Pkwy. and 112th Ave. is a challenge for pedestrians due to lack of signalization and should be improved.
 - Sidewalks in the neighborhood are narrow in many places; they need to be improved throughout.
- 112th Ave.: This road scored 48 out of 100 points for walkability. Key issues included:
 - Other than a pedestrian signal at 112th Ave. and York St., there are no designated crosswalks to the businesses on the south side of 112th Ave. between Irma Dr. and York St.; there is a need to add dedicated and/or signalized crosswalks at key locations.
 - Sidewalks are narrow, mostly attached to the street, and with little or no shade as 112th Ave. approaches the station; there is a need to improve and detach the sidewalks from the street.
 - The speed and volume of traffic on 112th Ave. makes walking unpleasant; an engineering study to determine the safest speeds for the road and a potential "road diet" to improve safety should be conducted.
 - The width of the road may offer the opportunity to add amenities such as bike lanes or landscaping to increase the distance from pedestrians to traffic.
- Northwest Neighborhood: The residential district to the north and west of the station scored 62 points on the walkability scale. Major issues included:
 - Neighborhood sidewalks are very narrow and usually attached to the road with no buffers. Wheelchairs would have a difficult time using the sidewalks. Where appropriate, the city should

provide separated and improved sidewalks.

- The route for pedestrians from the neighborhood to the station (primarily along the Wyco Trail) is indirect and should have better signage.
- Few pedestrian amenities exist in the neighborhood or along the trail; there is a need to add those amenities.
- The trail currently does not have lighting or shade; there is a need to add those amenities.

4.6 Proposed Street Network

The major elements of a proposed street network for the station area are shown in Figure 4-7, with more details provided below.

The conceptual network as shown includes:

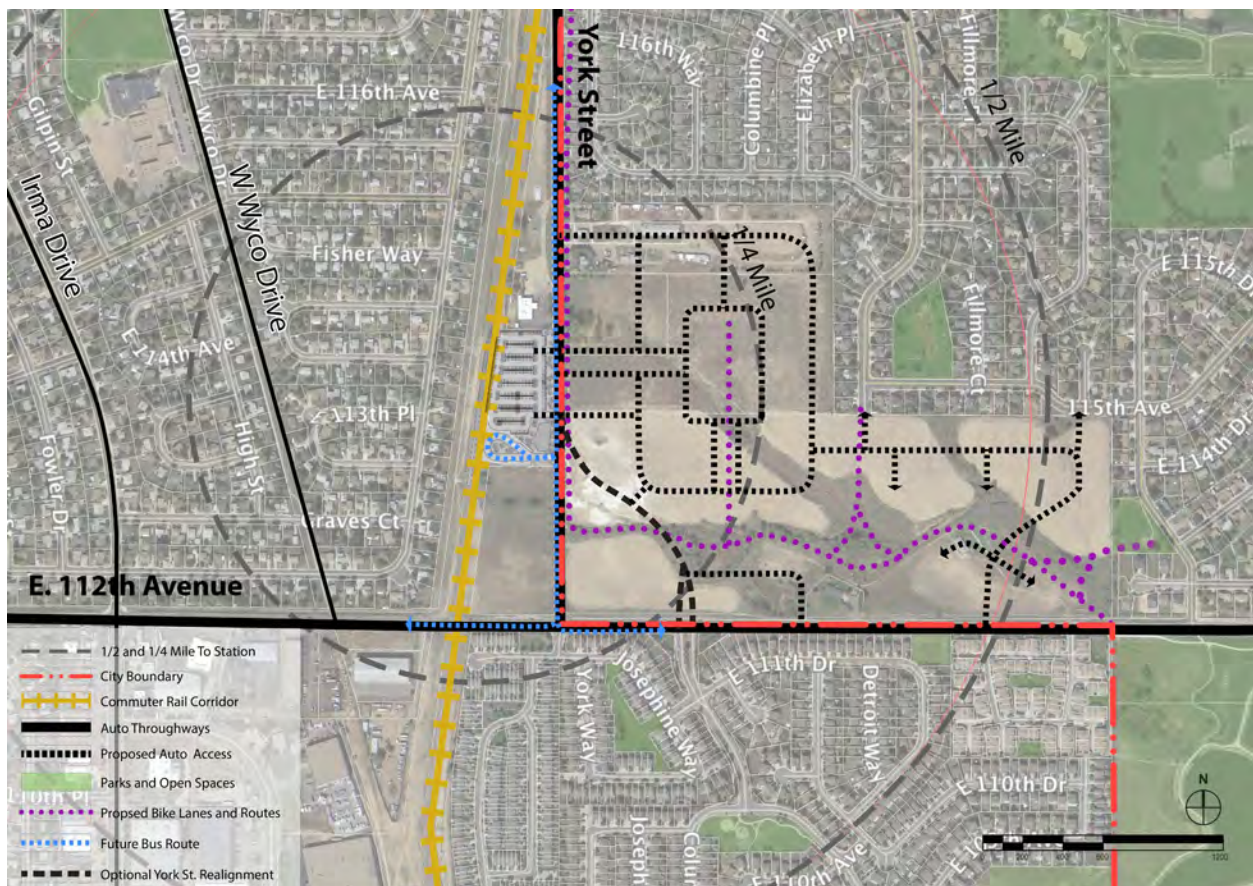
- Planned improvements to York St. and 112th Ave. as proposed by Northglenn and Thornton.
- A small-block street network within future development areas to encourage walkability, with all new roadways being “complete streets” and as bicycle and pedestrian friendly as possible.
- Where appropriate, continuation of existing streets from adjacent neighborhoods to promote good connectivity and access.

