

City of Cottonwood Heights, in Partnership with Wasatch Front Regional Council
Fort Union Corridor Study

Zions Bank Public Finance – Landmark Design - InterPlan
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Executive Summary

Cottonwood Heights is one of the most desirable communities in which to live, to work and to play along the Wasatch Front. It boasts scenic beauty, premiere Class A suburban office space, somewhat higher-priced homes with well-kept neighborhoods, and is favorably located at the mouth of Big and Little Cottonwood Canyons – home to world-class skiing and outdoor recreation. Incomes are high in this area, providing significant discretionary income for shopping and recreational activities. The only major obstacle to future development is a lack of vacant land. Therefore, redevelopment prospects are critical to the future growth and success of the City.

This Plan is intended to identify strategic opportunities along the Fort Union Corridor. The approach has been to combine the perspectives of land use planners, transportation engineers and economic consultants to create a visionary plan, while at the same time assuring that the Plan is achievable in the marketplace.

Land Use

Land use in Fort Union was assessed in conjunction with economic and transportation assessments as part of a unified planning process. A range of land use and design concepts emerged, all emanating from the unique location and history of the area, and focusing on long-term, transformational ideas. The land use approach acknowledges the era when the area was established, its location on a large alluvial field, its strong relationship with the Wasatch Mountains and canyons, and connections with roadways and adjacent neighborhoods. The land use discussion also acknowledges the fact that development along the road is markedly commercial, with residential neighborhoods immediately adjacent on both sides of the corridor, and it also acknowledges other significant developments in the vicinity that influence the area, including the soon-to-be-developed gravel pit to the east and large office park complex to the north, as well as off-site areas in adjacent communities.

Fort Union is the "heart of the city" where most services and activities are concentrated. The roadway serves both local and regional travelers, intersecting six primary north-south running roadways along the four-mile corridor within Cottonwood Heights. Often forgotten – it should be stressed that Fort Union Boulevard is the physical and visual Extension of Big Cottonwood Canyon, which together provide a direct Link with the Wasatch Mountains, public lands and world-class recreational amenities.

The study area comprises approximately 2,200 acres of land that extend along a narrow, two-mile swath of land from Union Park Avenue to Wasatch Boulevard. More than half of the area is occupied by low-density/single-family homes, and nearly two-thirds of the site is composed of residential uses of all types. Commercial uses comprise nearly 13 percent of the total area, which is concentrated at a few

nodes where the boulevard crosses other major roadways. The land use assessment focused on understanding these nodes and destinations in detail, as each were found to be distinctly different with special opportunities for future change.

Fort Union Boulevard is a great location with close access to natural amenities, recreation opportunities, transportation infrastructure and local/regional services. However, the area lacks a clear identity. It is dominated by busy streets, automobile traffic and auto-oriented patterns and uses, and is not a particularly inviting place, making it difficult to draw visitors to the area without major positive transformations.

Figure 1: Fort Union Boulevard – Aerial View from 1300 East looking east toward Big Cottonwood Canyon



In order for the area to flourish, a clear and unified land use vision must be established which acknowledges the fact that the needs to change - both physically and conceptually. This is illustrated in the Preferred Land Use Concept, which envisions the transformation of the nodes into distinctive yet unified destinations linked together by the boulevard, which will become the "Main Street" of Cottonwood Heights. In this manner the preferred land use concept embraces both the economic vision for the area, including the following key changes:

- Development of the "West End" into a more intensive retail zone;
- Conversion of the two nodes at Highland Drive and 2300 East into an extended "Town Center," encompassing niche retail and mixed-use development; and
- Modification of the Wasatch Boulevard intersection into the "East End" node, which will be focused on niche retail developments that respond to the Wasatch Mountains and Big Cottonwood Canyon recreation.

The Preferred Land Use Concept also addresses the "transition" areas along the boulevard edge, calling for the establishment of a unified look and feel along the narrowest frontages, the creation of "Green Edges" where canyon-inspired trail and parkway development ideas are appropriate, and "Built Edge" transitions that transform ad hoc residential properties into viable "Residential Business" sites while preserving the adjacent residential neighborhoods. The concept also addresses the Corporate Center and Gravel Pit locations in a general fashion, calling for stronger linkages with Fort Union Boulevard and the city core, and the creation of a series of interlinked places and destinations throughout the greater area.

Finally, a number of urban design enhancements and goals for the area, including the following:

- Densification of the area through infill development
- Increasing the height of commercial and mixed-use buildings where possible
- Incorporation of meaningful public places into the structure of the area as part of encouraging people to wander and participate

- Better utilization of the large and underutilized parking areas – through the development of structured parking with development above, as great "parking streets," and as examples of sustainable, regionally-appropriate landscapes
- Creation of quality built and open spaces that attract drivers, riders, pedestrians and bikers alike
- The development of a unified town center and obvious Main Street through the application of quality design
- Provide genuine neighborhood destinations and uses
- Development of great buildings and outdoor spaces that reflect local vernacular and site conditions
- Expression of the Big Cottonwood Canyon and the Wasatch Mountains in the design and function of the site through the use of local materials and design approaches
- Incorporation of sustainable design practices as an integral part of creating a new place
- Development of unique places and features that help establish the fact that one has arrived at a very special place

Market Analysis and Economic Conditions

The City is a regional hub for Class A office space in the Salt Lake Valley. Asking rents at the Cottonwood Corporate Center are currently ranging between \$24.00 up to \$32.00 per square foot for some properties, similar to those attained in downtown Salt Lake City. Land at the gravel pits – the only remaining area with a significant amount of vacant land -- is extremely desirable for future Class A office space, as well as residential units and regional and niche retail markets. Future plans for transit in this area could greatly impact the type of development at the gravel pits and along Fort Union, accelerate the pace of development and provide a justification for increased residential densities along the corridor.

With future development at the gravel pits likely in the near term, the City has a unique opportunity to improve the viability of Fort Union Boulevard by increasing connections with the gravel pits and with the mouth of the Canyons. Design and land use maps have been included in this report that show how Canyon recreation users can be “enticed” down Fort Union through an impressive gateway and vibrant development at the east end of the boulevard. If connections between the canyons are made, as is currently being studied through the Mountain Accord process, Cottonwood Heights becomes an even more viable home base and central location for canyon visitors.

The western and eastern portions of Fort Union are unique and different, yet both have strong redevelopment potential. The west end is the major retail center in the City and should be redeveloped over time, maintaining larger-scale development, but also increasing retail densities, adding entertainment options, and creating plazas where people can come to eat, shop and be entertained. Increased walkability in this area, such as is seen at Station Park in Farmington, will serve to increase the regional draw to this shopping area which accounts for nearly 50 percent of the City’s retail sales.

The east end of Fort Union must tie in with the feel of the resorts up the canyons and should offer unique dining and shopping experiences that are more upscale than those options found at the west end of the boulevard. Along the boulevard, commercial nodes already exist at Highland Drive and 2300 East and these centers should increase in density over time, with greater building heights and a mix of residential units along with the commercial uses.

The City also has significant opportunity to recapture lost retail sales. Currently Cottonwood Heights captures (within City boundaries) only 66 percent of all retail purchases made by City residents. There are significant areas of leakage in accommodations and food services, both of which are related to employment growth and resort-related development. The west end of Fort Union (at 1300 East) is the City’s major retail center, accounting for nearly half of all retail sales in the City. However, the area needs to be redesigned and can support greater densification of properties in order to build the tax base and create a retail/entertainment destination for the area.

Multi-family housing in the City is generally older stock, with little new development over the past decade. Demand, however, is strong, as evidenced by low vacancy rates in Cottonwood Heights and strong multi-family absorption in other areas of the County. Therefore, increasing allowable housing densities and heights along Fort Union will facilitate development of this market. Residential units of five to six stories should be achievable at key intersections along Fort Union, with townhome development taking place between the major commercial nodes.

A summary of recommendations is as follows:

West Corridor

Increase the density of retail development

Condense parking areas and reduce the amount of asphalt

Capitalize on ease of access as compared to Family Center in Midvale, while also benefitting from the regional draw that Family Center offers

Improve visibility, signage and attractiveness

Add entertainment options, dining and plaza areas

Recapture lost sales tax leakage by adding new businesses in areas with high sales leakage

Central Corridor

Increase allowable housing densities and building heights (five to six stories) – concentrate rental units at commercial nodes (Highland Drive and 2300 East) with townhome development along the corridor

Continue the canyon feel down Fort Union through design, recreation-related development, trails, bike paths, transit options

Create community events that bring visitors down Fort Union (trail and road running series; the cycling center of the Valley)

Actively recruit recreation-related businesses such as Bass Pro, Field & Stream

Redesign nodes to reduce asphalt parking and create walkability; use interiors of blocks

Bring businesses out to the street; create a “street wall”

Recapture lost sales tax leakage in smaller-scale businesses

East Corridor

Create exciting and vibrant gateway to Fort Union (could include splash pads, ice skating rink, fire-warming stations, food vendors, food mobiles, interactive sports and Olympics exhibits, clock tower); give visitors a reason to go down Fort Union

Encourage hotel and lodging development

Attract more unique, one-of-a-kind restaurants; create a restaurant cluster in this area

Focus on higher-end niche retail markets with unique goods and services that will appeal to a larger and more sophisticated regional market area

Provide a shuttle service to the Canyons from the hotels that also extends along Fort Union

Avoid placing parking lots at highly visible locations at the mouth of the Canyons – property that could be better used for commercial development

Consider tax increment assistance to facilitate a gathering place and entryway

Create visual and transportation connections with the gravel pits and mouth of the Canyons

Create a resort and recreation feel to this area

Transportation

The transportation analysis of the Fort Union corridor points toward three key findings:

- 1) Several factors - Fort Union's unique connective role in the east-west street grid; the opportunity to extend bicycling west from the Big Cottonwood Canyon area; the clusters of pedestrian destinations waiting to be tied together by a walkable street - indicate that **Fort Union Boulevard should be a complete street supportive of all transportation modes.**
- 2) The Fort Union corridor is not leveraging the natural and recreational corridors and hubs in the mouth of Big Cottonwood Canyon. This is certainly an economic and community-building issue, but it is a transportation issue as well. **The City should look for ways to bring the activity and flavor of the Cottonwood canyons into the greater Fort Union area.** From a transportation perspective this means active transportation modes.
- 3) **The Fort Union corridor suffers from indecision between being a regional corridor and being a local corridor.** Currently it is neither – it is too focused on high-speed auto traffic with too little active transportation support to be a local corridor. But it does not have enough traffic, high-capacity transit, and land use intensity to be a proper regional corridor.

The following outlines in more detail the transportation opportunities on the corridor:

Anchor regional transit corridor: The employment concentration projected for the Cottonwood Corporate Center and the Gravel Pit creates a good argument for high-capacity mass transit serving this area. Intensive employment areas tend to be among the most dependable land uses to generate high ridership for transit.

Increase residential density of Gravel Pit/Corporate Center node: Residential density is the linchpin in future mixed use communities at the canyon mouth that will help reduce the number of vehicle trips in and out of these centers, and make them sustainable urban places.

Understand nuances of mountain traffic and leverage in appropriate niche: Mountain traffic can be an opportunity for the Fort Union corridor if policymakers understand how it fits into the transportation and economic context of the corridor. On one hand, mountain traffic is “a drop in the bucket” of overall traffic in the area. However, active transportation traffic and overnight mountain visitors are bigger opportunities.

Consider north-south, along base of mountains, as transit priority: The north-south corridor along the base of the Wasatch, which includes Wasatch Boulevard, I-215 and Foothill Boulevard, provides an intriguing potential high capacity transit option. The route connects a string of highly valued regional employment destinations and regional recreational destinations.

Connect complementary regional nodes: No other street in the area connects as effectively as Fort Union – and yet its nodes remain disconnected and unrelated to one another. There is an opportunity to use Fort Union to link these disparate nodes into something that is more unified.

Use public investment in streetscape to “set the tone” for the Fort Union corridor: Public investment in streetscape – street trees, landscaping, street furniture, lighting, signage, and other improvements – can be the public element to tie the corridor together.

Develop local community: It is easy for the attention on the Fort Union corridor to become focused on regional-level opportunities, such as mountain visitors and employment centers. However, it is important to consider that the Fort Union corridor is an opportunity for the City to develop its sense of community by encompassing smaller places at the local scale.

Create local transit service: The City has an opportunity to leverage future visitor-oriented growth at the Big Cottonwood Canyon mouth into local circulator-level transit connecting various nodes on Fort Union, in the Gravel Pit, and the Cottonwood Corporate Center. The City of Holladay is also considering such a service.

Create Cottonwood Heights downtown: Several assets combine to create the opportunity for a Cottonwood Heights downtown beginning around 2300 East and running to Highland Drive: clusters of commercial and civic destinations, including a county library, school, and post office; some parcels that are likely re-developable combined with an emergence of local businesses; some existing pedestrian traffic; and excess roadway capacity that allows for complete streets improvements.

Convert Fort Union into complete street east of Highland Drive: The City has the opportunity to transform Fort Union Boulevard into a complete street east of Highland Drive, extending to Highland the 3-lane-plus-bike-lanes cross section currently running from Wasatch Boulevard west to 3000 East. This could not only catalyze a downtown but also help extend the “flavor” of the Cottonwood Canyons further down from the mouth area. Enabling this street re-design is the low existing use of capacity (25 to 50 percent for LOS C) and even the future capacity (50 to 100 percent for LOS C). Reducing the number of lanes of Fort Union would also communicate to visitors that Fort Union is not a pass-through but a locally valued chain of destinations.

Improve pedestrian crossing of Fort Union Boulevard: The City could make large improvements in the walking conditions along Fort Union corridor by improving the pedestrian crossing infrastructure.

Make bike/recreation connections between Big Cottonwood Creek and rest of corridor: The City has a major opportunity to build off the Big Cottonwood Creek corridor – to extend the regional recreation network further into the Fort Union Corridor.

Enhance existing cross section with streetscape: Even within the existing right-of-way and with the same number of through lanes, Fort Union Boulevard can be improved by reducing the space given to moving traffic and extend sidewalks, install medians, trees, and streetscape.



Existing Conditions

Demographics

The City's demographics are attractive to economic development, especially in regards to high-end, niche and resort-oriented development. The City has very high household incomes with an older population and fewer children at home. Interviews with City staff indicate that the City's population is naturally interested in this type of quality development, such as unique places to eat and shop, integration with mountain recreation, and proximity to Class A office space.

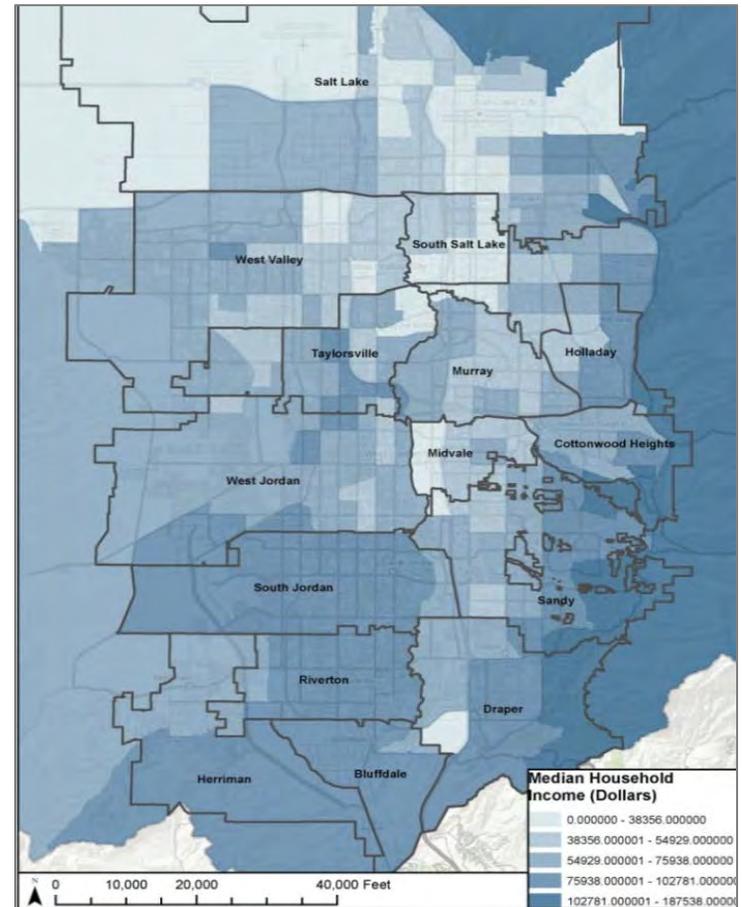
Population

The City's 2014 population is estimated at 34,994 persons with an estimated population¹ of 12,216 along Fort Union and 3000 East. For comparison, the population was 34,559 in 2013.

Household Characteristics

Incomes in Cottonwood Heights are among the highest in the County with a median household income of \$74,825 per year. This is significantly higher than the County-wide median of \$60,555. These high incomes indicate a strong buying power of residents living in the City.

Figure 2: Median Household Income



¹ Estimated by totaling 2010 Census Blocks along corridor, dividing by the City's 2010 population to determine a percentage of the City's total population and multiplying that proportion with the more recent 2014 population estimate given above. The 2014 population is estimated through the GOMB population projections from 2010 to 2020 as the Census has not released 2014 estimates at the time of this study.

Table 1: Median HH Income

City	Median HH Income
Salt Lake County	\$60,555
South Salt Lake	\$35,514
Salt Lake City	\$45,862
Midvale	\$48,008
West Valley City	\$52,389
Murray	\$54,405
Taylorsville	\$57,553
Holladay	\$66,368
West Jordan	\$67,308
Herriman	\$72,215
Cottonwood Heights	\$74,825
Sandy	\$76,904
Riverton	\$82,336
Bluffdale	\$88,657
South Jordan	\$89,709
Draper	\$89,922

Source: ACS 2013

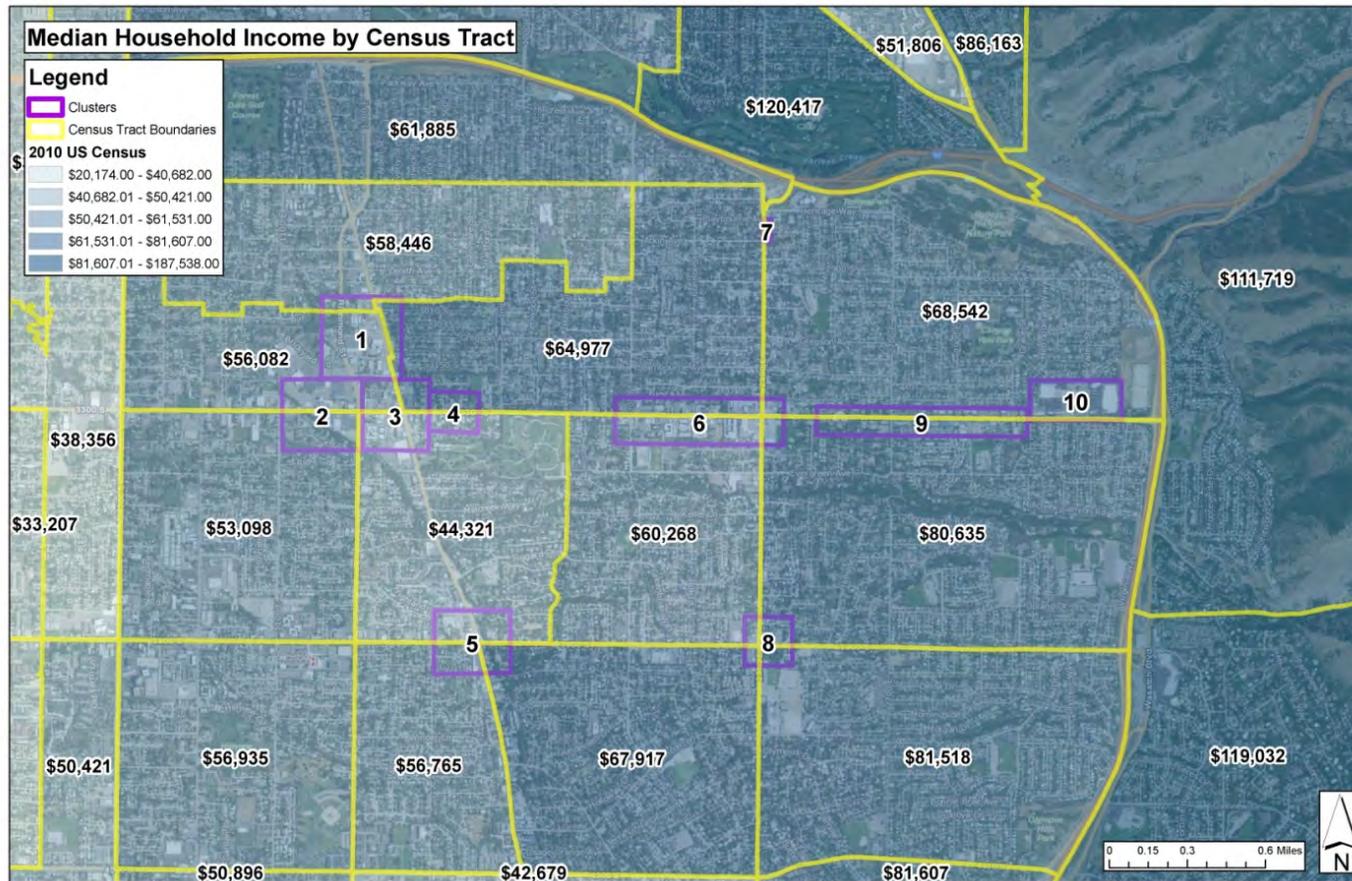
Table 2: Per Capita Income in Salt Lake County

City	Per Capita Income
Salt Lake County	\$26,103
South Salt Lake	\$16,448
West Valley City	\$17,934
Herriman	\$22,114
West Jordan	\$22,303
Taylorsville	\$22,523
Midvale	\$22,904
Riverton	\$25,629
Bluffdale	\$27,934
Salt Lake City	\$28,137
Murray	\$28,811
South Jordan	\$29,271
Sandy	\$30,952
Draper	\$32,618
Cottonwood Heights	\$36,668
Holladay	\$38,097

Source: ACS 2013

With the exception of Holladay, the City has the highest per capita incomes in the County. Higher per capita incomes are positive for buying power because it indicates that the residents have more disposable income compared to other areas of the County and a greater ability to spend money on retail and recreational uses along Fort Union. The higher per capita incomes could be reflective of the smaller household sizes and an older median age within the City.

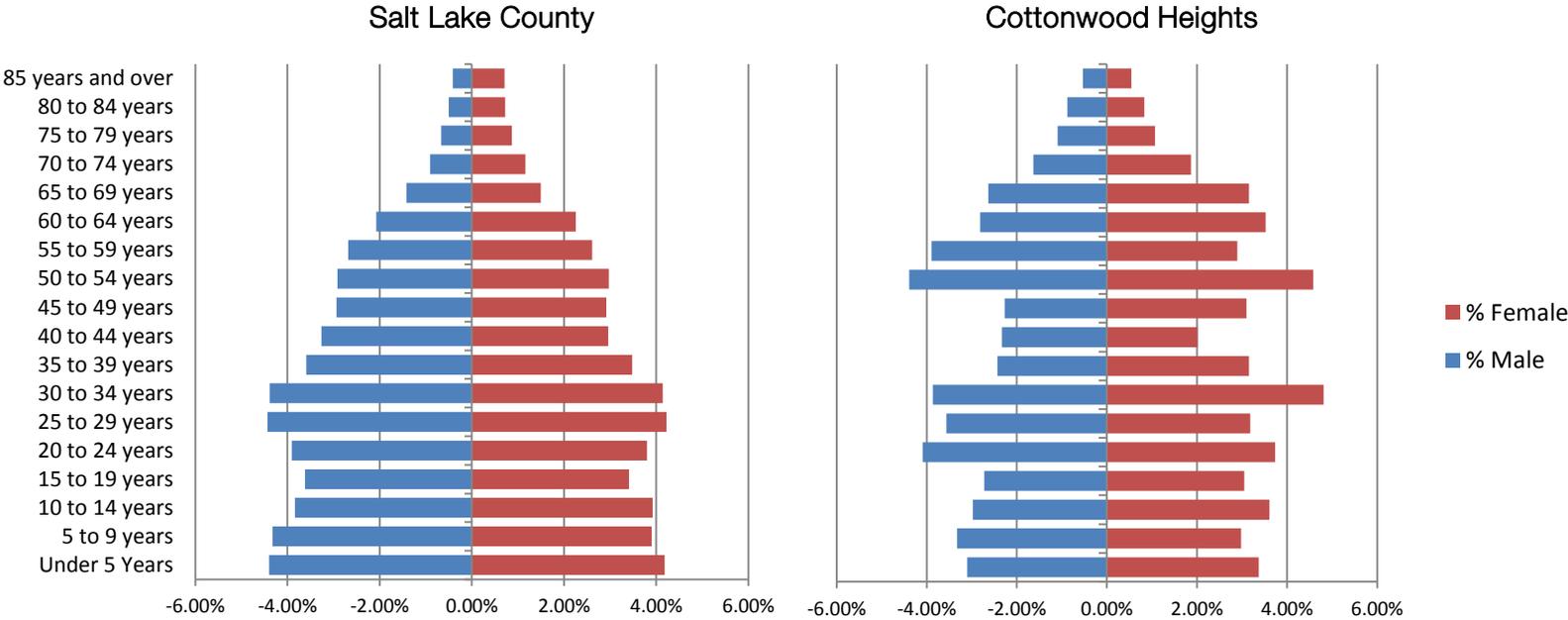
Figure 3: Median Household Incomes by Census Tract





The following age pyramid shows the City’s age distribution and suggests that the City has a disproportionately higher percentage of those aged 50 years and older. There is a somewhat smaller composition of those ages 35 to 50 years, but a strong component of those ages 20 to 35 years, indicating that neighborhoods may be starting to “recycle” with younger families.

Figure 4: Population Age Pyramid Comparison



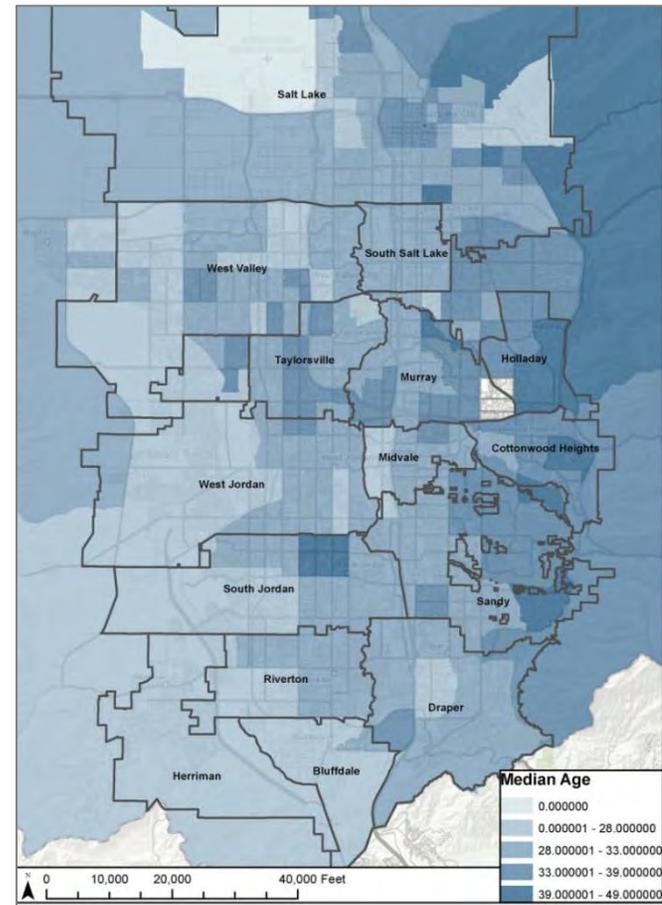
The median age in Cottonwood Heights is one of the oldest in the County, comparable to Murray and Sandy. The more established cities along the East Bench tend to have older residents compared to the fast growing south and west sides with young families with children.

Table 3: Median Age by City in Salt Lake County

City	Median Age
Salt Lake County	31.2
Herriman	20.5
Bluffdale	26.7
Riverton	28.3
West Jordan	28.7
West Valley City	29.7
South Jordan	29.8
South Salt Lake	29.9
Draper	30.6
Midvale	30.7
Salt Lake City	31.4
Taylorsville	31.9
Sandy	34.0
Cottonwood Heights	35.2
Murray	35.7
Holladay	38.3

Source: ACS 2013

Figure 5: Median Age by Census Tract in Salt Lake County



Corresponding with median age is household size – a larger household size often translates to a lower median age because it indicates that there are more households with children. Cottonwood Heights has a smaller household size than the County and a higher median

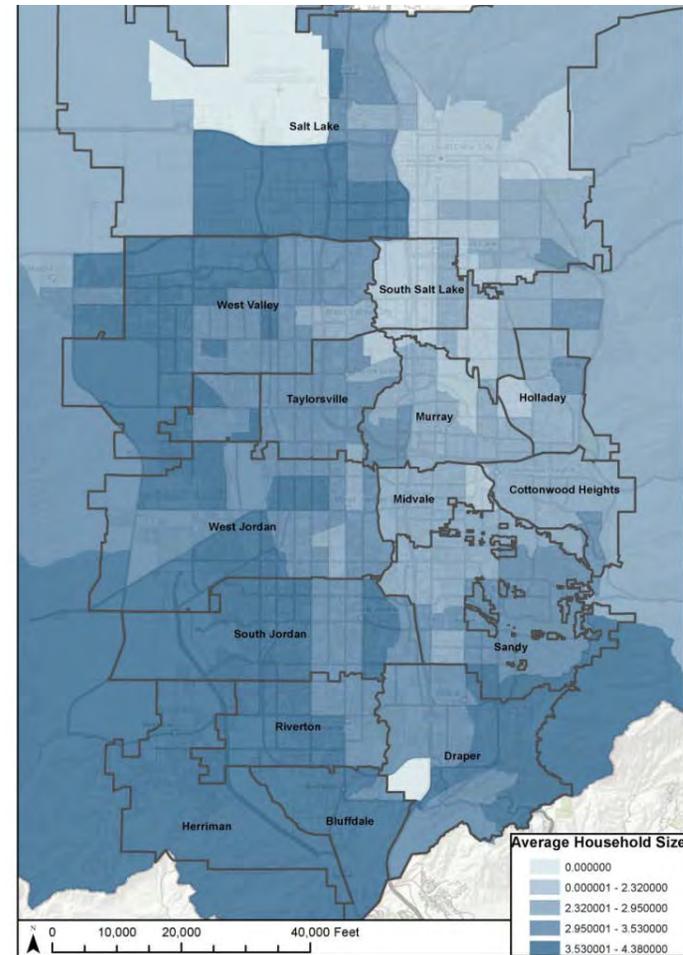
age. Since median age often correlates with household size, the geographic trends in the Valley are similar – cities in the southwest have higher household sizes, indicating more children living at home.

Table 4: Average Household Size

City	Average Household Size
Salt Lake County	3.01
Salt Lake City	2.49
Murray	2.54
Midvale	2.56
South Salt Lake	2.61
Cottonwood Heights	2.80
Taylorsville	3.06
Sandy	3.09
Draper	3.41
West Jordan	3.43
West Valley City	3.49
Holladay	3.62
South Jordan	3.65
Riverton	3.71
Bluffdale	3.79
Herriman	4.01

Source: ACS 2013

Figure 6: Household Size by Census Tract in Salt Lake County



Resort/Tourism Influence

Ski Utah reported 4.2 million skier visits during 2013/14, making it the third best season on record. Total taxable sales in the leisure and hospitality sector increased seven percent during the first half of 2014, while gas stations, grocery stores, and tourism-related retail sales increased anywhere from 2 to 4 percent. Tourism-related jobs in Utah's private leisure and hospitality sector increased 6 percent, double the growth rate of all other private Utah jobs combined (3 percent). However, leisure and hospitality sector wages, adjusted for inflation, increased 4 percent while wages for all other private jobs increased 5 percent.²

According to Smith Travel Research, during the first half of 2014, statewide occupancy, average daily rate and revenue per available room increased 3 percent, 4 percent, and 8 percent, respectively. The greatest increases in overall Utah hotel performance occurred during the second quarter of 2014 (April, May and June).

TNS Global reported total Utah person-trips during the first six months of 2014 had increased an estimated 12 percent from 2013, with an 18 percent increase in nonresident visitors.

In September 2014, Visit Salt Lake announced its "Ski City" marketing campaign to promote the proximity of an urban hub to several world-class ski areas. Cottonwood Heights sits at the base of both Big and Little Cottonwood Canyons and is a prime location for world-class resort-related development. The Canyons are known not only for their premiere skiing, but also for hiking, biking and rock climbing opportunities.

Figure 7: Wasatch Blvd on President's Day 2006, *Source: Mountain Accord*



² 2015 Utah Economic Report to the Governor

Figure 8: Recreation Activities, *Source: Mountain Accord*

Area	Recreation Activities																					
	Resort skiing/snowboarding	Backcountry skiing/snowboarding	Nordic skiing	Snowmobiling	Sledding	Backpacking	Camping	Dog walking	Fishing	Hiking	Hunting	Mountain biking	Off highway vehicle use	Organized events	Sightseeing/photography	Picnicking	Road cycling	Rock/ice climbing	Running	Scenic driving	Summer resort concessions	Wildlife viewing
Big Cottonwood Canyon																						
Little Cottonwood Canyon																						
Millcreek/Parleys canyons																						
Wasatch Front minor canyons ¹																						
Wasatch Back																						

Notes: High use Moderate use Low use Not applicable
¹ Use is generalized for Bells, Deaf Smith, Ferguson, Hughes, Neffs, and Tolcats canyons

Land Use

Existing Land Use Conditions & Analysis

Fort Union Boulevard land use was addressed in tandem with economic and transportation/transit needs as part of a unified planning process. As illustrated in Figure 9, this helped determine areas of overlap, how Fort Union Boulevard can become a more dynamic place, and where the balance lies between the three specialty areas – the so-called planning "sweet spot."

Figure 9: Diagram of Planning Approach

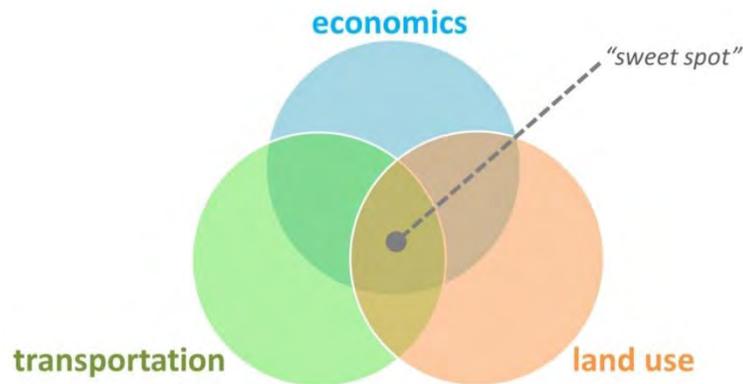


Figure 10: The "Old Mill" – Circa 1890



As presented in the following pages, a range of land use and design concepts emerged, the majority of which focus on transformational ideas that will take time, effort and diligence to achieve. These ideas extend beyond simple assessments and standard solutions, addressing the wide range of conditions - natural, physical, social, environmental and man-made - that influence the character of the corridor and in large part determine the functional, visual and place-making opportunities that are available for future enhancements and improvements.

Background

Although Cottonwood Heights didn't incorporate as a city until January 2005, its roots run deep, extending back to the first pioneers who settled the area during the mid-nineteenth century. While Fort Union Boulevard wasn't established until relatively recently, the area was an overnight stopping point where basic services were established, including a store, post office, brewery and tavern. Soon after, the Deseret Paper Mill – commonly known as the “Old Mill” – was constructed just north of Fort Union along Big Cottonwood Canyon Road, where newspaper was created from wood pulp harvested from the nearby canyon and mountain trees. Although it only operated for 22 years due to a catastrophic fire, the shell of the building remains, providing a physical link with activities and developments from the distant past.

Located on the northern extents of a large alluvial field that that gently rises hundreds of feet above the valley floor, Fort Union Boulevard traces the slopes of a remnant beach of ancient Lake Bonneville. The west-east running boulevard terminates at the mouth of Big Cottonwood Canyon, where the waters of the associated Cottonwood Canyon Creek turn sharply to the northwest on a journey through present-day Holladay and Murray before joining the waters of the Jordan River and the Great Salt Lake. Since the uppermost flats of the sandbar where the Boulevard is located were too dry and desolate to attract farming and substantial settlement, the development of Fort Union Boulevard and its surroundings has been slow, with most growth taking place during the past 50 years.

During the past few decades most of the development along the roadway has been markedly



Figure 11: Westward view down Big Cottonwood Canyon toward Cottonwood Heights, Fort Union Boulevard, the valley floor, and the Oquirrh Mountains in the distance



Figure 12: View from Wasatch Boulevard/SR-190 intersection eastward toward Big Cottonwood Canyon
Source <http://www.mountainproject.com/v/107679083>

commercial, with residential neighborhoods

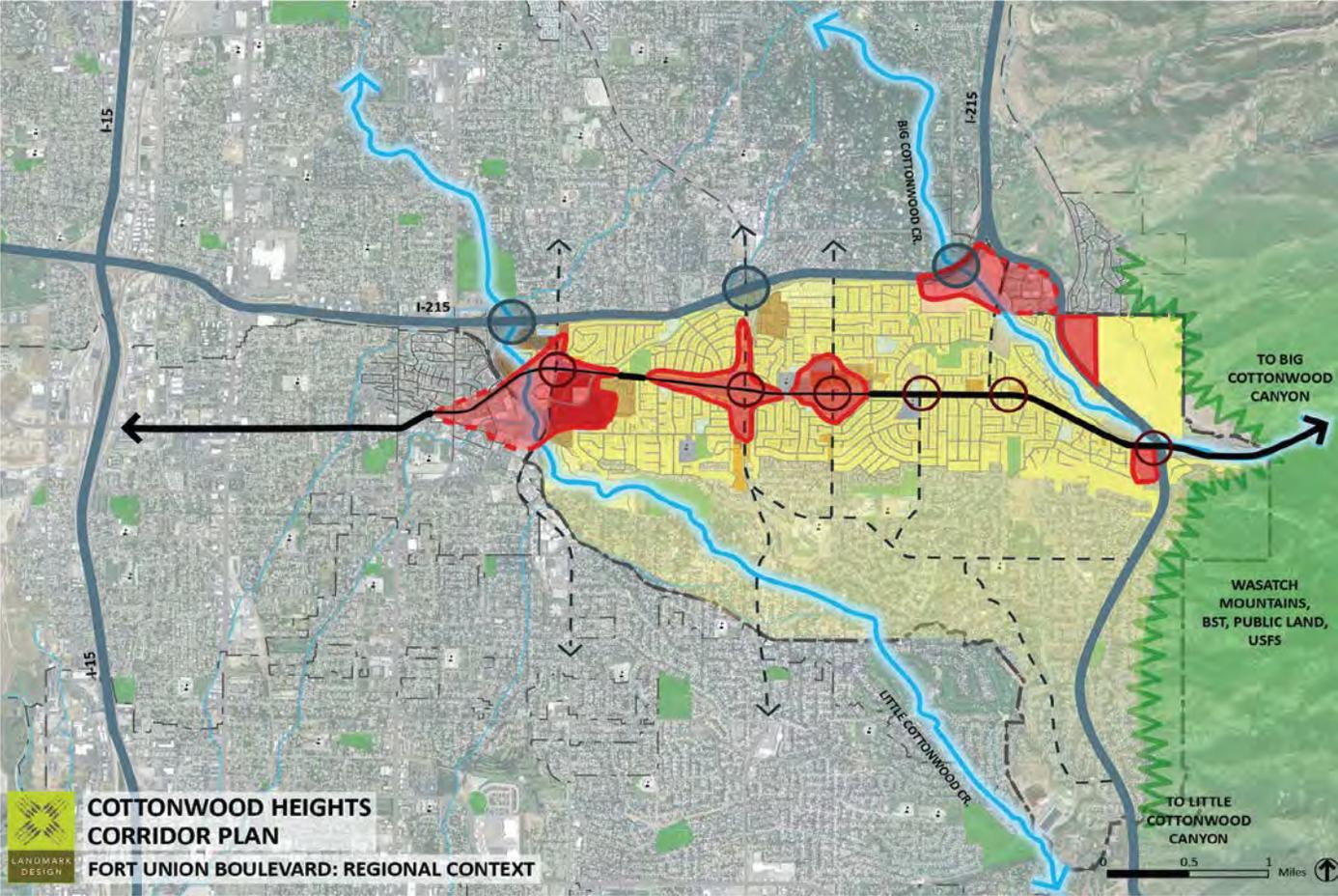
stretching beyond the corridor to the north and south. With the completion of I-215 three decades ago it was anticipated that significant transformation might occur along the corridor; however wholesale change failed to materialize for the most part, reinforcing the dated and ad-hoc feel that currently dominates the boulevard. In contrast, the area north of Fort Union Boulevard (near 3000 East and 6200 South) has developed into a premiere office park, encompassing corporate headquarters and intensive business operations within Cottonwood Heights and neighboring Holladay boundaries. Employees of these businesses, visitors and local residents can easily access the belt route from this intersection, where the Wasatch Mountains loom overhead and dramatic views over the valley dominate the western perspectives.

For better or worse Fort Union Boulevard is the defacto "heart of the city," where the majority of city services are found. The boulevard also shares strong relationships with other south valley communities, in addition to the nearby Wasatch Mountains and Cottonwood Canyon, and the world-class recreational opportunities found there. In order to build upon an enviable location, a clear and compelling vision is required. This will help ensure that inherent strengths and opportunities can be leveraged for maximum benefit, and shortcomings overcome in a manner that results in a more dynamic, sustainable and enticing place.

Study Area

The *Fort Union Boulevard Study Area* extends approximately one mile north and south of the boulevard. Interstate 215 defines the northern boundary of the area, with no clear delineation to the south. It is located on the northernmost edge of a natural sandy ridge that separates the mouths of Big Cottonwood Canyon and Little Cottonwood Canyon, with elevations dropping nearly 500 feet from the mouth of the canyon in the east to the Midvale City boundary that defines the western boundary of the site. The result is a progressively upward sloping corridor, with small peaks, valleys and plateaus located throughout the area.

Figure 13: Fort Union Boulevard – Regional Context



Fort Union Boulevard is the westward extension of State Road 190 (Big Cottonwood Highway), which continues east from Wasatch Boulevard through the steep slopes of Big Cottonwood Canyon to Solitude and Brighton Ski areas, both of which are situated approximately 15 miles east of the canyon mouth.

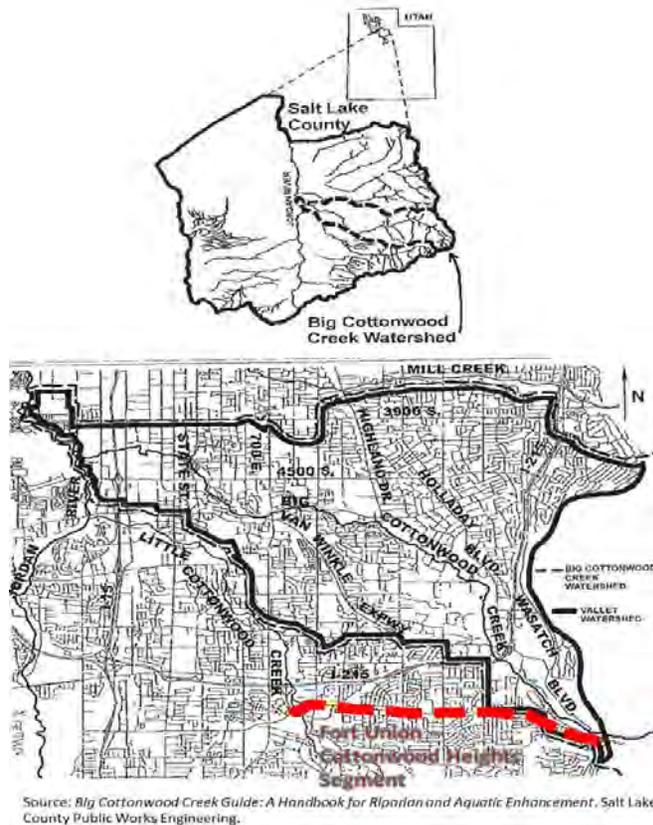
Fort Union Boulevard serves both local and regional travelers, intersecting six north-south running primary roadways along the four-mile corridor located within the city limits. As summarized in Table 5 below, two of these crossings (Union Park Avenue and Highland Drive) link directly with Interstate-215, while SR-190/ Wasatch Boulevard and 3000 East connect with the interstate, albeit in a less direct manner. Both 1300 East 2300 East extend to the north beneath I-215, resulting in less traffic and distinctly different development patterns and characteristics at the nodes where both roads cross Fort Union Boulevard. Each of the six Fort Union intersections have developed into places with a concentration of automobile-oriented commercial activities. Some of these “nodes” are larger and more intensive than others, and each has a distinct profile that reflects the type and intensity of surrounding traffic and roads.

Table 5: Major North-South Intersections – Fort Union Boulevard – East to West (Within Cottonwood Heights City Limits)

INTERSECTION	DIRECT CONNECTION WITH I-215	INDIRECT LINKAGE WITH I-215	EXTENDS UNDER I-215 INTO HOLLADAY OR MURRAY	NOTES
1. SR-190/Wasatch Boulevard	-	YES	-	Eastern Fort Union/ City Terminus
2. 3000 East	-	YES	-	-
3. 2300 East	-	-	YES	-
4. Highland Drive	YES	-	-	-
5. 1300 East	-	-	YES	-
6. Union Park Avenue	YES	-	-	Western Fort Union/ City Terminus

Fort Union Boulevard is the Physical and Visual Extension of Big Cottonwood Canyon and a Direct Link with the Wasatch Mountains

Figure 14: Big Cottonwood Creek Watershed – Regional and Local Context



Big Cottonwood Canyon is a protected municipal watershed that is contained within the Big Cottonwood Drainage Basin. The creek has the largest flow of any of the adjacent Wasatch streams, and although most of the canyon is owned and managed by the US Forest Service, there are significant private land holdings, including several near the canyon mouth and the study area. As illustrated in Figure 14, the drainage basin skirts the northeast edge of the study area, where Big Cottonwood Creek turns northwestward after exiting the canyon on its journey through Holladay and Murray en route to the Jordan River. Although the creek touches the boulevard for a few feet, it is one of several natural features that have significant influence on the study area; the others are Big Cottonwood Canyon, the alluvial fan formation where the study area is situated, and the nearby Wasatch Mountain slopes and foothills that dominate the eastern horizon.

Commercial uses dominate Fort Union Boulevard, with scattered residential properties located on both sides of the street between the node intersections. Stable residential neighborhoods are found immediately north and south of the boulevard, comprising hundreds of homes, the majority of which have been built since the early 1960's. These neighborhoods are dominated by moderate-sized single-family homes on moderate sized lots, and a number of multi-family, higher density projects located along the boulevard and the major roads it intersects. As one might expect, the study area also includes typical public services and amenities, including schools, parks and churches.