Key Policy Directions/Recommendations:

Street Network

- Develop a small-block street network within future development areas to promote walkability.
- Continue adjacent street patterns into new development areas.
- Conduct detailed traffic engineering analysis related to the potential realignment of York St.

Figure 4-7: Potential Street Network for Station Area



Source: Project Team

Even without the station area development, the adjacent roadway network will experience some operational issues. The intersection of E. 112th Ave./York St. will operate at an acceptable Level of Service “D” through the Year 2035, but the Fox Run Parkway approach to 112th Ave. will continue to experience long delays. As demand at this approach increases, a traffic signal may be necessary (and will likely be warranted) to correct the operational problems. This would result in two traffic signals within approximately 500 feet. Based on some potential densities associated with the development of the station area, an additional 2,500 to 6,100 daily trips could be generated in the station area, with approximately 230-490 additional trips in the morning peak period and 240-560 additional trips in the evening peak period. These estimates assume a slower increase in daily trips than would normally be seen for comparable traditional developments due to the nearby station and anticipated higher transit use. Since the intersection of 112th Ave./York St. is already anticipated to operate at Level of Service “D”, which typically suggest that the intersection is near capacity, the added trips due to the development of the station area would most likely require additional mitigation. However, additional study would be necessary once a more refined development plan is available to identify the specific mitigation that may be necessary.

York Street Realignment

One potential strategy for improving roadway design and access to the station area is the realignment of York St. to intersect 112th Ave. at Fox Run Pkwy. This would result in the signalized intersection moving to this location and the old York St. alignment serving local neighborhood/development access. This would eliminate the need to install two signalized intersections within 500 feet of each other and create better separation between the signalized intersection and the North Metro rail line. The realignment would also relocate the primary access to the Fox Run subdivision to a more logical location and better serve the existing neighborhood. Finally, pedestrian and bicycle access would also be improved. Figure 4-8a illustrates the current configuration of York St. and the potential realignment.

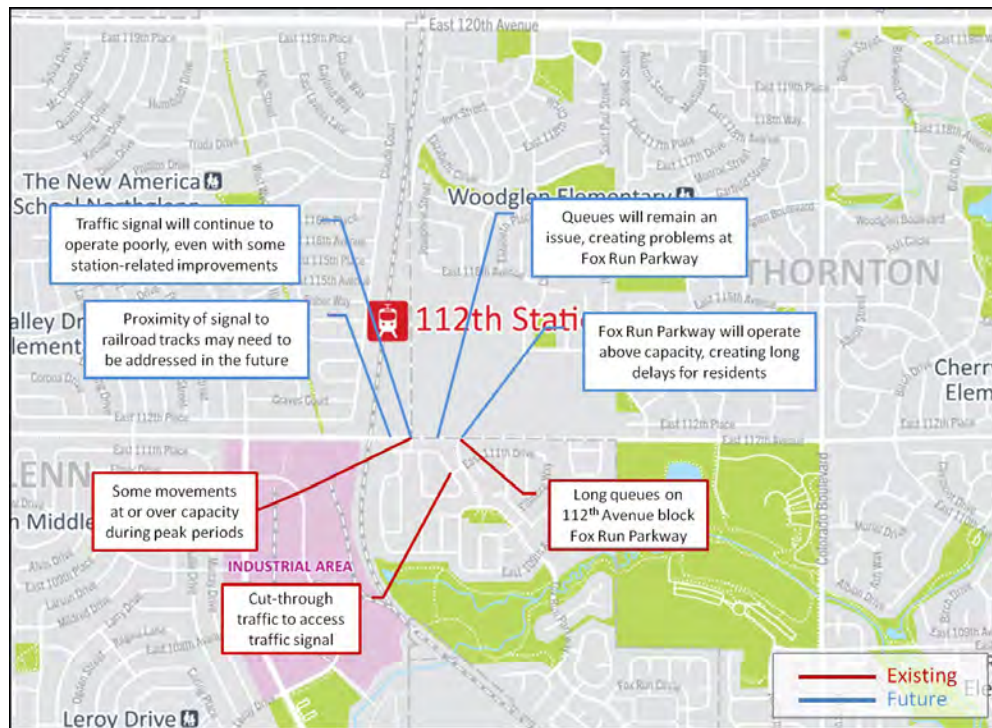
Figure 4-8a: Current and Potential Realignment of York St.