The study area abuts three adjacent communities - Midvale to the west, Murray and Holladay to the north on the opposite side of I-215. Segments of Sandy City are located south of the study area, as are pockets of unincorporated Salt Lake County land, although these are well beyond the informal southern limits of the Study Area.

More significant are the public lands located in the eastern extents of the study area. These sites are generally associated with the Wasatch Mountains and Big Cottonwood Canyon, which provide the special “look” and recreational draw that makes the area special. A thriving corporate center is located on the southwest corner of 3000 East and Wasatch Boulevard, bringing economic advantages to the study area and City alike. A large 200+ acre gravel quarry defines the eastern edge of Wasatch Boulevard between Big Cottonwood Canyon and I-215. Although the site is still actively being mined, it is anticipated that the site will be transformed into a major mixed-use development within the next few years.

The study area contains two particularly steep sections that present engineering and development challenges for the roadway and properties that line it, and which can be difficult for pedestrians, cyclists and vehicles to navigate, particular on snowy and icy days. The first steep section, known locally as Brighton Hill, is centered on 2300 East and has an average slope that is nearly nine percent. The second hill has no known common name, but is located around 3000 East and is almost as steep as Brighton Hill.

Existing Land Use

As illustrated in Figure 15 and Table 6, the *Fort Union Boulevard Study Area* comprises approximately 2,200 acres of land. Extending along a narrow, two-mile swath of land from Union Park Avenue to Wasatch Boulevard (3.8 miles in length), more than half of the area is occupied by low-density/single-family homes, which are generally situated on moderate-sized lots in large, suburban neighborhood. Nearly two-thirds of the site is composed of residential uses of all types (low-to high density), with the higher density uses located along major roadways.



Figure 15: Existing Land Use

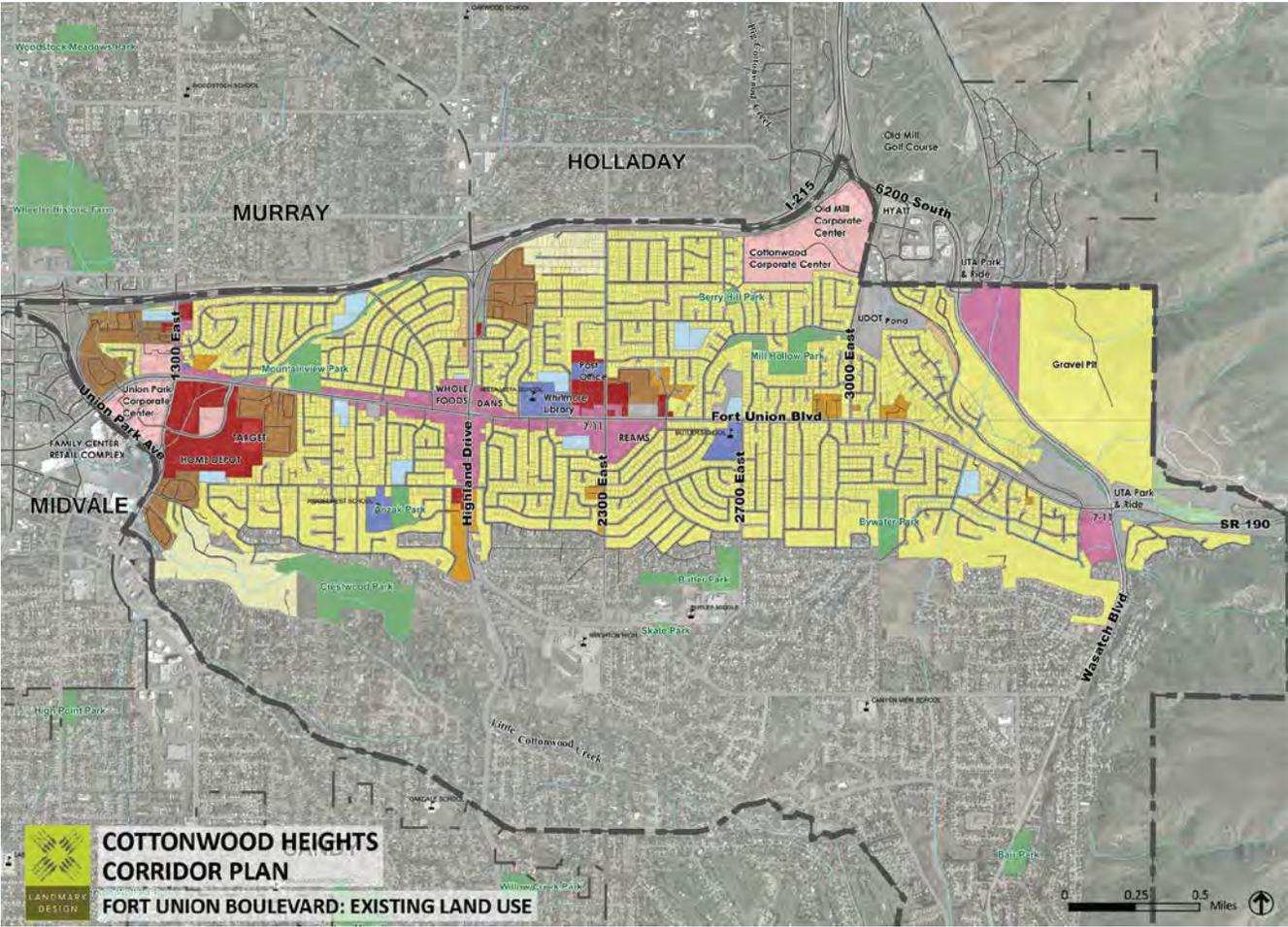


Table 6: Existing Land Use

	Existing Land Use	Acres	%
	Civic	38.5	1.8%
	Commercial	82.3	3.7%
	Mixed Use	82.7	3.7%
	Office/R-D	107.4	4.9%
	Residential Office	7.3	0.3%
	Residential High Density	113.9	5.2%
	Residential Medium Density	33.4	1.5%
	Residential Low Density	1199.5	54.5%
	Residential Rural Density	79.4	3.6%
	Sensitive Lands	14.8	0.7%
	Religious	39.8	1.8%
	Open Space	56.9	2.6%
	Utility	94.3	4.3%
	Vacant	251.3	11.4%
TOTAL		2201.6	100.0%

Commercial uses (office/retail/mixed use) comprise nearly 13 percent of the total land area. These uses are concentrated along Fort Union Boulevard, particularly at the nodes where the boulevard crosses other major roadways. A small majority of commercial land is occupied by offices, which are concentrated at the Old Mill and Cottonwood Corporate Centers near 2000 East and I-15, and to a lesser degree at Union Park Corporate Center near 1300 East and Fort Union Boulevard.

A gravel pit dominates the vacant land category, which at just over 12 percent is the second largest land use category in the study area. Vacant land is dominated by a handful of large and contiguous properties managed by state and federal entities and a regional water

utility. In contrast to the privately-owned gravel pit (which is classified as vacant land), nearly all of the vacant public lands are unlikely to be available for future development.

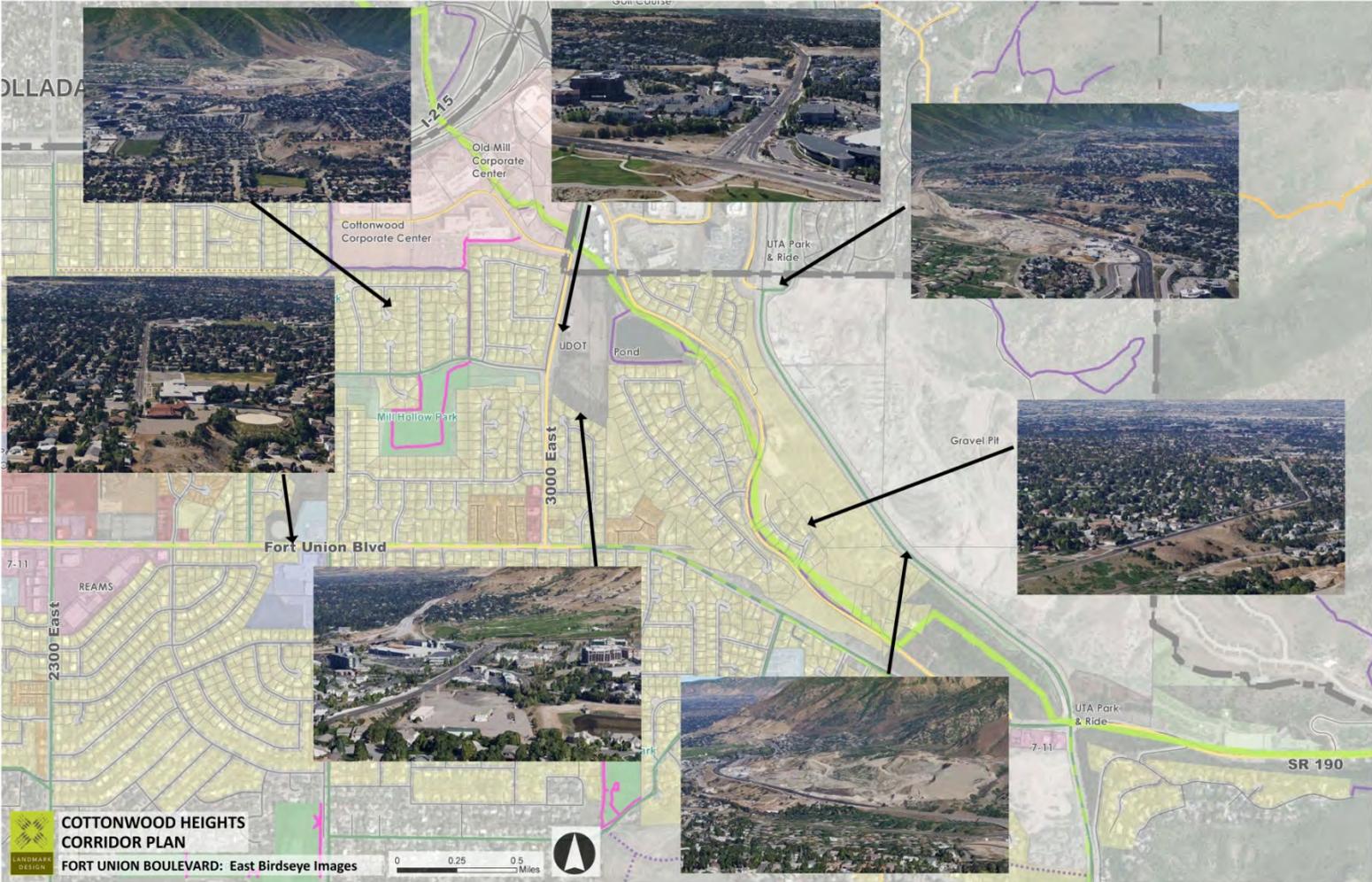
Other land uses include public, cultural, civic, park and open spaces, which “round-out” the study area land use profile. Figures 16 and 17 provide perspective views of the various land uses and configurations found in the study area.

Figure 16: Birdseye Photos – Union Park Avenue to 2600 East





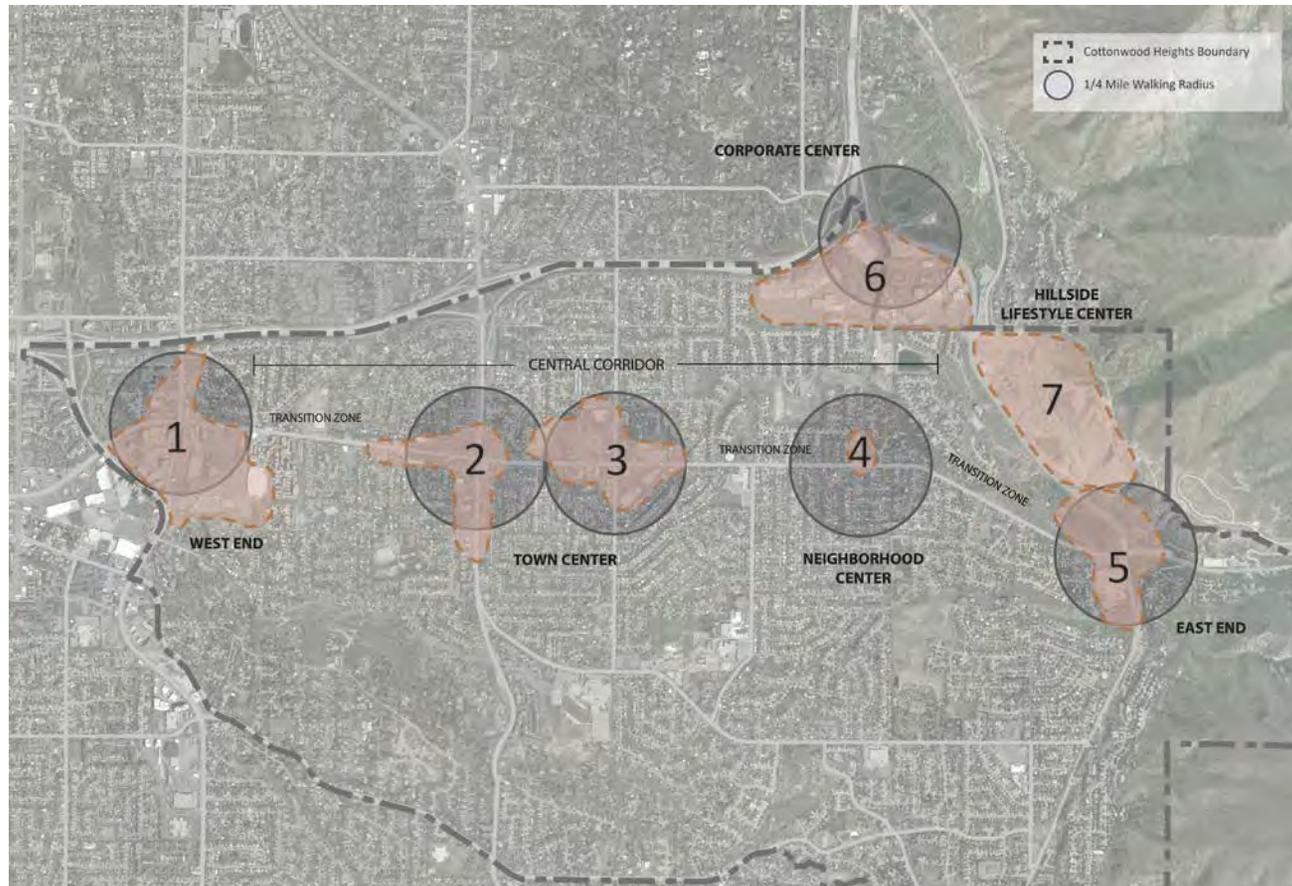
Figure 17: Birdseye Site Photos – 2600 East to Canyon Mouth/Corporate Center/Gravel Pit



Focusing on the Nodes

In order to better understand existing land use conditions and relationships within the corridor, a detailed analysis was undertaken for the key nodes/destinations illustrated in Figure 18. The following is a summary analysis for each.

Figure 18: Detailed Land Use Analysis – Size and Use/Activity Profile of the Seven Nodes



Node 1 **1300 East/Fort Union**

This is the largest of the seven nodes, comprised of 183 acres that stretch from Union Park Avenue to approximately 1600 East. The bulk of land is occupied by high-density multi-family projects, with the remaining area composed of big-box retail, office buildings and mixed use projects. Despite the prevalence of high-density residential, the chain-store retail profile is dominant, including the large and empty parking lots that surround low-level buildings. The area is auto-centric, with few amenities to support pedestrian movement from place to place. The lack of a clear vision for the area creates an indistinct and unmemorable feeling.

Node 2 **Highland Drive/Fort Union**

Located at the intersection with Highland Drive, this node is a mixed bag of old and new mixed uses, and a small commercial component. Similar to Node 1, the development pattern is distinctly auto-centric, with few amenities to encourage pedestrian movements within the area. At just one-quarter the size of Node 1, this node is relatively small and compact.

Node 3 **2300 East/Fort Union**

Situated on the east side of 2300 East, just shy of I-215, this 30-acre node is nearly fully developed with higher-density condominiums and apartments. 2300 East and I-215 are fast-moving, reinforcing the sense that this is not a safe place for people, cyclists and motorists alike.

Node 4 **3000 East/Fort Union**

Perhaps the most diverse node, this 62-acre area is dominated by mixed uses (library, school and post office, for example), and a good mix of high-density residential and commercial services. The node has a greater “sense of place” than the other nodes, yet is still disjointed and lacks a clear vision.

Node 5 **Wasatch Boulevard/Fort Union**

At only two acres, this is by far the smallest node. Consisting of a gas station and a couple of residentially-scaled office buildings on the northwest corner only, this small node has the potential to become something more, such as a “neighborhood Center” or a unique local hotspot.

Node 6 Old Mill/Cottonwood Corporate Centers

A clear and modern identity has been established for this 70-acre business center. Although this is one of the major employment centers in the region, greater effort could be taken to entice site workers to explore nearby nodes located along Fort Union Boulevard.

Node 7 7-11 to the Gravel Pit

The southwest corner of this intersection contains some of the most unique shopping and dining sites, but is run-down and tired.

General Land Use Analysis

Fort Union Boulevard is in a great location. It has close access to natural amenities (canyons and mountains), and access to unparalleled recreation opportunities, transportation infrastructure (I-215) and local/regional services. The mix of commercial and residential uses is mainly laid out in discernible pattern, with residential uses configured as neighborhoods and “nodes” developed as commercial service centers.

Enticing visitors to visit the core of Fort Union can be challenging, especially until a real draw is created that will encourage them to do so. The steep nature of the site can create access and development challenges, although it is those same conditions that provides the unique views and perspectives and a greater appreciation for the nearby Wasatch Mountains and canyon environments. The area lacks a clear identity and vision. It is dominated by busy streets, automobile traffic and auto-oriented patterns and uses, and is not a particularly inviting place, despite being home for a wide range of business operations and a place many people call “home.”

Fort Union lacks a clear identity, as do the various nodes and destinations scattered throughout the area. The residential neighborhoods can be “faceless.” Commercial uses have begun to “creep” into surrounding residential neighborhoods, signaling the upset of long-established patterns.



The suburban commercial patterns that define much of the corridor (large parking lots/ big box commercial uses/ strip development, national chains, etc.) are challenging to overcome. Likewise, abrupt land use transitions that have become more and more prevalent in the area over the years need to be curtailed. The fact that so many of the parking lots found along the boulevard are empty is an indication that infill and intensification are probably good ideas, and the difficult relationship that exists between individual commercial uses (separated parking lots/ steep slopes/difficult wayfinding/poor crossings/ no real linkages) might be resolved over time.



A clear and unified vision is required before the corridor can begin to change and flourish. The process will not be quick or easy, particularly since the area is nearly built out, which will require redevelopment. The lack of unified and consistent amenities (streetscape, landscaping, lighting, etc.) is an issue, but can be resolved in phases.

Analysis of the Nodes

As illustrated in Figure 19, the study area contains six distinct nodes, each of which will play an important role in the transformation of the corridor. The type and level of enhancement at each node should be carefully considered and fine-tuned to match the purpose. As illustrated in Figure 20, a four-level tiered system has been developed to illustrate the importance of classifying each node correctly. As indicated, the Corporate Centers and Gravel Pit are Tier 1 nodes, each of which should play important future roles in the transformation of the corridor, and receive corresponding enhancements. In contrast, Tier 4 nodes are envisioned to be relatively simple contributors to the transformation process so the level of enhancement should be correspondingly simple. The type and intensity of envisioned land uses is further clarified in Figure 21.



Figure 19: Analysis – Nodes/Connections/Contingencies

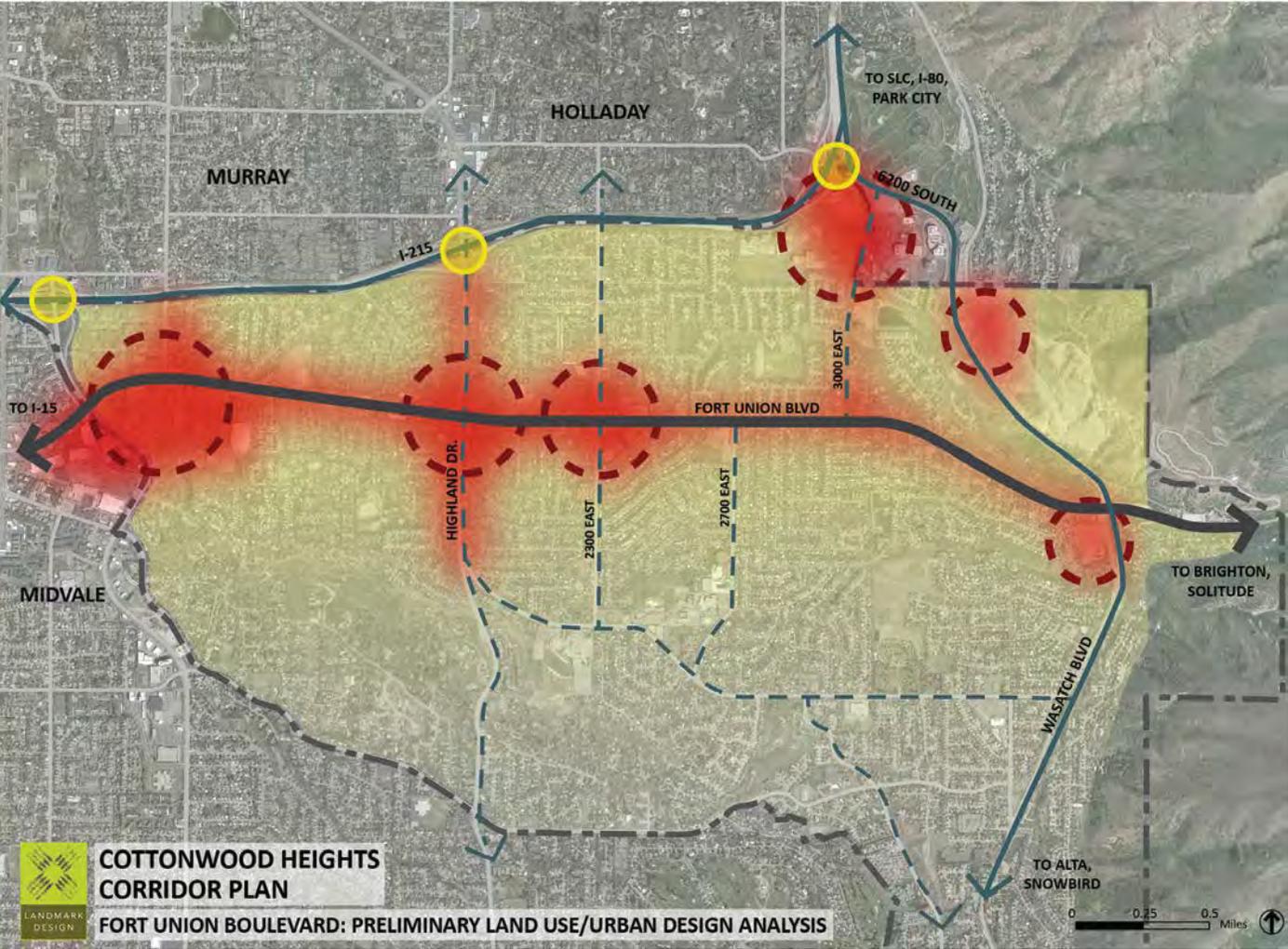


Figure 20: Node/District Development Tiers

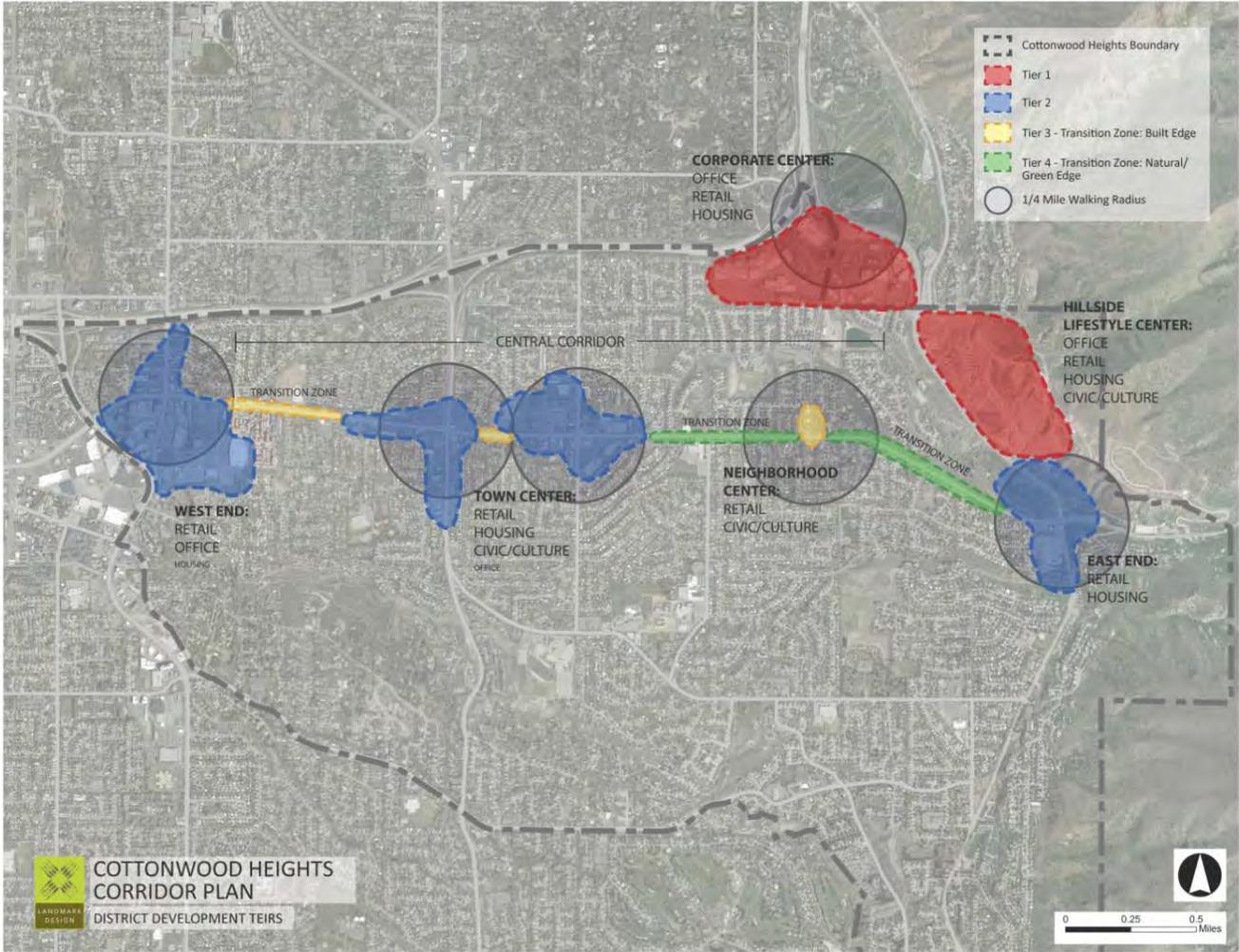


Figure 21: Land Use Intensity



 **COTTONWOOD HEIGHTS
CORRIDOR PLAN**
LAND USE INTENSITY MAP

-  Cottonwood Heights Boundary
-  Civic/Culture
-  Office
-  Retail
-  Housing

Economic Conditions

In 2014, Forbes Magazine ranked Utah #1 on its list of Best States to Do Business. The ranking measures six vital categories for businesses: costs, labor supply, regulatory environment, current economic climate, growth prospects and quality of life. Cottonwood Heights, with some of the premiere Class A office space in the State, and the opportunity to develop more, is extremely well positioned to capitalize on world-class businesses locating in Utah, as well as on relocations and expansions of top firms already in the State.

Existing economic conditions are discussed below, in the following sections:

- Retail Market
- Office Market
- Housing Market
- Vacant Land and Density Analysis

Retail Market Analysis

While Cottonwood Heights has significant buying power due to the high incomes in the City, there is a significant amount of sales leakage out of the City to surrounding areas. In order to identify future opportunities for the City, the retail analysis includes the following components of existing conditions:

- Market Growth and Share Analysis
- Sales Leakage
- Retail Cluster Analysis

Market Growth and Share Analysis

Taxable sales in Cottonwood Heights have grown at an average annual rate of 5.9 percent between 2009 and 2013. In comparison, sales in the State of Utah have grown at a rate of 5.1 percent annually over the same time period. Retail sales in Cottonwood Heights

are more than double retail sales in neighboring Holladay and have been growing more rapidly – at an average rate of 5.9 percent (compared to 1.9 percent for Holladay). The growth rate in Cottonwood Heights is fairly similar to the average annual growth rate in Murray (6.4 percent), but total sales in Murray are nearly four times greater than sales in Cottonwood Heights. This disparity reflects the fact that Murray is the regional retail hub that extends outward from Fashion Place.

Table 7: Retail Sales Growth, 2009- 2013

City	2009	2013	AAGR	Absolute Growth
Cottonwood Heights	\$376,612,209	\$474,515,318	5.9%	\$97,903,109
Draper	\$663,256,077	\$964,732,945	9.8%	\$301,476,868
Holladay	\$187,807,037	\$202,420,167	1.9%	\$14,613,130
Midvale	\$484,509,219	\$678,977,139	8.8%	\$194,467,920
Murray	\$1,439,050,774	\$1,846,357,391	6.4%	\$407,306,617
Sandy	\$1,733,183,155	\$2,273,927,199	7.0%	\$540,744,044
South Salt Lake	\$1,161,187,572	\$1,290,468,867	2.7%	\$129,281,295

When compared to its neighbors, Cottonwood Heights has six percent of market share, with its share remaining relatively constant since 2009. There has been little change in market share in most communities, with South Salt Lake and Holladay declining somewhat and Draper, Midvale and Sandy picking up market share.

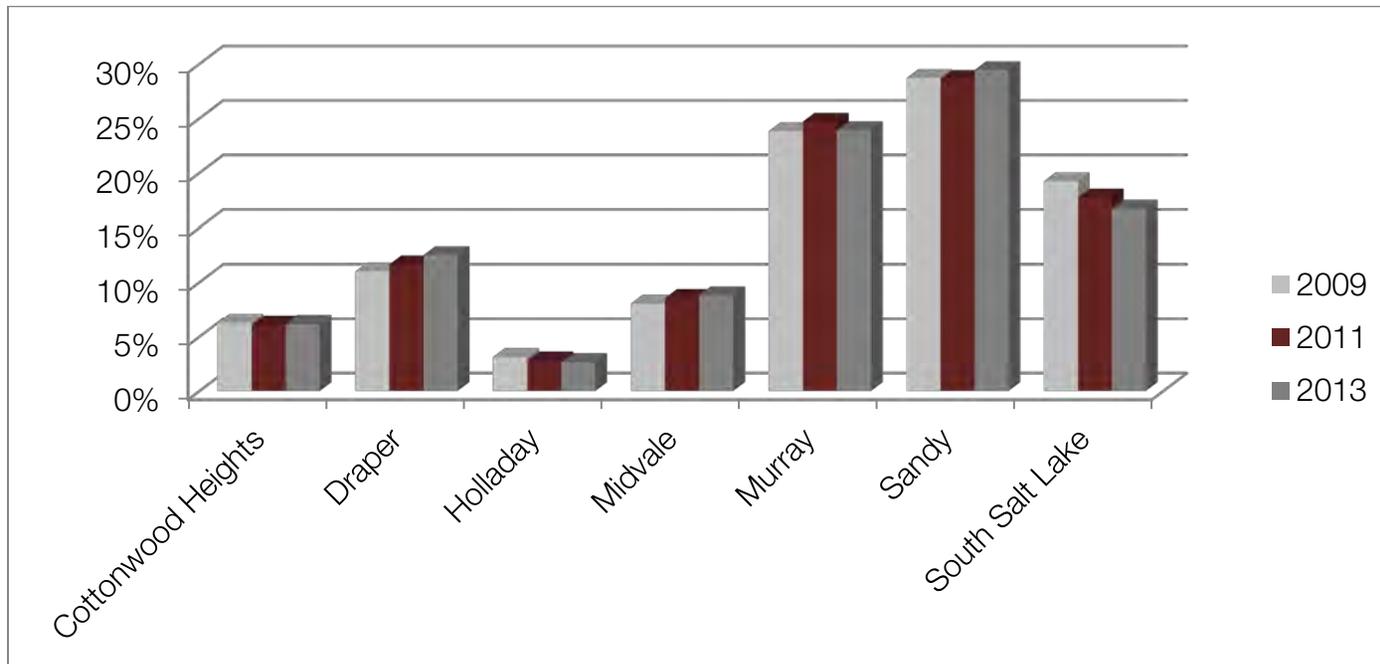
Table 8: Percent of Retail Market Share by City

Percent of Market Share				
City	2009	2011	2013	
Cottonwood Heights		6.2%	6.1%	6.1%
Draper		11.0%	11.6%	12.5%
Holladay		3.1%	2.8%	2.6%

Percent of Market Share

City	2009	2011	2013
Midvale	8.0%	8.5%	8.8%
Murray	23.8%	24.7%	23.9%
Sandy	28.7%	28.6%	29.4%
South Salt Lake	19.2%	17.7%	16.7%

Figure 22: Retail Market Share, 2009-2013



While Cottonwood Heights has maintained roughly six percent of market share over the past few years, the City is home to over 11 percent of the population in the regional area, suggesting that there is significant opportunity for the City to recapture lost retail sales. Both Murray and South Salt Lake capture a significantly higher percentage of retail sales than is represented by their respective populations.

Table 9: Comparison of Percent of Population and Market Share – 2013 Data

City	Population 2013	Population as % of Total	% of Retail Market Share
Cottonwood Heights	34,559	11.6%	6.1%
Draper	42,215	14.2%	12.5%
Holladay	27,385	9.2%	2.6%
Midvale	29,391	9.9%	8.8%
Murray	48,745	16.4%	23.9%
Sandy	90,450	30.4%	29.4%
South Salt Lake	24,542	8.3%	16.7%
TOTAL	297,288	100.0%	100.0%

Sales Leakage

A sales gap analysis shows the estimated amount of retail purchases made by residents of Cottonwood Heights³ and the percentage of those purchases being made within City boundaries (as reflected by the “Capture Rate”). Where the capture rate is less than 100 percent, this indicates that residents are leaving the City to make purchases elsewhere. Where the capture rate is greater than 100 percent, such as for Health and Personal Care Stores, this indicates that consumers from outside of the City are making purchases within City boundaries.

Corresponding to the capture rate is the leakage amount in each category. Categories where the capture rate is less than 100 percent and City residents are making purchases in other cities show a negative leakage amount. This is the amount Cottonwood Heights is losing in sales annually in that category. Overall, Cottonwood Heights is capturing roughly two-thirds of all retail purchases made by residents in the City.

³ Estimated consumer purchases are based on average annual consumer purchases in the State of Utah.

Table 10: Retail Sales Leakage Summary

Retail Category	2013 Leakage	2013 Capture Rate
Motor Vehicle and Parts Dealers	-\$72,431,250	7.68%
Accommodation	-\$18,040,442	10.79%
General Merchandise Stores	-\$16,698,928	81.79%
Miscellaneous Store Retailers*	-\$16,003,204	33.05%
Repair and Maintenance	-\$13,686,242	12.80%
Furniture and Home Furnishings Stores	-\$11,145,721	6.15%
Clothing and Clothing Accessories Stores	-\$9,654,085	61.23%
Sporting Goods, Hobby, Book, and Music Stores	-\$7,628,974	49.59%
Gasoline Stations	-\$6,652,381	54.45%
Food Services and Drinking Places	-\$6,019,939	89.41%
Amusement, Gambling, and Recreation Industries	-\$4,502,581	25.10%
Food and Beverage Stores	-\$3,825,111	93.49%
Personal and Laundry Services	-\$1,888,194	60.92%
Performing Arts, Spectator Sports, and Related Industries	-\$1,659,124	4.68%
Museums, Historical Sites, and Similar Institutions	-\$424,631	0.00%
Nonstore Retailers	\$185,694	102.31%
Electronics and Appliance Stores	\$2,401,368	118.98%
Building Material and Garden Equipment and Supplies Dealers	\$5,921,960	117.18%
Health and Personal Care Stores	\$16,563,916	341.76%
TOTAL	-\$165,187,870	66.09%

*Miscellaneous Store Retailers includes categories as diverse as pet stores, cigars, quilters, fan companies, bees, etc.

Source: Utah State Tax Commission, ZBPF

As the sales leakage table demonstrates, Cottonwood Heights has a low overall capture rate of 66 percent, with a loss of over \$165 million in retail sales annually to surrounding communities. The City is better known in the County as the hub for Class A office space rather than for retail shopping. However, some of the leakage categories such as general merchandise and sporting goods can increase capture rates through improvements and higher densities at current commercial nodes on Fort Union at 1300 East, Highland Drive, and 2300 East.

While motor vehicles show the greatest loss in sales, it is not likely that the City can recapture this leakage. Auto dealers tend to cluster together and even have specific geographic areas assigned to them. They also require a significant amount of land for their auto inventories, and vacant land is at a premium in Cottonwood Heights.

The areas with the most opportunity for the City's retail growth are ones that complement Class A office development and proximity to the canyons and resorts – accommodations and food services. Accommodations had a low capture rate of almost 11 percent with sales leakage of over \$18 million. This deficit is primarily attributable to few hotels and motels in the City. Along Fort Union there are only 30 short-term condo and home rentals and one hotel with 96 rooms. Given the access of Fort Union to canyon recreation and resorts, there is opportunity for the City to be a base camp along Fort Union by improving accommodation space. Accommodations also complement Class A office space by providing easy access for out-of-town employees and clients visiting the City's businesses.

Compared to other cities with similar access to mountain recreation and ski resorts, Cottonwood Heights has significantly lower accommodation sales, especially on a per capita or per employee basis. Again this illustrates that the City has good opportunity to provide lodging given its proximity to the canyons and the similarities to other neighboring cities.

Table 11: Comparative Accommodation/Lodging Sales by City

	2013 Sales	Per Capita	Per Employee	Per Capita & Employee
Park City	\$220,058,942	\$29,158	\$16,678	\$11,235
Cottonwood Heights	\$2,181,180	\$63	\$162	\$47
Sandy	\$28,929,265	\$320	\$671	\$224
Holladay	\$5,500,000	\$201	\$977	\$172
Midvale	\$12,339,350	\$420	\$851	\$294
Murray	\$7,146,437	\$147	\$166	\$81

Food services also complement the City's presence as an employment hub and gateway to the ski resorts. In this retail category, the City has a higher capture rate at 89 percent, but there is still room for improvement in that number – especially since the presence of office employees and recreation users would be expected to attract purchases from more than City residents (thus bringing the capture rate to

over 100 percent). The current capture rate translates into a loss of over \$6 million annually to the City. The table below shows food services sales on a per capita and per employee basis, suggesting room for improvement in the City compared to other cities that neighbor or have resort access.

Table 12: Food Services Retail Sales by City

	2013 Sales	Per Capita	Per Employee	Per Capita & Employee
Park City	\$97,443,588	\$12,912	\$7,385	\$4,975
Cottonwood Heights	\$50,812,165	\$1,470	\$3,780	\$1,094
Sandy	\$152,397,628	\$1,685	\$3,534	\$1,179
Holladay	\$28,327,857	\$1,034	\$5,034	\$887
Midvale	\$69,994,504	\$2,382	\$4,827	\$1,667
Murray	\$112,038,364	\$2,298	\$2,605	\$1,268

The following tables give sales leakage and capture rates in further detail by retail category in all categories for 2013. While an overall category may have a positive capture rate, some sub-categories within the broader category may individually have a capture rate of less than 100 percent and be showing sales leakage.

Table 13: Retail Sales Leakage by Category

	2013 Leakage	2013 Capture Rate
<i>Motor Vehicle and Parts Dealers</i>		
New Automobile Dealers	-\$48,369,742	0.07%
Used Car Dealers	-\$12,386,446	0.49%
Other Motor Vehicle Dealers	-\$3,702,327	41.29%
Automotive Parts, Accessories, and Tire Stores	-\$7,972,734	29.45%
Subtotal	-\$72,431,250	7.68%
<i>Furniture and Home Furnishings Stores</i>		
Furniture Stores	-\$8,680,140	3.85%

	2013 Leakage	2013 Capture Rate
Home Furnishings Stores	-\$2,465,582	13.44%
Subtotal	-\$11,145,721	6.15%
<i>Electronics and Appliance Stores</i>		
Appliance, Television and Other Electronics	\$2,401,368	118.98%
Camera & Photographic Supplies	\$0	0.00%
Computer & Software Stores	\$0	0.00%
Subtotal	\$2,401,368	118.98%
<i>Building Material and Garden Equipment and Supplies Dealers</i>		
Building Material and Supplies Dealers	\$6,954,562	120.81%
Lawn and Garden Equipment and Supplies Stores	-\$1,032,602	1.39%
Subtotal	\$5,921,960	117.18%
<i>Food and Beverage Stores</i>		
Grocery Stores	-\$13,088,854	75.23%
Specialty Food Stores	-\$1,652,407	0.84%
Beer, Wine, and Liquor Stores	\$10,916,150	358.96%
Subtotal	-\$3,825,111	93.49%
<i>Health and Personal Care Stores</i>		
Cosmetics & Perfume	-\$146,716	91.52%
Optical Goods	-\$788,507	2.48%
Other Health & Personal Care	\$16,967,288	604.86%
Pharmacies & Drug Stores	\$531,851	155.83%
Subtotal	\$16,563,916	341.76%
<i>Gasoline Stations</i>		

	2013 Leakage	2013 Capture Rate
Gasoline Stations	-\$6,652,381	54.45%
Other Gas Stations	\$0	0.00%
Subtotal	-\$6,652,381	54.45%
<i>Clothing and Clothing Accessories Stores</i>		
Clothing Stores	-\$6,823,814	67.30%
Shoe Stores	-\$1,035,235	53.21%
Jewelry, Luggage, and Leather Goods Stores	-\$1,795,035	1.38%
Subtotal	-\$9,654,085	61.23%
<i>Sporting Goods, Hobby, Book, and Music Stores</i>		
Books, Periodical, and Music	\$630,775	130.06%
Hobby, Toys & Games	-\$1,896,050	1.97%
Musical Instruments	-\$661,537	0.00%
Sewing, Needlework & Piece Goods	-\$309,441	0.13%
Sporting Goods	-\$5,392,721	46.76%
Subtotal	-\$7,628,974	49.59%
<i>General Merchandise Stores</i>		
Department Stores	-\$13,244,103	83.69%
Warehouse Club & Other General Merchandise Stores	-\$3,454,825	67.06%
Subtotal	-\$16,698,928	81.79%
<i>Miscellaneous Store Retailers</i>		
Florists	\$705,079	231.92%
Office Supplies, Stationery, and Gift Stores	-\$863,927	78.55%
Other Miscellaneous Store Retailers	-\$15,113,704	18.40%
Used Merchandise	-\$730,651	10.86%
Subtotal	-\$16,003,204	33.05%

	2013 Leakage	2013 Capture Rate
<i>Nonstore Retailers</i>		
Electronic Shopping and Mail-Order Houses	\$2,529,351	159.44%
Vending Machine Operators	-\$483,932	16.77%
Direct Selling Establishments	-\$1,859,725	42.03%
Subtotal	\$185,694	102.31%
<i>Performing Arts, Spectator Sports, and Related Industries</i>		
Performing Arts, Spectator Sports & Related Industries	-\$1,659,124	4.68%
Spectator Sports	\$0	0.00%
Promoters of Performing Arts, Sports, and Similar Events	\$0	0.00%
Agents and Managers for Artists, Athletes, Entertainers and Other Public Figures	\$0	0.00%
Independent Artists, Writers, and Performers	\$0	0.00%
Subtotal	-\$1,659,124	4.68%
<i>Museums, Historical Sites, and Similar Institutions</i>		
Museums, Historical Sites, and Similar Institutions	-\$424,631	0.00%
Subtotal	-\$424,631	0.00%
<i>Amusement, Gambling, and Recreation Industries</i>		
Amusement, Gambling & Recreation Industries	-\$4,502,581	25.10%
Subtotal	-\$4,502,581	25.10%
<i>Accommodation</i>		
Bed & Breakfast & Other Accommodation	\$1,572,099	0.00%
Hotels & Motels	-\$19,110,686	2.99%
RV Parks & Recreational Camps	-466912.8463	0.00%
Rooming and Boarding Houses	-\$34,942	35.46%
Subtotal	-\$18,040,442	10.79%

	2013 Leakage	2013 Capture Rate
<i>Food Services and Drinking Places</i>		
Full-Service Restaurants	-\$2,975,689	94.09%
Limited-Service Eating Places	\$0	0.00%
Caterers & Other Special Food Services	-\$2,250,402	54.07%
Drinking Places (Alcoholic Beverages)	-\$793,848	48.93%
Subtotal	-\$6,019,939	89.41%
<i>Repair and Maintenance</i>		
Automotive Repair and Maintenance	-\$11,398,648	13.45%
Electronic and Precision Equipment Repair and Maintenance	-\$352,600	8.08%
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	-\$768,520	0.05%
Personal and Household Goods Repair and Maintenance	-\$1,166,474	15.05%
Subtotal	-\$13,686,242	12.80%
<i>Personal and Laundry Services</i>		
Personal & Laundry Services	-\$762,336	79.29%
Private Households	-\$8,042	0.00%
Religious, Grantmaking, Civic, Professional & Similar	-\$1,117,816	2.10%
Other Personal Services	\$0	0.00%
Subtotal	-\$1,888,194	60.92%
TOTAL	-\$165,187,870	66.09%

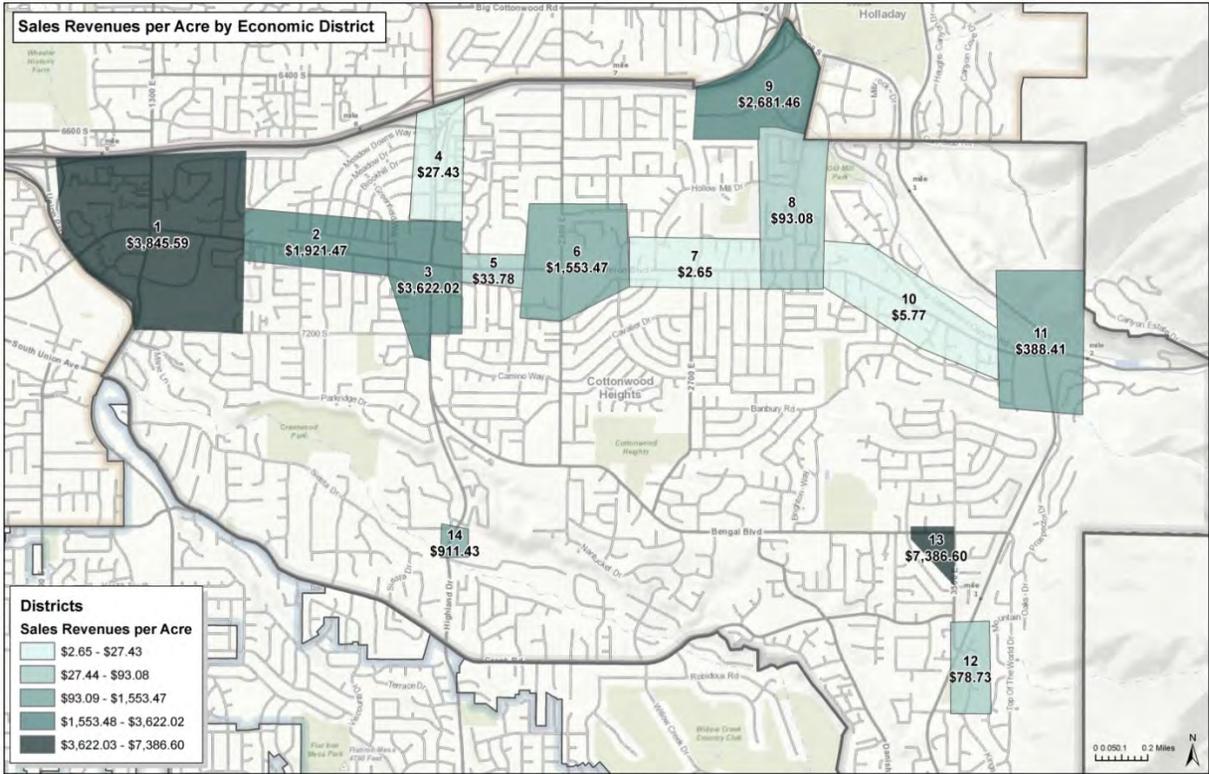
The opportunities identified above are combined with the Merchant Void Analysis in the Future Growth and Potential section to make recommendations regarding specific retail businesses that should be approached to locate in the City.