Source: Project Team

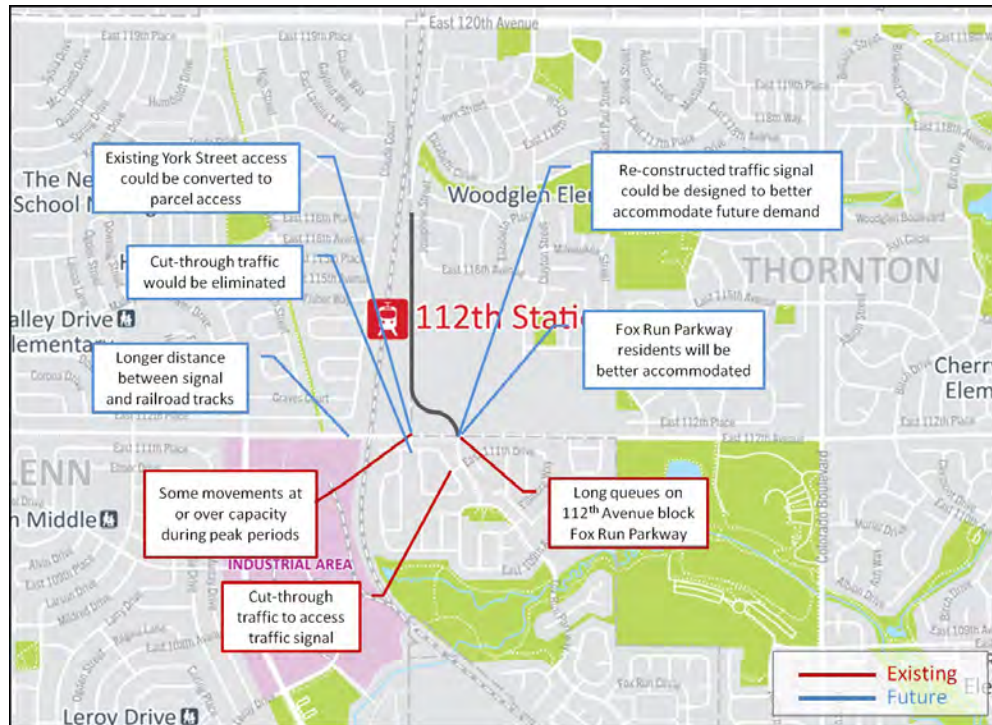
The primary drawback of the realignment would be the increased cost to construct the new alignment instead of merely widening the existing alignment. There would be some cost savings by ending the proposed city of Thornton widening of 112th Ave. between York St. and Colorado Blvd. at Fox Run Pkwy., thereby reducing the widening by approximately 500 feet. Based on planning level cost estimates, the realignment could cost approximately \$3 million to construct, while widening the existing York St. alignment would cost closer to \$2 million. A more refined development plan and additional study will be needed to determine the specific lane geometry that would be needed at the 112th Ave. intersection with re-aligned York St. Figure 4-8b illustrates the key issues associated with maintaining the current alignment of York St., and Figure 4-8c shows key issues associated with the potential realignment of York St. All of these issues should be explored in more detail in future traffic engineering studies.

Figure 4-8b: Key Issues/Challenges With Maintaining Current York St. Alignment



Source: Project Team

Figure 4-8c: Key Issues/Challenges With Realignment of York St.



Source: Project Team

4.7 Proposed Pedestrian and Bicycle Connectivity Improvements

Figure 4-9 shows a conceptual bicycle/ pedestrian facility network to provide additional local access to the rail station and to complement existing and planned facilities.

The major elements of the proposed network include:

- **Enhanced bicycle/pedestrian facilities (including shared facilities where necessary) along both sides of 112th Ave. and York St.** These improvements will be especially important for residents living west of the railroad alignment and north of 112th Ave. It is highly unlikely that any direct pedestrian connection can or will be made under or over the railroad tracks (due to grade issues, engineering challenges, or cost). Therefore, ensuring good connections that are as direct and convenient as possible for that neighborhood is essential, especially along the major roadways.
- **Designation of new bicycle routes on existing roadways throughout the station area, including in the Fox Run neighborhood, in and around the industrial park, and on roadways in the residential areas to the east and west of the station.** This assumes that the greenway improvements included in the development concepts as shown in Chapter 4 are implemented with major bicycle and pedestrian connections, providing connections to all local and regional bicycle/pedestrian facilities in the area.
- **Utilization of Wyco Trail south of 112th Ave. as a regional trail.** Currently, the Wyco right-of-way south of 112th Ave. is undeveloped, with potential equipment hazards located in the right-of-way. This right-of-way should be redesigned and improved (including improvements to avoid or potentially remove the equipment hazards) to provide a continuous connection from the trail north of 112th Ave. to the regional trails south of the industrial area.
- **The addition of bicycle/pedestrian signals at key points along 112th Ave.** to maximize bicycle and pedestrian access across the roadway to the station and other areas, and to improve safety. This can be done in conjunction with new auto signals depending on the exact alignment of north-south roadways in the station area.

Key Policy Directions/Recommendations:

Pedestrian and Bicycle Connectivity

- Provide enhanced facilities along York St.
- Designate new bicycle routes on existing streets throughout the study area.
- Upgrade the Wyco Trail south of 112th Ave. and make it a continuous connection to the north and south.
- Provide signalized bicycle/pedestrian crossing points at key locations along 112th Ave.
- Plan for bicycle facility needs for new developments in the station area, coordinating trail connections between the cities.
- Establish guidelines for a bike sharing program throughout the station area.

Figure 4-9: Proposed Bicycle and Pedestrian Facility Connections



Source: Project Team

- Develop a comprehensive bicycle facility strategy.** Further improvement to existing and future facilities that support bicyclists will be important to help employees and residents shift away from single-occupant vehicles (SOVs). Advocating for and supporting the implementation of micro-mobility hubs the station and all new developments will help create a non-SOV commuter culture. Micro-employer mobility hubs could include bicycle racks and/or lockers, pumps, and basic bicycle tool kits. Access to showers and lockers is also an important amenity needed to support bicyclists and to encourage a shift in travel behavior. The two cities and/or the Smart Commute Metro North Transportation Management Association (or TMA) could provide incentives to any existing or future employers in the station area to invest in facilities that support bicyclists. Those incentives could include:
 - Purchase and/or installation of bike racks and/or lockers.
 - Distribution of bicycle tool kits to employers to support the micro-mobility hub concept.
 - Providing air pumps to employers to provide “peace of mind” for the casual cyclists.
 - Offering bicycle maintenance classes to increase confidence of cyclists.

- **Establish guidelines for a bike sharing program throughout the station area**, including potential vendors and sponsors, initial locations, and sharing mechanisms. This could include “micro mobility hubs” that focus on bicycle facilities but also provide information on other modes. It could also include one or more pilot programs to be implemented concurrently with the opening of the North Metro line and the station in 2018.

4.8 Transit and Transportation Demand Management (TDM) Enhancements

Future RTD Services

RTD bus service currently is focused on the major arterials surrounding the station and station area, with no direct bus access to the station area itself being currently provided. Once the Northglenn at 112th Station goes into service in 2018, RTD will reorient some of its bus service in the area, including potentially providing a new route to directly serve the new station. Northglenn and Thornton should continue to work with RTD to ensure maximum bus connectivity to the station based on potential demand to adequately provide good connections to surrounding neighborhoods.

Other Transit and Alternative Mode Options

In addition to fixed-route transit services, a variety of potential alternative mobility services can be considered for the station area in the future. The project team has developed a list of alternative mobility options that could potentially improve access to and from the station and throughout the surrounding station area.

- **Increase transit usage to the station (and correspondingly decrease the need to drive to the station).** The Smart Commute Metro North TMA (of which Northglenn and Thornton are members) promotes the RTD EcoPass program, which is available on an employer-by-employer basis; these passes provide employers with tax benefits but generally must be made available to all employees. RTD also provides a FlexPass program, which includes more flexibility in

Key Policy Directions/Recommendations:

Transit

- Continue to work with RTD to evaluate, revise, and upgrade potential fixed-route services for the station.
- Work with the Smart Commute Metro North TMA to develop or expand transit pass programs for local businesses.
- Work with the TMA to promote car sharing and vanpooling.
- Develop a comprehensive parking management strategy for the station area in Northglenn, coordinating when possible with Thornton’s existing parking management plan.
- Use the TMA to identify transit gaps and work with RTD and private providers to fill those gaps.
- Work with the TMA to develop innovative technology-driven transit solutions for the area.
- Implement a mobility hub program throughout the station area that focuses on car- and bike-sharing, wayfinding, and transit user information and access.
- Work with the TMA to develop a comprehensive Transportation Demand Management (TDM) strategy for the station area.

distribution and price, and also provides the opportunity for employers to set up transit pass sales or vouchers for their employees. The TMA and the two cities have a variety of options to expand usage of EcoPasses in the station area, including: expanding marketing of EcoPass options and benefits to all employers; and working with RTD to develop a new transit pass program just for the TMA area that provides additional flexibility for distribution and usage of passes. The cities of Northglenn and Thornton should work with the TMA to identify appropriate pass programs and cost sharing options.

- **Promote car sharing and vanpooling.** The Smart Commute Metro North TMA currently works with DRCOG to promote and provide carpools and vanpools for the station area but relies on that agency to administer the program. The TMA can assist with creating a closed network for ride-sharing specific to the station area region using DRCOG's Way to Go Program, or other programs and ride-sharing opportunities as they become available.
- **Develop a comprehensive parking management strategy for Northglenn.** One of the major concerns of residents of neighborhoods near the station is the uncertainty about the impacts of commuter parking associated with the opening of the North Metro line and the Northglenn at 112th Station. The city of Thornton has already completed a Parking Management study applicable to the station areas within Thornton's jurisdiction, and it is anticipated that the recommended strategies from this study will be applied to the Thornton portion of the 112th Station area area as needed and appropriate. As the station and its related development occurs in the next few years, Northglenn should also develop a parking management strategy for the Northglenn portion of the station area to alleviate area resident concerns and provide equitable parking solutions for residents, employees and visitors. Ideally, Northglenn could coordinate with Thornton on the parking strategies that Thornton will be implementing. Specific strategies that Northglenn might consider include:
 - ***Establishment of a coordinated parking strategy for new developments in Northglenn*** by reducing parking minimum requirements on a per-worker basis to gradually reduce free parking availability. This could also include establishing parking maximums (instead of minimums) to place a ceiling on parking spaces per workers, providing parking advantages for carpools and vanpools, unbundling parking from rent or sale prices of office or residential buildings.
 - ***Shared parking facilities.*** Future parking facilities (at the station or in adjacent Northglenn developments) should be studied for the potential of sharing those facilities with non-single-occupant vehicle (SOV) facilities, including first/last mile modes and programs and potentially mobility hubs to encourage alternative mode usage during the workday.
 - ***Neighborhood parking management.*** If commuter parking does become a problem in established neighborhoods, Northglenn should look into conducting a parking study to determine appropriate parking management strategies. For example, some cities have established parking permit programs to provide priority parking for local residents and discourage or prohibit commuter parking. Northglenn should determine if this or other strategies would be appropriate near this station.
- **Improve transit options and services.** The two cities and the TMA should work with RTD to identify gaps in existing transit service and the potential for filling them with enhanced RTD service. If necessary, the cities or the TMA could explore grant opportunities to fund transit studies and services.