Retail Cluster Analysis

In order to identify retail centers within the City, all retail sales for 2013 were geocoded by address and then analyzed by various “districts” within the City. District 1, at 1300 East, shows the highest sales revenues on a per acre basis, followed closely by District 3, which is located at the intersection of Highland Drive.

Figure 23: Sales Revenue per Acre by Economic District



Average sales per store are considerably higher in District 1, indicating the relatively larger scale of the stores in that area when compared to other retail clusters along Fort Union Boulevard.

District One is ideal for larger-scale retail, such as general merchandise, big box and furniture. Nearly half of all sales take place in District One. Because of the large amount of sales occurring at the west end of Fort Union, it is critical that the City maintain good access and visibility for this area, which plays an important role in the sustainability of the City's General Fund.

Table 14: Share of Citywide Sales by District

District	2013 Total Sales	Share of Total Sales Citywide
0 (Rest of City)	\$35,941,248	9.55%
1	\$170,634,560	45.35%
2	\$22,481,184	5.98%
3	\$44,666,728	11.87%
4	\$153,159	0.04%
5	\$147,356	0.04%
6	\$29,531,393	7.85%
7	\$28,437	0.01%
8	\$1,403,259	0.37%
9	\$37,620,886	10.00%
10	\$132,913	0.04%
11	\$9,583,515	2.55%
12	\$479,799	0.13%
13	\$22,218,903	5.91%
14	\$1,228,602	0.33%
Total	\$376,251,942	100.00%

The following table shows the degree to which average sales per business in District 1 compare to citywide average sales per outlet. Generally, average sales in District 1 are significantly higher than the average citywide. Those categories where the average sales per outlet in District 1 are more than twice the average citywide include the following:

- Accommodation
- Apparel and Accessories
- Food Services
- Furniture and Home Furnishings
- Gift, Novelty and Souvenir
- Sporting Goods, Hobby, Book and Miscellaneous
- Transportation, Warehousing and Storage
- Wholesale Trade

Table 15: Average Sales per Business

Average Sales per Business	District 1	Average Citywide
Accommodation	\$933,121	\$26,760
Apparel and Accessories	\$1,998,040	\$601,646
Arts, Entertainment, and Recreation	\$0	\$60,198
Auto Repair and Services	\$382,953	\$479,707
Building and Landscape Supply	\$4,462,965	\$3,101,572
Business and Office Support	\$65,337	\$67,505
Commercial Banking	\$4,195	\$6,747
Construction and Landscaping Services	\$717,590	\$694,463
Electronics	\$462,010	\$286,759
Food Services	\$3,948,770	\$794,220
Furniture and Home Furnishings	\$68,981	\$29,337
Gasoline and Convenience Stores	\$1,154,740	\$994,139

Average Sales per Business	District 1	Average Citywide
General Merchandise	\$35,954,712	\$35,954,712
Gift, Novelty, and Souvenir	\$1,395,491	\$203,678
Grocery		\$10,566,289
Health and Personal Care	\$260,335	\$320,016
Health Care and Social Assistance	\$2,596	\$6,564
Manufacturing and Industrial	\$77,900	\$85,145
Personal Services	\$8,925	\$40,013
Professional Services	\$6,502	\$136,198
Real Estate Rental and Leasing	\$4,294	\$39,945
Sporting Goods, Hobby, Book and Music	\$1,526,511	\$274,641
Transportation, Warehousing, and Storage	\$33,695	\$10,238
Wholesale Trade	\$140,346	\$64,255
Total	\$682,538	\$343,609

The following table shows the percent of all sales citywide that take place in District 1. In five categories, District 1 accounts for more than 80 percent of all retail sales that occur in the City:

- Apparel and Accessories
- Building and Landscape Supply
- Electronics
- General Merchandise
- Transportation, Warehousing and Storage

Table 16: Percent of Sales, by Retail Category, in District 1

Retail Category	Percent of Sales Citywide – District #1
Accommodation	30.1%

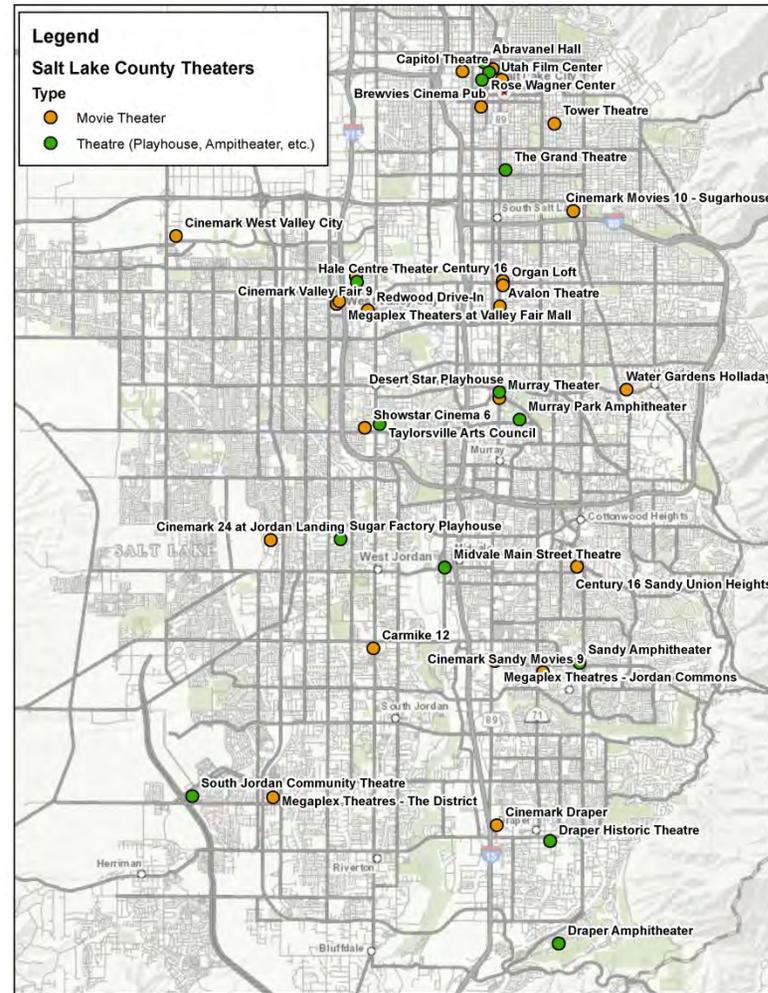


Retail Category	Percent of Sales Citywide – District #1
Apparel and Accessories	96.9%
Arts, Entertainment, and Recreation	0.0%
Auto Repair and Services	10.0%
Building and Landscape Supply	99.6%
Business and Office Support	25.8%
Commercial Banking	11.3%
Construction and Landscaping Services	26.8%
Electronics	85.3%
Food Services	30.1%
Furniture and Home Furnishings	27.7%
Gasoline and Convenience Stores	29.0%
General Merchandise	100.0%
Gift, Novelty, and Souvenir	65.3%
Grocery	0.0%
Health and Personal Care	21.2%
Health Care and Social Assistance	8.2%
Manufacturing and Industrial	19.4%
Personal Services	2.7%
Professional Services	1.9%
Real Estate Rental and Leasing	2.0%
Sporting Goods, Hobby, Book and Music	50.5%
Transportation, Warehousing, and Storage	94.0%
Wholesale Trade	34.5%

Entertainment and Event Venues

As the map shows, there is a significant lack of entertainment venues (movie theaters and playhouses) in Cottonwood Heights, with the closest theaters in Sandy and Midvale. Movie theaters could provide a good entertainment option and could potentially locate at the west end of Fort Union to enhance the retail experience in the City’s major retail hub.

Figure 24: Salt Lake County Theater and Event Venues



Office Development

Over the past decade, office development and absorption in Salt Lake County has been markedly stronger in suburban areas than in other areas of the County. In fact, there was decline and negative absorption outside of suburban areas over the past three years; yet, during that same time period the suburbs absorbed an average of 550,731 square feet annually. This bodes well for Cottonwood Heights which is an excellent location for the development of Class A office space.

Table 17: Historic Office Absorption in Salt Lake County

	Average Absorption per Year, 2004-2013	Recent Trends, 2010-2013, Average Absorption per Year
Suburban		
Class A	375,786	286,428
Class B	120,276	184,145
Class C	23,988	80,158
Overall	520,050	550,731
TOTAL – CBD, Periphery & Suburban	608,336	511,601

Source: Commerce CRG; ZBPF

The City currently has 1,993,988 square feet of Class A office space, including a 172,000 square foot building that is currently under construction. Vacancy rates are low in the City – only at 6.6 percent. With a total of 7,432,238 square feet of office space in suburban Salt Lake County, Cottonwood Heights accounts for 27 percent of Class A office space in the suburbs. When compared to all Class A office space in the County (12,437,164 square feet), Cottonwood Heights hosts 16 percent of Class A space. In comparison, Cottonwood Heights represents only about 3.2 percent of the total population in the County and just 2.2 percent of total employment. While office employment is relatively high, retail employment is relatively low (as indicated by the City’s sales leakage and capture rates), and there is no business park/industrial employment in the City.

The following table is included to compare Cottonwood Heights employment by category in comparison to other communities. As the table below shows, the City has above average employment in three categories: trade, transportation & utilities; financial activities; and professional & business services. The highest wage-paying category in Cottonwood Heights is financial activities, followed by trade, transportation & utilities, and then by professional & business services. Cottonwood Heights' employment concentration in the higher-wage-paying industries provides a strong economic base for the City.

Table 18: Employment by Industry Type

County and City	Total	Construction	Manufacturing	Trade, Transp. & Utilities	Information	Activities	Business Svcs	Health Svcs	Hospitality	Services	Government
SALT LAKE COUNTY	603,930	30,517	52,499	123,939	17,464	46,724	100,323	68,028	49,417	18,548	92,819
% of Total Employment		5%	9%	21%	3%	8%	17%	11%	8%	3%	15%
BLUFFDALE	2,947	625	289	606	410	70	531	48	45	87	236
% of Total Employment		21%	10%	21%	14%	2%	18%	2%	2%	3%	8%
COTTONWOOD HEIGHTS	13,012	245	179	3,023	D	2,513	3,014	1,002	832	225	844
% of Total Employment		2%	1%	23%	NA	19%	23%	8%	6%	2%	6%
DRAPER	24,430	2,227	1,026	7,253	797	1,368	3,992	2,251	2,075	680	2,014
% of Total Employment		9%	4%	30%	3%	6%	16%	9%	8%	3%	8%
GRANITE	140	30	0	13	0	17	21	D	D	48	0
% of Total Employment		21%	0%	9%	0%	12%	15%	NA	NA	34%	0%
HERRIMAN	1,948	337	11	144	3	110	166	273	97	49	757
% of Total Employment		17%	1%	7%	0%	6%	9%	14%	5%	3%	39%
HOLLADAY	5,448	120	198	518	275	1,208	902	850	654	253	452
% of Total Employment		2%	4%	10%	5%	22%	17%	16%	12%	5%	8%
MIDVALE	14,036	1,337	911	3,498	231	937	2,534	1,174	1,743	476	1,188
% of Total Employment		10%	6%	25%	2%	7%	18%	8%	12%	3%	8%
MURRAY	41,637	2,281	1,952	8,112	500	2,814	6,050	12,715	3,157	1,322	2,629
% of Total Employment		5%	5%	19%	1%	7%	15%	31%	8%	3%	6%
RIVERTON	8,689	952	217	1,708	58	295	944	1,691	968	D	1,608
% of Total Employment		11%	2%	20%	1%	3%	11%	19%	11%	NA	19%
SALT LAKE CITY	242,389	7,470	25,965	42,840	6,376	15,835	40,804	20,439	19,349	7,717	53,571
% of Total Employment		3%	11%	18%	3%	7%	17%	8%	8%	3%	22%
SANDY	41,746	2,555	2,530	9,148	1,904	2,895	5,753	4,293	6,173	1,433	4,831

County and City	Total	Construction	Manufacturing	Trade, Transp. & Utilities	Information	Activities	Business Svcs	Health Svcs	Hospitality	Services	Government
% of Total Employment		6%	6%	22%	5%	7%	14%	10%	15%	3%	12%
SOUTH JORDAN	19,390	734	2,548	3,758	956	1,464	4,139	1,923	1,804	376	1,659
% of Total Employment		4%	13%	19%	5%	8%	21%	10%	9%	2%	9%
SOUTH SALT LAKE	35,208	3,167	4,319	9,020	D	2,238	5,718	1,782	1,571	1,223	5,404
% of Total Employment		9%	12%	26%	NA	6%	16%	5%	4%	3%	15%
TAYLORSVILLE	18,073	489	1,023	2,378	D	1,158	5,042	1,824	1,634	304	3,396
% of Total Employment		3%	6%	13%	NA	6%	28%	10%	9%	2%	19%
WEST JORDAN	28,764	2,554	3,195	6,652	D	798	3,408	3,901	2,567	961	4,486
% of Total Employment		9%	11%	23%	NA	3%	12%	14%	9%	3%	16%
WEST VALLEY CITY	65,227	3,855	6,738	18,893	2,472	9,429	9,383	4,374	4,154	1,441	4,169
% of Total Employment		6%	10%	29%	4%	14%	14%	7%	6%	2%	6%

Source: Department of Workforce Services; ZBPF

Mining has not been included in the above table; therefore percentages for each City may be slightly less than 100 percent.

Housing

Residential building permits in Salt Lake County grew steadily from 2010 to 2012, jumped significantly in 2013, and then had a sharp dropoff in 2014. Growth in Cottonwood Heights has been minimal – averaging only 20 units per year. Those communities that have experienced growth of more than 1,000 units between 2010 and 2014 include Midvale, Sandy, South Jordan, West Jordan and Herriman. South Jordan has had the most rapid growth of any area, with 3,168 new residential permits over the five-year period, or an average of 634 units per year.

Table 19: Historical Building Permits in Salt Lake County – Total Dwelling Units

Total Dwelling Units	2014	2013	2012	2011	2010	TOTAL 2010-2014	Percent of Total
Cottonwood Heights	22	22	25	19	15	103	1%
Alta	-	-	-	-	1	1	0%
Bluffdale	33	410	97	37	27	604	5%
Draper	9	287	201	86	95	678	5%

Total Dwelling Units	2014	2013	2012	2011	2010	TOTAL 2010-2014	Percent of Total
Midvale	157	546	144	341	64	1,252	9%
Murray	1	56	60	38	31	186	1%
Riverton	17	159	83	155	93	507	4%
Salt Lake City	3	38	183	347	111	682	5%
Sandy	41	1,100	113	93	81	1,428	11%
South Jordan	71	1,067	906	623	501	3,168	24%
South Salt Lake	-	8	25	4	32	69	1%
West Jordan	15	201	234	227	458	1,135	8%
West Valley City	146	382	191	99	145	963	7%
Taylorsville	4	55	36	44	218	357	3%
Herriman	55	606	480	211	180	1,532	11%
Holladay	1	36	19	14	-	70	1%
Other Salt Lake Co	12	242	155	84	156	649	5%
TOTAL	587	5,215	2,952	2,422	2,208	13,384	100%

Much of the growth that has occurred has been in multi-family units which account for 45 percent of total residential unit growth between 2010 and 2014. However, multi-family unit growth accounts for only six percent of new dwelling units in Cottonwood Heights over the same time period.

Table 20: Historical Building Permits in Salt Lake County – Multi-Family Units

MULTI-FAMILY HOUSING SUMMARY TABLE	2014	2013	2012	2011	2010	TOTAL	Percent of Total
Cottonwood Heights		2	2		2	6	0%
Alta	0	-	-	-	-	-	0%
Bluffdale	10	192	-	-	-	202	3%

MULTI-FAMILY HOUSING SUMMARY TABLE	2014	2013	2012	2011	2010	TOTAL	Percent of Total
Draper	0	8	-	-	19	27	0%
Midvale	144	443	101	320	46	1,054	17%
Murray	0	16	52	16	2	86	1%
Riverton	14	52	2	81	29	178	3%
Salt Lake City	0	24	150	323	92	589	10%
Sandy	32	996	2	11	15	1,056	17%
South Jordan	24	476	388	243	150	1,281	21%
South Salt Lake	0	-	4	-	22	26	0%
West Jordan	0	-	10	72	288	370	6%
West Valley City	137	177	-	12	12	338	6%
Taylorsville	0	20	14	34	203	271	4%
Herriman	4	135	58	31	-	228	4%
Holladay	0	-	-	-	-	-	0%
Other Salt Lake Co	9	174	74	21	49	327	5%
TOTAL	374	2,715	857	1,164	929	6,039	100%

Even with the relatively slow growth in multi-family units in recent years, approximately 30 percent of dwelling units in Cottonwood Heights are renter occupied – similar to the ratios of Holladay and in Murray. Based on the table below, Cottonwood Heights has an average number of rental units when compared with neighboring cities.

Table 21: Housing Tenure by City

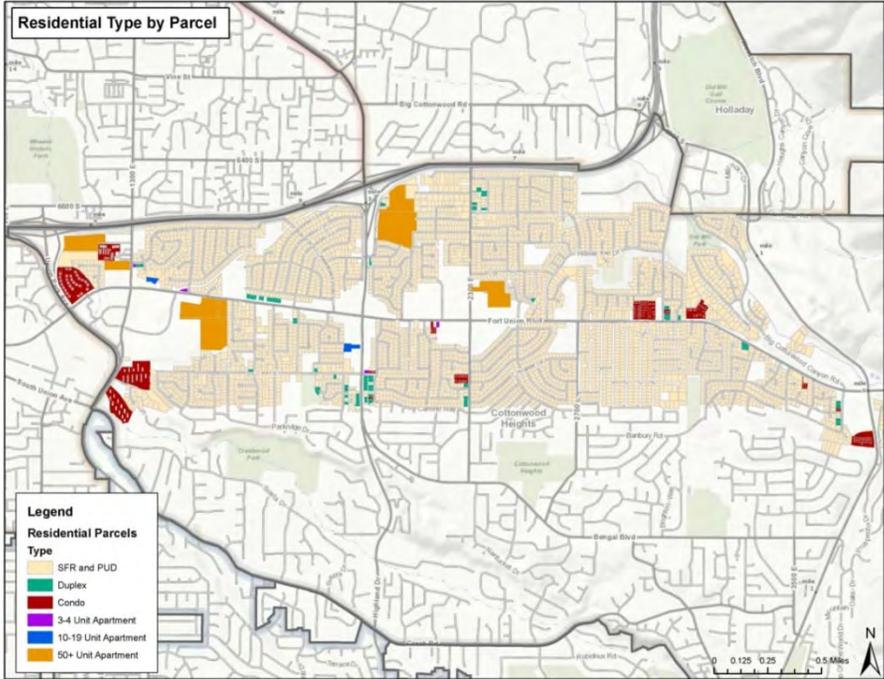
Subject	Cottonwood Heights	Draper	Holladay	Midvale	Murray	Riverton	Sandy	South Jordan	South Salt Lake	West Jordan
Occupied housing units	12,061	11,801	10,130	11,314	18,611	10,626	28,531	14,698	8,462	30,740
Owner-occupied	70.8%	80.1%	73.7%	44.3%	66.4%	87.4%	79.0%	82.7%	39.3%	76.6%



Subject	Cottonwood Heights	Draper	Holladay	Midvale	Murray	Riverton	Sandy	South Jordan	South Salt Lake	West Jordan
Renter-occupied	29.2%	19.9%	26.3%	55.7%	33.6%	12.6%	21.0%	17.3%	60.7%	23.4%

Multi-family units are spread throughout the northern half of the City, but with more units located at the western end of Fort Union.

Figure 25: Residential Type by Parcel



Cottonwood Heights has several large apartment units (50+ units), condos and duplexes, but very few apartment units in the mid-size range. These units are scattered throughout the City, with very little multi-family housing located along the central portion of the Fort Union Corridor.

Vacancy rates for apartment units in the County are low, with Cottonwood Heights dipping to 4.5 percent in 2013. This suggests that units are filled and that there is demand for multi-family units in the City.

Table 22: Vacancy Rates for Multi-Family Units

	2010	2011	2012	2013
Cottonwood Heights	6.1%	6.5%	5.9%	4.5%
Holladay	4.9%	5.3%	4.6%	NA
Murray	6.5%	5.3%	5.5%	5.2%
Salt Lake City	4.6%	4.0%	3.5%	5.4%
South Salt Lake	6.7%	5.0%	4.1%	4.2%
Taylorsville	7.6%	4.9%	5.6%	4.6%
Salt Lake County (Total)	6.2%	5.2%	5.0%	5.1%

Source: Equimark

Cottonwood Heights has grown much more slowly over the past decade than it has previously. This is a natural result of a lack of vacant properties. Growth hit its peak between 1970 and 1980 when approximately one-third of all residential units were built in the City. The “age” of housing in Cottonwood Heights is similar to that found in Murray.

Table 23: Year Structure Built

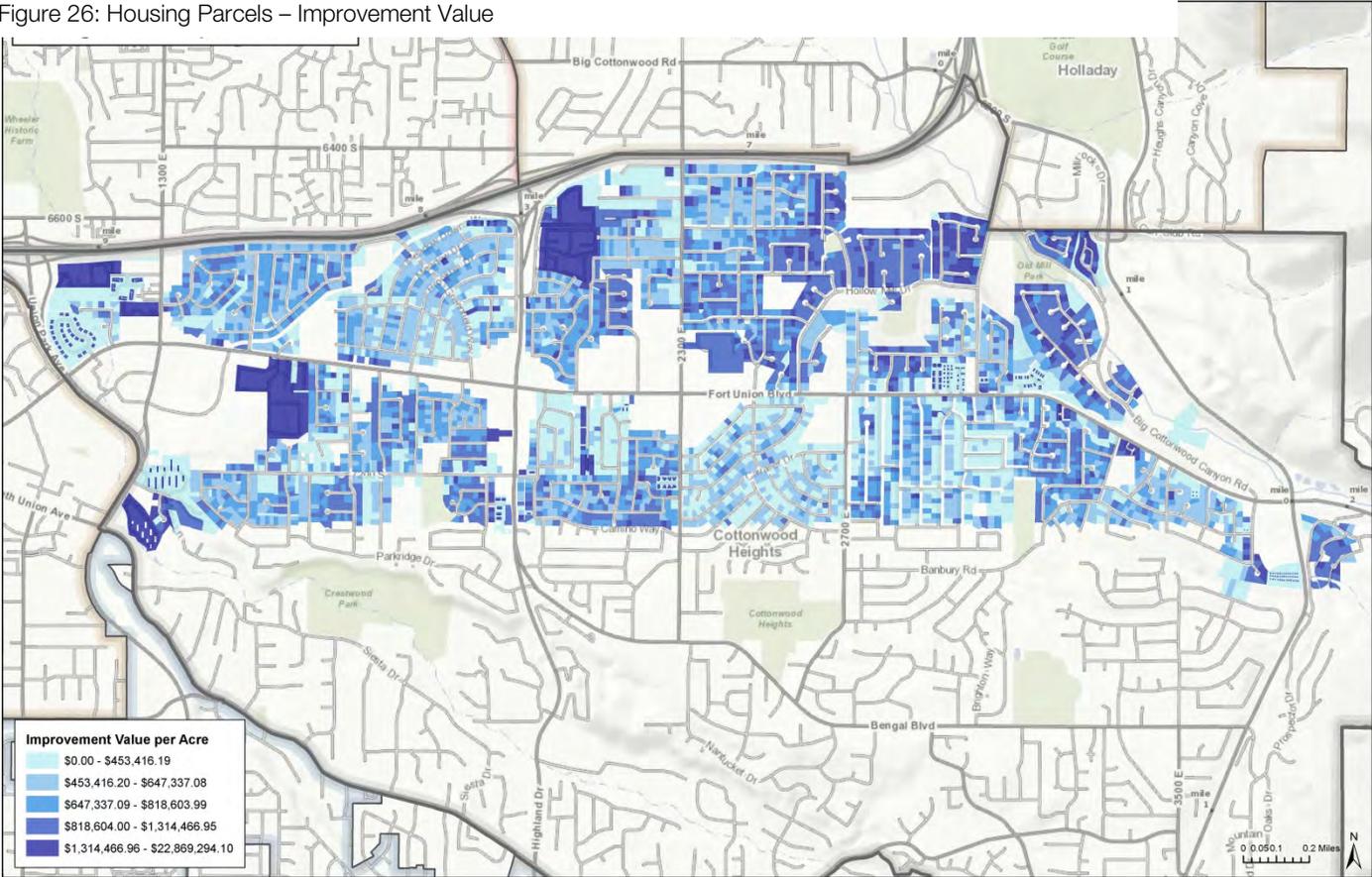
YEAR STRUCTURE BUILT	Cottonwood Heights	Draper	Holladay	Midvale	Murray	Riverton	Sandy	South Jordan	South Salt Lake	West Jordan
Total housing units	13,136	12,777	10,482	11,966	19,673	11,021	29,567	15,477	9,211	32,146
Built 2010 or later	1.0%	0.8%	0.2%	1.7%	0.1%	3.2%	0.3%	3.7%	1.3%	1.5%
Built 2000 to 2009	6.7%	46.5%	6.7%	15.2%	8.0%	38.3%	11.6%	47.6%	8.1%	29.6%
Built 1990 to 1999	16.9%	40.7%	8.7%	14.5%	10.4%	32.7%	21.5%	30.2%	9.9%	27.9%
Built 1980 to 1989	18.6%	2.5%	7.6%	17.6%	17.3%	9.8%	22.8%	7.5%	13.0%	19.3%
Built 1970 to 1979	33.4%	2.2%	21.6%	19.0%	32.3%	9.8%	34.9%	6.5%	21.0%	16.9%
Built 1960 to 1969	12.1%	2.1%	25.3%	12.1%	12.9%	1.8%	4.4%	2.8%	14.7%	2.3%
Built 1950 to 1959	9.8%	1.4%	22.5%	11.0%	11.3%	1.9%	1.8%	0.9%	12.7%	1.4%
Built 1940 to 1949	0.7%	1.1%	3.2%	2.7%	4.3%	0.3%	0.7%	0.5%	7.4%	0.6%

YEAR STRUCTURE BUILT	Cottonwood Heights	Draper	Holladay	Midvale	Murray	Riverton	Sandy	South Jordan	South Salt Lake	West Jordan
Built 1939 or earlier	0.7%	2.7%	4.2%	6.2%	3.4%	2.3%	1.9%	0.4%	11.9%	0.6%

The highest values per acre for housing match nearly identically with the larger multi-family housing units in the city. Housing values along the central part of the Fort Union Corridor are generally lower, suggesting that redevelopment and densification of these properties may occur over time, with increased commercial development at key intersections and increased housing densities along the Corridor between the commercial nodes.



Figure 26: Housing Parcels – Improvement Value



The median home price for homes sold in 2014 is \$311,000, which is 12 percent higher than the weighted average price of \$277,431 countywide. Higher median prices in the County are found only in Salt Lake City, Draper, Sandy, South Jordan, Holladay, Riverton and Herriman.

Table 24: Median Home Price of Homes Sold in 2014

Zip Code	City	Units Sold	2014 Median Price
84108	Salt Lake City	72	\$412,500
84020	Draper	154	\$399,750
84103	Salt Lake City	68	\$396,750
84092	Sandy	110	\$364,000
84095	South Jordan	252	\$340,000
84124	Holladay	73	\$340,000
84109	Salt Lake City	86	\$336,000
84093	Sandy	90	\$329,950
84065	Riverton	119	\$325,000
84117	Holladay	55	\$316,000
84096	Herriman	146	\$311,750
84121	Cottonwood	137	\$311,000
84105	Salt Lake City	133	\$310,000
84102	Salt Lake City	30	\$284,000
84106	Salt Lake City	101	\$268,000
84094	Sandy	94	\$250,000
84088	West Jordan	113	\$239,900
84070	Sandy	88	\$231,700
84084	West Jordan	106	\$205,000
84107	Murray	50	\$203,100
84047	Midvale	69	\$200,000
84128	West Valley	77	\$188,000
84115	South Salt Lake	64	\$185,100
84120	West Valley City	118	\$176,250
84118	Taylorsville/Kearns	203	\$175,000
84119	West Valley City	83	\$172,000

Zip Code	City	Units Sold	2014 Median Price
84116	Salt Lake City	71	\$168,400
84104	Salt Lake City	54	\$135,500

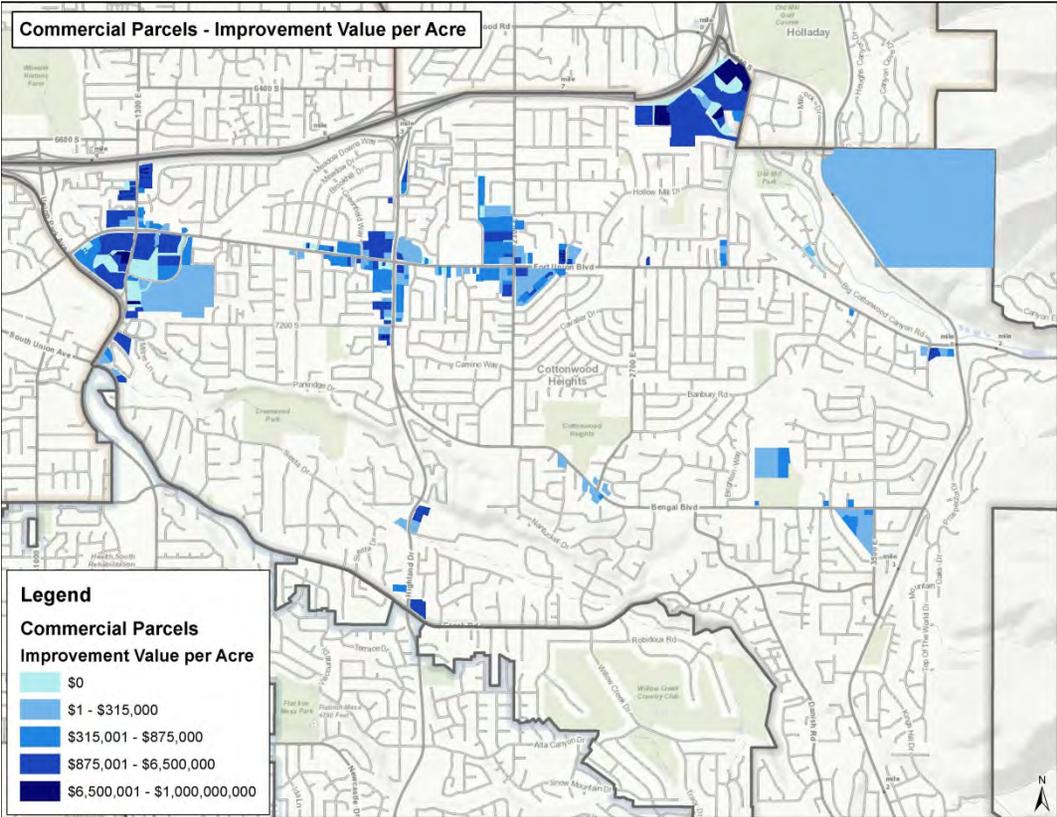
Source: Salt Lake Tribune

Property Parcel Value Analysis

In order to identify redevelopment opportunities, developers often look at the improvement values of parcels. Those parcels with lower improvement values per acre are more likely to be redeveloped. The purpose of the analysis is to locate likely redevelopment parcels at or near commercial sites that could provide economic opportunities.



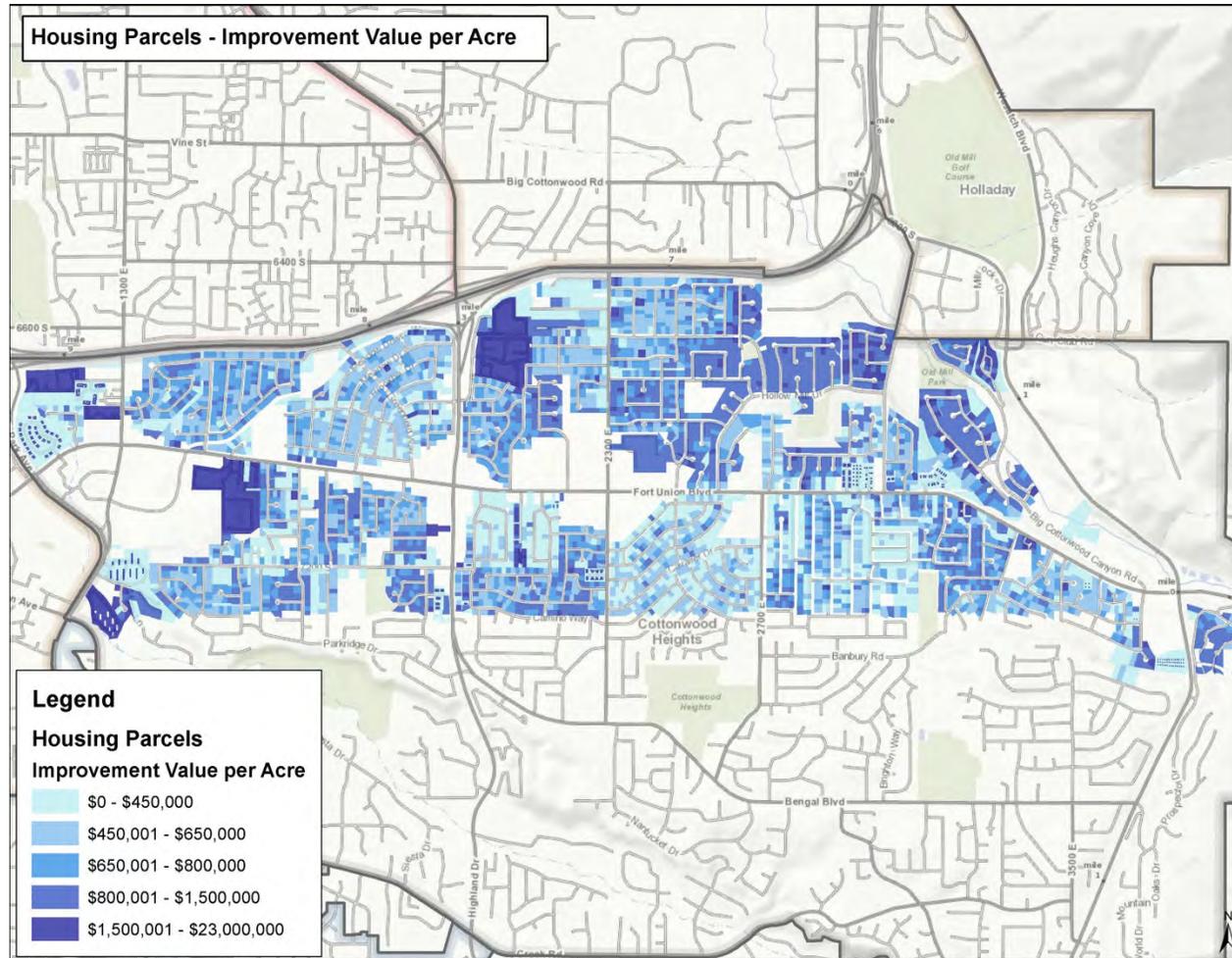
Figure 27: Commercial Parcels – Improvement Value per Acre



The analysis is then repeated to show how housing values vary throughout the City and along the Corridor, again to identify any potential redevelopment opportunities along Fort Union. Based on the map below, the most likely properties to be redeveloped, over time, are

those located along the Corridor and between the retail nodes – especially between Highland Drive and 2300 East, and immediately to the east of 2300 East. This area could be an attractive place for higher-density residential development.

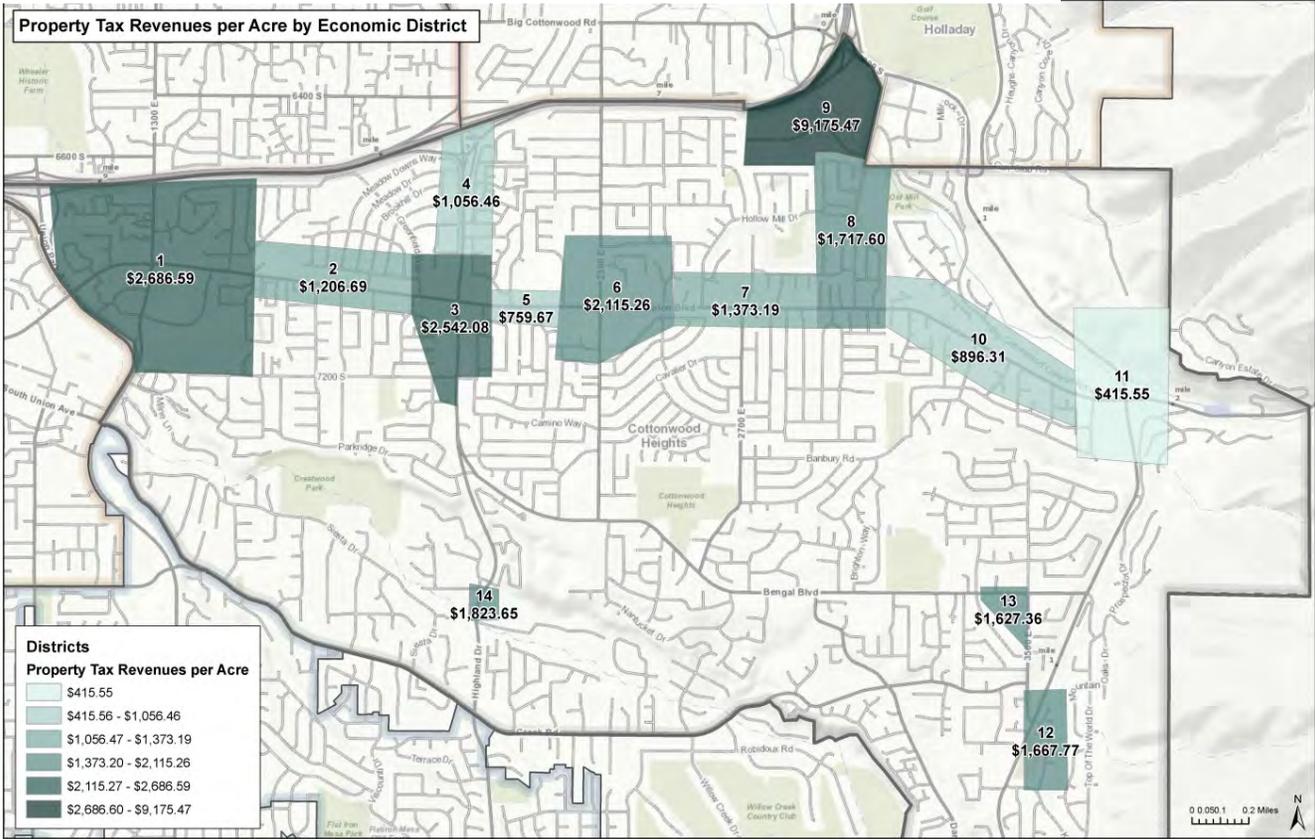
Figure 28: Housing Parcels – Improvement Value per Acre





Property tax revenues in each district were evaluated in order to assess the relative fiscal impacts to the City from various commercial properties. Total taxable value was divided by the number of acres to arrive at the average property tax revenue per acre. District 9, with its abundance of Class A office space in the Cottonwood Corporate Center, provides the City’s highest property tax revenues on a per acre basis. All of the property tax revenues in retail areas pale in comparison to District 9.

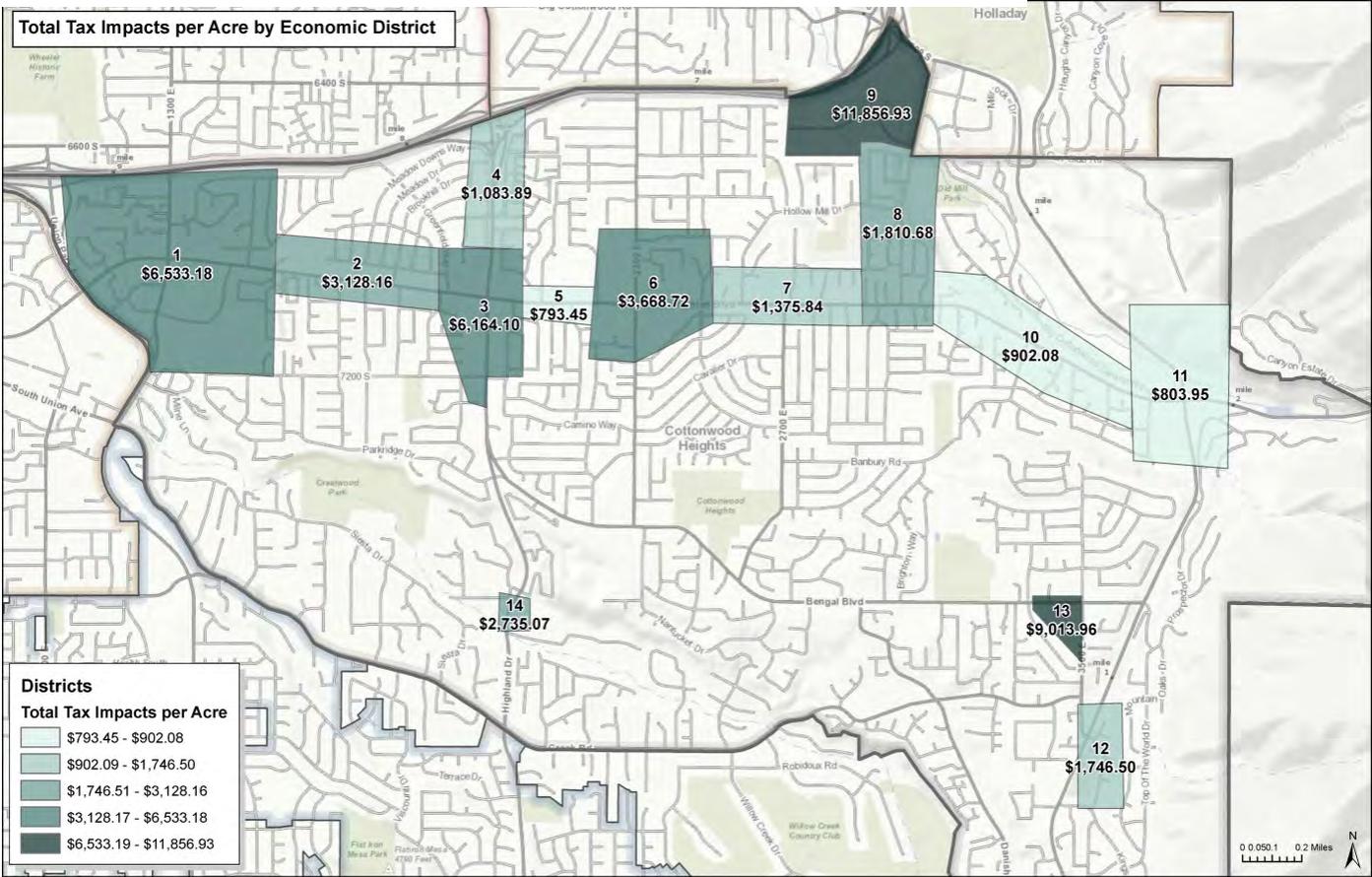
Figure 29: Property Tax Revenues per Acre by Economic District





Total tax impacts, on a per acre basis, are estimated by adding the property and sales tax revenues together, resulting in the highest revenues for District 9, followed by the retail centers at 1300 East (District 1) and Highland Drive (District 3).

Figure 30: Total Tax Impacts (Property and Sales) per Acre by Economic District



Transportation and Transit

While Fort Union Boulevard is a vital economic corridor, it is equally important to transportation. The transportation portion of this study aims to articulate this importance by assessing the fundamental role of Fort Union for all transportation modes – not just vehicles but also transit, bicycles and especially pedestrians – both locally and in a regional context. Upon gaining this multi-faceted transportation understanding, along with the economic and land use findings, this study offers recommendations for improving and changing Fort Union to achieve the City’s corridor goals.

Figure 31: Fort Union Corridor Looking East



Infrastructure and Operations

Fort Union Boulevard is a major east-west street in the City of Cottonwood Heights, connecting the I-15/rail regional spine and Midvale in the west with Wasatch Boulevard and the Central Wasatch Mountain canyons in the east. For most of its length, (from the Midvale border to 3000 East), Fort Union Boulevard operates primarily within an effective 78-foot right of way. The actual parcel lines bracketing the public right-of-way vary widely and often do not reflect the parameters of the built street, but back-of-sidewalk to back-of-sidewalk is generally 78 feet, with some widening (up to about 91 feet) between Highland Drive and 2300 East.

West of 3000 East the street's right-of-way has been allocated into a cross section relatively typical of arterial streets along the Wasatch Front of five 11-foot traffic lanes (4 through and one left turn), and a nine-foot pedestrian realm subdivided into a 4-foot sidewalk and 5-foot park strip. East of 3000 East, Fort Union takes on a three-lane section with bike lanes. Here, its sidewalks disappear by Wasatch Boulevard.

Figure 32: Existing Fort Union Cross Section West of 3000 East



Other street infrastructure includes:

- Large power poles and lines and telephone poles and lines;
- Crosswalks at signals, including newer high-visibility crosswalks installed at 2300 East, Whitmore Way, Nye Drive, and Highland Drive.

Street operations include:

- 40 mile-per-hour speed limit throughout the corridor;
- A.M./P.M. Weekday signal cycle lengths of:
 - 110/160 seconds at Highland Drive;
 - 100/90 seconds at Union Park; 1300 E.; and Park Center;
 - 95/95 seconds at 2700 E.;
 - 80/110 seconds at Whitmore and 2300 E.;
 - 75/75 seconds at 3000 E.;
 - 53/53 seconds at Wasatch Blvd; and
 - 50/90 seconds at 1700 E.

The infrastructure and operations of Fort Union Boulevard are relatively basic – perhaps too basic and oversimplified to address the economic, transportation, and community goals for the corridor. This idea will be fleshed out later in the report.

Local and Regional Trip Generation

While the physical and operational infrastructure of Fort Union Boulevard and intersecting streets (as well as the nature and urban form of the land uses on them, covered in Land Use section) address the “supply” side of transportation on the corridor, the local and regional land uses and their trip generation accounts for the equally important “demand” side, and help determine the role within Cottonwood Heights and in the greater region.

The corridor’s land uses and position in the regional transportation network inform its regional role. Currently, the corridor does not really stand out regionally, except as a “hot spot” for mountain traffic, but its employment centers are becoming increasingly significant. In the 2040 socio-economic data projections undertaken by Wasatch Front Regional Council, the TAZs containing the corporate centers and gravel pit add over 11,000 jobs. In the corporate center/gravel pit area, so many jobs are projected to concentrate there that it is one of a handful of employment centers in Salt Lake County that reach 50 jobs per acre, a commonly-used threshold for supporting light rail transit service. Figures below show how the corporate center/gravel pit area becomes one of the most dense job centers in the Salt Lake Valley.

However, the household growth trends show the opposite. Currently, the Fort Union corridor shows the mid-to-low 1-10 unit per acre density seen throughout much of the eastern part of the valley, and in 2040 it is projected to add only about 1,200 new housing units, in stark contrast to the southwest part of the valley.

Figures 33 - 34: 2014 Job Densities in Salt Lake County with Regional Rail Network; and Projected Job Growth 2014 to 2040. *Source: Wasatch Front Regional Council*

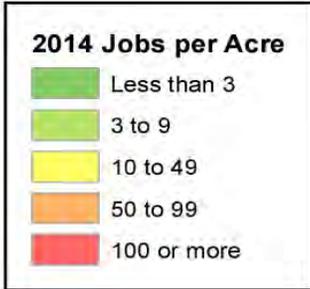
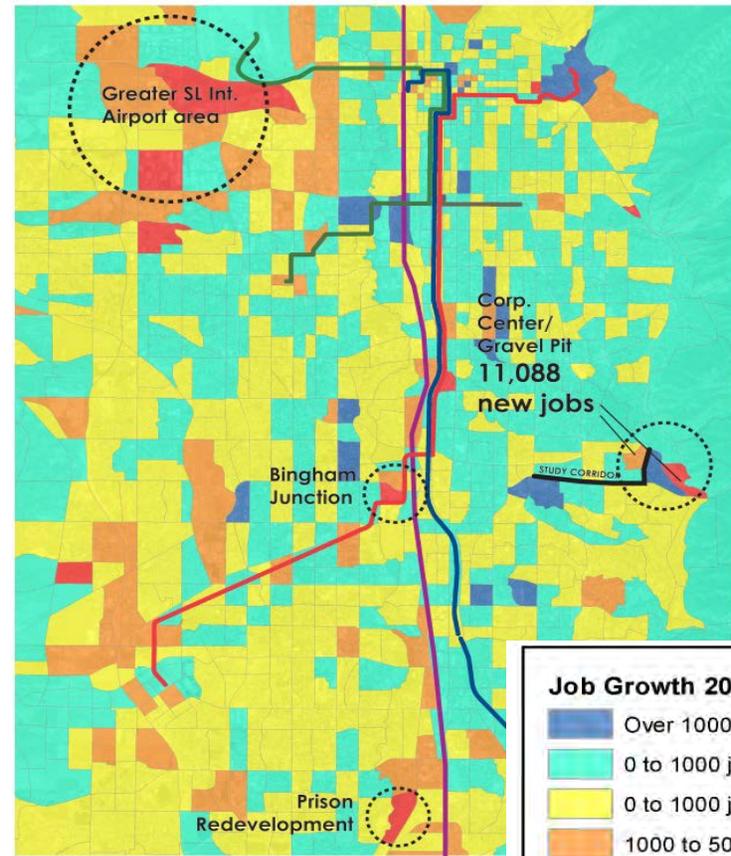
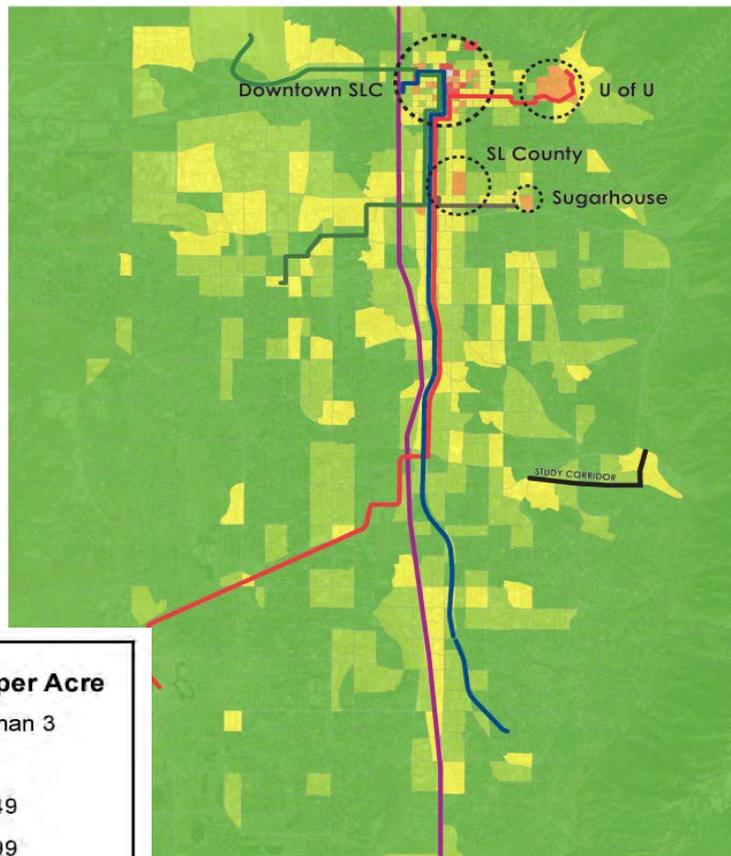
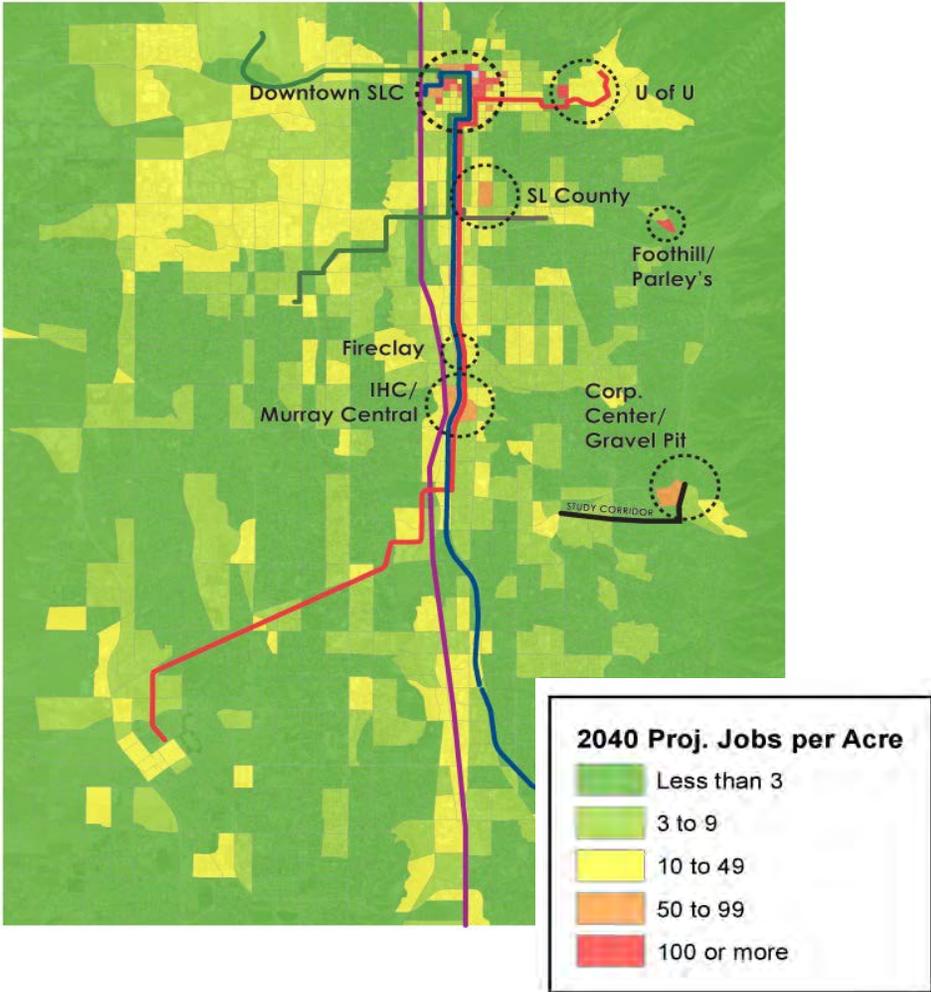




Figure 35: Projected 2040 Job Densities in Salt Lake County with Regional Rail Network. *Source: Wasatch Front Regional Council*



Figures 36 and 37: 2014 Households per Acre; and Household Growth 2014-2040. Source: Wasatch Front Regional Council

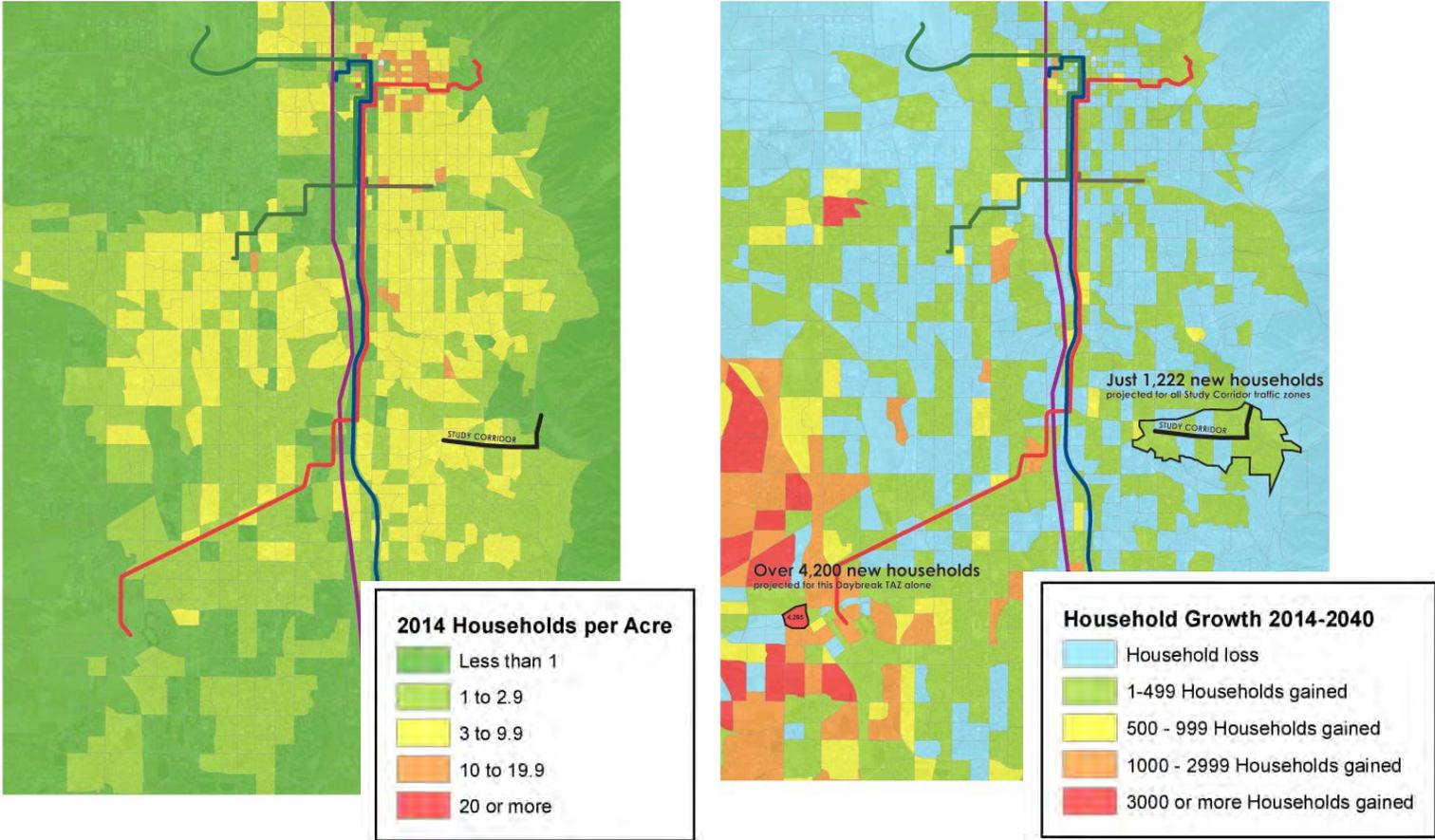
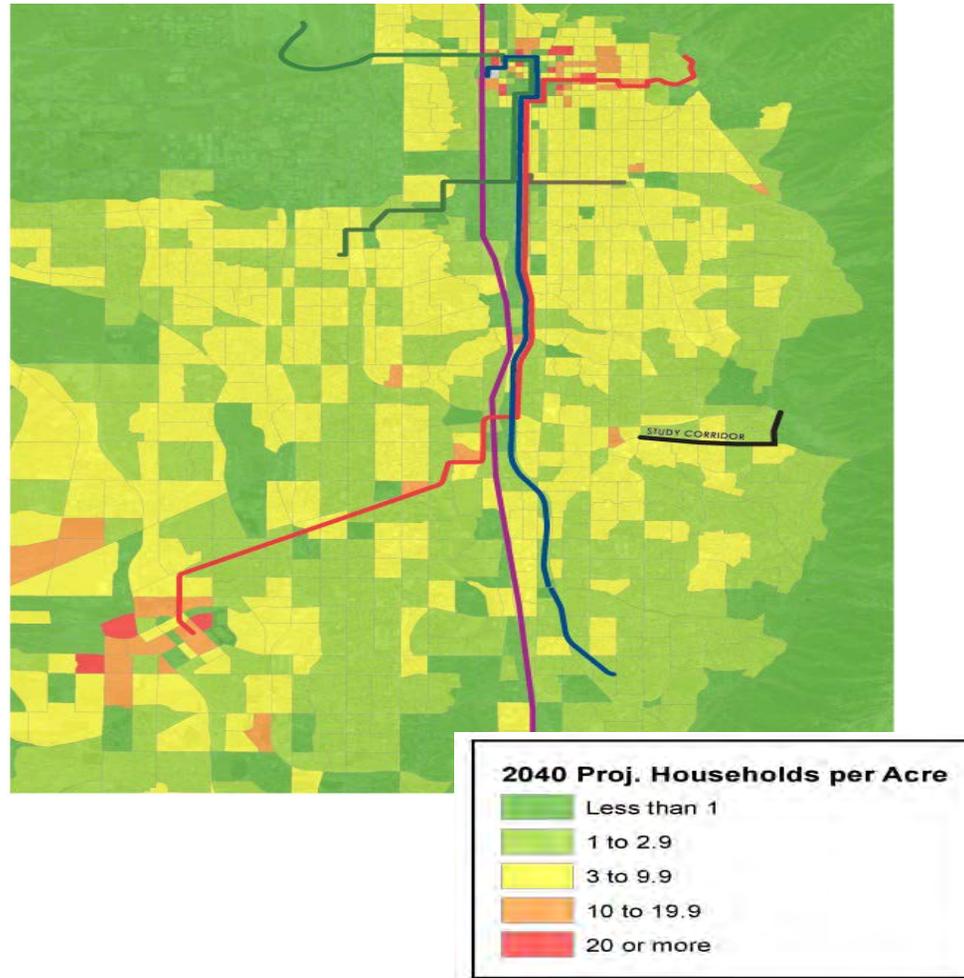


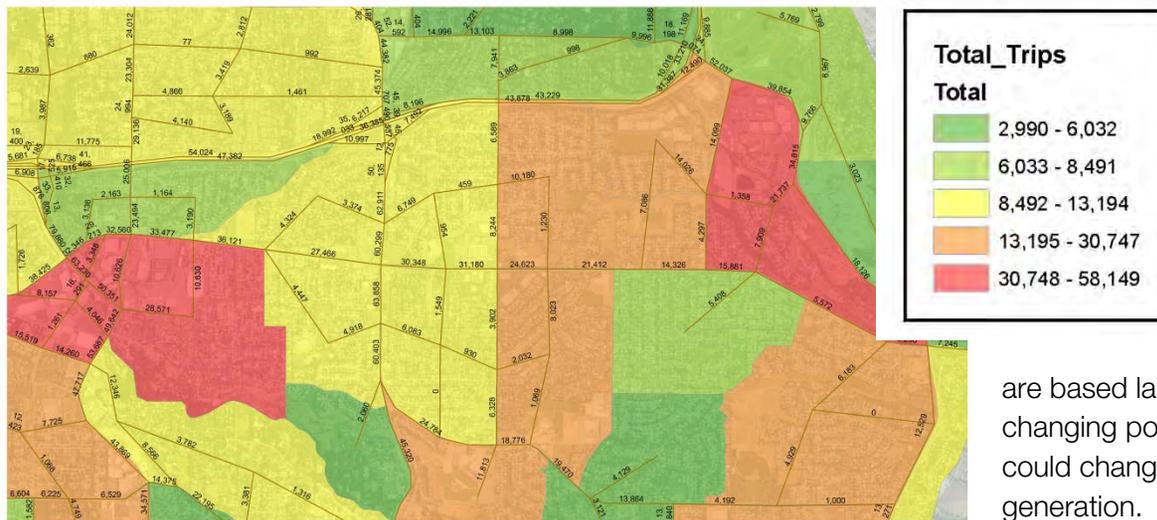
Figure 38: Projected Households per Acre. *Source: Wasatch Front Regional Council*



Locally, most trips generated on the Fort Union corridor begin or end on either end of the corridor – in the Corporate Center area on the east side or in the Union Park area on the west side. In between these “bookends” is much less of a degree of trip generation, save for a

spike in the Highland Drive area. This infers that much of the traffic along Fort Union Boulevard in Cottonwood Heights is “passing through” – perhaps using Fort Union as an alternative to I-215.

Figure 39: 2014 2040 Projected Trips Generated. *Source: Wasatch Front Regional Council*



Future projected growth in these bookends mean emphasis on trip generation in these areas, with the areas in between seeing less growth and little additional trip generation – the increases in traffic along Fort Union would be due to more “passing through.” It is worth noting, though, that these projections

are based largely on the City’s current land use policy; changing policy to allow or promote more density here could change the projected growth and related trip generation.

One other major aspect of trip generation is mountain visitation. This has two primary aspects – day traffic to the mountain canyons and overnight visitor traffic. The trip generation of day traffic to the canyons is actually quite small compared in the context of all of the upper Fort Union area traffic – only 10,000 vehicles a day for Big Cottonwood Canyon in the peak winter and summer seasons. This volume has held steady for the last decade. However, the number trips generated by overnight visitors – currently there are only 126 hotel rooms or short-term condo units in the corridor – could be a dynamic source of change in the future.

Network Summaries

In order to understand the Fort Union corridor's local and regional roles and its assets and challenges, we first need to look at how each transportation mode operates on the corridor. The following sections examine the network of facilities available (supply) for each mode and how traffic is using these facilities (demand). We look at the facilities on the streets themselves, facilities to access destinations and facilities to park vehicles. These sections will answer the questions "What is it like to be a driver on Fort Union?"; "What is it like to be a transit rider on Fort Union?"; "What is it like to bicycle on Fort Union?" and "What is it like to walk on Fort Union?"

Vehicular Network

Facilities

For motor vehicles, Fort Union Boulevard is classified as an arterial street for its entire length through the city. As stated, it has five lanes west of 3000 East and three lanes east of 3000 East, with a continuous left turn lane throughout. It contains the following extra turn lanes:

- **At Union Park Avenue:** additional left turn lane (EB); right turn lane (EB and WB) and channelized receiving lane (EB and WB)
- **At 1300 East:** right turn lane (EB and WB) and receiving lanes (EB and WB)
- **At Highland Drive:** right turn lane (EB and WB); and future additional left turn lane
- **At Wasatch Boulevard:** right turn lane (EB) and informal receiving lane (WB)

- **2300 East:** Collector yet provides a significant connection to north and south, especially across the I-215 barrier into Holladay. 2300 East provides important access for Cottonwood Heights residents to services along this stretch of Fort Union.
- **2700 East:** Collector linking to south and Bengal Boulevard; two civic uses, Butler Elementary and an LDS ward building, anchor 2700 East's intersection with Fort Union.
- **3000 East:** Collector linking to north and corporate center area.
- **Big Cottonwood Canyon Road:** Local street linking Big Cottonwood mouth to Old Mill area and corporate center area.
- **Wasatch Boulevard:** Arterial connecting north-south along base of Wasatch Mountains, also connecting north to I-215; primary access to Cottonwood Canyons.

It is also important to note the presence of Interstate 215 paralleling most of Fort Union just to the north (between about a ¼ mile and a mile).

Access

Accessing destination land uses by auto on the Fort Union corridor is simple – most uses have their own driveways from the street leading directly to surface parking. This includes single family residential uses directly fronting onto Fort Union Boulevard. Residents of these houses must back in or out of driveways directly into five lanes of traffic with a 40 mile-per-hour speed limit.

Parking

The other key aspect of the vehicular network to consider is parking. On Fort Union Boulevard itself, there is no on-street parking, except at the east end. There is on-street parking on some cross streets. However, for most intents and purposes, parking for non-residential land uses along the corridor is accommodated by on-site surface parking lots. The only exception to this is in the corporate center area – Cottonwood Corporate Center has some structured parking facilities – and in the Union Park Centre, which has a few two-level parking structures.

Network Use and Demand

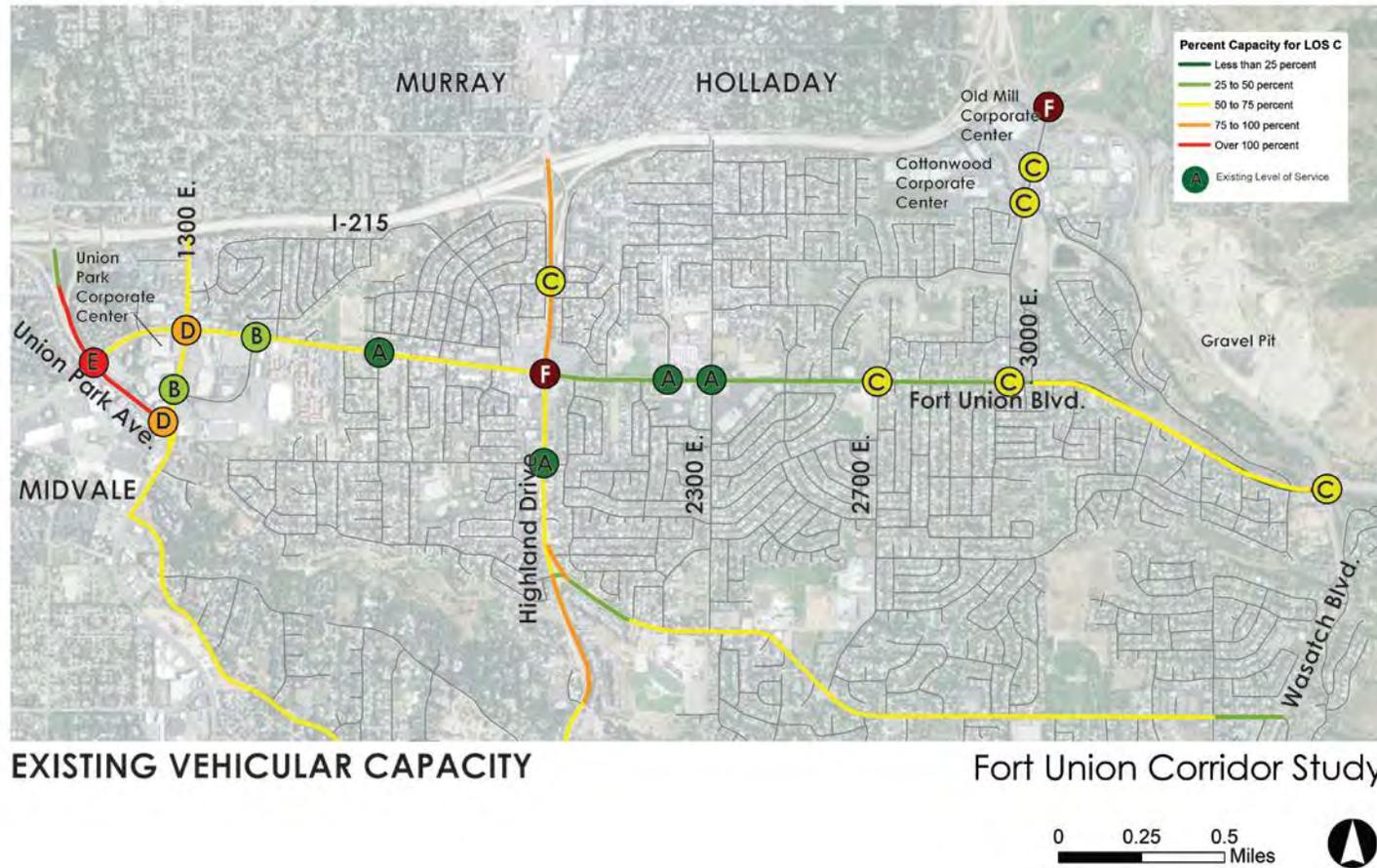
The primary pattern of traffic on Fort Union Boulevard is a moderately high level of traffic on the west end that lessens the further east one goes. Traffic at the west end is nearly 30,000 vehicles per day; traffic at the east end is 11,000-12,000 vehicles per day.



The second key pattern is that traffic on the major cross streets dwarfs that of Fort Union – the intersection levels of service at Union Park Avenue and Highland Drive (the worst performing along the corridor) is driven by the traffic on those cross streets rather than Fort Union. This is a major theme throughout our study findings – the streets and districts crossing Fort Union tend to influence the corridor character, assets and constraints more than Fort Union itself.

The third key pattern is that none of the segments of Fort Union Boulevard is at capacity. Assuming that we are considering a five-lane roadway in a suburban setting with signals spaced at over a half-mile, and that the standard for capacity is Level of Service C (Level of Service C or D is the City's standard), none of Fort Union reaches capacity. Between Highland Drive and 3000 East it is likely less than 50 percent full; at the west end of the corridor it is likely less than 75 percent full.

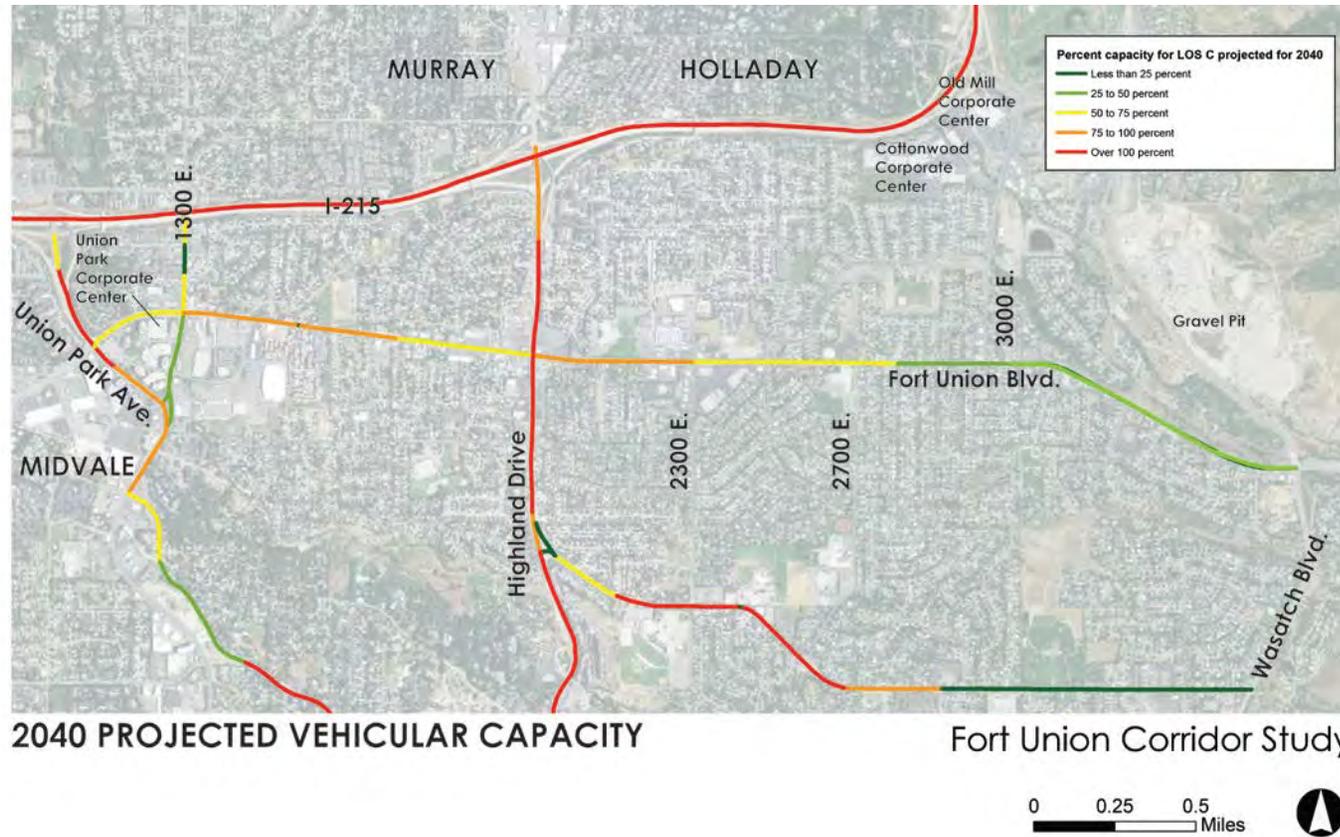
Figure 41: Current Vehicular Capacity of Fort Union Corridor in terms of estimated capacity (lines and intersection level of service (letter ratings in circles). Source: City of Cottonwood Heights, street capacity analysis based on InterPlan Maximum Daily Traffic Capacity Estimates



In the projections for 2040, traffic in many segments of Fort Union increases, but none of the corridor segments reaches capacity under LOS C. Furthermore, the increase in traffic attributed to the middle segments of the corridor likely rely on more “pass through” traffic that

is using Fort Union as an alternative to I-215; few new trips are generated here according to the projections. This traffic could probably go elsewhere.

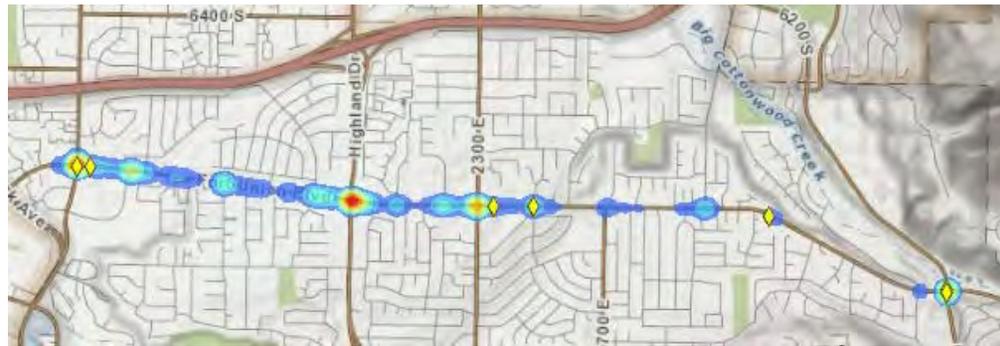
Figure 42: Projected 2040 Vehicular Capacity of Fort Union corridor in terms of estimated capacity. *Source: Wasatch Front Regional Council; street capacity analysis based on InterPlan Maximum Daily Traffic Capacity Estimates*



Vehicles and Safety

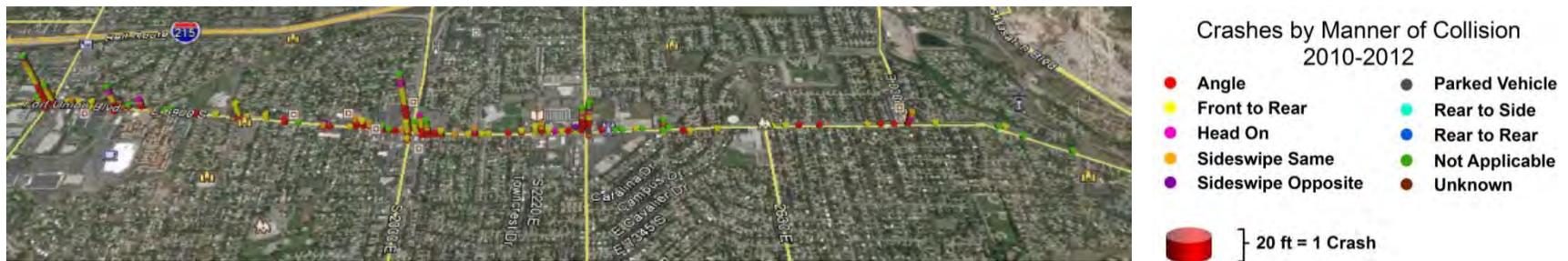
2010-2012 data showed a total of 281 crashes on the Fort Union corridor in Cottonwood Heights. The Fort Union corridor has shown a higher rate of crashes (4.21) than the state average (3.15). Yet crashes on Fort Union are on average less severe than state average a rate of 6.0 compared to 8.0 for the state average.

Figure 43: Heat map of crashes along Fort Union corridor, with severe crashes (yellow diamonds). *Source: UDOT*



The largest concentration of crashes has occurred at Highland Drive, with a smaller concentration at 2300 East.

Figure 44: Map of Crashes by Type along Fort Union Corridor. *Source: UDOT*



Transit Network

Facilities

Several Utah Transit Authority (UTA) bus routes run through the Fort Union corridor. They are of two main types – local routes and express routes. Apart from Route 72 – the only route that runs on Fort Union for nearly its entire length – all routes run generally north-south and terminate at either Downtown Salt Lake or University of Utah. Most routes are focused on the commute to these large employment centers.

The table below summarizes the bus routes through the Fort Union corridor:

Table 25: Bus Routes Fort Union Corridor

Route Number	Type	Origin	Destination	Streets used	Fort Union
72	30 min local	Fort Union TRAX	Wasatch Blvd. Park & Ride	Fort Union Blvd.	Along whole corridor
213	30 min local	Midvale	University of Utah	1300 East/ Highland Drive	Crosses at 1300 East
223	30 min local	Sandy	U of U/ Downtown Salt Lake City	Highland Drive	Crosses at Highland Drive
307	Express	Bengal/Wasatch Cottonwood Hts	Downtown Salt Lake	Van Winkle Expwy/700 E.	Along Fort Union 2700 E. to 3000 E.
313	Express	10600 S. State Sandy	University of Utah	1300 E/ I-215	Crosses at 1300 East
320	Express	9400 S. Sandy	Downtown Salt Lake	Highland Drive/Van Winkle Expwy	Crosses at Highland Drive
354	Express	9400 S. Sandy	University of Utah	Wasatch Blvd/ I-215/ Foothill	Along Fort Union Highland to Wasatch

The closest access to UTA's regional rail network is the Fort Union stop on the TRAX Blue Line at Fort Union Boulevard and about 200 West, over two miles west of Cottonwood Heights' border with Midvale.

The main finding with regard to transit is that despite the high number of routes running through the corridor, they add up to very little transit service for corridor residents, employees and visitors. Residents living within walking distance of the corridor could get some use

out of the express routes running to Downtown Salt Lake and the University of Utah, or taking the 72 to Fort Union TRAX or to the corporate center area, but for a major corridor, this level of transit service even for the commute is not ideal, and there is not enough transit to support a transit lifestyle. The only trunk line for the corridor, the 72, runs only every 30 minutes, making it hard to depend on as a primary source of transportation. So, there is some level of transit connecting the corridor with the biggest destinations in the valley, but very little connecting the corridor's nodes themselves.

Access

Access to transit along Fort Union is comprised of the corridor's walkability and bikeability. In this respect, the Fort Union corridor has some assets. Especially in the central part of the corridor, around 2300 East, the street network is comprised of the kinds of connected, low-traffic streets great for walking.

However, elsewhere in the corridor, on the west and east ends, street grids are less connected and create roundabout walk or bike routes that force potential transit riders who may live or work very near a transit stop to walk or bike much more distance because of disconnected street grids. This type of pattern often forces people accessing transit stops onto arterial cross-streets, and many of these cross streets are very busy thoroughfares that also have on and off ramps to I-215. The steep slopes throughout the corridor are also a concern for transit access.

Fort Union itself presents many challenges to those on foot and bike accessing transit. See pedestrian and bicycle sections for more information.

In addition, there are a few Park & Ride lots in the greater mouth of the canyon area, one at Wasatch Boulevard and 6200 South; one at the intersection of Big Cottonwood Canyon and Wasatch Boulevard; and one on Fort Union just below Wasatch Boulevard. These lots are largely to serve ski bus trips but can provide some use for commuters.

And, with the large amounts of surface parking available, commuters may be parking at some of the major nodes served by north-south bus routes such as 1300 East and Highland Drive.

Parking

Parking is not directly applicable to transit – however we can think of transit stops as “parking” for transit riders. Despite the low level of transit service on the Fort Union corridor, some of the transit stops along it are quite good, providing benches located out of the path of travel and lending a dash of human character to the otherwise auto-focused streets. Others, however, provide the minimum level of amenities and do not conform to Americans with Disabilities Act (ADA) standards.

Figure 45: Nice bus stop in corporate center area with matching bench and trash can, flowers in planter, out-of-the-way sidewalk (left); minimal bus stop that does not achieve ADA requirements (right).



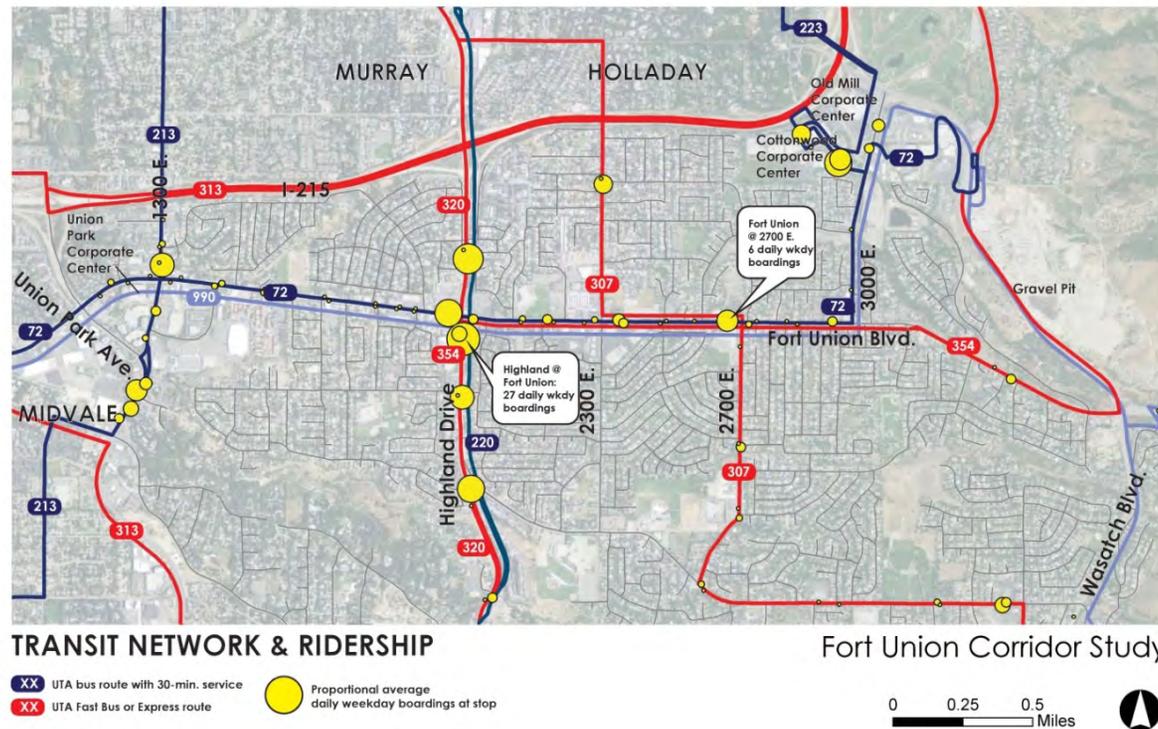
Network Use and Demand

With the low level of transit service, as well as the suburban, low-density, single-use, auto-focused patterns of development (see Land Use section) that do not support transit, it is not surprising that the corridor produces little transit ridership. The highest number of daily weekday boardings is 27 – which occurs at a stop at the Highland Drive intersection. Again, even this level of ridership is driven by the nature of the Highland corridor rather than the Fort Union corridor. Elsewhere, most stops have fewer than 10 daily weekday boardings and many fewer than 5.

Consequently, the Fort Union corridor is basically starting from “zero” with transit. Any discussions of future light rail or bus rapid transit along Fort Union must keep this in mind.

Yet some patterns of growth portend well for the potential of transit in the future, particularly the growing employment center at Cottonwood Corporate Center. As was stated above, so many jobs are expected in the corporate center/gravel pit area that it could be one of a handful of employment centers in Salt Lake County that reach 50 jobs per acre, a commonly-used threshold for supporting light rail transit service. This points more toward the potential future success of regional-scale rapid transit, since employees would likely be coming from throughout the Salt Lake Valley and Wasatch Front. The Union Park area, the other “bookend,” could also be a strong transit-supportive node. With both of these potentially transit-supportive nodes, and especially with any gravel pit redevelopment, it is critical that the city enact transit and pedestrian supportive policies if the goal is to attract mass transit.

Figure 46: Transit lines running through Fort Union corridor and average weekday boardings at each stop. *Source: UTA*



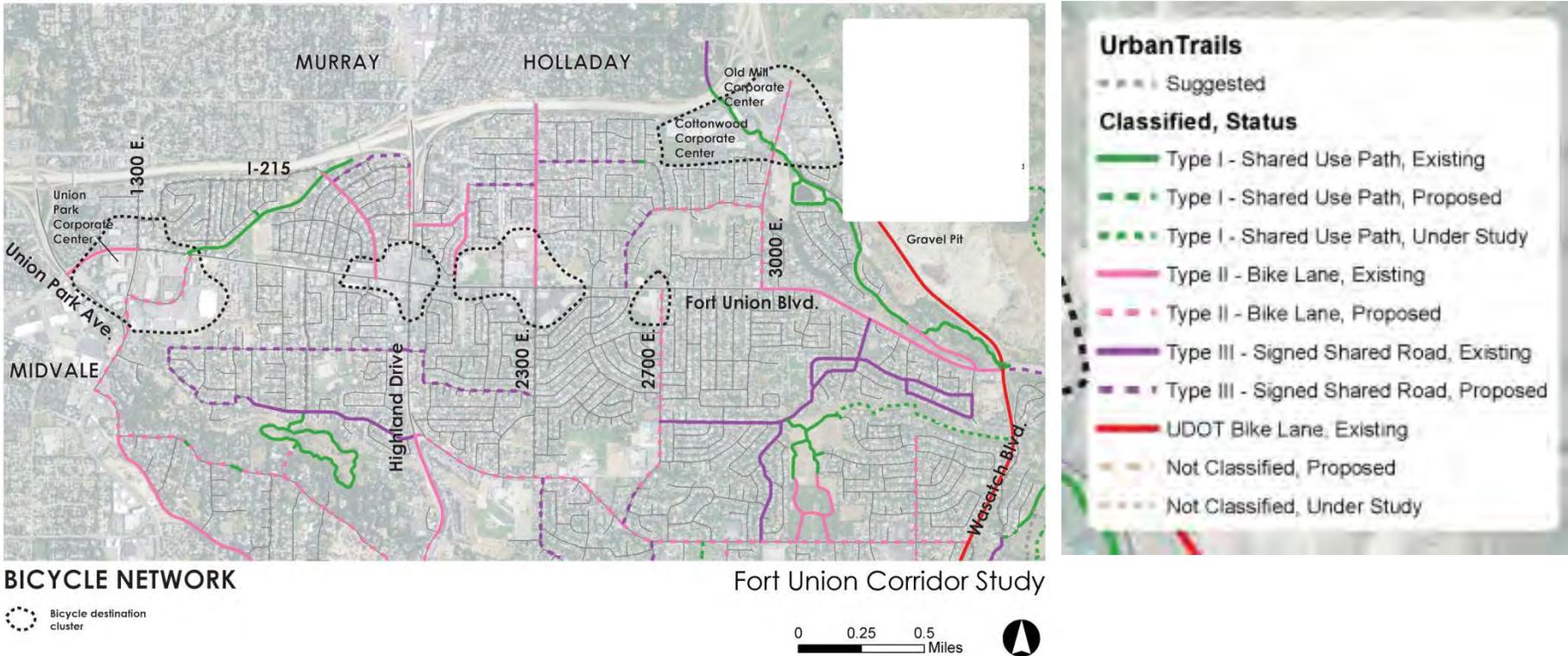


Bicycle Network

Network Facilities

The study area contains all types of bike routes – Class I off-street trails; Class II bike lanes; and Class III bike routes. Some of the bike network exists today and some of it is planned.

Figure 47: Existing and planned bike network in Fort Union corridor area. Source: City of Cottonwood Heights



Class I routes include trails along creeks, canals, and in parks.

- The major Class I trail in the corridor area is the **Big Cottonwood Trail**, much of which was recently constructed from the mouth of Big Cottonwood Canyon, roughly following the creek bottom through the Cottonwood Corporate Center area to the Holladay border.
- There is an informal path along the East Jordan Canal running from I-215 (west of Highland Drive) southwest to Fort Union Boulevard in the Union Park area, but it is not paved.
- There is a small internal network of paths in **Crestwood Park** in the southwest part of the corridor

Class II bike lanes are located on:

- **Fort Union Boulevard** from the Big Cottonwood Canyon mouth west to 3000 East;
- A short segment of **Fort Union Boulevard** between Union Park Avenue and 1300 East;
- **2300 East** from the Holladay border south to Fort Union Boulevard;
- **Wasatch Boulevard** north and south of Fort Union Boulevard;
- Smaller local and minor collector streets around Highland Drive north of Fort Union – **Greenfield Way** and **Nye Drive**.

Class III bike routes are less common in the study area, however there are a few. They are located on:

- **7420 South** east of 2700 East;
- Local streets in the southeastern part of the corridor such as **Winesap Road** and **MacIntosh Lane** and **3325 East**.

These routes provide important individual connections – many, like Wasatch Boulevard and Big Cottonwood Trail are key pieces of regional recreation routes. Greenfield and Nye are important connections because they lead from neighborhoods to civic destinations like Bella Vista Elementary School and Whitmore Library and to retail as well. Many routes lead into the clusters of destinations along the corridor. Yet despite all of these routes, they do not yet add up to a connected network of bike facilities that safely and comfortably lead cyclists through the whole corridor. Small connecting pieces can create much of a robust bicycle network.