An example is GO Boulder and the collaboration between the City of Boulder and RTD to subsidize local circulator services in that city such as the Hop, Skip, Jump, Bound, and other services. The two cities and the TMA should work with DRCOG or other local, regional, or national agencies or entities to study short-term and long-term circulation options near North Metro Line commuter stations and throughout the station area. These organizations should explore collaborative funding programs and incentive programs that could assist with a pilot project for local circulation to the station. In particular, the cities and the TMA should explore options available through the Federal Transit Administration, New Partners for Smart Growth, National Resources Defense Council (and its Urban Solutions Program), Urban Land Institute, or other entities to fund studies of enhanced station area circulation.

- **Explore new innovative transit solutions.** The station area should be a “living laboratory” for exploring, testing, and implementing new approaches to local transit circulation. Many transit systems around the country are exploring options to the traditional fixed-route transit service models, such as: flexible route services, where vehicles operate on fixed routes but are allowed to deviate from those routes (either all day or just in off-peak hours) to provide demand-response pick-ups; enhanced demand-response or call-and-ride services; and checkpoint services, where on-demand vehicles circulate through a service zone but make scheduled pickups at designated locations at established times throughout the day. In addition to those approaches undertaken by transit agencies, many areas are exploring entirely new service models that are private-sector driven. The most common recent example is from a company called Bridj, which operates completely with a mobile app for pickups and drop-offs in designated areas. The two cities or the TMA should partially or totally subsidize costs for this type of provider. The cities or the TMA could open its service needs to competition from private sector entities (and RTD if it chose to do so) to develop a pilot project for local circulation around the station. This could include establishing minimum service standards and objectives and letting the private sector propose an operating structure. This type of pilot project, if successful and cost-effective, could be expanded to other portions of the station area and could be a groundbreaking example of public/private sector collaboration to meet a specific transit need.
- **Explore implementing mobility hubs.** The mobility hub concept is a common-sense concept that attempts to integrate all activities in and around a transit facility in a way that maximizes its utility and benefit to transit users, local residents, employees, and visitors, including incorporating local transit, bike sharing, car sharing, and good wayfinding and user information. This effort could engage the private sector and future developers, if feasible, to establish appropriate minimum standards for mobility hubs based on potential demand at the station and in new developments and to agree on potential locations for pilot locations at key areas throughout the station area as it develops. As part of the mobility hub effort, the two cities or the TMA could explore a number of key elements:
 - **Develop a car sharing strategy:** Similar to the bike sharing strategy, the TMA should work with its partners to establish guidelines and service standards for a car sharing strategy that meets the specific needs of the station area.
 - **Develop a wayfinding/travel information strategy:** The cities or the TMA could solicit proposals for development of a comprehensive wayfinding/signage strategy for implementation initially in

selected areas and ultimately throughout the station area.

- **Develop initial locations for hubs:** The cities or the TMA should work with its public and private partners to develop initial pilot locations for mobility hubs along with a hierarchy of services to be provided at different locations. The initial focus should be on major activity centers (obviously including the rail station), with the goal of providing some type of hub at many key locations throughout the station area such as residential or commercial developments. Ultimately, the two cities and the TMA should decide on its long-range goal for mobility hub implementation. Depending on resources, one goal could be to ensure that no employee or resident in the station area is more than a quarter-mile from a mobility hub, where he or she would have access to all modes within no more than a five-minute walk.
- **Become a leader in Transportation Demand Management (TDM) Programming.** Working through the TMA, the two cities could establish Smart Commute Metro North as a pioneer in establishing TDM programs at the station area to promote alternative transportation. These activities could include:
 - Developing innovative comprehensive resident and employee information programs for all modes to promote trip planning. The TMA could develop a pilot program for “casual/dynamic” travel planning that uses a mobile app to provide up-to-date information to employees and residents on all modes. This could include the ability to provide instant ridesharing/ carpooling partners for drivers, up-to-date transit information (including next bus and next train information), and information on available bike and car sharing facilities and options.
 - Implement policies that promote alternative modes. The TMA could explore the potential of developing a comprehensive menu of programs that would promote alternative mode usage in new developments. This could include car and bike sharing for new developments. Another potential policy that could be explored for feasibility is the potential for an alternative mode facility tax or assessment district (that could potentially provide funding for local transit circulation, car/bike sharing programs, mobility hubs, and sidewalk/trail improvements), and other regulatory options.