Planned network: In addition to the existing bike facilities, several are planned (See Figure X). Many of these are Class III Bike Routes on smaller streets, but they also include planned Class II Bike Lanes. The most relevant to the Fort Union Corridor are planned lanes for 2700 East and 3000 East.

Bicycle Parking

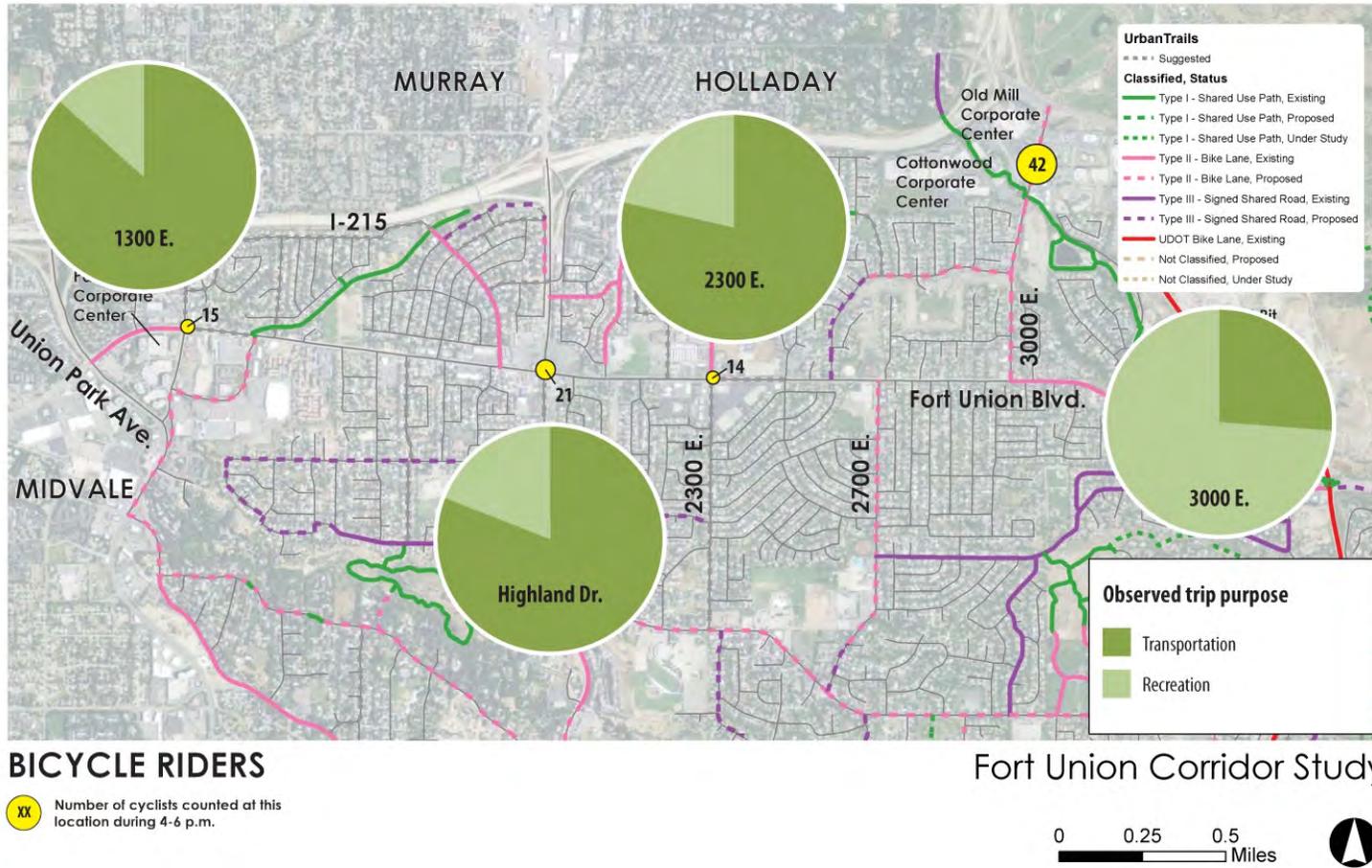
Little bike parking exists along the Fort Union corridor. Some private businesses, such as those in the Cottonwood Corporate Center, have on-site bike parking. Yet the project team was unable to find any bike parking in the public realm.

Network Use and Demand

Bicycling is uneven in the Fort Union corridor. A small, unscientific series of counts conducted by the project team suggests that the eastern end, as part of the regionally popular recreational riding along Big Cottonwood Creek, Wasatch Boulevard, and in the Cottonwood Canyons, sees high numbers of recreational riders. However, our counts suggest that the rest of the Fort Union corridor sees little bicycle traffic. This makes sense, as there is little recreational attraction, and conditions challenge riding for transportation. As stated earlier, the Fort Union corridor has pieces of bike lanes and paths, but they are isolated, and this may be a factor leading to low bicycling numbers. Considered another way, Fort Union, or at least part of it, is a regional bicycling attraction while it struggles to support local bicycling trips.

The project team conducted a basic count of bicyclists at four intersections along the corridor – 1300 East; Highland Drive; 2300 East; and 3000 East at Big Cottonwood Canyon Road. The team counted cyclists going through those intersections from 4-6 p.m. on a weekday on a pleasant fall day.

Figure 48: Bicyclist counts and observed trip purpose. *Source: InterPlan field work.*



- The results showed the following:
- 1300 East: 15 cyclists
 - Highland Drive: 21 cyclists

- N300 East: 14 cyclists
- 3000 East (at Big Cottonwood Rd.): 42 cyclists

The team drew a few inferences from these data. First, there was a stark difference between the 3000 East/Big Cottonwood Rd. location and the rest of the locations. The 3000 east location saw nearly as many cyclists as the other three combined.

Second, the vast majority of the cyclists at the 3000 East location (about 75 percent) were observed to be riding recreationally (ascertained by clothing and gear carried or lack thereof), while almost the complete reverse was true for the other three locations.

Pedestrian Network

Network Facilities

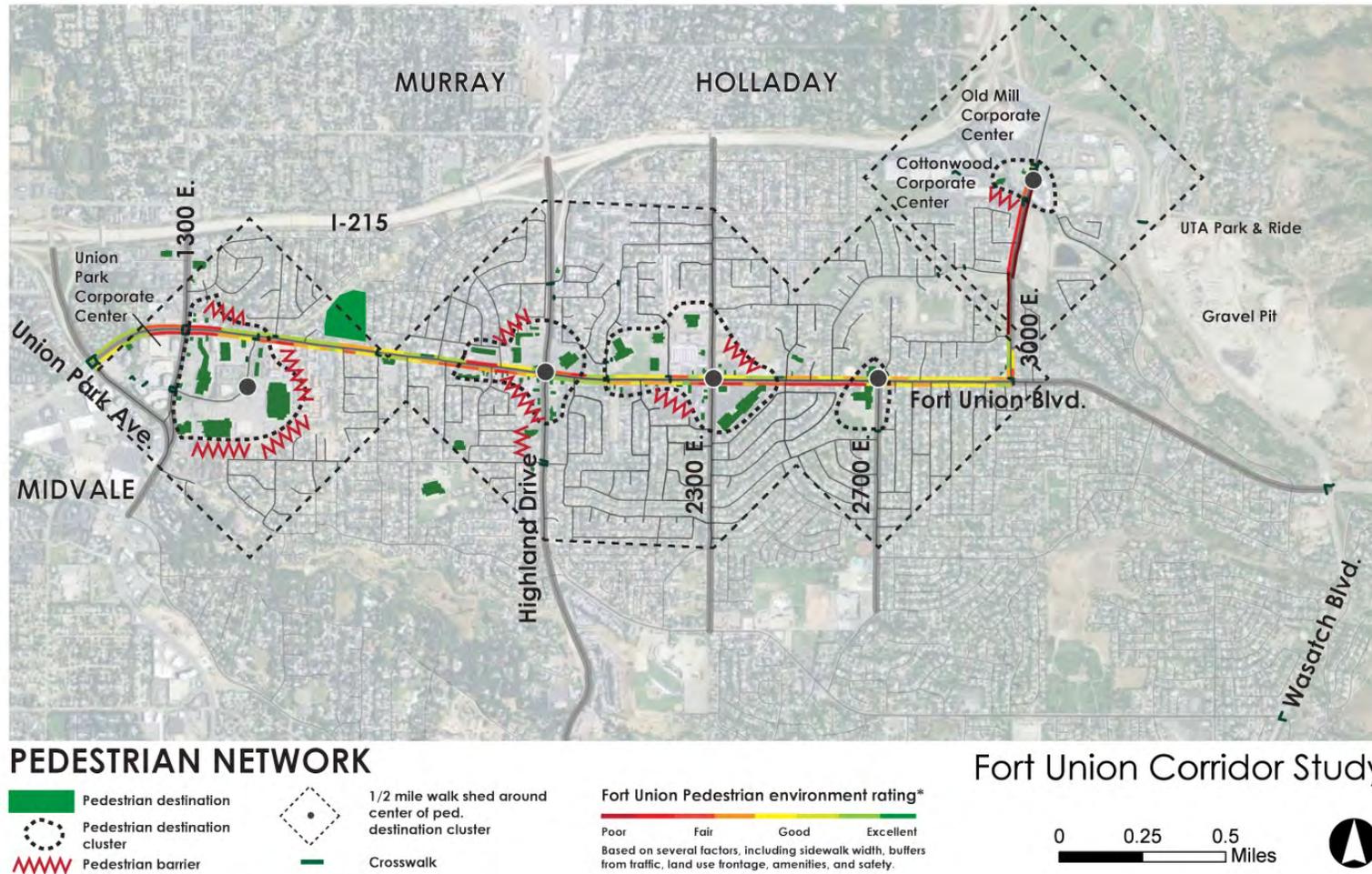
The pedestrian network is the most complex modal network to understand and evaluate. It is comprised of a number of different pieces. While pedestrian facilities such as sidewalks and crossings are paramount, walking is the mode that is most strongly influenced by the surrounding environment.

On the Fort Union corridor the project team undertook analysis that attempted to model these complexities into an evaluation. This evaluation focused on two main factors: 1) the presence and accessibility of pedestrian destinations throughout the corridor and 2) the detailed walking conditions on Fort Union Boulevard itself.

Pedestrian destinations: Pedestrian destinations are places that attract people who live or work within walking distance to walk to them. Pedestrian destinations are most likely to be:

- Commercial uses that offer essential, frequently needed goods and services like groceries, drugstores, hardware, hair/beauty salons, or dry cleaning;
- Lifestyle commercial uses such as restaurants or cafes
- Schools, especially elementary schools
- Civic uses such as libraries and post offices
- Open spaces such as parks

Figure 49: Existing pedestrian network. *Source: InterPlan field work and analysis.*



destinations are not likely to be:

Pedestrian

- Employment uses: while some people may live within walking distance of their places of work, it is likely that these employment uses are drawing from much of the region. Note, however, that with good transit, employment uses can become pedestrian destinations through secondary use of walking.
- Auto-oriented uses: Some land uses inherently imply the use of a vehicle to access them, such as gas stations, auto repair, and car washes.

While the concept of pedestrian destinations does not address recreational walking, it does get at the ability of a place to serve walking for transportation purposes.

The Fort Union corridor has relatively high numbers of pedestrian destinations. They include all of the types of land uses listed above.

Pedestrian destination clusters: To promote ease of walking and efficiency of linked trips, pedestrian destinations should usually cluster in groups. Clear “clusters” of pedestrian destinations occur along Fort Union at major and minor nodes.

- **Union Park** includes several restaurants and other eating places and grocery/drugstores – such as Target, Home Depot, Paradise Bakery, and Café Rio. Mountview Park is nearby.
- **Highland Drive** includes two large grocery stores – Whole Foods and Dan’s – restaurants and other eating places such as Pizza Studio, and banks such as Zions Bank.
- **2300 East** includes drugstores, convenience stores, restaurants, as well as a post office, the Whitmore Library, and Bella Vista Elementary School. The 2300 East cluster extends to merge with the Highland cluster to the west.
- **2700 East** is a smaller node with two key civic destinations, Butler Elementary School and an LDS ward building.
- **3000 East/Big Cottonwood Road** is primarily a regional-scale employment center, but in the Holladay section of the node on the east side of 3000 East are several retail and restaurant uses.

In addition to our analysis, the well-known walkability analysis tool WalkScore reinforces this idea of pedestrian destinations clustering on Fort Union Boulevard. Fort Union, from approximately Highland Drive to 2300 East, is the only area with a WalkScore of 70 (“Very Walkable - most errands can be accomplished on foot”) not only within the City of Cottonwood Heights, but for miles around it.

Street network leading to destinations: A key piece of a walkable corridor is a connected network of local and collector-scale streets within about a half-mile leading to pedestrian destinations. In general the street networks around Highland Drive and 2300 East are

relatively connected, allowing someone who lives in the neighborhoods on either side of Fort Union a relatively direct route to its pedestrian destinations. However, the street networks at either end of the corridor, especially around the Union Park area and the Cottonwood Corporate Center area, are disconnected, especially between the residential neighborhoods and the clusters of pedestrian destinations.

Pedestrian destination barriers: Where the street networks are disconnected or cut off from the clusters of destinations is denoted in Figure 48 by a barrier. Barriers can include inherently disconnected street patterns such as cul-de-sacs or loops; freeways or other large heavily trafficked streets; or water features like creeks. In some cases, one crossing of a barrier can bring a large area into the walk-shed of pedestrian destinations.

In the case of the Fort Union corridor, barriers primarily include disconnection among neighborhood street networks and pedestrian destination clusters. This problem is most acute in the Union Park area, where residents living immediately adjacent to the Target or Home Depot must walk a roundabout route to access these destinations. The other primary type of barrier is large heavily trafficked streets such as Highland Drive. In fact, one of the biggest pedestrian barriers in the Fort Union corridor is Fort Union Boulevard itself, which has a high speed limit and infrequent opportunities for crossing.

It is fortunate that the Fort Union corridor has no other real barriers disconnecting its neighborhoods from pedestrian destinations.

Pedestrian environment conditions: While pedestrian destinations and street networks look at the overall structure of walkable places, assessing the details of the pedestrian environment is equally as important for understanding the overall walkability of a corridor.

The project team undertook a pedestrian environment analysis of Fort Union Boulevard that integrated a number of criteria into an overall score. The criteria included both the public realm as well as private property's effect on the public realm. The criteria included:

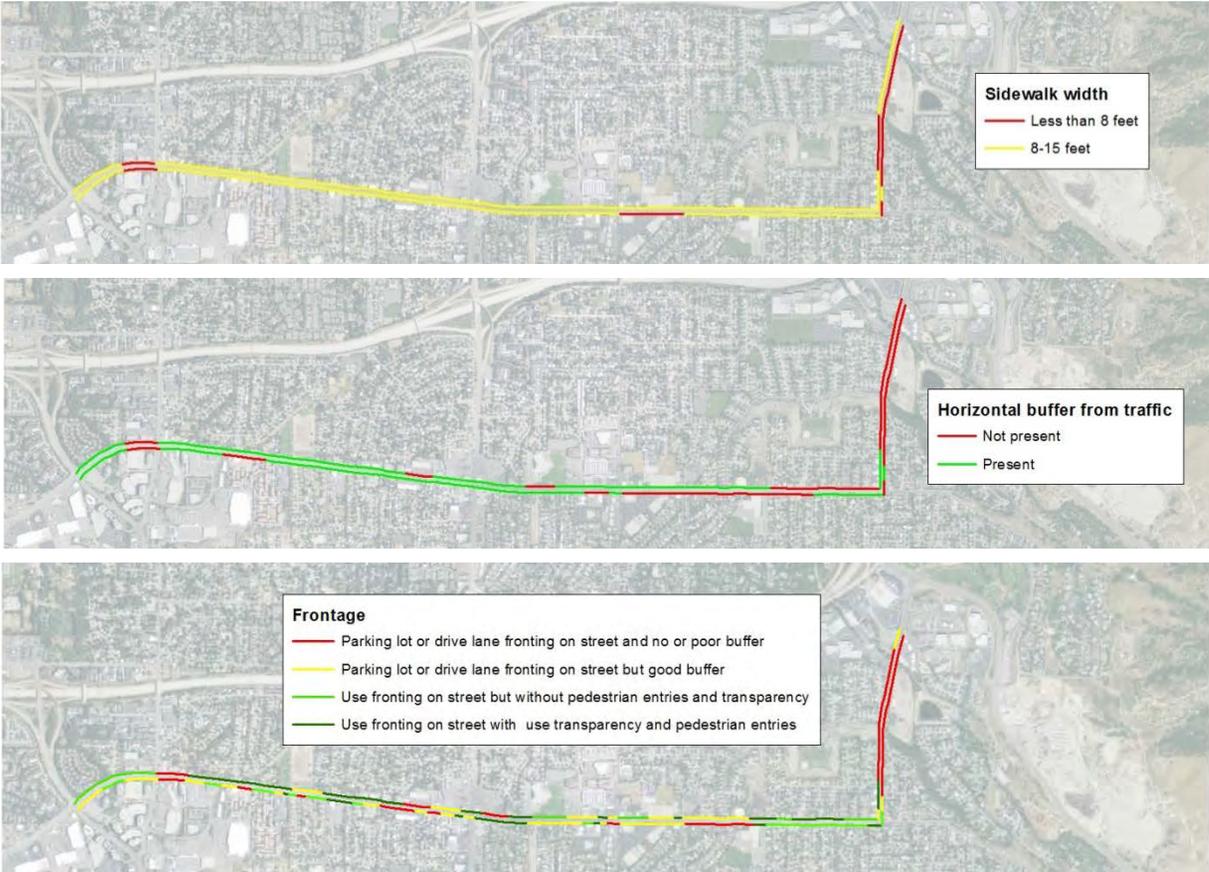
- **Sidewalk width** (2 points): One point for at least an 8-foot sidewalk and another point for at least a 15-foot sidewalk.
- **Buffers** (2 points): One point for a horizontal buffer (park strip, furnishings zone) and one point for a vertical buffer (trees, high shrubs, light posts, street furniture).
- **Shade**: (1 point): Whether most of the sidewalk is shaded in midday in the summer.

- **Amenities** (1 point): Whether pedestrian amenities such as street furniture, pedestrian wayfinding, or pedestrian-scale lighting are present.
- **Entries** (1 point): Whether land uses are accessed directly from the sidewalk (via storefront door way or path from sidewalk to door).
- **Frontage** (3 points): Three points for pedestrian-oriented frontage with good land use transparency and entries; two points for building fronting on street without good transparency and entries; one point for parking lot or drive lane frontage with good buffer between parking lot; zero points for parking lot or drive lane frontage without buffer.

This list of criteria was developed using several established pedestrian evaluation indices, most especially the Pedestrian Environmental Quality Index (PEQI), developed by the San Francisco Department of Public Health. Sidewalk width thresholds were drawn from the Institute of Transportation Engineers' (ITE) *Designing Walkable Thoroughfares: A Context-Sensitive Approach*.

The overall analysis is shown in Figure 50, with the individual points broken out as well.

Figure 50: Individual pedestrian analysis criteria. *Source: InterPlan field work*





From this analysis, we can conclude that the pedestrian conditions along Fort Union are mostly poor but variable. Figure 48 shows us that many of the aspects of the pedestrian realm are consistent – the sidewalk width, with some exceptions, and the lack of shade and pedestrian amenities. The variability, as we can see from Figure 48, is found primarily in the frontage, and so the insistency of the pedestrian environment is largely due to the individual developments determining the pedestrian environment, rather than the public realm. It is preferable to have the public streetscape “set the tone” for a walkable environment with ample sidewalks, buffers, and amenities. Certainly, the frontage of the private property plays a role, yet a good public realm can offset some of the damage done to the pedestrian environment by bad property frontage.

The pedestrian quality analysis also suggests that Fort Union has virtually no pedestrian-supportive amenities – shade, lighting, street furniture, vertical buffers. Adding these would improve the pedestrian scale of the street and the overall pedestrian conditions. Wider sidewalks would also greatly help. There is a short section of sidewalk along Fort Union near Highland Drive that hints at what a more appropriate width might feel like. Here, the ratio of pedestrian space to auto space is much more balanced:

Figure 51: Properly scaled sidewalk along Fort Union near Highland Drive



Another key finding from this analysis is that while the pedestrian destinations cluster along nodes on the Fort Union Corridor, especially around 2300 East and Highland, the urban form of the land uses thwarts walking, as do the conditions of the sidewalks themselves. Another aspect is the pedestrian environment is pedestrian crossing. The pedestrian crossing experiences at key signalized Fort Union Boulevard are governed by the distance of the crossing and the amount of time of crossing allowed by the signal (walk signal and “flashing red” pedestrian clearance time):

- Union Park: 112 feet; 35 seconds (minimum speed 3.2 feet/second), with countdown.
- 1300 East: 120 feet; 30 seconds (minimum speed 4.0 feet/second), no countdown.
- Highland Drive: 80 feet; 30 seconds (minimum speed 2.7

feet/second), no countdown.

- 2300 East: 67 feet; 20 seconds (minimum speed 3.4 feet/second), no countdown.

Three of these intersections – Union Park, 1300 East and 2300 East – do not meet the Manual of Uniform Traffic Control Devices (MUTCD) minimum walk speed of 3.0 feet/second.

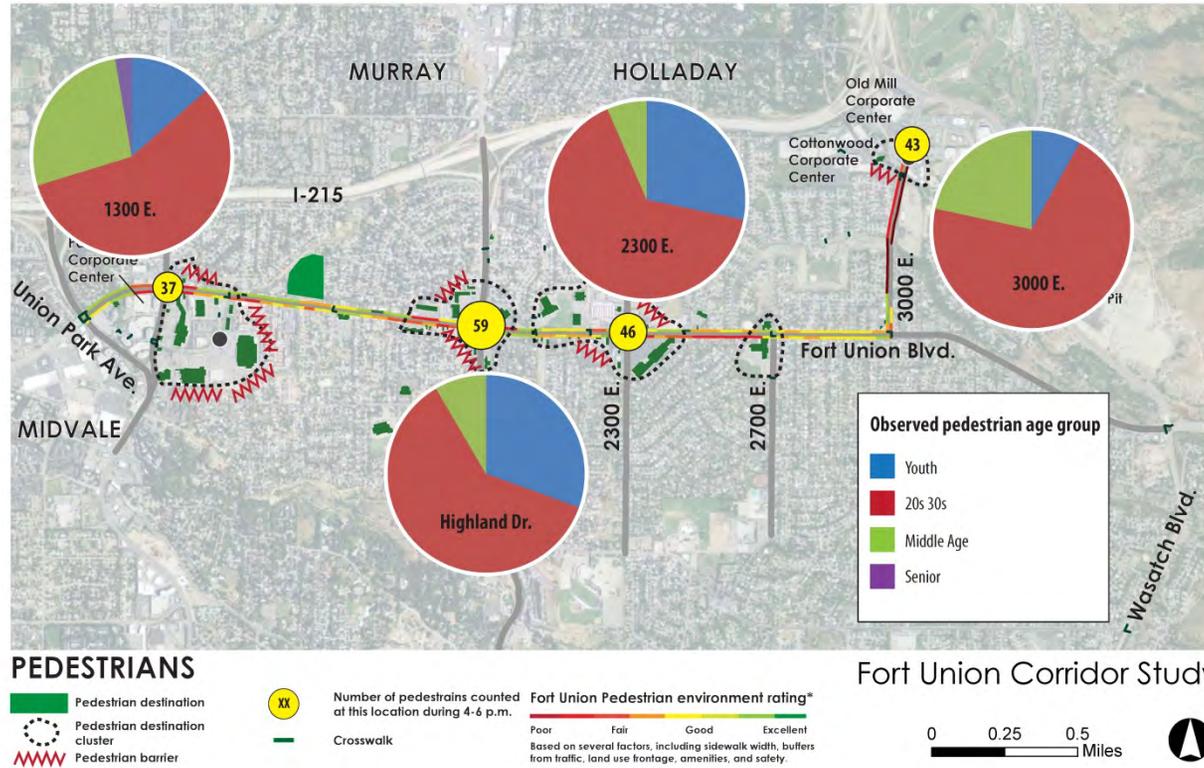
Another overriding key influence on the poor pedestrian environment is the 40-mile-per-hour speed limit present throughout the corridor. While the recipe for a successful pedestrian environment is often complex, the combination of people walking on a nine-foot sidewalk immediately adjacent to traffic moving 40 miles per hour is a simple recipe for an unwalkable environment.

Network Use and Demand

Despite the poor walking conditions, people do walk throughout the corridor, likely lured by living in proximity to the many useful retail and civic destinations.

The project team conducted a basic count of pedestrians at four intersections along the corridor – 1300 East; Highland Drive; 2300 East; and 3000 East at Big Cottonwood Canyon Road. The team counted pedestrians going through those intersections from 4-6 p.m. on a weekday on a pleasant fall day. Pedestrians included both walkers and joggers.

Figure 52: Numbers of pedestrians observed at key locations on Fort Union corridor. *Source: InterPlan field work*



The results showed the following:

- 1300 East: 37 pedestrians
- Highland Drive: 59 pedestrians
- 2300 East: 46 pedestrians

- 3000 East (at Big Cottonwood Road.): 43 pedestrians

These numbers show that despite the poor conditions, walking does occur on the Fort Union corridor. In comparison, in 2010 pedestrians were counted in 277 locations in the Seattle/Puget Sound region – known as one of the most walkable regions in the United States. The number of pedestrians counted reached as high as 1,967 in Downtown Seattle. But 59 pedestrians, the number of pedestrians counted at Highland Drive and Fort Union Boulevard, would rank 107th out of the 277 Puget Sound locations - the 61st percentile. In the Puget Sound region count, the location with 59 pedestrians was in the middle of Kirkland, a walkable suburban downtown.

It is notable that the highest number of pedestrians was observed at the Highland node, where the two most key pedestrian destinations – the two grocery stores – are located, and where one of the highest levels of transit use exists.

Relevant Regional Transportation Issues

Regional Transportation Plan

The Wasatch Front Regional Council 2015-2040 Regional Transportation Plan has proposed some regional transportation facilities within the Fort Union corridor that could come to bear on corridor planning and future development and infrastructure projects. They include:

- Bus Rapid Transit project from Fort Union TRAX to Wasatch Boulevard via Fort Union and 3000 East;
- Enhanced Bus project on Foothill Boulevard, I-215 and Wasatch Boulevard crossing Fort Union at mouth of Big Cottonwood Canyon;
- Bus Rapid Transit project from Fort Union Boulevard northward on 1300 East;
- “Transit Hub” at 1300 East and Fort Union;
- Operational improvements on Fort Union Boulevard
- Widening of Highland Drive through Fort Union
- Widening of 3000 East north of Fort Union
- Proposed bike route on Highland
- Proposed bike route on Fort Union

One conclusion to draw from these proposed projects is the regional interest in Fort Union becoming a more multi-modal street, serving not only vehicles but transit riders and cyclists.

Mountain Transportation

Transportation to and from Central Wasatch Mountain destinations provides one of the major variables affecting the future of the Fort Union corridor, especially the upper portion. The Mountain Accord planning process has been occurring concurrently with this process and has developed some findings and concepts germane to this study.

First, the gravel pit area stands out as one of few large redevelopment areas that could be oriented to mountain users. The Accord's economic framework called it out as a moderate commercial/mixed-use development node – the only commercial/mixed-use development node along the base of the mountains – and the closest one to the Cottonwood Mountain destinations (without a year-round connection to Park City).

Second – and in conflict with the first finding – the greater mouth of Big Cottonwood area looks to be taking a secondary transportation role. None of the three rail transit scenarios have rail coming near Big Cottonwood (except through tunnels to Brighton, at its top). The scenarios are: a train up Foothill Drive and Parley's Canyon to Park City; a Train up 9400 S. and Little Cottonwood Canyon; and a Train loop of Foothill/Parley's/Brighton/Little Cottonwood/9400 S. In all scenarios, Big Cottonwood/Fort Union is shown the same – Express Buses/BRT on Fort Union and Wasatch and a bus up Big Cottonwood.

Also, it is worth noting that Big Cottonwood Canyon has the least traffic of any mountain corridor (i.e. Big Cottonwood, Little Cottonwood, I-80 Parleys, 224, 248). Traffic has held steady at around 5,000 vehicles/day (both in February and July) for the last 10 years.

The conflict between these two conclusions points toward the need for some sort of reconciliation of the Big Cottonwood Canyon mouth area's transportation role relative to mountain visitors.

Transportation Assets, Challenges, and Opportunities

This section takes data and observations from the previous Infrastructure and operations, Trip generation, and Networks summaries sections to bring the corridor's assets, challenges and opportunities into focus.

Transportation Assets

Employment concentration

That the Cottonwood Corporate Center/gravel pit area projects to be one of the densest and largest concentrations of jobs in Salt Lake Valley in 2040 is a major asset for transportation in the Fort Union corridor. This concentration and density can leverage regional mass transit as well as complementary land uses such as retail and residential; if this mix is achieved, walking and bicycling become better transportation options as well. This can all occur on the back of a major employment center, if planned and executed correctly.

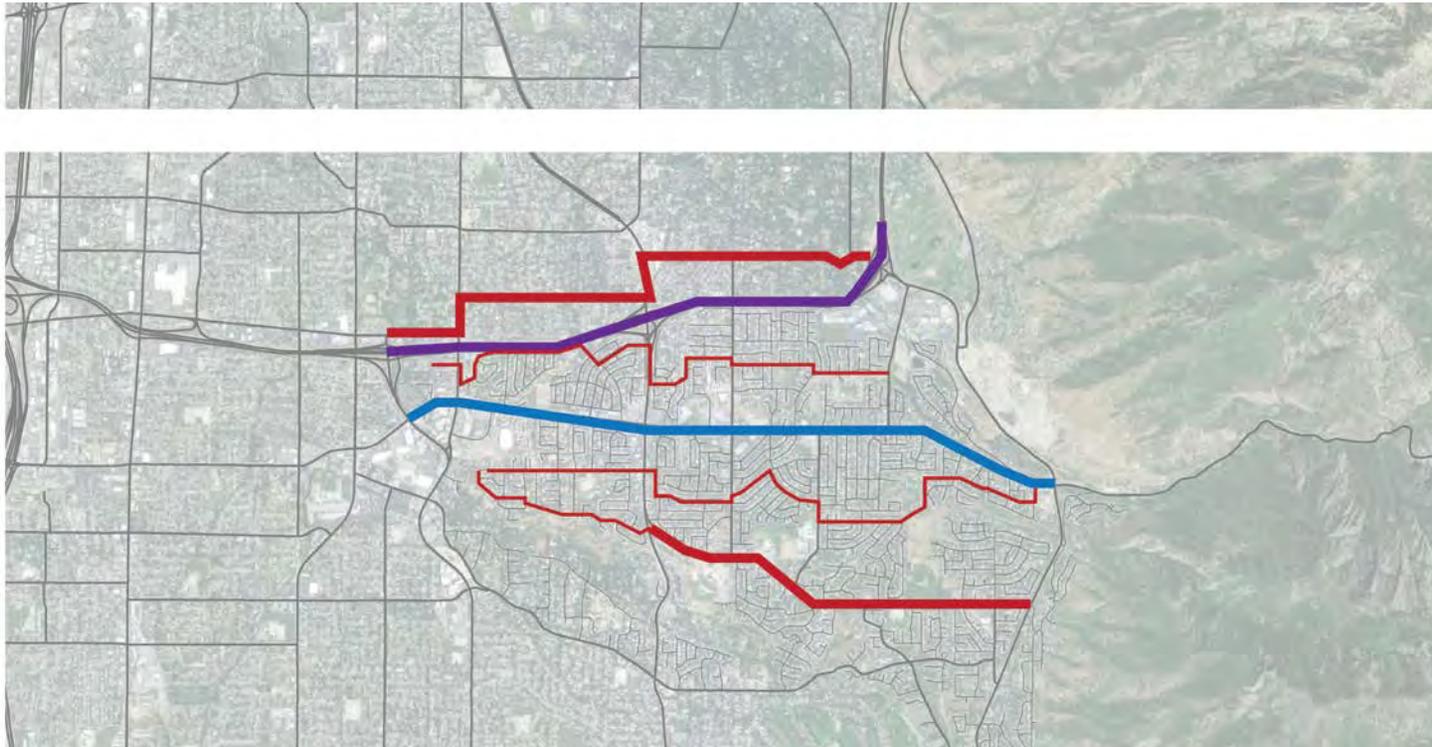
Unique combination of regional users

Employees, recreationalists, and mountain visitors all come through the study area in big numbers. This is an economic asset but it is also an active transportation asset – it could lead to a “park once and walk” approach for visitors on one hand, and on the other this area could use the high levels of recreation to incorporate more active transportation.

Unique connection qualities

No other street in the area connects east to west as effectively as Fort Union. While this connectivity is a convenience for autos, and to some degree transit, it is most relevant to active transportation modes – there are no other parallel options for pedestrians and especially cyclists wishing to get from one end of the corridor to the other. Autos and transit have I-215 as a nearly parallel alternative.

Figure 53: Fort Union (shown in blue) provides rare east-west connectivity in the area. I-215 (shown in purple) also provides similar connectivity but is unavailable to bicyclists and pedestrians.



Interstate 215

With Fort Union's limited right-of-way, it is imperative to get the most out of the I-215 right-of-way. Part of doing this is considering parallel routes that provide the same function. As stated above, Fort Union's east-west connectivity is unique, except for I-215, whose roadway capacity is an asset that must be considered in the use of Fort Union's right-of-way. I-215 provides nearly pure vehicular mobility and directly accesses two most important regional destinations. In addition, I-215's right-of-way should be considered a potential asset for future mass transit or trail.

Clusters of pedestrian destinations

The Fort Union corridor contains closely clustered pedestrian destinations that include essential, everyday retail and services like grocery stores, drugstores, and banks; lifestyle commercial uses such as restaurants or cafes; elementary schools; civic uses such as libraries and post offices; and parks. These clusters and the relatively connected street network that connects the corridor's residential neighborhoods to them form the foundation for walkable places along the corridor.

The area from 2300 East to Highland Drive is particularly walkable

The two linked clusters of pedestrian destinations at 2300 East and Highland Drive are the most walkable in the corridor. This area provides the most relevant mix of retail, service, and civic destinations and the most connected street grid. This area receives the “very walkable” WalkScore in Cottonwood Heights and for miles around it.

In addition, this area does not have many of the extra turn lanes that are present at Union Park Avenue, 1300 East, and to some degree, Highland Drive, resulting in a relatively short crossing distance and more constrained turning movements that rein in vehicles behavior at intersections.

People do walk

Perhaps due to the pedestrian destinations along it – and despite the challenging conditions – people do walk on the Fort Union corridor. Up to 59 pedestrians were counted at the p.m. peak two-hour period in corridor nodes. This existing pedestrian traffic is something to build on if the city decides to develop more pedestrian-oriented district along Fort Union.

Low traffic capacity utilization east of Highland

East of Highland Drive, Fort Union Boulevard's five lanes of capacity are highly unutilized. According to current counts, 25 to 50 percent of capacity is being utilized, based on a standard of Level of Service (LOS) C. Even future projections only raise the estimated capacity to 50 to 100 percent at LOS C.

This is an asset partially because traffic is flowing smoothly in this segment of the corridor, but also because it opens the opportunity for Fort Union's limited right-of-way to be utilized for other modes and uses.

Culture of recreation at east end

The propensity of cycling and other recreational activities at the east end of the corridor as it transitions into Big Cottonwood Canyon is a major transportation asset if the culture of recreational cycling and walking, hiking and running can be catalyzed into active transportation.

Beginnings of a bike network in the Corridor

While not very connected, the Fort Union corridor has several pieces of bike facilities that can form the foundation for a connected and effective network in the future.

Transportation Challenges

Fort Union has limited right-of-way

For most of its length (from the Midvale border in the east to 3000 East), Fort Union Boulevard operates primarily within an effective 78-foot right of way. This right-of-way limits attempts to make multi-modal changes or improvements – with the street’s five lanes taking up 70 percent of the right-of-way, there is little wiggle room to widen sidewalks, add bike lanes, add an exclusive transit guideway, or add on-street parking.

Fort Union is, in general, not very walkable

While the Fort Union corridor contains good clusters of pedestrian destinations and relatively connected street networks, the actual walking conditions on Fort Union Boulevard itself are mostly poor. The street has small nine-foot sidewalks next to 5 lanes of traffic moving at a 40 mile-per-hour speed limit. There is a park strip but it does not provide much of a buffer. There is a lack of trees, shade, and other pedestrian amenities such as street furniture or lighting. Signalized and/or marked crossings are far apart, and on many intersections with crosswalks, such as at Whitmore Way, Nye Drive, 2700 East, and 3000 East, only one of the sides of the Fort Union crossing is marked. In addition, the specific level of walkability is variable and inconsistent and largely tied to development rather than the public streetscape.

Fort Union provides the same basic street infrastructure for very different nodes

Fort Union’s major nodes – Union Park/1300 East, Highland Drive, 2300 East, 2700 East, 3000 East, and Wasatch Boulevard – are strikingly different. Yet, with the exception of the segment east of 3000 East, Fort Union Boulevard features the same street design (or

lack thereof) for each node, where each of these nodes could likely benefit from unique features such as landscape, signage, pedestrian amenities, transit amenities, and even lane configuration.

Low current transit service and use

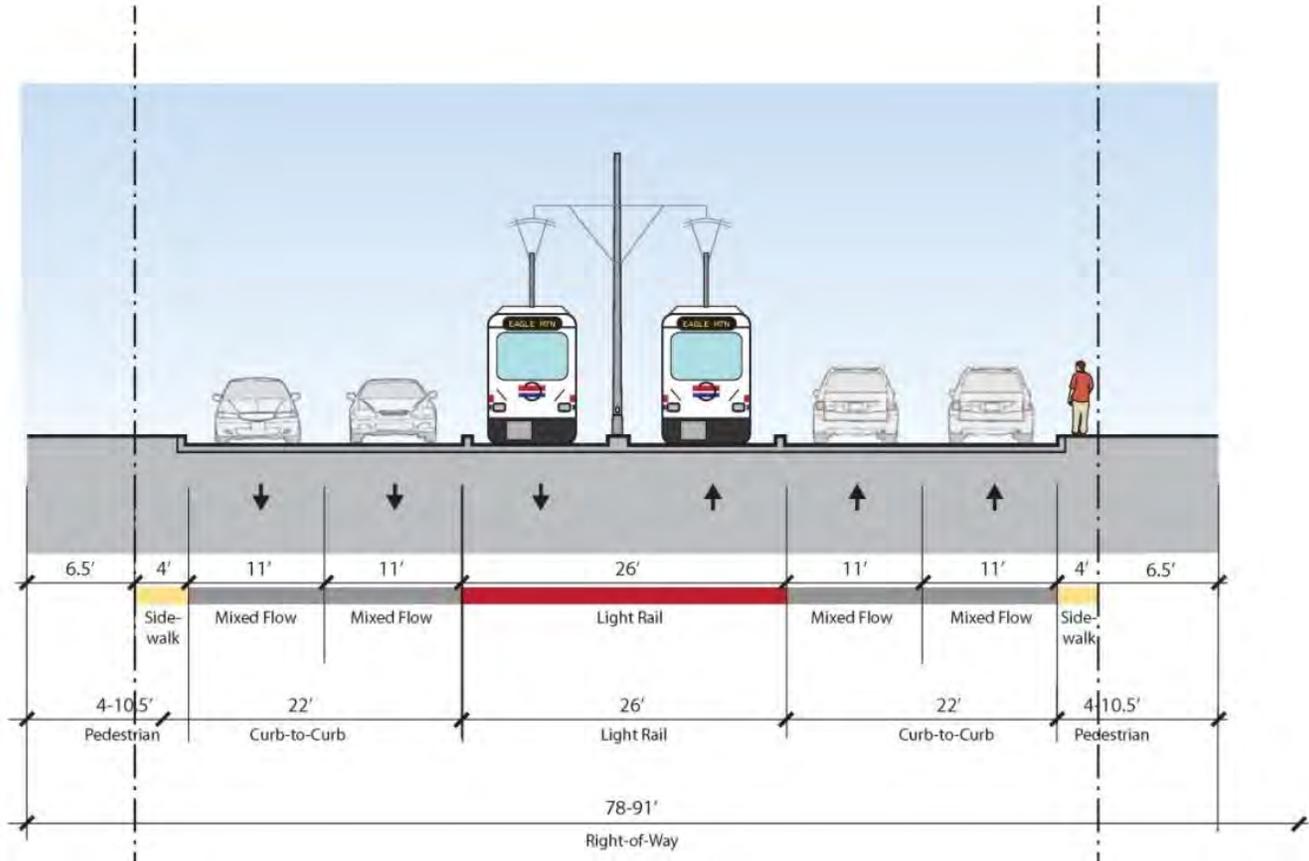
Few people board transit on the Fort Union corridor. Several bus lines run through and across the corridor, but they do not add up to a high level of transit service. Throughout the corridor, no stop has more than 27 weekday boardings and most have less than five. The higher levels of ridership exist along the major cross corridors of Highland Drive and 1300 East as well at major employment destinations such as Cottonwood Corporate Center, but even here, ridership is paltry. Any discussion of future transit on Fort Union Boulevard must weigh these facts.

Right-of-way constrains transit

Fort Union Boulevard's 78-foot effective right-of-way challenges the integration of a fixed-guideway transit line into the cross section. The most likely cross section for fixed guideway – maintaining the four lanes of through traffic; widening and converting the center turn lane into a transit guideway; no on-street parking; and a sidewalk with the rest of the edges of the right-of-way – would allow for a four-foot sidewalk.



Figure 54: Fort Union hypothetical cross section if light rail were implemented in the center, and existing capacity retained. Sidewalks would mostly be 4 feet wide. Also, this does not take into account extra space needed at stations.



As a comparison, the Link light rail line on Martin Luther King Jr Blvd. in the Seattle region takes on the same cross section as would likely be considered for Fort Union, described above. The Martin Luther King cross section is 93 feet wide. Additionally, if light rail or bus rapid transit is implemented on Fort Union corridor, the city should consider whether there will be a need for Park & Ride lots and where they would go.

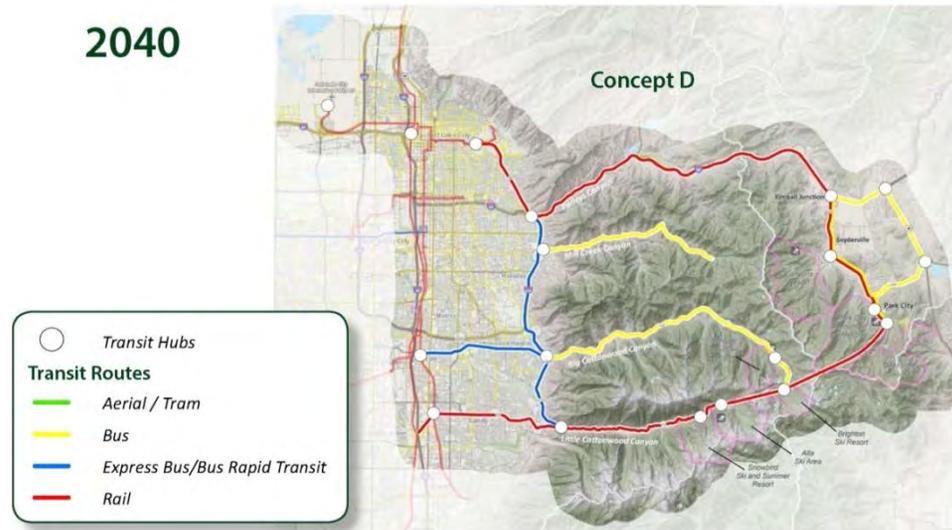
Figure 55: The Link light rail in the Seattle/Puget Sound region, a similar cross section to what would likely be built on Fort Union with no auto capacity reduction, takes up 93 feet, far more than Fort Union's 78 feet.



Mountain Accord transit scenarios do not emphasize Fort Union

The future transportation situation on the Fort Union corridor will be influenced by the mountain transportation network. This network is currently being planned through the Mountain Accord process. On one hand, the Mountain Accord scenarios call out the gravel pit area as a major mixed use development, yet the train lines in all the transit scenarios avoid the Big Cottonwood Canyon mouth area. The Fort Union corridor could be challenged to develop its eastern end without the benefit of the primary mountain transit lines.

Figure 56: The Mountain Accord ideal transportation scenario concepts' rail systems all miss Big Cottonwood Canyon and Fort Union. *Source: Mountain Accord*



Bike routes stop short of destinations

Currently many of Cottonwood Heights' bike routes end abruptly where destinations are concentrated, and often short of the key destinations.

Highland Drive will continue to be constrained by north-south traffic

One of the few pieces of the corridor that is at or over capacity is the Highland Drive intersection, which is currently a Level of Service F. While improvements to turning movements in the intersection should help the delay in the intersection, in the long-term Highland Drive should continue to carry a heavy load of traffic. Adding density to this node should emphasize use of alternate modes, especially on Highland corridor.

Transportation Opportunities

Anchor regional transit corridor

The employment concentration projected for the Cottonwood Corporate Center and the Gravel Pit creates a good argument for high-capacity mass transit serving this area. Transit needs intensity of use and employment is the most dependable type of intensity for transit. A major transit line along the Fort Union corridor to the Corporate Center/gravel pit would likely rely on regional (work or recreation) trips from all over the region. Union Park is another key employment center that should be a central feature of a Fort Union corridor transit line. If the key components of a Fort Union corridor transit line would be Union Park and Corporate Center/gravel pit, how would this best be realized? Because Fort Union presents challenges to mass transit, and does not actually access the Corporate Center/gravel pit, a broader range of routes should be considered, including I-215, which could deliver transit riders to both employment hubs from connection to the rest of the regional rail network with a high degree of speed and mobility.

Increase residential density of Gravel Pit/corporate center node

Residential density is the linchpin in future mixed use communities at the canyon mouth that will help reduce the number of vehicle trips in and out of these centers, and make them sustainable urban places. Currently the entire Fort Union corridor in Cottonwood Heights projects to add very few units – around 1,200 for study area TAZs. But increased residential density in the eastern end of the Fort Union corridor could synergize and balance with the employment concentration there. It could also complement the recreational activities in the canyons and at the canyon mouth. For several different reasons – proximity to employment, recreation, and the freeways – this is an attractive place to live.

Understand nuances of mountain traffic and leverage in appropriate niche

Mountain traffic can be an opportunity for the Fort Union corridor if policymakers understand how it fits into the transportation and economic context of the corridor. On one hand, mountain traffic is “a drop in the bucket” of overall traffic in the area. According to Mountain Accord analyses, Big Cottonwood Canyon has the least traffic of any mountain corridor (i.e. Big Cottonwood canyon, Little Cottonwood Canyon, I-80/Parleys Canyon, 224, and 248 in Summit County). Traffic has held steady in Big Cottonwood Canyon at around 5,000 vehicles/day (both in February and July) for last 10 years. Compare this to 45,000-50,000 vehicles on I-80 and 30,000 vehicles on SR 224, or to 49,000 on Highland Drive and 63,000 on Union Park, or to 42,000 trips generated by the Corporate Center traffic zone.