4.9 Summary: Connectivity Goals

The mobility improvements recommended in this chapter are aimed at meeting the connectivity goals illustrated in Figure 4-1 in the following ways:

1. Access for the neighborhoods to the west of the railroad line and north of 112th Ave. to the station: Planned improvements to 112th Ave. along with recommended upgrades to pedestrian and bicycle facilities on 112th Ave and throughout the neighborhoods to the west of the rail station should improve overall access for those neighborhoods.
2. Access for the Thornton neighborhoods to the north and east to the station: Establishment of an inter-connected street grid in the new development area east of the rail station along with recommended multi-modal path upgrades throughout the area should improve access for the neighborhoods to the east of the station (including for Hulstrom K-8 School).
3. Connecting Margaret W. Carpenter Park and Open Space to the station and to future development areas north of 112th Ave.: Planned upgrades to 112th Ave. along with recommended enhancements to multi-modal facilities should improve access between new development areas and the Park.
4. Access from the Fox Run neighborhood to the station: Planned upgrades to 112th Ave. along with the potential realignment of York St. would significantly improve the access from the Fox Run neighborhood to the station.
5. Connecting the open space pieces south of the industrial park to the station and other regional connections: Recommended upgrades to the Wyco right-of-way in this area along with additional improvements to multi-modal facilities should improve access to the station from this area.
6. Access for the industrial park to the southwest to the station: Planned upgrades to 112th Ave. along with additional improvements to multi-modal connections should significantly improve access to this area from the station.

CHAPTER FIVE: OVERALL POLICY DIRECTION AND RECOMMENDATIONS FOR CITY OF NORTHGLENN

This plan is designed to establish a vision for the future of the Northglenn at 112th Station area. To achieve that vision – as conceptualized in the Preferred Alternative – the two cities and their partners will take many purposeful and focused steps over the course of several years. Some of these steps will be similar for both cities, while some steps will be unique to Northglenn or Thornton. These steps will require ongoing collaboration and strong partnerships between and among the cities, RTD, other public agencies, the private sector, and the local residents.

This chapter outlines recommendations for the city of Northglenn and includes a number of implementation strategies and policies; roles and responsibilities among city of Northglenn staff, Thornton City Council or other outside entities and agencies; and suggested timeframes for implementation. These strategies, used in combination with each other and with the *Northglenn at 112th Station TOD Public Space Design Guidelines* prepared as Appendix 5, are intended to ensure the full development potential of the station area is met as envisioned by the STAMP.

Implementation strategies are organized by the following categories:

- Land Use, Zoning, and Urban Design;
- Infrastructure and Utilities; and
- Mobility Planning

Table 5-1 identifies the implementation strategies for the city of Northglenn along with suggested roles and responsibilities and potential timeframes for implementation. Those strategies that should be implemented in the short-term are immediate actions that will be implemented within the next 1-2 years. Strategies with a medium-term timeframe will likely be implemented before and shortly after the opening of the commuter rail station and are expected to be put in place within 3-5 years. Strategies with a long-term timeframe are likely to occur in the in the 6+ year timeframe

Timeframe Key
Short = 1-2 years
Medium = 3-5 years
Long = 6+ years

Table 5-1: Recommended Implementation Strategies for the City of Northglenn

No.	Strategy	Responsibility	Timeframe
N1	Adopt the Northglenn at 112th Station Area Master Plan: Formally adopt the STAMP, emphasizing the Vision, Preferred Alternative, Guiding Principles and Implementation Strategies as the core Plan elements intended to guide public and private development and investment decisions related to land use, infrastructure, and mobility planning. The City will review future development proposals within the STAMP area for compliance with the core Plan elements.	City Council, City staff	
N2	Amend Comprehensive Plans and Zoning Codes: The city should amend its Comprehensive Plans and zoning codes to incorporate the elements of this STAMP as the first steps in developing a consistent strategy for plan implementation, with particular emphasis on the plan's proposals for residential, commercial, and industrial development and redevelopment.	City Council, City staff	
N3	Amend Northglenn Development Code to Incorporate Plan Elements: As the city of Northglenn updates its Development Code, develop specific zoning recommendations to implement the plan's proposals for land use and zoning.	City Council	
N4	Propose implementation strategies for annual consideration in City Council Work Plans: Prioritize implementation strategies for annual inclusion into the City Council Work Plan.	City Council, City staff	
N5	Dedicated TOD Staff: Create a staff position or combination of positions within the city of Northglenn dedicated solely to implementation and marketing of the station area master plans and TOD development along the North Metro line. Duties would include attracting and working with private sector interests to ensure new development and redevelopment meets the vision for each station area; proactive communication with property owners, developers and the surrounding community; pursuing planning and infrastructure funding opportunities; and serving as a single point of contact for all city department reviews and project implementation activities to ensure public and private sector actions are synchronized.	City staff	

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

No.	Strategy	Responsibility	Timeframe
N6	Approve Urban Design Guidelines: Using the Northglenn at 112th Station TOD Public Space Design Guidelines developed for this project, develop specific TOD-related design guidelines to ensure that new developments meet desired design standards.	City Council, City staff	Short-term
N7	Monitor Plan Progress: Conduct a periodic review of the STAMP to assess effectiveness and progress toward implementation. As needed and appropriate, recommended changes could include STAMP updates, amendments to governing regulations and/or consideration of new or modified financing strategies. Amendments to Chapter 5: Implementation Strategies, or changes to the land use designations within Northglenn's jurisdiction in the Preferred Alternative or other aspects of this 112th Station Area Master Plan that would solely affect Northglenn and not Thornton may be approved by the city of Northglenn without need for approval by the city of Thornton.	City staff	Ongoing
N8	Develop a comprehensive urban art program: Working with RTD and the Northglenn Arts and Humanities Foundation, the city should establish and fund urban art programs for the station and the station area and its new developments. This should aim for a comprehensive, unified art program for the station and station area that focuses on functional art installations that (where appropriate) can also function as wayfinding for local residents, employees, and visitors.	City staff, Arts and Humanities Foundation	Medium-term
N9	Define and Update Infrastructure Needs: As the proposed land use concepts are better defined in the future, station area infrastructure needs will need to be better defined for capacity and costs, including the preparation of a design development level civil engineering drainage/infrastructure plan and a cost estimate for drainage and utility improvements, including the costs of water quality features, detention ponds, grade crossings, low water crossings, wet and dry utilities, lighting, streets, bike paths, pedestrian paths, trails, all forms of multi-modal connectivity, and open space.	City staff	Long-term