However, active transportation traffic may be a different story. In warmer months, the Big Cottonwood corridor and the corridors at the base of the Wasatch (Wasatch Boulevard and Holladay Boulevard) see major recreational bicycling, jogging and walking traffic. And, overnight mountain visitors could also provide a different wrinkle. If visitation to the Central Wasatch increases in the future, there will likely be an imperative to accommodate them outside the Cottonwood Canyons, yet in a “base camp” that is as near to the desirable recreation destinations as possible. This is the mountain “traffic” that is much more significant to the Fort Union corridor. Like with permanent residents and employees, this type of mountain accommodation would benefit most from mixing of uses, walkable places, and making good transit up and down the canyons work.

The upshot is that the opportunity lies not in accommodating the relatively small numbers of local motorists who drive up Big and Little Cottonwood Canyons each day at peak recreation seasons, but of gearing the greater mouth of the canyon area to sustainable mixed use communities that weave in overnight visitors, and enable carless travel up and down the canyons.

Consider north-south, along base of mountains, as transit priority

The north-south corridor along the base of the Wasatch, which includes Wasatch Boulevard, I-215 and Foothill Boulevard, provides an intriguing potential high capacity transit option. The route connects a string of highly valued regional employment destinations (University of Utah, Corporate Center/Millrock area, potential gravel pit) and regional recreational destinations (mouths of Millcreek, Big Cottonwood and Little Cottonwood Canyons). These destinations all figure to grow and develop in the future - the Mountain Accord study’s idealized scenarios emphasize mixed-use activity centers, concentrated recreational areas, staging areas, and transit nodes along the base of the mountains.

Connect complementary regional nodes

No other street in the area connects as effectively as Fort Union – and yet its nodes remain disconnected and unrelated to one another. There is an opportunity to use Fort Union to link these disparate nodes into something that is more unified.

Use public investment in streetscape to “set the tone” for the Fort Union corridor

Currently, the character of the public realm of the street on Fort Union is set by the hodge-podge of individual developments along it. Public investment in streetscape – street trees, landscaping, street furniture, lighting, signage, and other improvements – can be the public element to tie the corridor together.

Protect local interests

It is easy for the attention on the Fort Union corridor to become focused on regional-level opportunities, such as mountain visitors and employment centers. However, there is a danger that the City of Cottonwood Heights can aim to gear the Fort Union corridor toward these regional opportunities and not succeed – or continue to be a “pass-through” for this regional traffic headed to work or the mountains.

In this sense, it is important to consider that the Fort Union corridor is an opportunity for the City to take care of itself – perhaps not financially, but from a community sense. Some of Cottonwood Heights’ strategy can be to watch out for its sense of community in this regional stampede of employment and recreational traffic. Fort Union has just as many opportunities to encompass smaller places at the local scale as regional places. The young city’s development of a downtown is an unfinished project, with many of the civic destinations and community attractions, but without the human-scale public infrastructure to support them. Its relatively independent nodes offer the opportunity to develop a place hierarchy, with some nodes geared toward a regional audience and others geared toward a local audience.

Create local transit service

Transit currently does not serve Cottonwood Heights very well, especially for local trips within Cottonwood Heights. Any higher-capacity transit on the Fort Union corridor will likely be regionally-g geared. So then what can be a local transit solution? The City has an opportunity to leverage future visitor-oriented growth at the Big Cottonwood Canyon mouth into local circulator-level transit connecting various nodes on Fort Union, in the Gravel Pit, and the Cottonwood Corporate Center. The City of Holladay is also considering such a service.

Use signature bus stops for placemaking

In key activity centers, the city may want to work with UTA to create special bus stops to highlight Cottonwood Heights. These stops could include larger, nicer shelters, real-time bus information, seating, even community-based public art.

Create Cottonwood Heights downtown

Several assets combine to create the opportunity for a Cottonwood Heights downtown beginning around 2300 East and running to Highland Drive: clusters of commercial and civic destinations, including a county library, school, and post office; some parcels that are

likely re-developable combined with an emergence of local businesses; some existing pedestrian traffic; and excess roadway capacity that allows for complete streets improvements.

Convert Fort Union into complete street east of Highland Drive

Closely related to the opportunity for a Cottonwood Heights downtown is the opportunity to transform Fort Union Boulevard into a complete street east of Highland Drive – running through a potential new downtown. In effect, the City could extend to Highland the 3-lane-plus-bike-lanes cross section currently running from Wasatch Boulevard west to 3000 East. This could not only catalyze a downtown but also help extend the “flavor” of the Cottonwood Canyons further down from the mouth area.

Enabling this street re-design is the low existing use of capacity (25 to 50 percent for LOS C) and even the future capacity (50 to 100 percent for LOS C). At current traffic levels, Fort Union could function at LOS C. A low degree of trips are being generated in this section of corridor, so doubling of volumes could be moved to another route.

Also, reducing the number of lanes of Fort Union would also communicate to visitors that Fort Union is not a pass-through but a locally valued chain of destinations.

Implement operational improvements

A few changes in the traffic operations of Fort Union Boulevard would help make the street more walkable, bikeable and rideable. Some of Fort Union’s walking challenges stem from its 40 mile-per-hour speed limit and its short walk signals – at least three major intersections – Union Park, 1300 East and 2300 East – do not meet the Manual of Uniform Traffic Control Devices (MUTCD) minimum walk speed of 3.0 feet/second. Reducing the speed limit and lengthening the walk signals could help make pedestrians safer.

Improve pedestrian crossing of Fort Union Boulevard

The City could make large improvements in the walking conditions along Fort Union corridor by improving the pedestrian crossing infrastructure. Intersections that are already signalized but only have one side of the Fort Union crossing marked – such as Nye Drive, Whitmore Way, 2700 East, and 3000 East – can mark the other side of the intersection. In addition, the City can consider infilling marked crossings, some of which could warrant consideration of pedestrian-activated signals, such as those that are in use in Salt Lake City.

Reconsider parking on corridor to support corridor goals

Although this study did not examine the supply of and demand for parking in depth, we can recommend ways in which re-thinking the City's approach to parking on the Fort Union corridor can support its economic development, place making, transportation, and other goals. What is the approach to parking that will best support the economic, land use and transportation concept selected for the corridor?

Parking approaches to consider include:

- Conduct parking study to see if uses are over-parked;
- Consider trying to implement shared or district parking;
- Consider where land values are high enough or enough density is proposed to convert surface parking to structured or underground;
- Consider on-street parking to encourage street vitality and to make up for lost parking in redevelopment; and
- For new development, consider reducing parking requirements or instituting parking maximums.

Reduce pedestrian barriers in Union Park Center

The pedestrian analysis makes clear that many pedestrian destinations exist in the Union Park area, surrounded by relatively dense residential areas – but that lack of connections in the street network form barriers between residents and those destinations. Connecting the retail along Park Centre Drive to key streets (cul-de-sac stubs or loops) in the areas to the south, west and north could open up these areas to people living around them.

Consider 2300 East as a north-south bike connector

2300 East is an important street in the Fort Union corridor, especially for bicyclists. It is one of the rare cross streets that provides good connectivity to adjacent cities and the southern parts of Cottonwood Heights but lacks the danger of freeway off-ramps and is low-traffic. A bike lane exists on 2300 East north of Fort Union from I-215 southward to Fort Union. However no bike lane (and no plan for one) exists south of Fort Union. Adding a bike lane on this southern stretch of Fort Union would connect Holladay's bike network to a planned bikeway on Bengal Boulevard via Fort Union.

Make bike/recreation connections between Big Cottonwood Creek and rest of corridor

The Big Cottonwood Creek corridor as it passes through Cottonwood Heights is a major recreational bicycling, jogging and walking corridor – including long regional bike trips that attract riders from throughout the Wasatch Front. In addition, the Mountain Accord planning process has expressed interest in a trail up Big Cottonwood Canyon.

The City has a major opportunity to build off this corridor – to extend the regional recreation network further into the Fort Union Corridor. This could both lure more of this regional recreation active mode traffic into the heart of Cottonwood Heights, especially if the City is able to develop a downtown along Fort Union. It would also give Cottonwood Heights residents safer and easier access to the regional trail network in the Big Cottonwood area and in adjacent places like Holladay.

The City should consider how to extend this bike corridor/network into heart of Fort Union corridor safely, comfortably and legibly.

Potential routes include:

- Fort Union Boulevard itself, via a multi-use path;
- A “wiggle” route between the Cottonwood Corporate Center and the Highland/2300 East area of Fort Union that avoids the steep slopes of the easternmost part of Fort Union;
- The I-215 corridor;
- The East Jordan Canal; and
- 2300 East (via a planned bike route in Holladay along 6200 South)

Enhance existing cross section with streetscape

Even within the existing right-of-way and with the same number of through lanes, Fort Union Boulevard can be improved by reducing the space given to moving traffic. The City could narrow lanes, eliminate the small shoulder often between the outer lane and the curb. With the extra space, the city could extend sidewalks from 9 feet to about 12 feet; install medians and turn pockets in place of the continuous center turn lane; and install trees and streetscape.

Celebrate Fort Union’s natural geography

Cottonwood Heights and the Fort Union corridor have remarkable natural geography, having been built on alluvial deposits at the mouths of the Cottonwood Canyons. There are two main aspects to this – the topography of the bluff along which the upper part of Fort Union



runs and the hydrography of Big Cottonwood Creek below the canyon mouth. This is not to mention the drama of the central Wasatch Mountains rising immediately adjacent. The combination of these factors creates a series of dramatic views in the eastern end of the Fort Union corridor that the street and the places along it could emphasize. They also create the potential for more recreational opportunities in the shallow canyon between Fort Union and Wasatch Boulevard, continuing up into a redeveloped Gravel Pit. Active transportation in this natural “amphitheater” has not been designed as holistically as it could be; a thorough re-thinking of this whole area could leverage these natural attributes while creating a recreational network fitting right in with the recreational emphasis emerging here, creating memorable places, and asserting Cottonwood Heights’ identity.



Future Growth and Potential

Demographics – Household Characteristics and Projections

Population and Employment Growth

The City's 2014 population is estimated at 34,994 persons with an estimated population⁴ of 12,216 along Fort Union and 3000 East. Cottonwood Heights is projected to have an average annual growth rate (AAGR) of less than one percent until 2030 – the lowest rate in the County along with Alta, and an increase of approximately 5,300 residents. Cottonwood Heights is largely built-out compared to other parts of the County which accounts for its lower growth rate. Cottonwood Heights is considered an extremely desirable place to live and work, but little land is available for future development. Therefore, future population growth will need to come from: 1) increased residential densities; 2) future development at the gravel pits; and 3) changing land uses to higher-density residential. It is important to note that both current population and employment projections from Wasatch Front Regional Council do not account for development at the gravel pit, the impacts of which will be explored in more detail below.

Table 26: Population Growth Projections, Salt Lake County

	2010	2020	2030	2010-2030 Absolute Growth	2010-2030 AAGR, 2010 – 2030
Salt Lake County	1,029,655	1,180,859	1,340,665	311,010	1.3%
Alta	383	400	441	58	0.7%
Bluffdale	7,598	10,099	16,777	9,179	4.0%
Cottonwood Heights	33,433	37,336	38,738	5,305	0.7%
Draper	40,532	46,420	52,680	12,148	1.3%
Herriman	21,785	27,003	38,458	16,673	2.9%
Holladay	26,472	29,641	31,062	4,590	0.8%
Midvale	27,964	33,010	41,207	13,243	2.0%
Murray	46,746	53,748	61,798	15,052	1.4%

⁴ Estimated by totaling 2010 Census Blocks along corridor, dividing by the City's 2010 population to determine a percentage of the City's total population and multiplying that proportion with the more recent 2014 population estimate given above.

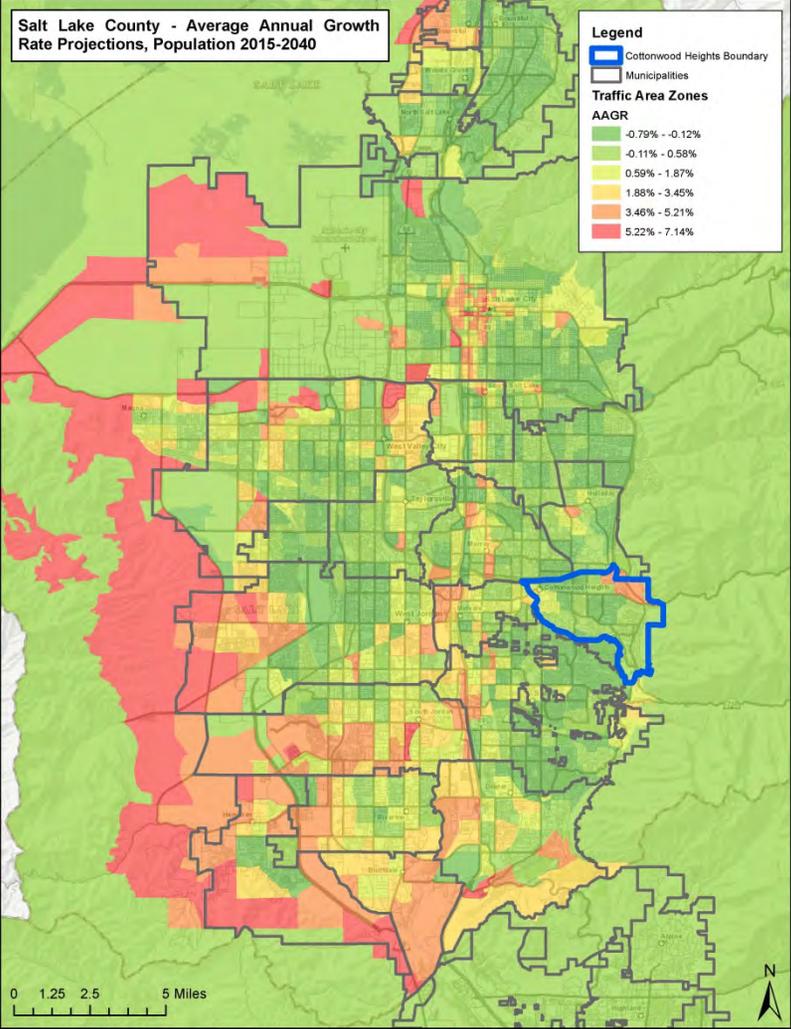
	2010	2020	2030	2010-2030 Absolute Growth	2010-2030 AAGR, 2010 – 2030
Riverton	38,753	44,339	50,150	11,397	1.3%
Salt Lake	186,440	210,592	227,824	41,384	1.0%
Sandy	87,461	97,826	102,107	14,646	0.8%
South Jordan	50,418	59,509	74,258	23,840	2.0%
South Salt Lake	23,617	26,845	29,693	6,076	1.2%
Taylorsville	58,652	65,637	66,282	7,630	0.6%
West Jordan	103,712	118,872	135,254	31,542	1.3%
West Valley City	129,480	145,400	150,641	21,161	0.8%
Balance of Salt Lake County	146,209	174,183	223,295	77,086	2.1%

Source: Wasatch Front Regional Council

The map below shows that Cottonwood Heights is similar to its neighbors – largely built out and not projected to grow significantly without in-fill development. The major growth in the Valley is expected to occur in the southern and western portions of the County.



Figure 58: Average Annual Growth Rate Projections



Employment growth projections provided by Wasatch Front Regional Council follow a similar trend – no significant gains in employment due to the perceived lack of vacant land.

Table 27: 2015-2040 Employment Growth Summary

	Retail	Industrial	Other	Total
Salt Lake County	23,726	15,120	187,169	226,015
Cottonwood Heights	-806	-121	1,756	829

Source: Wasatch Front Regional Council

However, these growth rates do not take into account the possible significant growth that would accompany a mixed-use development at the gravel pit with a significant amount of Class A space. Assuming that between 30 and 50 acres of the gravel pits are developed as office space would result in approximately 1,200,000 to 2,000,000 square feet of office on the site and a floor area ratio (density) of between 0.9 and 1.0. Most office space includes 200 square feet per employee and therefore the gravel pits alone could account for an additional 6,000 to 10,000 employees in the City.

Based on the number of jobs expected to be added to the City, the population could be expected to increase by nearly 10,000 people.

Table 28: Potential Population Growth with Gravel Pit Development

	Amount
Jobs Created	6,000 - 10,000
Capture Rate of 1/3	2,000 - 3,300
Household Size	2.92
Population Increase	5,840 - 9,636

Retail Projections

Retail absorption in the centraleast portion of Salt Lake County has been nonexistent over the past decade. Although new product has been built, total square footage has not increased, suggesting that new product is simply replacing older, aging retail sites. The southern portion of the County accounts for nearly half of all retail absorption due to the rapid population growth in that area. Based on this analysis, the centraleast part of Salt Lake County absorbs an average of 56,481 retail square feet per year. Cottonwood Heights would be competing with South Salt Lake, Murray, Holladay and Midvale for a “fair share” of this retail growth.

Table 29: Historical Retail Absorption in Salt Lake County by Geographic Location

Absorption	Average Absorption per Year, 2004-2013	Recent Trends, 2010-2013, Average Absorption per Year
Northeast	(27,591)	87,639
Centraleast	(75,364)	(76,191)
Southeast	192,806	196,173
Northwest	5,846	(9,673)
Centralwest	202,789	6,473
Southwest	303,913	96,510
TOTAL	602,398	300,931

Most of the retail growth⁵ has taken place in community centers, followed by neighborhood centers. The scale of both community centers (west end of Fort Union) and neighborhood centers (Highland Drive and 2300 East) fit well within the Fort Union Corridor.

⁵ Retail absorption and retail growth differ in that retail growth includes all new product built. Absorption only includes the additional square footage occupied.

Table 30: Historical Retail Growth in Salt Lake County by Retail Type

Retail by Type	Increase 2004 - 2013	Average Growth per Year, 2004-2013	Recent Trends, 2010-2013, Average Growth per Year	% of Total 2013
Regional Mall	(995,978)	(110,664)	207,537	10%
Regional Center	2,697,473	299,719	74,551	18%
Community Center	5,286,322	587,369	56,258	40%
Neighborhood Center	3,463,637	384,849	81,750	20%
Anchorless Center	2,680,913	297,879	79,716	12%
TOTAL	13,132,367	1,459,152	499,812	

Based on the above absorption data, as well as the slow population growth projected, Cottonwood Heights will need to increase its retail absorption through: 1) recapture of lost sales (leakage); 2) increased employment which make purchases in the community; and 3) increased residential densities to support additional population.

Growth in buying power alone will not generate significant new retail development in the City. Based on population growth projections, and average retail purchases per capita, population growth between 2013 and 2030 will only support approximately 200,000 square feet over the 17-year time period. However, a recapture of lost sales tax leakage will support nearly three times that amount in the near term.

Table 31: Buying Power Growth Projections

Cottonwood Heights	Buying Power	SF Supportable	Average SF Supportable per Year
Population Growth 2013-2030*	\$58,822,193	196,074	7,262
Leakage 2013	\$165,187,870	550,626	20,394
Total	\$224,010,064	746,700	27,656

Lost sales (leakage) represents an opportunity for future retail development. The leakage analysis has been combined with a merchant void analysis, provided by Commerce CRG, in order to offer specific recommendations to the City for retail development.

Table 32: Merchant Void Analysis and Retail Opportunities

Categories with High Sales Leakage or Low Capture Rate			Merchant Data from Merchant Void Analysis - Best Options			
Retail Category	Leakage	Capture Rate	Outlets Not in CH, Further Than 4 Miles	Closest Location to CH	# of Locations in SLCo	Notes
Accommodation	(\$18,040,442)	10.79%				
Motor Vehicle and Parts Dealers	(\$72,431,250)	7.68%				
Miscellaneous Stores (Florists, Office Supply, Gift)	(\$16,003,204)	33.05%				
Repair and Maintenance	(\$13,686,242)	12.80%				
			Econo Lube & Tune	8.12 Miles NW	1	
			Grease Monkey	7.31 Miles SW	3	
			Meineke Car Care	6.93 Miles SW	4	
			Precision Tune Auto Care	4.33 Miles NW	3	
			Midas	4.18 Miles NW	5	
Grocery Stores (sub-cat)	(\$13,088,854)	75.23%				Liquor store skews full category, grocery sub-category pulled out independently
			Stan's Market	9.58 Miles NW	1	
			Petersons Market	9.12 Miles SW	1	
			Davis Food & Drug	9.07 Miles NW	1	
			Super Saver	8.42 Miles NW	2	
			John's Marketplace	7.87 Miles NW	1	
			Wal-Mart Neighborhood Market	6.42 Miles SW	4	
			Rancho Markets	6.34 Miles NW	6	
			Winco Foods	5.09 Miles NW	2	
			Harmons	2.92 Miles SW	11	Closer than 4 Miles, but a major chain with better ability to locate
			Fresh Market	2.78 Miles SW	10	Closer than 4 Miles, but a major chain with better ability to

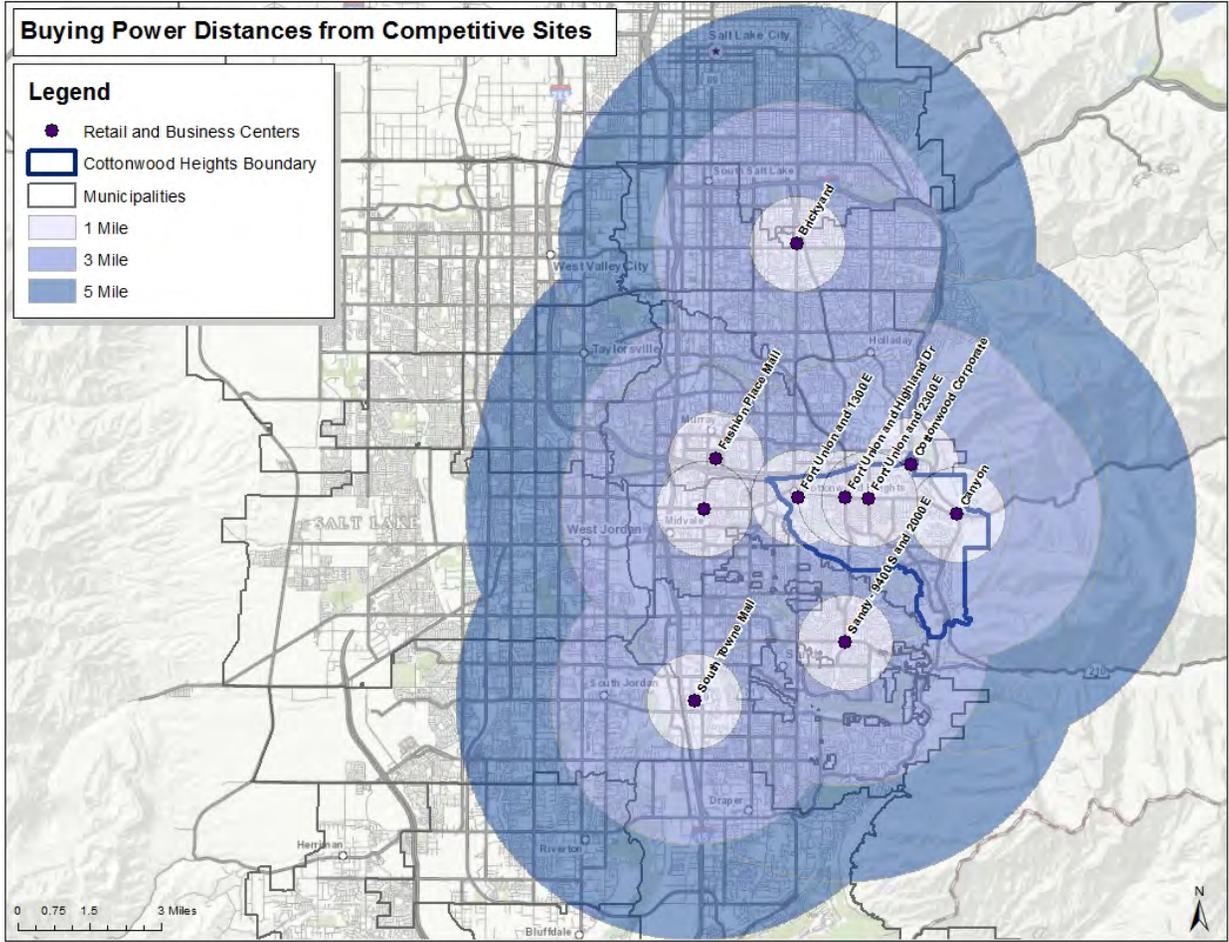
Categories with High Sales Leakage or Low Capture Rate			Merchant Data from Merchant Void Analysis - Best Options		
					locate
Furniture and Home Furnishings	(\$11,145,721)	6.15%			Excluded IKEA
			West Elm	11.25 Miles NW	1
			Bassett Furniture Gallery	8.71 Miles NW	1
			Ashley Furniture Homestore	8.26 Miles SW	2
			Furniture Row	8.20 Miles SW	1
			Buy Design	6.74 Miles NW	1
			San Francisco Design	6.60 Miles NW	1
			The Warehouse	6.59 Miles NW	1
			Granite Furniture	6.51 Miles SW	2
			Form & Function	6.32 Miles NW	1
			Ethan Allen	5.40 Miles SW	1
			John Paras Furniture	5.16 Miles SW	2
			Thomasville	4.75 Miles NW	1
			Z Gallerie	4.06 Miles NW	2
Clothing and Accessories	(\$9,654,085)	61.23%			Left out outlets normally found in mall setting
			David's Bridal	9.07 Miles NW	1
			Dress Barn	6.33 Miles NW	3
			Casual Male	4.19 Miles NW	1
			Men's Wearhouse	4.12 Miles NW	4
			Carter's	4.01 Miles NW	4
Sporting Goods, Hobby, Book and Music	(\$7,628,974)	49.59%			
Gasoline Stations	(\$6,652,381)	54.45%			Excluded Membership Clubs
			Love's	12.53 Miles NW	1
			Flying J	9.32 Miles NW	1
			LNG	9.25 Miles NW	3
			Exxon	8.73 Miles SW	2
			ProStop	5.92 Miles SW	3

Categories with High Sales Leakage or Low Capture Rate			Merchant Data from Merchant Void Analysis - Best Options		
			Tesoro	4.00 Miles NW	11
			Holiday	3.67 Miles NW	6
					Major chain with SLCo presence
Food Services and Drinking Places	(\$6,019,939)	89.41%			
Amusement, Gambling, and Recreation	(\$4,502,581)	25.10%			
Personal and Laundry Services	(\$1,888,194)	60.92%			
Performing Arts, Spectator Sports	(\$1,659,124)	4.68%			
Museums, Historical Sites	(\$424,631)	0%			

Competitive Buying Power Analysis – Regional

Retailers consider population and employment levels to determine whether a new outlet would be sustainable at a given site. Using population and employment projections developed by Wasatch Front Regional Council (WFRC) in Traffic Analysis Zones (TAZ), the projected growth in employment and population within one, three and five-mile radii of a sampling of sites along Fort Union was analyzed compared to other nearby competitive sites in the County. The map below shows these sites using the distance of these radii.

Figure 59: Buying Power Distances from Competitive Sites



Using these geographic areas to assess current and projected population and employment indicates that Cottonwood Heights – especially at Fort Union and 1300 East – has competitive population and employment numbers within given radii when compared to other retail centers in the County. The west end of Fort Union has population and employment figures that are only surpassed by Fashion Place in Murray and Fort Union/State Street in Midvale. The west end of Fort Union has similar drawing power when compared to Brickyard Plaza in Salt Lake City.

Table 33: Population Projections

	2015	2020	2030	2040
Canyon Entrance				
3 Miles	48,744	47,260	48,895	49,815
5 Miles	175,117	170,770	178,270	184,255
Cottonwood Corporate				
3 Miles	76,466	74,722	77,950	80,691
5 Miles	235,302	231,492	243,298	253,772
Fort Union and 1300 E				
3 Miles	140,041	139,543	148,709	157,557
5 Miles	334,221	340,132	368,522	394,049
Fort Union and 2300 E				
3 Miles	110,630	108,140	113,145	117,370
5 Miles	271,777	272,776	291,931	309,020
Fort Union and Highland Drive				
3 Miles	124,502	122,067	128,053	133,173
5 Miles	292,410	295,654	318,381	338,522
Midvale – Fort Union and State				
3 Miles	142,821	149,236	165,877	181,974
5 Miles	389,163	397,792	433,682	466,706
Sandy - 9400 S and 2000 E				

	2015	2020	2030	2040
3 Miles	126,286	123,652	129,581	134,133
5 Miles	241,362	245,975	266,959	285,421
South Towne Mall				
3 Miles	119,518	126,603	143,316	159,426
5 Miles	304,439	321,657	362,769	402,850
Fashion Place Mall				
3 Miles	146,892	151,357	165,515	178,477
5 Miles	395,016	401,351	434,451	465,111
Brickyard				
3 Miles	167,882	164,800	171,280	176,114
5 Miles	341,344	341,927	363,347	381,544

Source: WFRC, ZBPF

As with retail, employment numbers are highest at the west end of Fort Union, generally surpassing Sandy's numbers, but falling short of locations such as Fashion Place in Murray, Brickyard in Salt Lake City, and Fort Union at State Street in Midvale.

Table 34: Employment Projections

	2015	2020	2030	2040
Canyon Entrance				
3 Miles	21,704	21,247	21,547	22,168
5 Miles	68,980	68,074	69,973	72,872
Cottonwood Corporate				
3 Miles	39,039	38,538	39,601	41,373
5 Miles	124,840	124,848	129,620	135,871
Fort Union and 1300 E				
3 Miles	82,685	82,582	85,523	89,471
5 Miles	196,082	200,371	211,682	224,753

	2015	2020	2030	2040
Fort Union and 2300 E				
3 Miles	50,474	49,827	51,212	53,390
5 Miles	150,746	152,810	160,449	169,726
Fort Union and Highland Drive				
3 Miles	62,827	62,070	63,667	66,088
5 Miles	161,823	164,837	173,816	184,495
Midvale – Fort Union and State				
3 Miles	101,246	104,211	110,904	118,593
5 Miles	235,768	241,040	255,014	270,963
Sandy - 9400 S and 2000 E				
3 Miles	32,664	32,363	33,294	34,590
5 Miles	140,497	145,222	154,478	164,409
South Towne Mall				
3 Miles	86,038	91,641	100,072	108,414
5 Miles	154,664	165,488	186,373	205,096
Fashion Place Mall				
3 Miles	95,378	97,718	103,556	110,283
5 Miles	240,263	245,146	258,958	275,089
Brickyard				
3 Miles	112,554	112,489	115,918	120,354
5 Miles	323,552	323,209	332,402	345,469

Source: WFRC, ZBPF

These numbers indicate the importance of increasing the density of retail development at the west end of Fort Union, where population and employment numbers are strongest, and thereby increasing the City's sales tax base.

Office

Cottonwood Heights is the premiere site for suburban Class A office space in the Salt Lake Valley. Vacant land at the gravel pits will provide a significant opportunity for the City to continue to capitalize on its image and reputation for top-quality employment and to increase its tax base in the future. Based on developer input, building heights of 10 to 15 stories could be achieved at the gravel pits in the near term – perhaps even higher in the future. Rents are strong in the City – similar to those achieved in downtown Salt Lake City and can therefore support the higher cost of construction of greater building heights.

Cottonwood Corporate currently has buildings ranging from five stories to six stories in height. Millrock Technology Park in Holladay has buildings ranging from three to five stories above ground (has some below grade – garden level development). Orem is planning for buildings of nine stories in height at University Place and Sandy City recently announced plans for The Cairns which includes a 25-story residential tower. Assuming that between 30 and 50 acres of the gravel pits are developed as office space would result in approximately 1,200,000 to 2,000,000 square feet of office on the site and a floor area ratio (density) of between 0.9 and 1.0. Most office space includes 200 square feet per employee and therefore the gravel pits alone could account for an additional 6,000 to 10,000 employees in the City.

If future office space absorption is similar to past trends, the suburbs can expect to absorb over 500,000 square feet of space per year. The average absorption for the past decade is 520,050 square feet; the average for the past three years is slightly higher at 550,731. Absorption of Class A space has represented between 52 percent and 72 percent of this amount. Cottonwood Heights would be the premiere suburban location for Class A space and should be able to capture at least half of new Class A office development. Therefore, assuming a total of 1,200,000 square feet, this space could be absorbed in the City in roughly nine years, (assuming an absorption rate between 100,000 and 150,000 square feet per year). Absorption of 2,000,000 square feet would nearly double the time period.

Office space provides excellent property values for the City's tax base, and Class A space has the highest taxable values on a square foot basis. Additional office development will benefit not only the City's property tax revenues, but will also provide demand for employee services, such as daytime eating, gasoline, office supplies and convenience purchases. Development of Class A space will also generate demand for other, complementary businesses that could locate in less expensive space along the Fort Union Corridor. These businesses could include professional services such as insurance, advertising and medical offices.

Interviews with brokers and developers suggest that office buildings located along Fort Union would generally be two stories in height, with buildings of three to four stories located at key intersections (Highland Drive, 2300 East). Absorption of office space along Fort Union would be much slower than that projected for the gravel pits and would not include Class A space. Average absorption for Class B suburban office space is 120,000 square feet per year. Cottonwood Heights, due to spinoff effects from the development at the gravel pits, should be able to capture ten percent of this demand, or over 10,000 square feet of space per year, assuming that vacant or redeveloped properties are available for development.

Cottonwood Heights currently has an employment ratio of 0.39 jobs per capita, suggesting that the City is still largely residential in nature. However, neighboring cities have higher job per capita ratios indicating that the City could easily support more employment.

Table 35: Jobs per Capita Ratios

	Population 2013	Employment 2013	Jobs per Capita Ratio
Bluffdale	8,275	3,044	0.37
Cottonwood Heights	34,559	13,441	0.39
Draper	42,215	25,236	0.60
Herriman	23,235	2,012	0.09
Holladay	27,385	5,628	0.21
Midvale	29,391	14,499	0.49
Murray	48,745	43,011	0.88
Riverton	40,351	8,976	0.22
Salt Lake City	193,379	250,388	1.29
Sandy	90,450	43,124	0.48
South Jordan	52,989	20,030	0.38
South Salt Lake	24,542	36,370	1.48
Taylorsville	60,666	18,669	0.31
West Jordan	108,045	29,713	0.28
West Valley City	134,064	67,379	0.50

The official employment growth projected for Cottonwood Heights is not significant, but it is important to note that it does not take into account the potential for development at the gravel pits. The official projections, without the gravel pits, are as follows:

Table 36: 2015-2040 Employment Growth Summary

	Retail	Industrial	Other	Total
Salt Lake County	23,726	15,120	187,169	226,015
Cottonwood Heights	-806	-121	1,756	829

However, development at the gravel pits will add a significant number of new jobs in the City. It is anticipated that, of the 300 acres at the gravel pits, roughly 100 to 150 acres are developable. Limitations to development at the gravel pits includes grade issues, as well as fault lines and a 60" water viaduct bringing water down from the Canyons that passes through the area.

As stated previously, assuming that between 30 and 50 acres of the gravel pits are developed as office space would result in approximately 1,200,000 to 2,000,000 square feet of office on the site and an additional 6,000 to 10,000 employees in the City.

Housing

Housing densities can increase along the Fort Union corridor. Based on interviews with local developers, this would be a strong condominium market area. While the condo market is not robust at the present time, due to the difficulties associated with financing condo units, this market will return and will be viable along Fort Union. Townhomes and apartment (rental) units will do well along the corridor.

Existing multi-family product in Cottonwood Heights is fairly old. City building permit records show only 12 units constructed since 2005. Many of the larger complexes in the City appear to have been built approximately 25 years ago. Therefore, new product would bring in higher rents than are now being achieved in the City.

Table 37: 2014 Multi-Family Rental Unit Data

Cities	Avg \$	Avg SF	\$/SF	Vacancy
Cottonwood Heights	\$938	901	\$1.04	4.50%
Draper	\$980	964	\$1.02	6.90%
Midvale	\$860	860	\$1.00	4.80%
Murray	\$839	894	\$0.94	5.20%
Riverton	\$921	1,043	\$0.88	6.70%
Salt Lake City	\$865	793	\$1.09	5.40%
Sandy	\$943	846	\$1.11	6.00%
South Jordan	\$1,140	1,094	\$1.04	9.20%
South Salt Lake	\$709	656	\$1.08	4.20%
Taylorsville	\$787	814	\$0.97	4.60%
West Jordan	\$866	923	\$0.94	4.70%
Downtown Salt Lake	\$941	797	\$1.18	3.70%

Source: Equimark

Apartment units would likely range from \$140,000 to \$180,000 per door cost; condominiums and townhomes would likely have an average sale price of \$185,000 - \$190,000 per unit, with an upper tier up to \$250,000. In the near term, 3-4 stories are feasible at Union Park and Highland Drive; within the next 3-4 years there could be opportunity (assuming rents rise sufficiently) for 5-6 story buildings (retail on ground floor) at the major intersections along Fort Union. For-sale townhomes would fit nicely in between the commercial and higher-density residential nodes of apartment buildings.

If light rail is constructed along Fort Union, it becomes easier to do the higher densities but, even with light rail, there is not a market for buildings higher than seven stories due to construction costs and the achievable rents along Fort Union. The addition of light rail would also greatly accelerate residential development along the Corridor. In the short term, demand is mainly for rental product constructed in the market but, over time, the “for sale” townhome market could account for one-fourth to one-third of new product in the area. If vacant or reasonably-priced land could be made available, 100 to 150 units of multi-family product could be absorbed in Cottonwood Heights annually. The average absorption countywide for multi-family units for the past five years has been 1,208 units per units per year.

Therefore, this represents between eight percent and twelve percent of all multi-family units countywide. One developer even suggested that this was conservative and that 200 units per year is achievable – which would represent 17 percent of the market.

Employment growth can encourage residential growth, but developers generally state that there is a greater connection between where people “play” and where they “live,” than where they “work” and “live.” The spectacular appeal of the canyons can, and should, play a large role in future residential development along Fort Union.

Suburban areas typically cater to larger household sizes and require more bedrooms per unit. A common breakdown of unit types in a suburban area would be 40-50 percent one-bedroom, 40-50 percent two-bedroom, and 10 percent three-bedroom units. Conversely, urban areas generally market to smaller household sizes, with 60 percent one-bedroom units and 40 percent two-bedroom units. Sugar House, a transitional area, has a mix of 40 percent one-bedroom, 40 percent two-bedroom, 10 percent three-bedroom, and 10 percent studio apartments.

While recreational amenities are still important to consumers, developers claim that lifestyle amenities, such as granite countertops and laundry hookups, are increasingly important. Furthermore, when it comes to two-bedroom units, consumers prefer to have two bathrooms, not one.

Most developers state that pools are becoming less important to consumers, while exercise facilities, hot tubs, common areas, and open space are still very common and important. Other optimal amenities include clubhouses with a gathering room and a kitchen, connectivity to trails, and BBQ pits.

Parking is an extremely important amenity. Some developers believe that 1.8 to 2 stalls per unit would be needed for development in this area, adding that parking should be off-street, as tenants may be hesitant to park outside and be subject to break-ins. The addition of parking structures would add significantly to the overall cost of the development.

Vacant Parcels and Development Densities

There is little vacant land along the project corridor, highlighting the need for smart in-fill and increased retail density. The only significant vacant land is the gravel pit located just outside the corridor. The west end especially lacks vacant land but could benefit from densification within the commercial area: condensed parking and elimination of dead space between stores, improved signage and visibility, and added and more diverse retail options.

The current floor area ratio (ratio of building square feet to land area) at the west end of Fort Union is 0.28. This suggests that there is opportunity for increased densification of this area with additional retail development. Comparable floor area ratios at Holladay Village (smaller-scale development) and Station Park range between 0.37 and 0.57.

Table 38: Cottonwood Heights Density at 1300 East and Fort Union

Cottonwood Heights Density Comparison – West End of Fort Union

Retail square feet	919,366
Acres	75.44
Floor Area Ratio	0.2798

Table 39: Holladay Village Density

Holladay Village	NE	SE	SW	NW
Acres	3.1	2.4	2.4	2.5
Square Feet	59,884	47,737	43,068	62,064
Floor Area Ratio	.45	.46	.41	.57

Figure 60: Holladay Village



Table 40: Farmington Station Park Density

Farmington Station Park Comparison

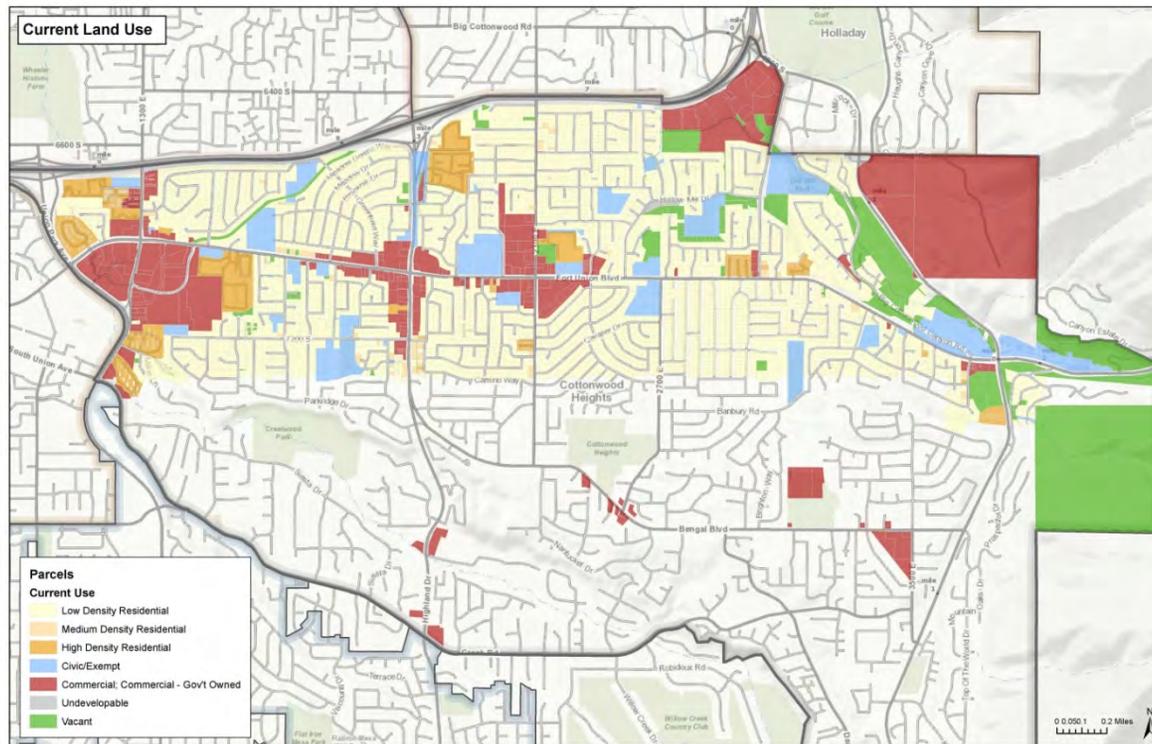
Retail square feet planned	1,000,000
Acres	62
Floor Area Ratio	0.370

On the east end of Fort Union (at the mouth of the Canyon), there is some vacant land, but much of it is steep and undevelopable. Rather than trying to fit significant retail and commercial uses in this area, the land can be used to develop the “resort feel” within the City as a connection to the Canyon. This area can become the gateway that ushers travelers into the City and down Fort Union. Options could include a clock tower, Olympic displays, or fire pits with food vendors. This feel could then continue down Fort Union, connecting the Canyon to the rest of the City and providing a rest stop or base camp for Canyon users with restaurants, hotels, and entertainment. Connections with the Canyon should also include recreation-related development like trails and bike paths.

There is a significant amount of vacant land at the gravel pits, just outside the study area of this project and analysis. While only a portion of the gravel pits are considered to be developable – approximately 100 to 150 acres of the total 300 acres – this area can have a major impact on attracting regional-scale office and retail to Cottonwood Heights, as well as further capitalizing on the resort market located up the Canyons.

Along the full corridor, and especially near the existing retail nodes at Highland Drive and 2300 East, housing densities should increase over time to reduce single-family driveways on the main corridor.

Figure 61: Current Land Use



Land Use and Transportation Alternative Concepts

Development of Alternatives

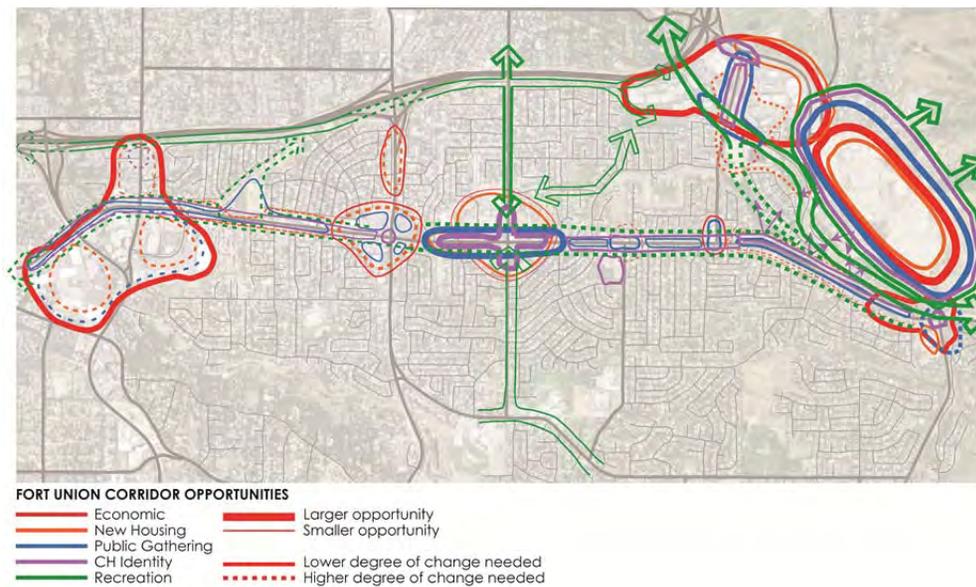
Our analysis of the Fort Union corridor points toward several key findings:

- 1) The **east and west ends of the Corridor** (including the land at the gravel pits) will provide the most economic impact in terms of property and sales tax revenues.
- 2) Opportunities exist all along the Corridor for **placemaking** – creating destinations where people linger longer. These types of places add value for cities by enhancing image, as well as by increasing local property values and retail sales.
- 3) The City needs to bring the **Canyon feeling** down into Fort Union through design, transportation modes and business types that reflect a resort and recreational atmosphere.
- 4) If Fort Union is developed as a regional corridor, rather than as a local road, developers state that development along the corridor will be accelerated and that **greater densities** (i.e., building heights) could be achieved at the key intersections along the corridor.
- 5) Under any scenario, the City needs to focus on **recapturing lost sales tax leakage**.
- 6) **Retail densities** at the west end need to be increased and plaza areas need to be created to keep the area vibrant and competitive.
- 7) A significant **gateway** needs to be created at the east end of Fort Union to invite travelers into the heart of the City.
- 8) Several factors - Fort Union's unique connective role in the east-west street grid; the opportunity to extend bicycling west from the Big Cottonwood area; the clusters of pedestrian destinations waiting to be tied together by a walkable street - point toward Fort Union Boulevard needing to be a **complete street** supportive of all transportation modes.

- 9) The Fort Union corridor is not leveraging the **natural and recreational** corridors and hubs in the mouth of Big Cottonwood Canyon. This is certainly an economic and community-building issue, but it is a transportation issues as well. The City should look for ways to bring the activity and flavor of the Cottonwood canyons into the greater Fort Union area. From a transportation perspective this means active transportation modes.
- 10) The Fort Union corridor suffers from indecision between being a **regional corridor and being a local corridor**. Currently it is neither – it is too focused on high-speed auto traffic with too little active transportation support to be a local corridor. But it does not have enough traffic, high-capacity transit, and land use intensity to be a proper regional corridor.

In developing different alternatives for the future of Fort Union Boulevard, key findings were used to leverage opportunities, resulting in a diagram that overlays combined economic, land use and transportation opportunities.

Figure 62: Opportunities to achieve corridor goals

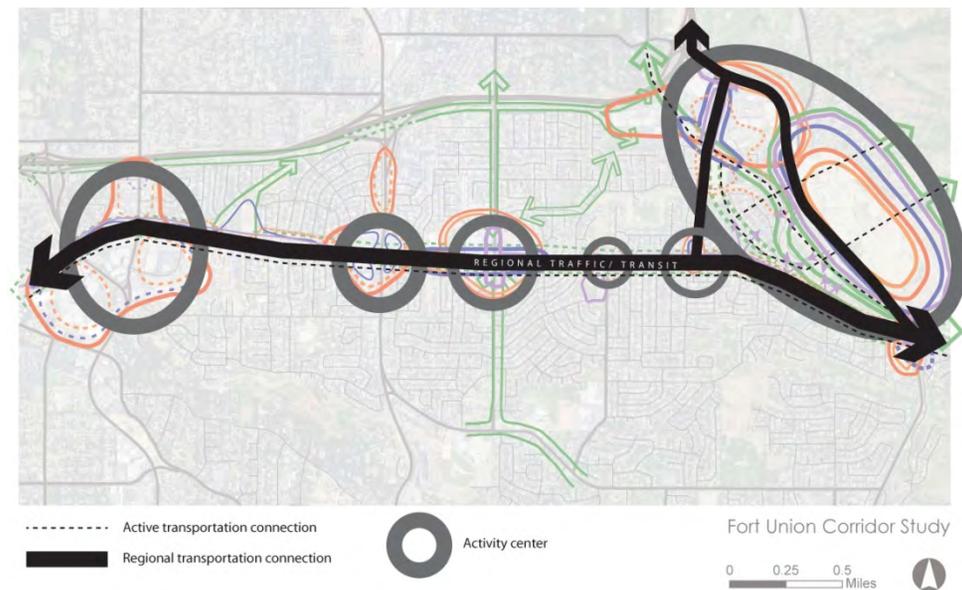


Patterns emerged that began to point the way toward specific alternatives:

- The largest opportunities appear to emerge on the east end of the corridor in the corporate center and gravel pit areas
- There are also large economic opportunities on the west end of the corridor
- There are a string of varying opportunities along the Fort Union corridor
- The pattern of opportunities along the Fort Union corridor is generally of larger, regional-focused economic opportunities on the ends of the corridor with the more locally focused opportunities in the center of the corridor.

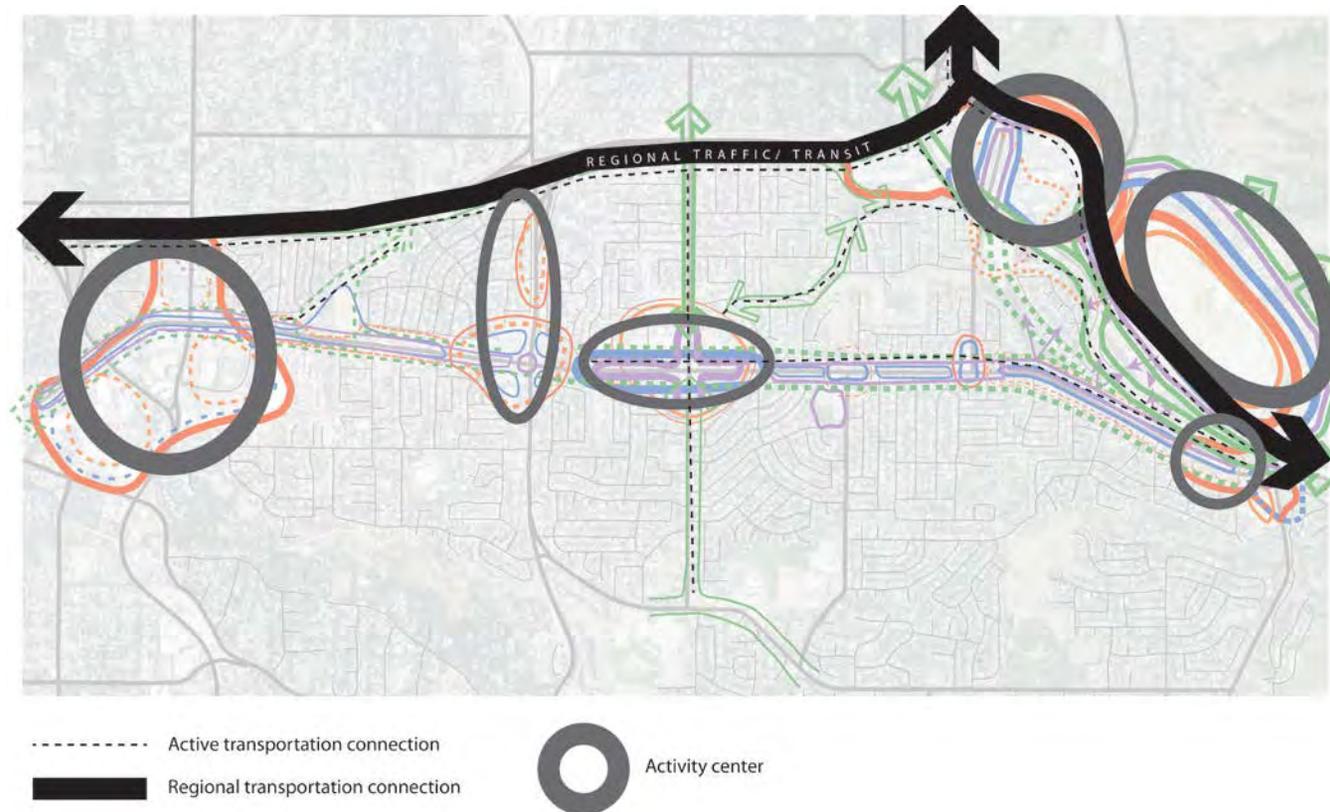
One way to capture these opportunities is to attempt to capture all of them via a regional corridor along Fort Union Boulevard:

Figure 63: Concept to capture corridor opportunities by converting Fort Union into a regional transit corridor



Another way to capture these opportunities, though, is by acknowledging that Wasatch Boulevard and I-215 most directly connect to the larger regional economic, recreational and gathering opportunities, while Fort Union is more important for hosting the locally focused opportunities for public gathering and placemaking:

Figure 64: Concept to capture corridor opportunities by allowing Fort Union to be a local corridor



So while several alternatives were considered for land use planning and the street cross section, including maintenance of the existing lane configuration with streetscape improvements; the addition of fixed guideway transit to the existing lane configuration in the existing

right-of-way; and the addition of fixed-guideway transit to a 3-lane mixed flow cross section; these two Land Use Concepts emerged during the planning and design process. These two alternatives were considered because they create the bold transformation the City desires to explore (albeit in different ways) and because they represent distinct approaches that can be instructive for a high-level study like this one.

Both of the alternatives embody a complete street/complete corridor approach. Both attempt to bring the activity and flavor of the Cottonwood Canyons down into the Fort Union corridor. What distinguishes the alternatives is that Alternative 1 develops and commits Fort Union into a proper regional corridor, while Alternative 2 develops and commits Fort Union into a quality local corridor.

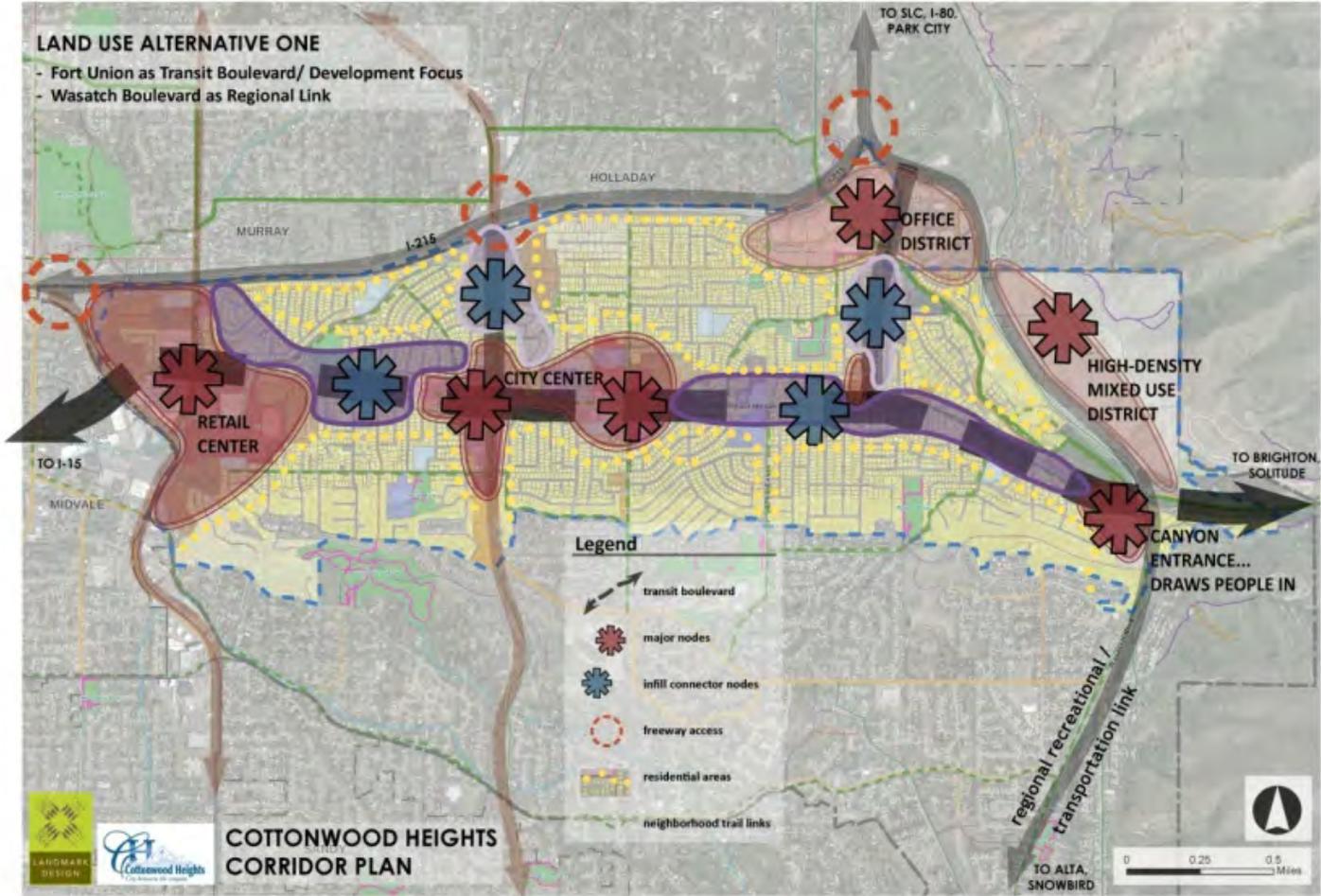
Land Use and Transportation Concept 1 - Fort Union as Regional Transit Corridor

This concept envisions that Fort Union Boulevard will become a Transit Boulevard and regional transportation link. In order to support this change, land use improvements will be focused at major and minor nodes located along the route. The option supports the development of each node into a specific place, with 1300 East becoming the intensive “West End” retail development zone; Highland Drive and 3000 East merging to become an extended “Town Center;” and Wasatch Boulevard transformed into a special niche market place called “East End.”

Special care is required to ensure the negative impact of such change is minimized for the surrounding residential neighborhoods. This will be achieved through the selective conversion of homes along the boulevard into transitional properties, which would eventually be purchased to facilitate a thorough boulevard transformation. Further enhancing the transformation would be the completion of the Corporate Center located near 6200 South as currently planned, and the establishment of a major new mixed-use district further to the south at the gravel pit site. In order to encourage better exchanges between the nodes, a range of open space and streetscape enhancements should be implemented along Fort Union as well as key north-south running roadways, including Wasatch Boulevard, 3000 East and Highland Drive.



Figure 65: Land Use Alternative 1 – Fort Union as Transit Boulevard



Transportation Concept

Alternative 1 takes the measures to transform Fort Union into a major regional multi-modal corridor – a string of connected mixed-use centers that forms the major connection between the Wasatch Front spine of I-15, TRAX, and FrontRunner in Midvale in the west and the greater mouth of Big Cottonwood Canyon and Wasatch Boulevard corridor on the east. Alternative 1 is a big vision, and so it intends to transform not only Fort Union Boulevard but also the Big Cottonwood Creek “amphitheater” between Fort Union and Wasatch Boulevard, matching the likely scale of the Gravel Pit redevelopment.

The Boulevard

The primary transportation tool that Alternative 1 employs to help create this regional corridor is a boulevard. Boulevards have gained recent popularity as ways to accommodate large volumes of urban traffic while also supporting other transportation modes as well as place making; they are a way to make a humane, multi-modal regional street, a counter-measure to un-thought-out arterials like Fort Union. Examples of traditional boulevards include the Champs-Elysees in Paris and 9 de Julio in Buenos Aires. An example of a more recent modern boulevard is Octavia Boulevard in San Francisco.

Figure 66: Boulevards traditional in France and Japan (left and center) and modern in San Francisco (right)

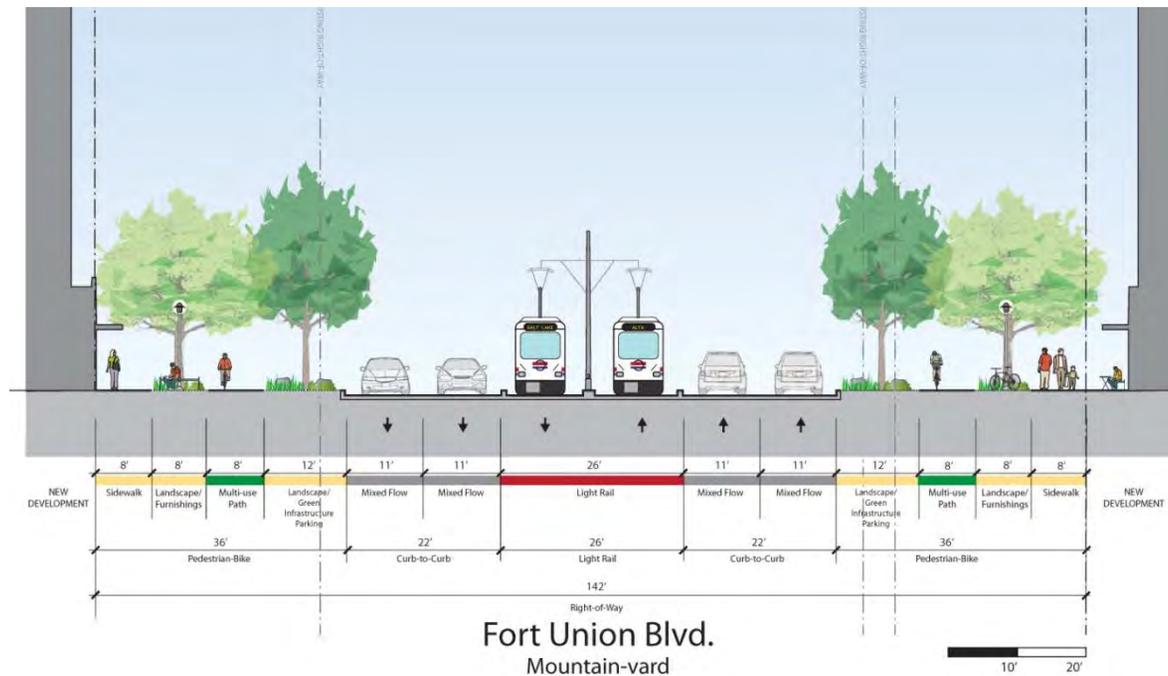


However, boulevards often require wide rights-of-ways because they dedicate lots of space to each mode, and can be tricky to design and operate, with large volumes of different modes producing a variety of conflict points to manage.

Concept overview

The “Mountain-ward” is the adaptation of the boulevard concept to Fort Union Boulevard. It would be an approximately 140-foot wide regional street that would accommodate increased volumes of traffic, high-capacity fixed-guideway transit, robust bike and pedestrian facilities. It would form the basis for a much more intensified Fort Union corridor that still creates great places along it.

Figure 67: “Mountain-ward” Boulevard concept for Fort Union Boulevard adapts the boulevard idea to Cottonwood Heights, incorporating outdoor recreation and mountain flavor with transit and new, denser development. This concept would need significant additional right-of-way.



Alternative 1 addresses the findings of this study in the following ways:

- 1) It incorporates all modes to become a complete street;
- 2) It brings the flavor of the Cottonwood Canyons by incorporating canyon and trees in the Mountain-ward's many different medians and planting areas, most of which bracket dedicated active transportation facilities such as a multi-use path and a sidewalk on each side
- 3) It gives Fort Union much of the infrastructure it needs to be a true regional corridor.

Implementation

Alternative 1 would be challenging to implement. Key challenges include:

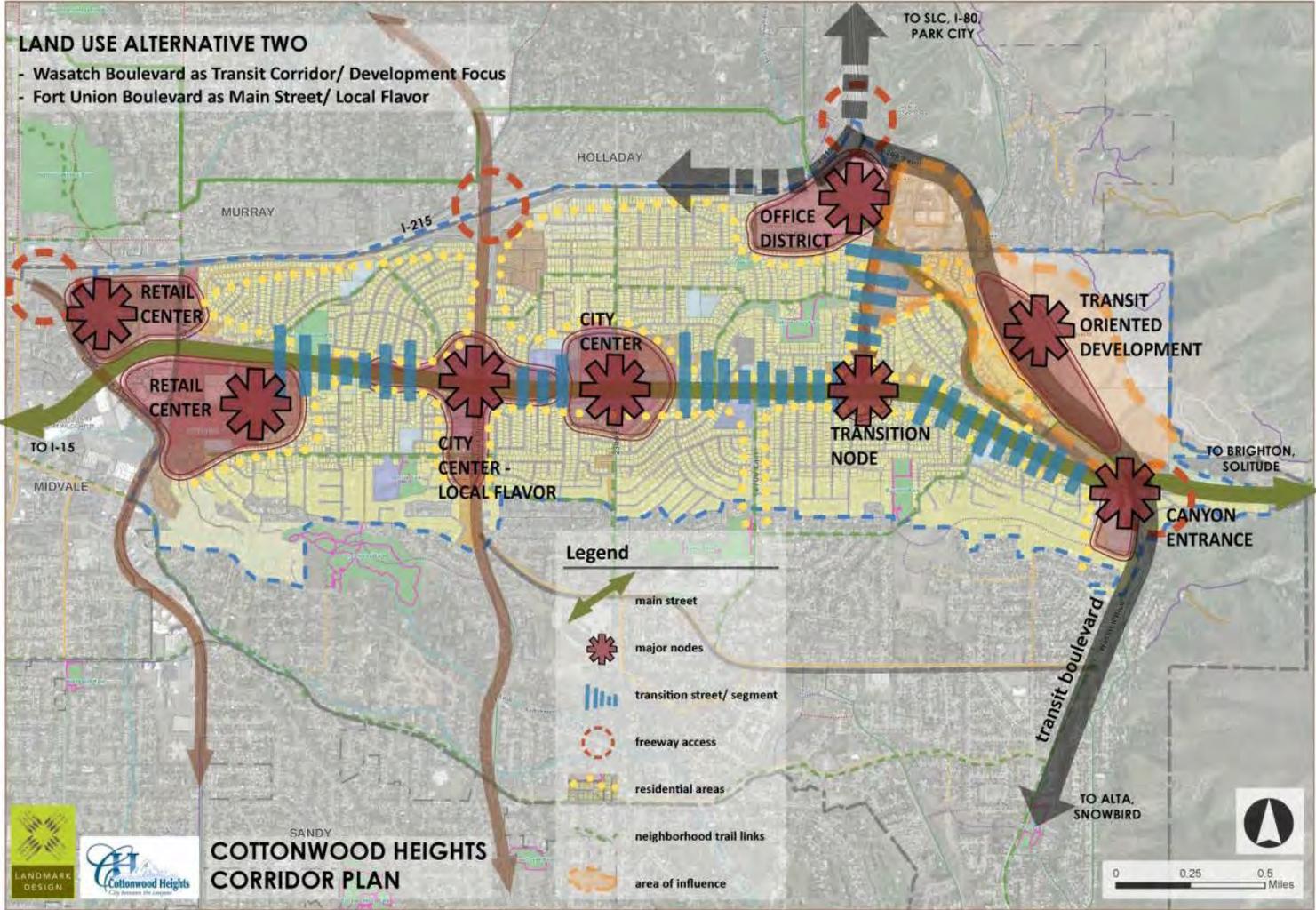
- Acquiring the right-of-way to build the street. The "Mountain-ward" concept would likely require an additional 30 feet on either side (60' total). In addition to the outright monetary cost and the political challenge of acquiring the property is the challenge of successfully redeveloping what could be a patchwork of remnant parcels. As an alternative to purchasing land, the City could implement the Mountain-ward concept piece-by-piece by relying on easements or dedications from developers for the pedestrian and/or bike areas.
- Successfully attracting the transit. Mass transit would play a major role in the regional nature of the corridor, and luring a light rail or even a high-level bus rapid transit line would be a challenge. While the Fort Union corridor contains some assets that could attract federal funding – such as its growing employment centers and the potential for accommodating more mountain visitors – it currently falls short in many other areas, such as land use and current transit ridership. However, even an improved bus transit service – for example increasing headways from 30 minutes to 15 minutes or 10 minutes and running more routes on Fort Union – would raise the transit service toward that demanded by a regional corridor.

Land Use Concept 2 – Fort Union as Local “Main Street”/Wasatch Boulevard as Regional Transit Corridor

Similar to the first option, this concept envisions that Wasatch Boulevard will become a Transit Boulevard and regional transportation link, while Fort Union Boulevard will be developed into a “Main Street.” This could provide a good option for the area, with land use improvements still focused at major and minor nodes, and more intensive changes to the new gravel pit area. Special care is required to ensure the impacts of change to the surrounding residential neighborhoods are minimized, even though it is likely that some homes currently located along the boulevard will be purchased to facilitate a more complete transformation of the area. The existing Corporate Center located near 6200 South will be completed as currently planned, and a new mixed-use district will be established at the gravel pit site. In order to encourage positive exchanges and linkages between the nodes, a range of open-space and streetscape enhancements should be implemented along key north-south running roadways and corridors, including Wasatch Boulevard, 3000 East and Highland Drive.



Figure 68: Land Use Alternative 2 – Wasatch Boulevard as Transit Boulevard/Fort Union as “Main Street”



Transportation Concept

Alternative 2 takes the measures to transform Fort Union into a locally focused multi-modal corridor. Its emphasis is on creating a series of walkable, human-scaled places along Fort Union, including a potential downtown Cottonwood Heights – as well as on improving ways for Cottonwood Heights residents to walk and ride to these places. Alternative 2 accepts the current “bookend” shape of the corridor. While it sets the stage for more intensity on Fort Union at these neighborhood-scale centers, most new intensity would be directed to the Corporate Center and Union Park bookends, allowing Fort Union Boulevard to remain a lightly trafficked street with active transportation modes to function safely and comfortably within the current right-of-way.

The Road Diet

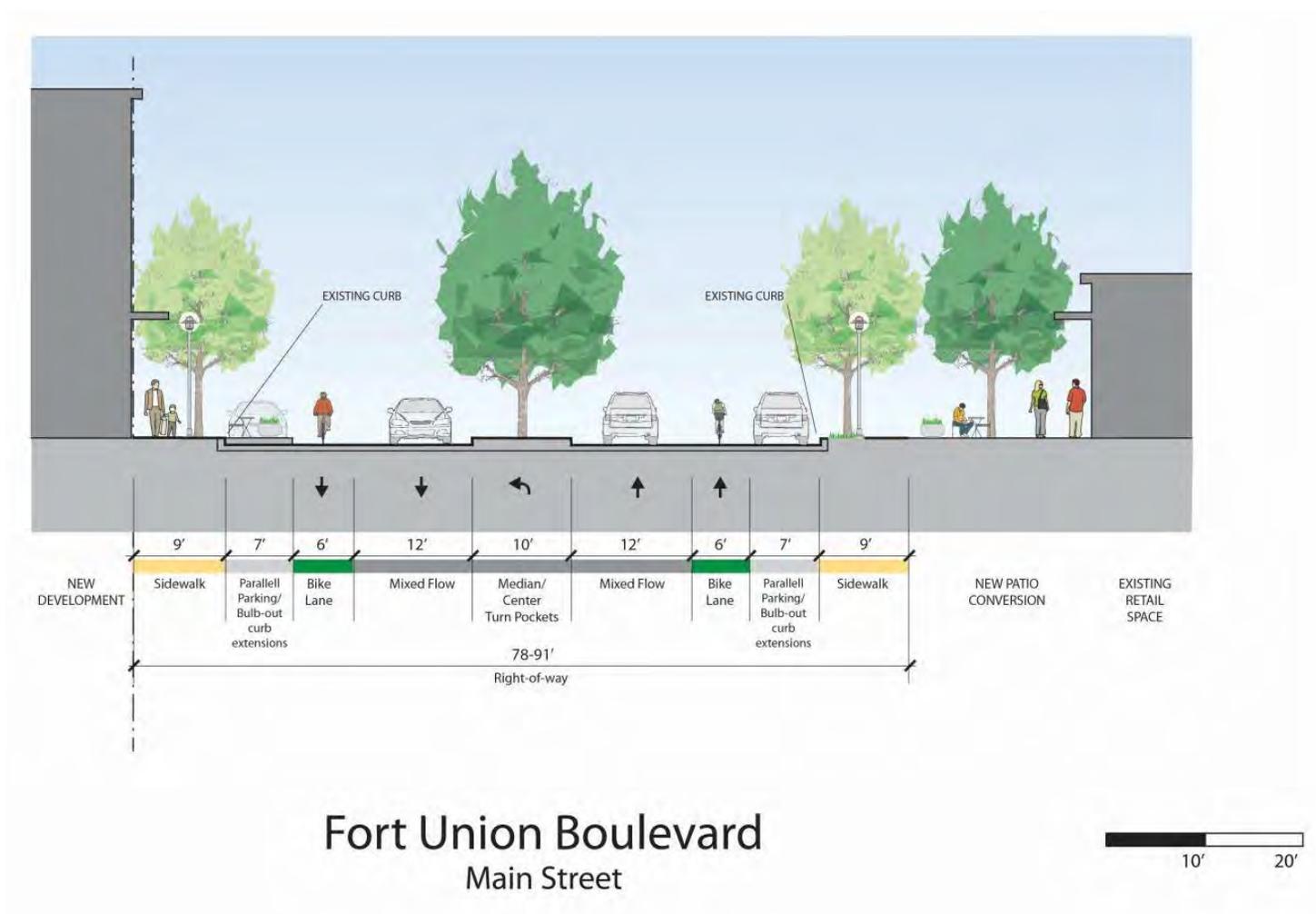
The primary transportation tool employed by Alternative 2 is a “road diet,” a term which refers to a street losing one or more of its motor vehicle traffic lanes – usually in order to calm traffic and use the space instead to bicyclists and pedestrians. In the right situations, road diets can create multiple benefits for all modes, including the accommodation of a wider range of street users, traffic calming, the reduction of conflict points and often a reduction in crashes and increase in safety for all modes. Road diets can also catalyze places, because they usually convert car space to people space, shorten street crossing distances, and “rein in” traffic, making a street corridor more attractive to activities such as walking, dining, gathering, or lingering in public space.

Five-lane to three-lane road diets have been implemented in dozens of streets across the United States, and have demonstrated operational and safety benefits as well as opportunities for biking and walking. In downtowns and activity centers, they have helped to create more comfortable, attractive places.

Concept Overview

The concept for a Fort Union road diet would reduce the number of traffic lanes from five to three. The continuous center turn lane would become landscaped medians and turn pockets where needed. The extra space on the side of the roadway would become bike lanes and on-street parking. The curbs would remain in place, but the sidewalks would receive new street trees and street furnishings.

Figure 69: Main Street concept for Fort Union Boulevard. Number of lanes reduce from 5 to 3, with the extra space being used for bicycle lanes and on-street parking. A median with turn pockets replaces the continuous turn lane.



Three lanes would likely be successful on Fort Union Boulevard for a variety of factors. While a lack of vehicle traffic relative to the current five-lane capacity creates the ability to reduce the number of lanes, creating a more walkable street on Fort Union would leverage the existing businesses and civic destinations to begin to create a community focal point for Cottonwood Heights. Traffic would likely travel slower, the on-street parking would provide quicker vehicle access to the sidewalk while buffering the sidewalk, pedestrians would cross the street easier. The existing nine-foot sidewalks would seem bigger. Perhaps most importantly, the balancing of people space with vehicle space would begin to create more of a human scale on Fort Union.

This new street could likely leverage smaller-scale redevelopment along Fort Union Boulevard, especially with the help of one or two catalyst projects. The segment of Fort Union from Highland to past 2300 East already has the highest WalkScore (which essentially measures concentrations of pedestrian destinations) in the area of the valley, but the public infrastructure is not walkable; adding public investment in walkable street design would make this area a fully walkable place and could entice businesses and developments. The Holladay Village project and street improvements in Holladay are an example of this happening nearby – the City of Holladay leveraged redesign of streets and streetscape and a City-sponsored development to lift the whole area, which is seeing investment from businesses and new development. The source of improvement for Holladay Village is not transit, but walkability, though it is putting itself in the position to support higher-capacity transit.

Implementation

Alternative 2's transportation concept would be more easily implemented than Alternative 1. It requires no additional right-of-way and no changing of the existing drainage system. The road diet could be implemented using only road paint, though we recommend a few other complementary pieces, such as new medians and streetscape improvements. The traffic signalization could stay the same, but a road diet should also be implemented with a lower speed limit, which may require some signal retiming.

Currently, only the traffic volumes east of Highland warrant consideration of this road diet – we recommend keeping the five-lane capacity west of Highland Drive, and for a few hundred feet east of Highland Drive to allow for Highland intersection queuing. However, the City can evaluate the success of the road diet and surrounding traffic patterns, and could decide to implement a similar three-lane street design on Fort Union west of Highland in a future phase.

We also recommend an in-depth traffic study to more precisely understand the tradeoffs with vehicle capacity and potential delay that this street redesign would require.

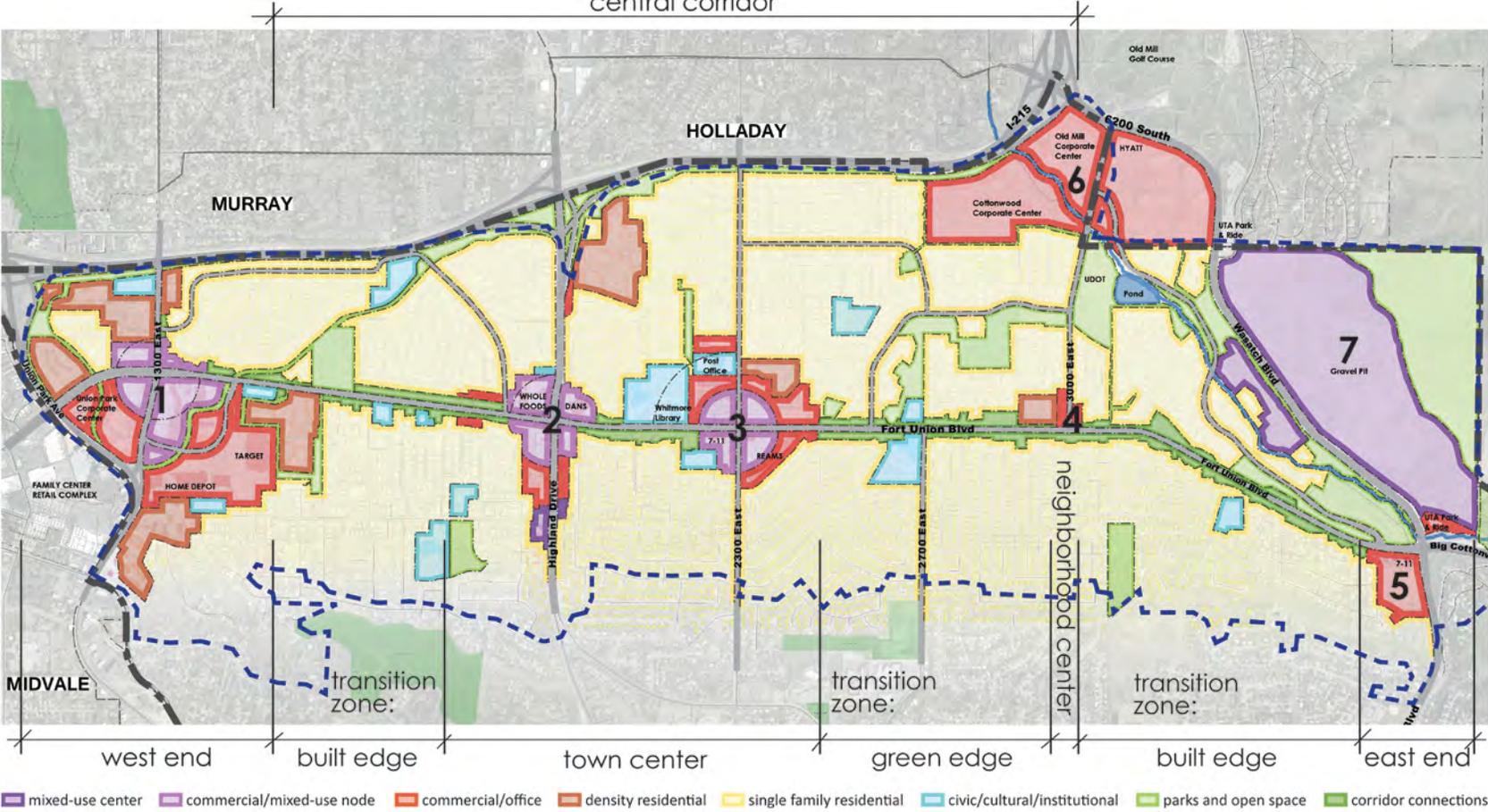
Preferred Land Use Concept

As illustrated in Figure 70 the **Preferred Land Use Concept** incorporates elements from both land use options. The nodes are highlighted by commercial mixed uses within a 1/4 mile walking distance of the intersections, with commercial, higher density residential and civic-type uses providing links with the adjacent single family neighborhoods, incorporating special transition methods such as buffers and screens as required. In general commercial and higher intensity should not extend more than 1/2 mile from the nodes, reducing the potential conflict with surrounding low-density residences while encouraging active transportation connections within each node.

Figure 71 illustrates a simplified version of the preferred concept study area, including a larger and better-integrated town center. The following is a description of some of the key features and functions of the concept, which are presented from west to east along Fort Union Boulevard. Please note that Nodes 4 and 6 are not reflected in these descriptions, as Node 4 is relatively minor, and Node 6 is well-removed from the study area and developing according to plan.



Figure 70: Preferred Land Use Alternative Connects Seven Nodes Along Fort Union and Wasatch Boulevard central corridor



COTTONWOOD HEIGHTS CORRIDOR PLAN

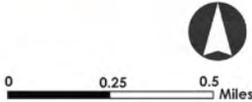
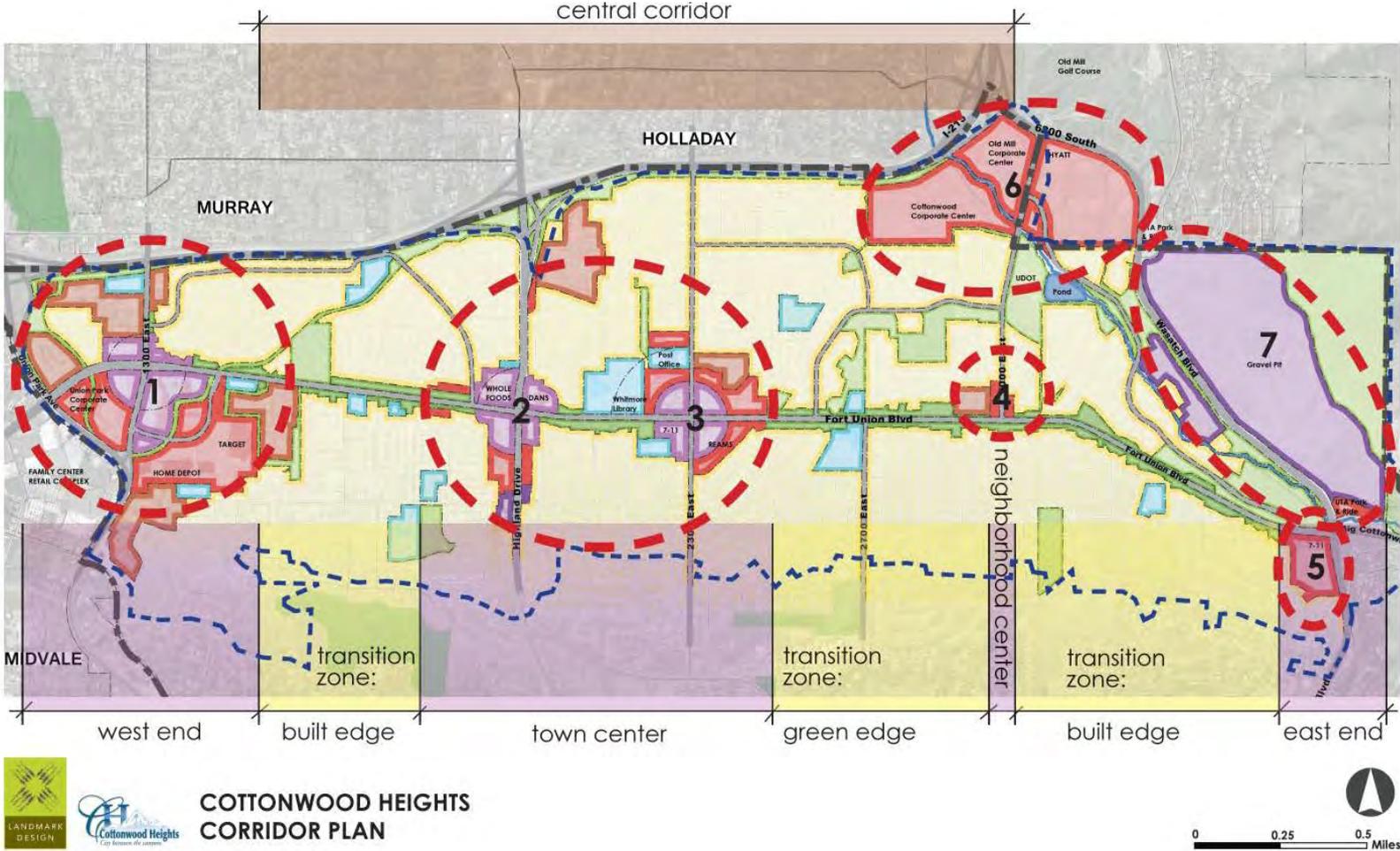




Figure 71: Preferred Land Use Concept – Linking the Nodes



“West End”

- Node 1
- Increase large-scale retail density
- Condense parking areas (reduce requirements, infill with structured parking, etc.)
- Infill and develop a discernible street edge in the process
- Capitalize on ease of access compared to Family Center in Midvale
- Improve visibility, signage, attractiveness
- Add entertainment options, dining and plaza area

Town Center/Central Corridor

- Nodes 2 and 3
- Create lunchtime eating linkages between employment centers and Fort Union
- Create community gathering areas (also could be at East End)
- Create community events that bring visitors down into Fort Union
- Develop partnerships with the resorts to offer discounted lift passes at sites along Fort Union
- Actively recruit recreation-related businesses such as cycling shops, Bass Pro Shops, etc.
- Increase housing densities at nodes along the Corridor – Highland; 2300 East; 3000 East (depending on transit options and stations)
- Redesign nodes to reduce asphalt parking and create walkability; use interiors of blocks
- Bring businesses out to the street; create “street walls” and urban places

“East End”

Focus on creation of a distinct local place meeting local needs but servicing "visitors" as well

- Node 5 and 7
- Hotel development
- Make it “THE NODE” for resort development up the Canyons – après ski, dining, shopping, hotel, etc.
- Connect and link with the canyon mouth, old mill, gravel pits and corporate centers
- Establish a resort feel at the east end of Fort Union
- Encourage new restaurant and entertainment options

- Establish the node into the Fort Union gateway in order to provide travelers a reason to enter Fort Union from the East special signage, information obelisks, visitor center, etc.
- Maintain the canyon experience through the establishment of recreation-related development, trails, bike paths, transit options, etc.
- Link with the future mixed use development of the Gravel Pit.

Figure 72: With land use, transportation, and urban design changes envisioned by the Preferred Alternative, the 2300 East area of the Fort Union corridor could transform into a city center, with the five-lane street transforming into a three-lane street with bike lanes and on-street parking, streetscape improvements such as trees, custom paving, and land use policy changes emphasizing pedestrian-scaled frontages.



This temporal mix makes sense because, while Alternative 2 is an inexpensive option that could be implemented in the near-term, Alternative 1 would likely take decades to come to fruition, if it does at all. This alternative simply leaves open the option for mass transit on Fort Union while implementing a sensible, inexpensive, feasible near-term improvement that achieves many of the City's goals.

Figure 73: Simulation of how the potential town center shown in Figure 72 could transition into a light rail corridor with increased development densities



This alternative is also attractive because, while high-capacity transit would not initially run on Fort Union, the more walkable, multi-modal street would likely begin to build up more demand for transit; and even medium-density redevelopment in Fort Union's nodes, when combined with a walkable environment, would create more transit demand. Both of these developments would increase the chance of obtaining federal funding for transit.

Implementation

The conversion could be a version of the "Mountain-ward" of Alternative 1, but could be scaled down depending on how much widening is feasible. The transit conversion could likely be achieved with just one vehicle lane in each direction (especially if traffic becomes used to this capacity), and putting the bicycle facility in the place of the old sidewalk would allow the City to keep the curbs where they are.

Note, though, that the decision to convert to transit is optional. If funding is found, and regional partners agree, the City could choose to pursue a widening with transit. Or, the City could keep Fort Union as-is.

Figure 74: With land use, transportation, and urban design changes envisioned by the Preferred Alternative, the east end of the Fort Union corridor could transform into a vibrant recreation-focused mixed-use walkable center with a continual trail running down from Big Cottonwood Canyon and onto Fort Union down to a Cottonwood Heights city center; small-scale and mobile food and drink; streetscape improvements; and spectating berms, tables and benches.



Transition Zones

- Establish a unified look and feel along narrow frontages that line the street
- “Green Edges” focus on canyon-inspired trail and parkway development
- “Built Edges” focus on “Residential Business” developments that transform existing homes into viable and contributing businesses

6200 South Corporate Centers

- Complete development with a mix of office, retail and housing
- Link with Fort Union Boulevard through unified streetscape and design inputs

Gravel Pit Lifestyle Center

- Leverage a great site by creating the most creative and desirable destination in the valley
- Link with Fort Union Boulevard through unified streetscape and design inputs

The Preferred Land Use Concept also embraces proposed economic and transportation improvements, as follow:

- 1) Employment hub for Class A office space
- 2) Destination/Resort/Recreation Center
 - *Serves and benefits from the canyon relationship*
 - *Extends the Big Cottonwood Canyon environment through Cottonwood Heights and Midvale toward the valley floor*
- 3) Recaptures lost sales tax leakage
- 4) Provides a greater diversity and density of housing
- 5) Creates a unified development at the gravel pit site, recaptures lost leakage by capitalizing on strong base at west end of corridor and proximity to Family Center
- 6) Captures niche markets
 - East end of Fort Union is not a regional retail site
 - Resort/recreation related retail
 - Employment related retail
 - Lifestyle center(s)
- 7) Increases housing densities and diversity of housing types
 - Mixed Use at nodes and centers

- Employment related retail
- Lifestyle center (s)
- 8) “Form Follows Function”
 - *Four-story heights on Fort Union at nodes*
 - *10-story potential by gravel pits in particular*
- 9) Boulevard Concept extends into surrounding properties
- 10) Local transit – long and short-term possibilities
- 11) Increases intensity and walkability throughout, including Cottonwood Corporate Center
- 12) Converts 2300 East and Highland Drive into City Center
- 13) Extends bike routes to and through the corridor/nodes/centers
- 14) Reduces pedestrian barriers at Cottonwood Corporate Center
- 15) Encourages corridor/recreational bicycle connections with recreational assets
- 16) Extends Mountain Accord trail concept from Big Cottonwood Canyon to Fort Union Boulevard
- 17) Builds upon unique Setting/Topography/ Environmental Conditions

Transportation Concept: Alternative 2 with Optional Future Conversion to Alternative 1

After discussion with the City, and the emergence of interest in a mix of the two alternatives, we developed a third alternative. This third alternative combines the transportation concepts for Alternatives 1 and 2, but the combination is in phasing. Under Alternative 3, the City would implement the street design for Alternative 2 – the road diet with bike lanes, on-street parking, center medians, and streetscape improvements. At the same time, the City would ensure all new development abides by a uniform setback – say, 15 feet – in order to leave room for a possible future widening to accommodate a fixed-guideway transit line.

Figure 75: Preferred Alternative street section in “city center” area from Promenade Drive to Highland Drive. The concept implements the road diet cross section of Alternative 2 while ensuring a building setback to accommodate a potential future light rail line.