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

No.	Strategy	Responsibility	Timeframe
N10	Explore financing strategies: The city should hire a consultant to explore the potential of – and ultimately help create - innovative financing mechanisms for development-supportive infrastructure around the station (such as Metro District or other assessment district).	City staff	Medium-term
N11	Develop joint standards for roadway design and development in the station area: The two cities should work together as appropriate to develop roadway design standards for improvements needed to York St. and 112th Ave. in the station area to promote walkability and improve overall mobility and safety. Those activities should include: <ul style="list-style-type: none"> ▪ Developing design guidelines for a small-block street network within future development areas to promote walkability. ▪ Continuing adjacent street patterns into new development areas. ▪ Conducting a detailed traffic engineering analysis related to the potential realignment of York Street. ▪ Northglenn could study the potential implementation of a “road diet” for 112th Ave. in and around the station area. The speed and volume of traffic on 112th Ave. makes walking unpleasant and safe, and a “road diet” to calm traffic could result in significant upgrades to pedestrian and auto safety. 	Northglenn and Thornton staffs	Short-to-Medium-term

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

No.	Strategy	Responsibility	Timeframe
N12	<p>Develop standards for pedestrian and bicycle facility planning: Northglenn should implement a comprehensive pedestrian and bicycle analysis of the station area, using the HEAL analysis as a starting point for the Northglenn portion of the station area, to upgrade and enhance pedestrian and bicycle facilities throughout the station area. Those activities should include:</p> <ul style="list-style-type: none"> ▪ Conducting a comprehensive sidewalk inventory and developing a program to add them where absent and upgrade existing sidewalks (including detaching from the street wherever possible). ▪ Adding pedestrian signals at key locations along 112th Ave., including at Fox Run Pkwy., between York St. and Irma Dr., and other locations, to slow traffic and allow pedestrian and bicycle access across the roadway. ▪ The width of 112th Ave. in the station area offers the opportunity to add amenities such as bike lanes or landscaping to increase the distance from pedestrians and cyclists to traffic. ▪ Work with Thornton on aligning trail connections. ▪ Add amenities such as wayfinding, lighting, and other upgrades to existing trails and facilities as needed. ▪ Be open to the possibility of a bike sharing program throughout the station area. 	Northglenn and Thornton staffs, local bicycle and pedestrian advocacy groups	Short-to-Medium-term

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

No.	Strategy	Responsibility	Timeframe
N13	<p>Develop a comprehensive innovative station area transit planning strategy: Northglenn should develop innovative transit solutions for the area, including:</p> <ul style="list-style-type: none"> ▪ Continuing to work with RTD to evaluate, revise, and upgrade potential fixed-route services for the station. ▪ Working with the Smart Commute Metro North TMA to develop or expand transit pass programs for local businesses or wider areas. ▪ Working with the TMA to promote car sharing and vanpooling. ▪ Development of a comprehensive parking management strategy for the station area. ▪ Using the TMA to identify transit gaps and work with RTD and private providers to fill those gaps. ▪ Working with the TMA to develop innovative technology-driven transit solutions for the area. ▪ Implementing a mobility hub program throughout the station area that focuses on car- and bike-sharing, wayfinding, and transit user information and access. ▪ Working with the TMA to develop a comprehensive Transportation Demand Management (TDM) strategy for the station area. 	Northglenn and Thornton staffs, local bicycle and pedestrian advocacy groups	Medium-term

CHAPTER SIX: IMPLEMENTATION RECOMMENDATIONS FOR CITY OF THORNTON

This plan is designed to establish a vision for the future of the Northglenn at 112th Station area. To achieve that vision – as conceptualized in the Preferred Alternative – the cities of Northglenn and Thornton, along with their partners, will take many purposeful and focused steps over the course of several years. Some of these steps will be similar for both cities, while some steps will be unique to Thornton or Northglenn. These steps will require ongoing collaboration and strong partnerships between the cities, RTD, other public agencies, the private sector, and the local residents.

This chapter outlines recommendations for the city of Thornton, which include a number of implementation actions; roles and responsibilities among city of Thornton staff, Thornton City Council or other outside agencies or entities; and suggested timeframes for implementation. These actions, used in combination with each other, are intended to ensure the full development potential of the station area is met as envisioned by the STAMP.

The Implementation actions outlined in this chapter address the following planning issues:

- Land Use, Zoning, and Urban Design;
- Infrastructure and Utilities; and
- Mobility Planning

Table 6-1 identifies the implementation actions for Thornton along with suggested roles and responsibilities and potential timeframes for implementation. Those actions that should be implemented in the short-term are immediate actions that will be implemented within the next 1-2 years. Actions with a medium-term timeframe will likely be implemented shortly after the opening of the commuter rail station and are expected to be put in place within 3-5 years. Actions with a long-term timeframe are likely to occur in the 6+ year timeframe.

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

Table 6-1: Recommended Implementation Actions for City of Thornton

No.	Strategy	Responsibility	Timeframe
T1	Adopt the Northglenn at 112th Station Area Master Plan: Formally adopt the STAMP, emphasizing the Preferred Alternative, Northglenn at 112th Station TOD Public Space Design Guidelines, and Implementation Strategies for Thornton as the core Plan elements for Thornton intended to guide public and private development and investment decisions related to land use, infrastructure, and mobility planning. Thornton will review future development proposals within the STAMP area for compliance with the core Plan elements.	City Council, City Development	Short-term
T2	Support and encourage rezoning to reflect STAMP: City of Thornton staff should encourage and support developer proposals to rezone the property within the STAMP area to be consistent with the land uses and densities identified in the STAMP Preferred Alternative.	City Council, City Development	Short -medium-term (as needed)
T3	Support Comprehensive Plan Amendments that reflect STAMP: At the time that the Thornton Comprehensive Plan is updated, the land within Thornton that is identified within this study area should be amended on the Future Land Use Map to reflect the STAMP Preferred Alternative. If development is proposed prior to the Comprehensive Plan update, city of Thornton staff should support Comprehensive Plan amendments required to align a development proposal with the land uses and densities identified in the STAMP Preferred Alternative.	City Council, City Development	Short-term
T4	Propose implementation strategies for annual consideration in City Council Work Plans: Prioritize implementation strategies for annual inclusion into the City Council Work Plan.	City Development, City Manager's Office, City Council	Ongoing
T5	Require Design Standards for development: Proposed development on the land within Thornton's jurisdiction should include TOD-appropriate design standards, and Thornton staff should use the Northglenn at 112th Station TOD Public Space Design Guidelines (developed as Appendix 5 to this project), where applicable, to assist in evaluating the developer's proposed standards.	City Development	Short -medium-term (as needed)

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

No.	Strategy	Responsibility	Timeframe
T6	Monitor plan progress: Conduct a periodic review of the STAMP to assess effectiveness and progress toward implementation. As needed and appropriate, recommended changes could include STAMP updates, amendments to governing regulations and/or consideration of new or modified financing strategies. Amendments to Chapter 6: Implementation Strategies, or changes to the land use designations within Thornton’s jurisdiction in the Preferred Alternative or other aspects of this 112th Station Area Master Plan that would solely affect Thornton and not Northglenn may be approved by the city of Thornton without need for approval by the city of Northglenn.	City Development	Ongoing
T7	Continue support for public art programs: Continue to support the Thornton Arts, Sciences and Humanities Council (TASHCO) efforts to select public art for strategic locations in Thornton. Look for opportunities to fund art that complements or enhances wayfinding or creates unique identity in the Thornton development around the 112th Station Area.	Community Services, Thornton Arts, Sciences and Humanities Council (TASHCO)	Medium-term
T8	Consider financing strategies: The city should be open to considering financing mechanisms, such as special districts, grants, or Urban Drainage funding, to assist with the costs of drainage improvements, streets, trails or other critical infrastructure needed for new development in the study area.	City Development	Short -medium-term (as needed)

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

No.	Strategy	Responsibility	Timeframe
T9	Develop standards for roadway design and development in the station area: The two cities should work together as appropriate to develop roadway design standards for improvements needed to York St. and 112th Ave. for the development area to improve overall mobility and safety, and also to promote walkability. Those activities may include: <ul style="list-style-type: none"> ▪ Developing design guidelines for a small-block street network within future development areas to promote walkability. ▪ Continuing adjacent street patterns into new development areas. ▪ Conducting a detailed traffic engineering analysis related to the potential realignment of York St. 	Infrastructure, City Development, City of Northglenn	Short -medium-term
T10	Plan for pedestrian and bicycle infrastructure needs: Within the next Parks and Open Space Master Plan update, continue to assess bicycle and pedestrian infrastructure needs for this study area. Work with city of Northglenn on aligning trail connections between the two jurisdictions as needed. Assist Northglenn in adding pedestrian signals, if needed, at key locations. Consider complete streets concepts when developing 112th Ave. standards and specifications: <ul style="list-style-type: none"> ▪ The width of 112th Ave. in the station area offers the opportunity to add amenities such as bike lanes or appropriate landscaping to increase the distance from pedestrians and cyclists to traffic. ▪ Add amenities such as wayfinding, lighting, and other upgrades to existing trails and facilities as needed. ▪ Be open to the possibility of a bike sharing program throughout the station area. 	Community Services, City Development, Infrastructure, City of Northglenn	Short -medium-term

Timeframe Key
 Short = 1-2 years
 Medium = 3-5 years
 Long = 6+ years

No.	Strategy	Responsibility	Timeframe
T11	Assist city of Northglenn as needed on innovative transit strategies for the station area, including: <ul style="list-style-type: none"> Continue to work with RTD to evaluate, revise, and upgrade potential fixed-route services for the station. Work with the Smart Commute Metro North Transportation Management Association, if feasible, to identify transit gaps and appropriate strategies such as working with RTD or private provides to fill gaps; developing or expanding transit pass programs for local businesses; promoting car sharing and vanpooling; implementing wayfinding. 	City Development, City of Northglenn, RTD, TMA, private providers	Medium-term

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