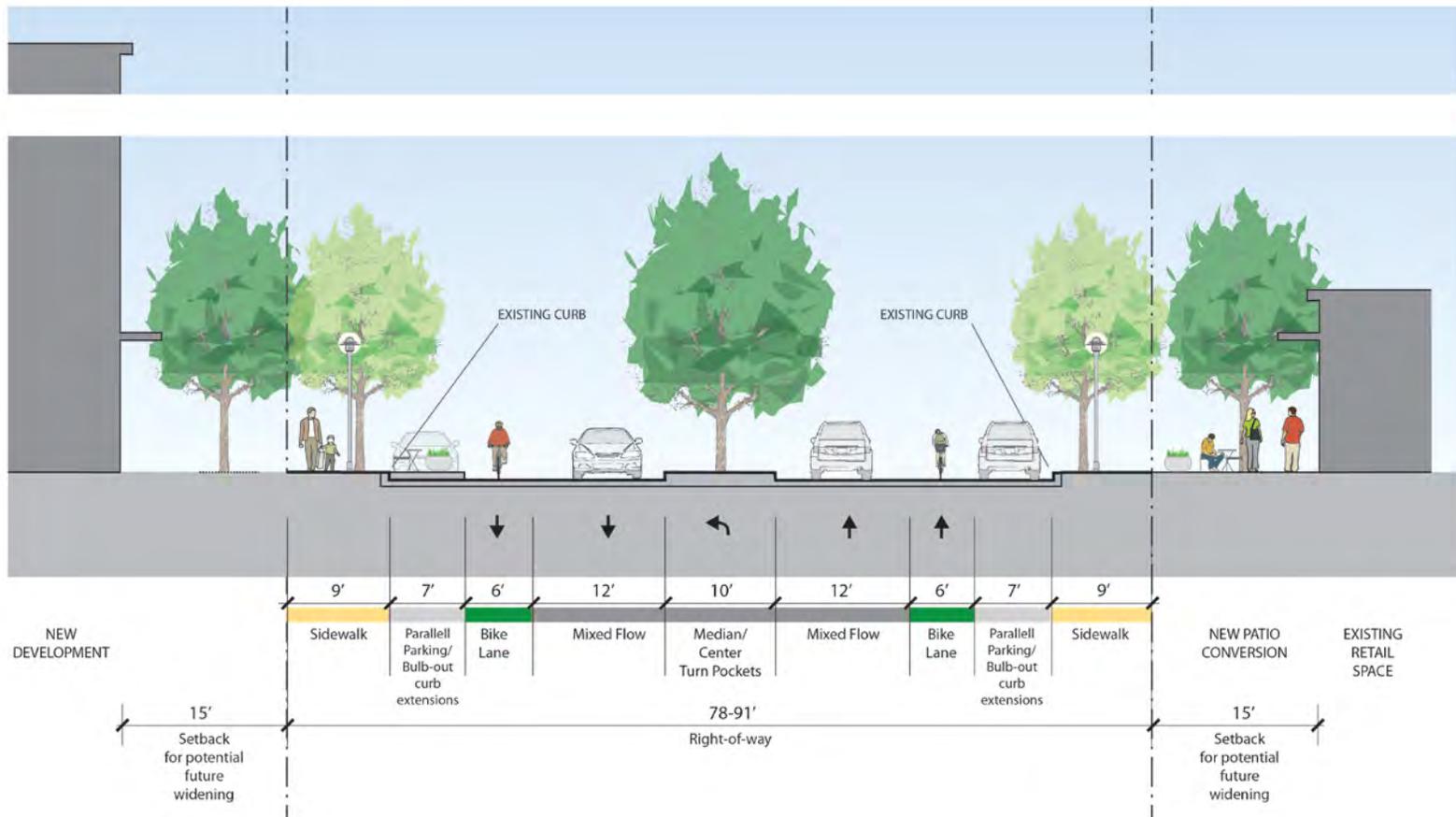
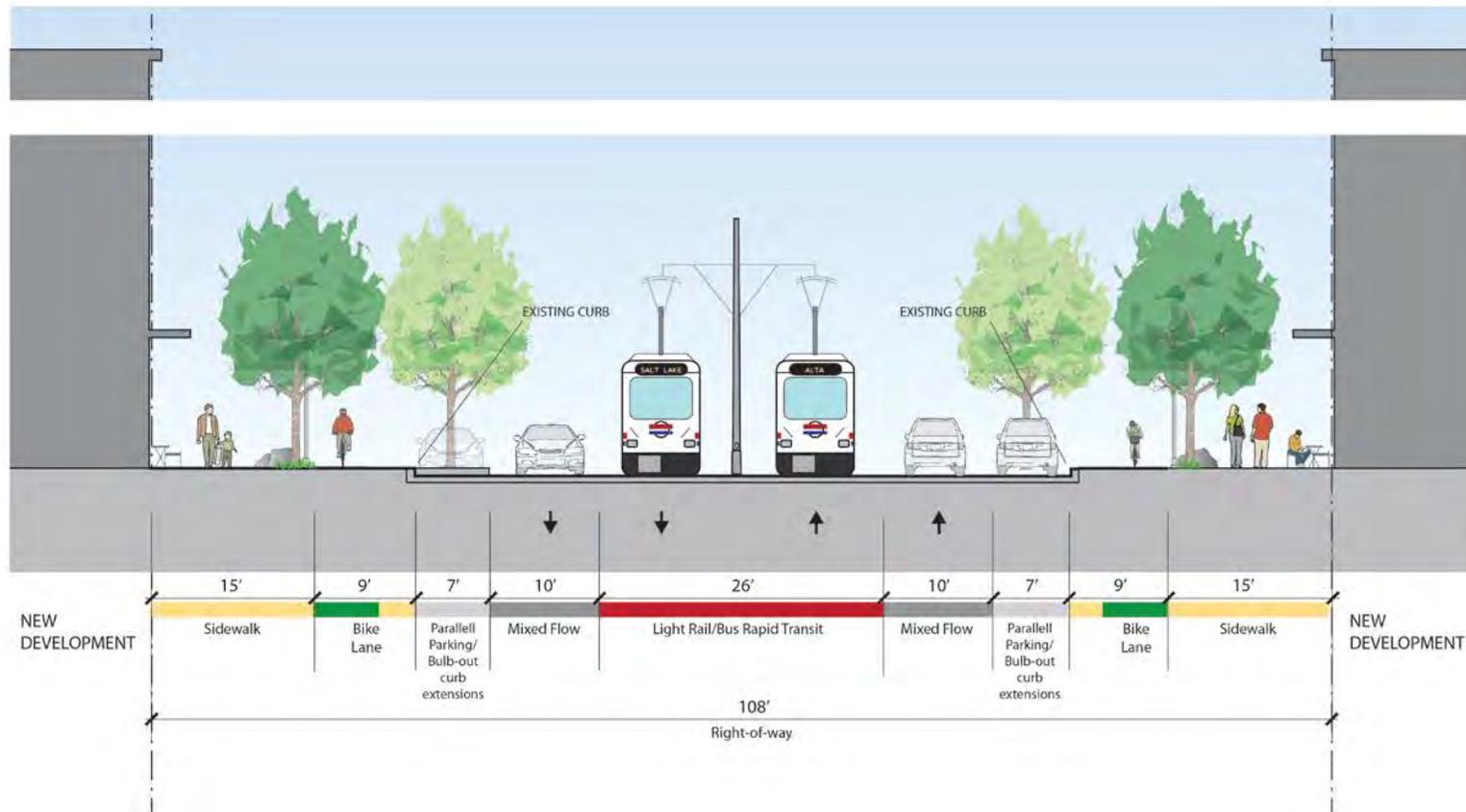


Figure 76: An illustration of the potential conversion of a three-lane Fort Union Boulevard to accommodate light rail, while maintaining existing curbs, but expanding right-of-way.



This temporal mix makes sense because, while Alternative 2 is an inexpensive option that could be implemented in the near-term, Alternative 1 would likely take decades to come to fruition, if it does at all. This alternative simply leaves open the option for mass transit on Fort Union while implementing a sensible, inexpensive, feasible near-term improvement that achieves many of the City's goals.

This alternative is also attractive because, while high-capacity transit would not initially run on Fort Union, the more walkable, multi-modal street would likely begin to build up more demand for transit; and even medium-density redevelopment in Fort Union's nodes, when combined with a walkable environment, would create more transit demand. Both of these developments would increase the chance of obtaining federal funding for transit.

Implementation

The conversion could be a version of the "Mountain-ward" of Alternative 1, but could be scaled down depending on how much widening is feasible. The transit conversion could likely be achieved with just one vehicle lane in each direction (especially if traffic becomes used to this capacity), and putting the bicycle facility in the place of the old sidewalk would allow the City to keep the curbs where they are.

Note, though, that the decision to convert to transit is optional. If funding is found, and regional partners agree, the City could choose to pursue a widening with transit. Or, the City could keep Fort Union as-is.

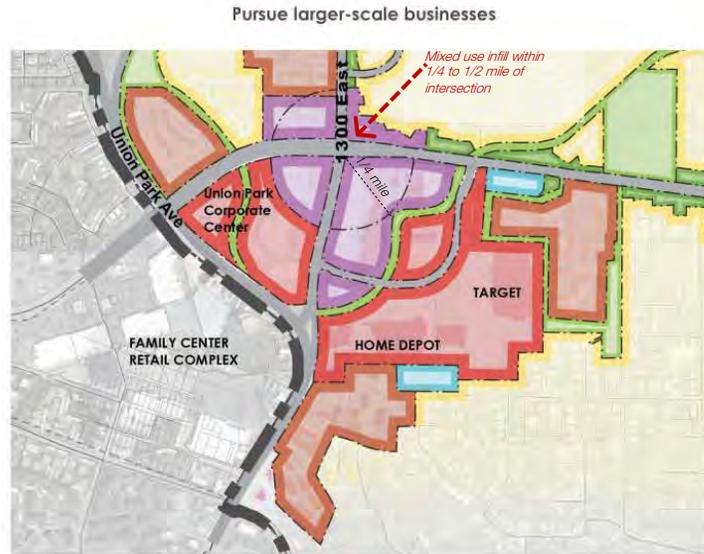
Detailed Land Use and Implementation Concepts by Node

Specific details and ideas for each node follow, which should be implemented as part of a unified corridor transformation process.

Figure 77: Land Use and Design Concept – Node 1 1300 East/Fort Union Boulevard

Reduce pedestrian barriers on all corners – convert the area into a walkable place for those living in proximity to it or within the area.

This can be achieved through the formation of discernable pedestrian zones within the parking lots, and strong linkages with future streetside walkways, sidewalks, and bikeways.



Capitalize on areas of strength and complementary development

- Pursue larger-scale businesses**
- Increase large-scale retail density**
- Condense parking areas** (reduce parking requirements, develop multi-story parking, etc.)
- Capitalize on ease of access** in comparison to the adjacent Family Center in Midvale
- Improve visibility, signage, and attractiveness**
- Add entertainment options**, including dining and plaza areas



**COTTONWOOD HEIGHTS
CORRIDOR PLAN**



0 0.125 0.25 Miles



Figure 78: 1300 East/Fort Union Boulevard – Existing Site Layout

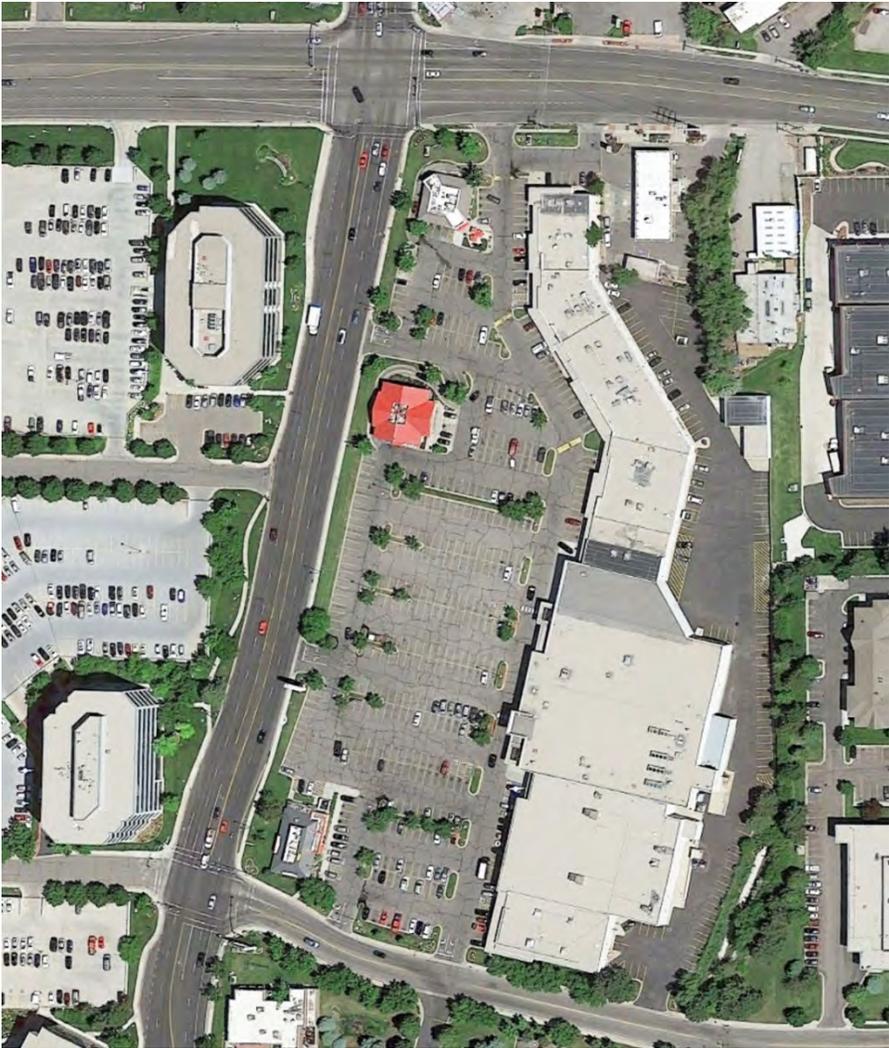


Figure 79: 1300 East/Fort Union Boulevard



- 1 Convert 1300 East into a walkable shopping zone
- 2 Create a focal courtyard/outdoor activity area with food service
- 3 Convert large parking lots into an internal commercial "street"
- 4 Provide 10'-20' pedestrian access along existing commercial frontage
- 5 Centrally located entrance includes pedestrian streetscape and wide walkways
- 6 Provide mid-block crossings where possible
- 7 Extend pedestrian oriented commercial into the site to create an internal "destination"
- 8 Create front/retail pedestrian access opportunities
- 9 Break up "sea of asphalt" into discernible, well landscaped and pedestrian friendly parking courts
- 10 Provide small courtyards and meeting places between and behind buildings

-  Existing Office/Commercial
-  New Commercial

Figure 80: Detail Design Plan – 1300 East/Fort Union Boulevard – Concept 1



Fort Union Corridor Study

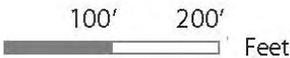
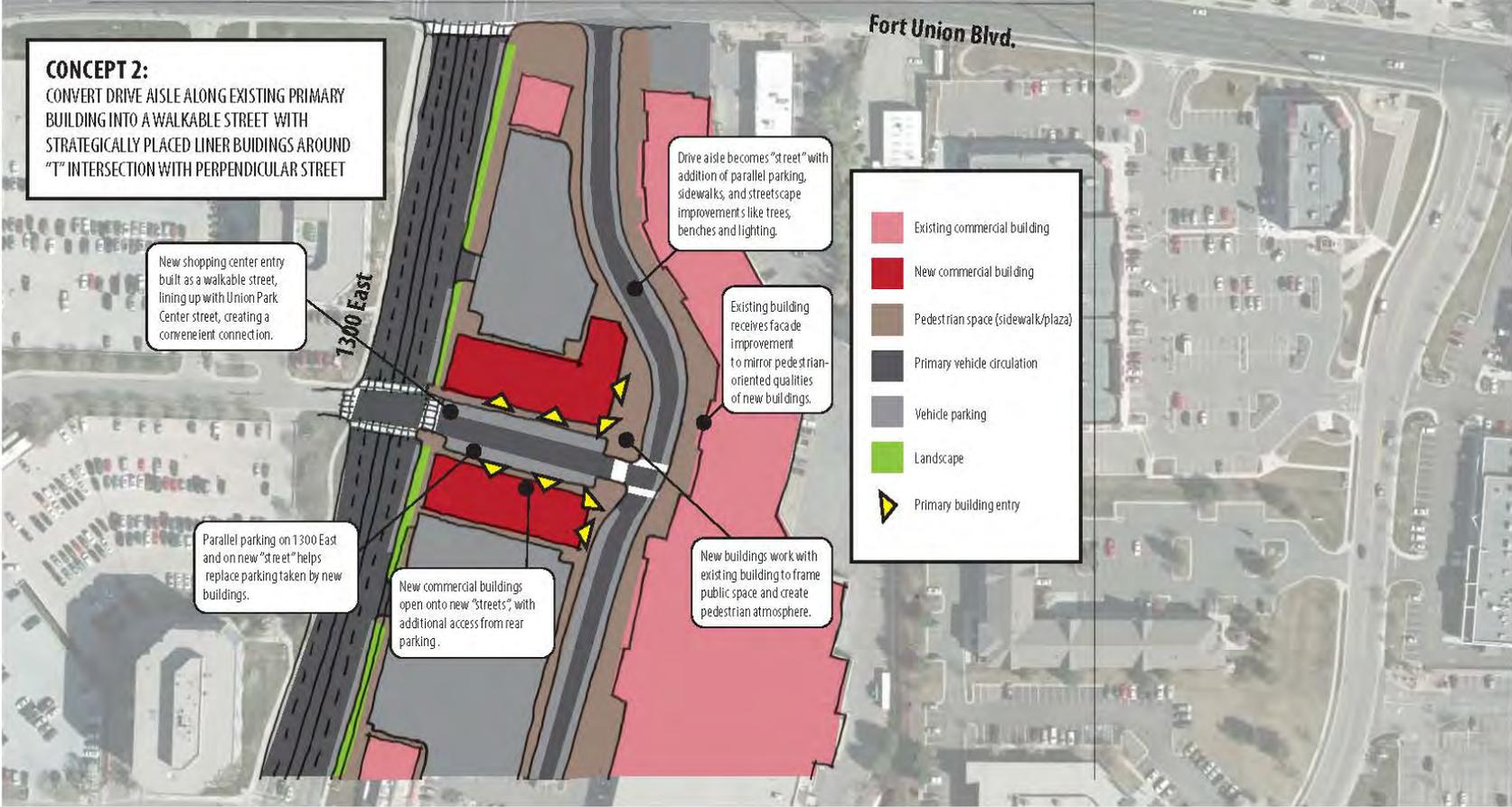
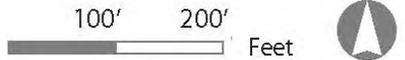




Figure 81: Detail Design Plan – 1300 East/Fort Union Boulevard – Concept 2



Fort Union Corridor Study



Node 1

*comparable images
& ideas*



*Diversify Uses:
Entertainment, dining, etc.*



*Treat parking lots like good
Streets*



*Create attractive entryways &
and linkages with public ways*



Convert parking areas into examples of sustainable local habitats



Densify, increase height of buildings and incorporate meaningful places to wander and participate



*A place for
people to
shop & linger*

Figure 82: Land Use Design Concept – Nodes 2 & 3 (Town Center); Highland Drive & 2300 East/Fort Union Boulevard

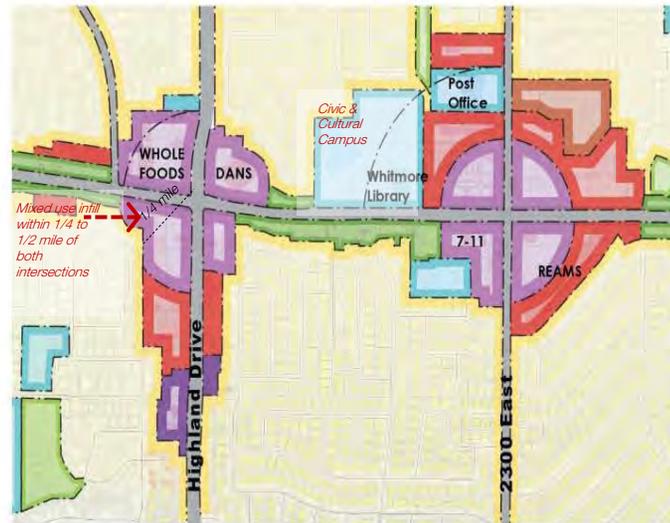


- Bring businesses out to the street – create a “street wall”
- Recapture lost sales leakage in smaller-scale businesses throughout this area
- Balance high traffic volumes with large pedestrian realm and placemaking enhancements

Create lunchtime dining linkages with nearby employment centers (Cottonwood Corporate Center) and with the Fort Union bookends (West and East ends)

Create community gathering areas

Incorporate high capacity transit, as possible



Encourage potential bike and pedestrian connections

Focus on local history and flavor when creating new uses

Create community events that bring visitors into the heart of Fort Union

Encourage new mixed-use development and increased housing densities at the nodes

Redesign the nodes to reduce asphalt and create walkable environments



COTTONWOOD HEIGHTS CORRIDOR PLAN





Figure 83: Highland Drive and 2300 East

Buffer existing residences from commercial and similar uses through the use of "green screens" and transitional land uses



COTTONWOOD HEIGHTS CORRIDOR PLAN

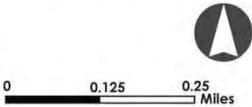




Figure 84: Envisioned Conversion of Fort Union into a Town Center “Main Street”





town center node

*images
& ideas*



Create a unified town center through quality design, architecture, site design and layout

nightlife



Incorporate legible entryways

Link private and public streets

Provide "24/7" places & uses



A balance of quality built & open spaces that attract drivers, riders, pedestrians and bikers alike

*A place to
meet & come
together*

Figure 85: Street design concept for city center node

FORT UNION BLVD. Main Street

This concept proposes the re-imagining of Fort Union Boulevard as Cottonwood Heights’ Main Street” between just east of 2300 East and just east of Highland Drive. This would occur by reducing the number of vehicle travel lanes from 5 to 3, and using the extra space within the existing curbs for on-street parking and bicycle lanes, both of which would promote a walkable central business district and community gathering center for Cottonwood Heights. Streetscape improvements such as street trees, street furniture, and pedestrian scale lighting, as well as a 25 mile-per-hour speed limit and mid-block crossings would also help transform the character of this segment of Fort Union to that of a Main Street.

- 1 THREE VEHICLE LANES**
This concept for Fort Union Blvd. reduces the number of vehicle lanes from 5 to 3. Traffic will flow smoothly because friction is reduced by plentiful turn lanes.
- 2 BIKE LANES**
With the extra room yielded by the lane reduction, bike lanes can be integrated into the street design, creating a key east-west bike connection for Cottonwood Heights.
- 3 ON-STREET PARALLEL PARKING**
The lane reduction also makes room for on-street parking, which will help businesses as well as the pedestrian life of the street.
- 4 PEDESTRIAN CROSSINGS**
This concept reduces the curb radii at major intersections like this one to reduce crossing distance and leverage the City’s high-visibility crosswalks.

- 5 PLANTED MEDIANS/TURN POCKETS**
In place of the continuous center turn lane, medians and focused turn pockets would be built. While medians help create a more pedestrian scale for the street and provide more opportunity for trees and landscape, turn pockets allow left turns with fewer conflict points than the continuous lane.
- 6 MID-BLOCK CROSSINGS/PEDESTRIAN REFUGES/BULB-OUTS**
This concept encourages more frequent pedestrian crossings of Fort Union, whether signalized, pedestrian-activated signalized, or unsignalized. These crossings can be shortened by median refuges and extensions of the curb, called bulb-outs. Here, bulb-outs are created by islands in the parking lanes connected to the sidewalk by trench drains.
- 7 STREETScape IMPROVEMENTS**
While this concept does not widen sidewalks, it does add new street trees as well as pedestrian-scale lighting and street furniture like benches and bike parking.

- 8 BUS PULL-OUT**
At bus stops placed at the far side of intersections, buses can pull out of traffic and into a lane shared with bicyclists.
- 9 GREEN PAINT IN CONFLICT ZONES**
Urban bicycle facility best practices say that conflict areas between cyclists and other modes should be marked by green coloring.
- 10 GATEWAY SIGN**
At the entry to this area, a gateway sign or monument can welcome people to Cottonwood Heights.
- 11 MULTI-USE PATH TRANSITION**
The project team has developed a concept for a multi-use path (for pedestrians and cyclists) extending to Wasatch Boulevard. At the entry to Downtown Cottonwood Heights, this path can transition to sidewalks and bike lanes.

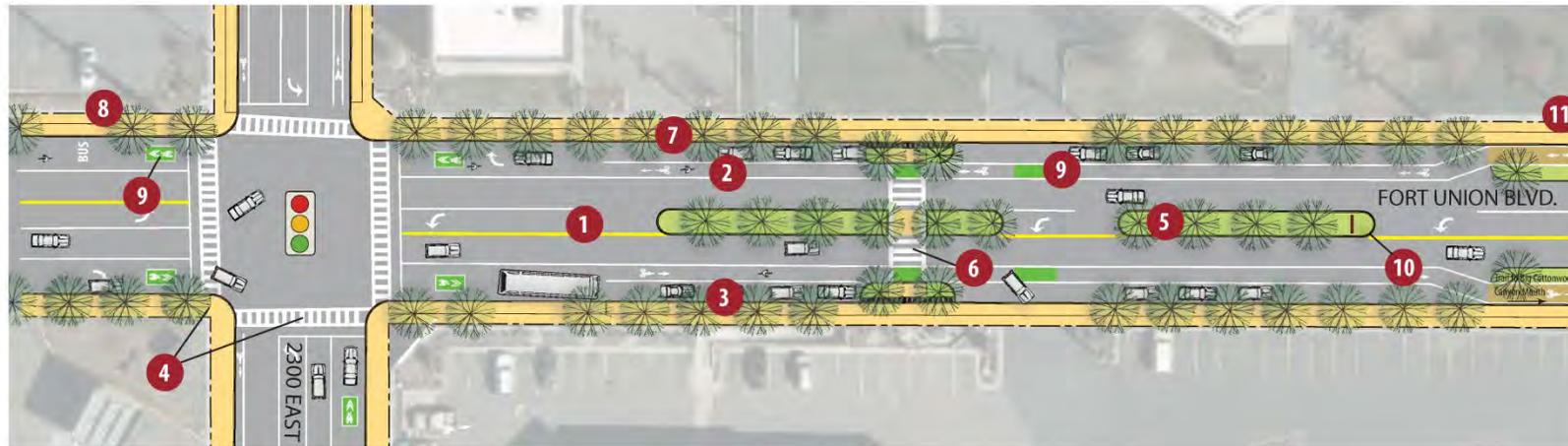
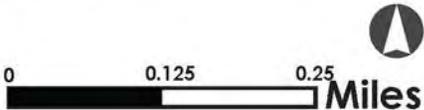




Figure 86: Land Use and Design Concept – Node 4 - 3000 East/Fort Union Boulevard



COTTONWOOD HEIGHTS CORRIDOR PLAN



Node 4

*comparable images
& ideas*



Scale/balance between buildings and spaces



Develop a special/unified design and look



Details and design that shout "local" & high-quality experiences



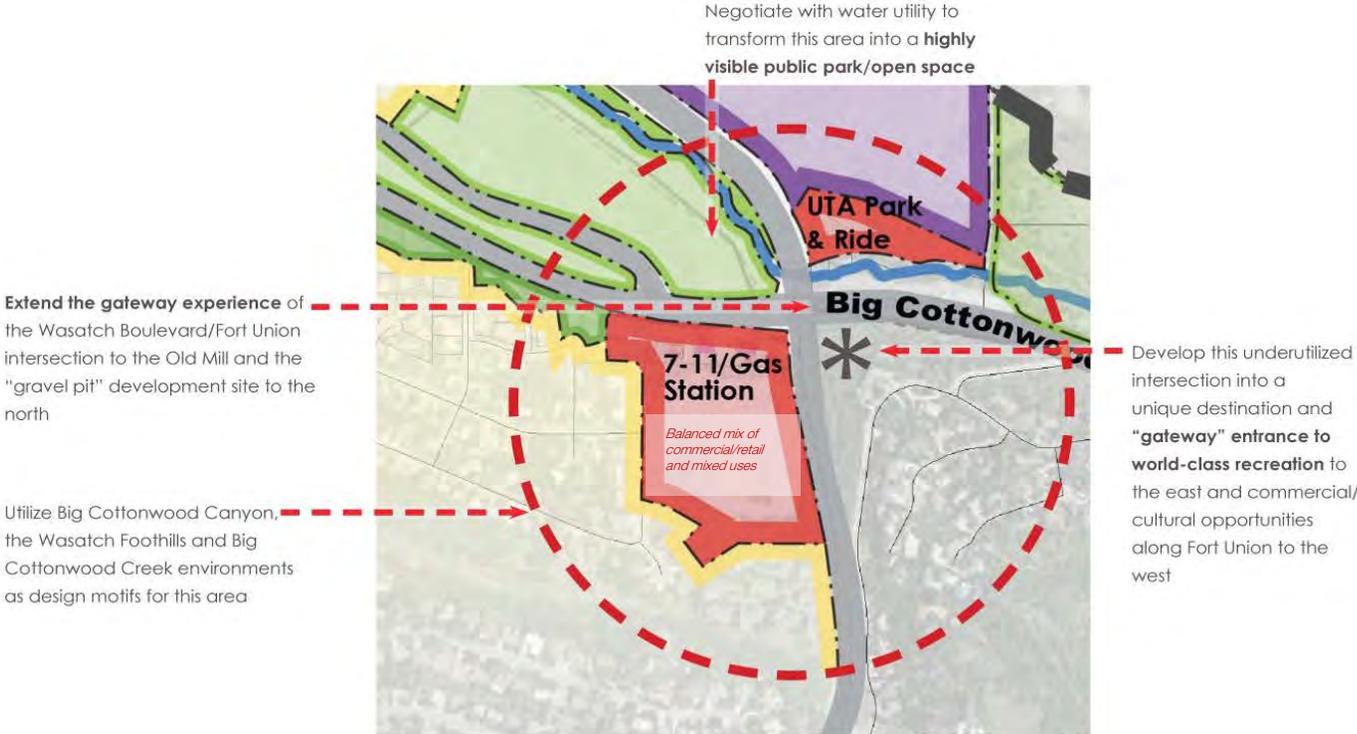
A genuine neighborhood destination & uses



**Neighborhood
scales & uses
for residents
& others**



Figure 87: Land Use and Design Concept – Node 5 – Wasatch Boulevard/Fort Union Boulevard



COTTONWOOD HEIGHTS CORRIDOR PLAN



Figure 88: Wasatch Boulevard/Fort Union Boulevard – Existing Site Layout



Figure 89: Detail Design Plan – Fort Union/Wasatch Boulevard

- | | | | |
|---|---|---|--|
| 1 Sidewalks to Old Mill/
Cottonwood Corporate Center | 7 Picnic Pavilion | 13 Mixed-use | 18 Community events obelisk |
| 2 Pedestrian hill climb (typ.) | 8 Plaza/playground | 14 Food court, farmer's market, or
temporary commerce | 19 Canyon landscape setback |
| 3 Bike/pedestrian boulevard | 9 Enhance natural vegetation with
trees and landscaping at edges | 15 Bike/pedestrian link to Old Mill/
Cottonwood Corporate Center | 20 New gas station |
| 4 Existing residential and office
uses | 10 On-street parking (typ.) | 16 Bike/pedestrian link to gravel pit
lifestyle center | 21 Road conditions obelisk |
| 5 Park/recreation parking lot | 11 Commercial | 17 Strava obelisk | 22 Weather obelisk |
| 6 Ridgeline Park | 12 Mixed-use | | 23 Canyon visitor center |
| | | | 24 Bike/pedestrian trail to top
of canyon |



Figure 90: Street design concept for block west of Wasatch Boulevard

FORT UNION BLVD. Big Cottonwood Canyon Mouth

This concept for the far east end of the Fort Union corridor, just west of Wasatch Boulevard, pulls the recreational aspects and mountain flavor of the Cottonwood Canyons into Fort Union while creating a more walkable environment for the row of businesses – and perhaps future mixed use center – on the south side of the street.

- 1 THREE VEHICLE LANES**
This concept for Fort Union Boulevard retains the existing three lane structure but narrows the lanes, eliminates the westbound receiving/turn lane and formalizes/adds more on-street parking.
- 2 SOUTH SIDE: WIDER URBAN SIDEWALKS**
Sidewalks on the south side of the street are widened and streetscape amenities such as trees, lighting and street furniture are added, in order to encourage walking and buildings fronting the street.
- 3 NORTH SIDE: BIG COTTONWOOD CANYON TRAIL**
The centerpiece of this concept is a multi-use trail extending from Big Cottonwood Canyon down Fort Union Boulevard to a potential “Downtown” Cottonwood Heights between 2300 East and Highland Drive. Here, the trail transitions from a mountain recreation trail in the canyon to a more urban trail west of

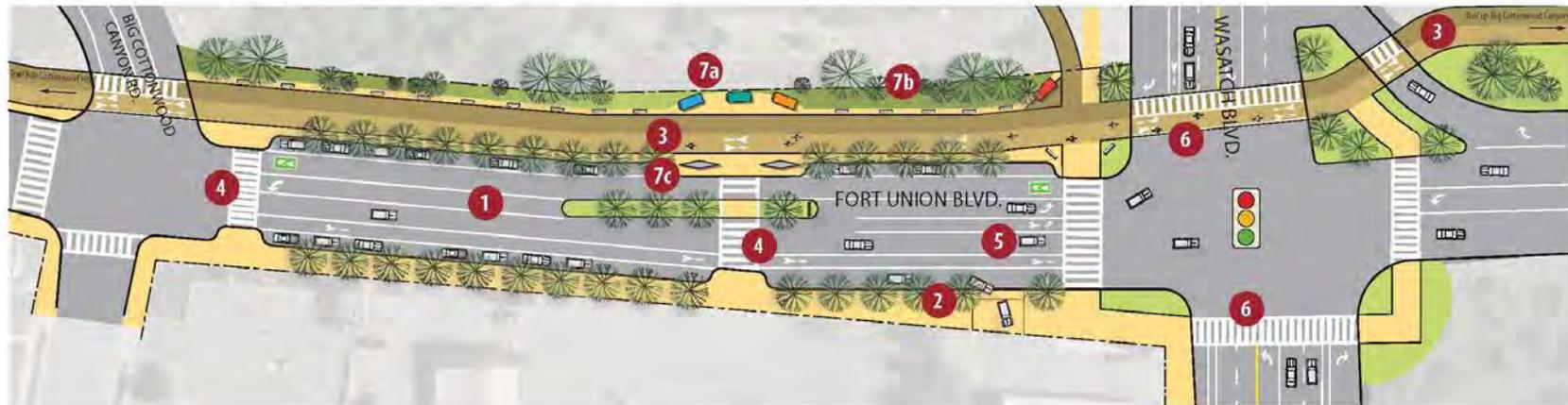
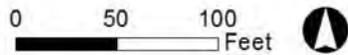
Wasatch Boulevard. The 20-foot-wide trail has designated lanes for bicycles and pedestrians as well as streetscape amenities like trees, lighting, and benches. This trail is designed to draw mountain visitors and recreationalists into Cottonwood Heights.

- 4 FORT UNION PEDESTRIAN CROSSINGS**
A key part of this concept is increasing and improving the opportunities for pedestrians to cross Fort Union Boulevard between Wasatch Boulevard and Big Cottonwood Canyon Road. This concept shortens crossings by reducing lane widths, extending “bulb-outs” into the parking lane and using wide, high-visibility crosswalk markings.

- 5 ON-STREET BIKE FACILITIES**
Even though this concept would add a multi-use trail for cyclists, it retains the eastbound (uphill) bike lane and bike turn lane. Westbound, the travel lane is marked (with the green-backed “sharrow”) as a shared lane for cyclists and motorists.

- 6 WASATCH BLVD. PEDESTRIAN CROSSINGS**
Pedestrian crossings of Wasatch Boulevard are improved by pulling back from the corners to be as short as possible and align with sidewalks. High-visibility markings are added. On the northern crossing, the existing “pork chop” at the free right turn is enlarged to increase pedestrian and cyclist comfort and safety.

- 7 MOUNTAIN PLAZA**
The multi-use path running through this segment of Fort Union Boulevard can create small public spaces emphasizing gathering, spectating, commerce, and public information. Amenities could include food trucks (7a), seating and berms for spectating races or people watching (7b), and electronic information boards with snow reports, community info, race results or a public Strava display (7c).



Node 5

*comparable images
& ideas*



Buildings and spaces that reflect local needs and conditions



Big Cottonwood granite expressed in the corridor design



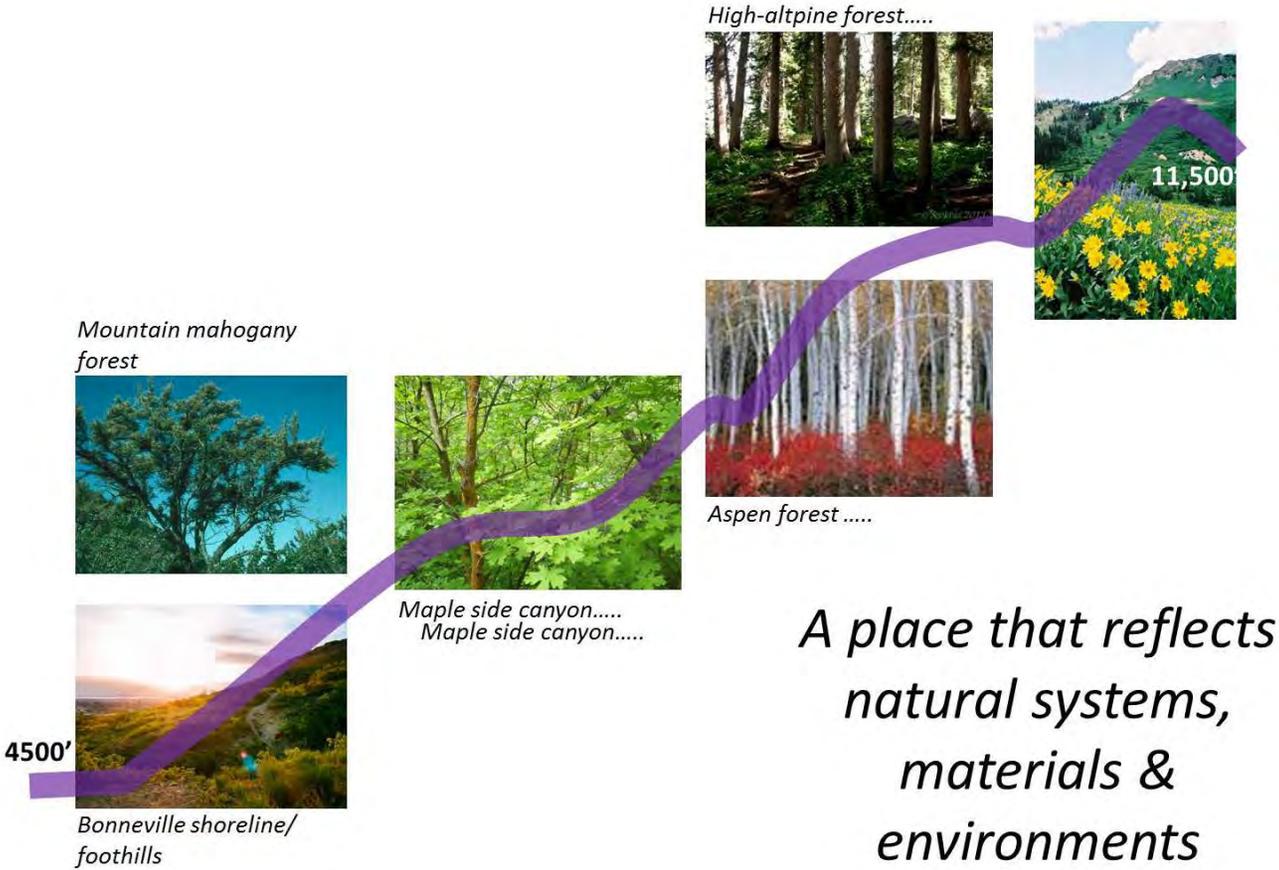
A mix of built and open spaces



Locally-inspired design and architecture

*A place where
nature and
city meet*

Figure 91: Extending Natural Systems into the Corridor



Node 5

canyon mouth gateway ideas

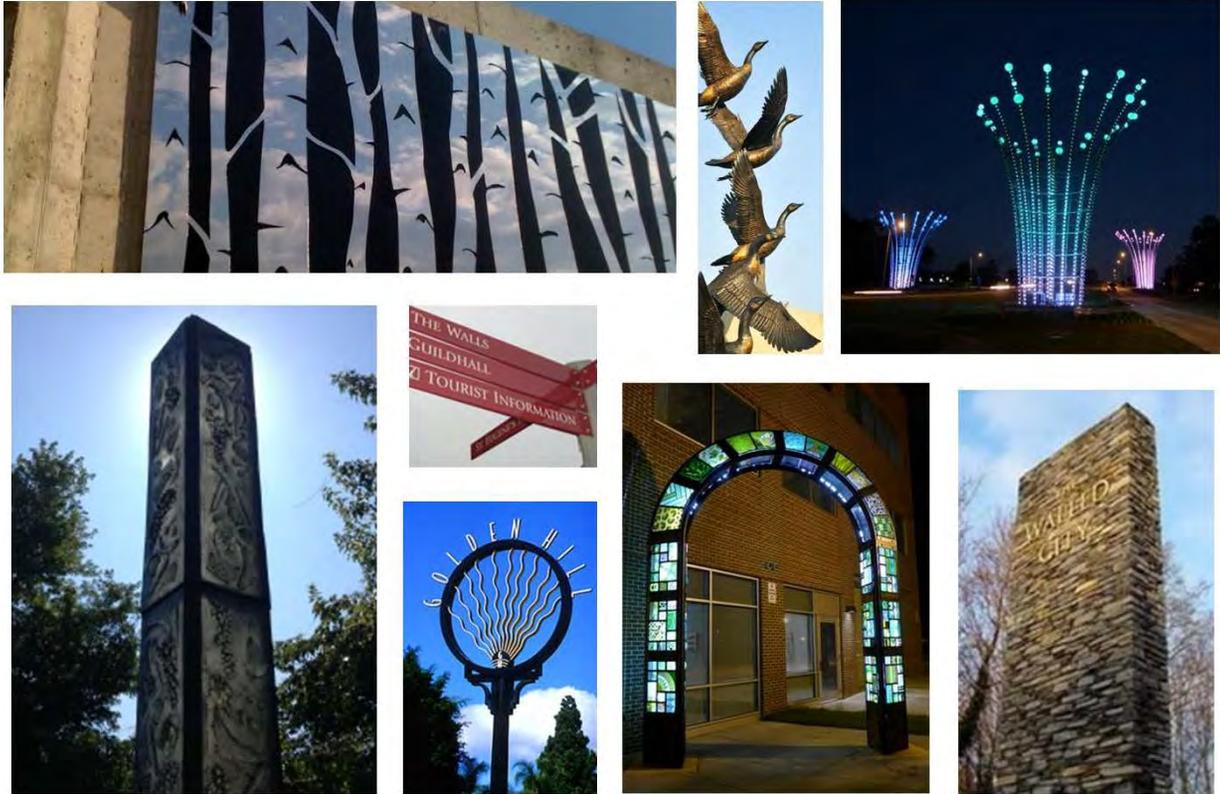
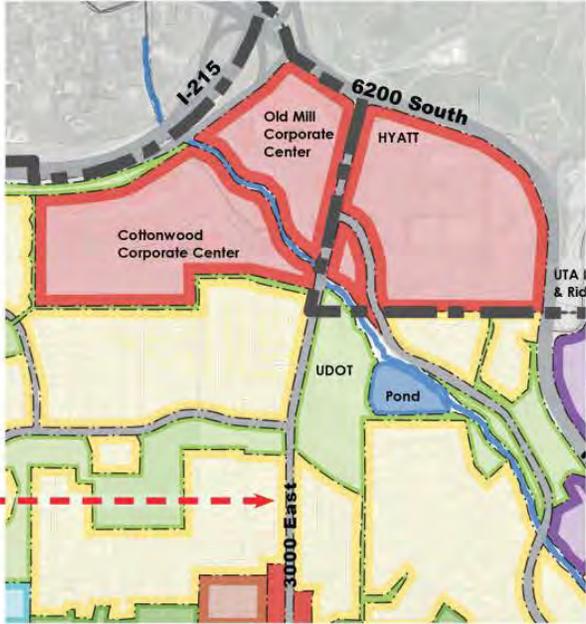




Figure 92: Land Use and Design Concept – Node 6 – Wasatch Boulevard/6200 South/I-215 Corporate Center



Leverage enhancements along Fort Union Boulevard to **attract diners and shoppers** working and visiting the Corporate Center area

Enhance 3000 East and other road linkages to promote **easy multi-modal connections** with Fort Union. Include multi-modal enhancements, including pedestrian and cycling paths and streetscape enhancements



COTTONWOOD HEIGHTS CORRIDOR PLAN

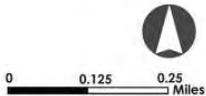
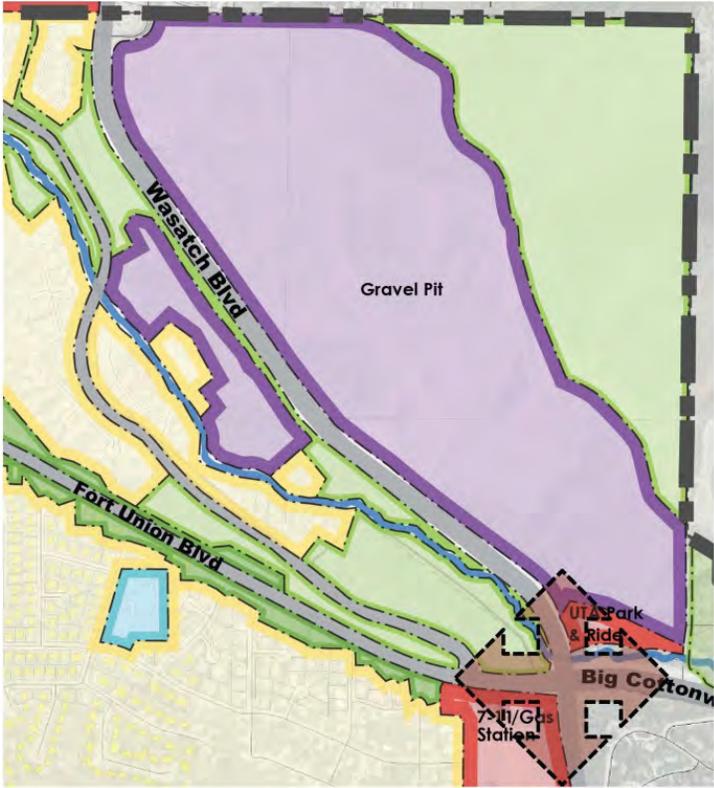




Figure 93: Wasatch Boulevard/Gravel Pit - Comparable

Link East Fort Union, Wasatch Boulevard, Old Mill, the Gravel Pit and Cottonwood Corporate Center into a unified place and special destination



Redevelop Fort Union/Wasatch Boulevard properties and roadways to create an enticing gateway to City Center

Create a unified intersection experience at Fort Union Boulevard/Wasatch Boulevard crossing



COTTONWOOD HEIGHTS CORRIDOR PLAN



Figure 94: Example of Phased Transition of Boulevard Transition Areas

Existing Condition:

Narrow right-of-way, narrow front yards and frequent driveways limit opportunities to create a meaningful pedestrian-friendly transition area

**Phase 1:**

Utilize front yards to establish continuous pedestrian pathways and related amenities on both sides of roadway

**Phase 2:**

Strategically merge adjacent lots in larger properties suitable for residentially-scaled businesses with controlled access points/driveways, shared parking and unified street presence



Appendix A – Value of Placemaking

Placemaking has been indicated throughout this study as an important aspect of development – an important tool that the City can use to redevelop at economic nodes. Placemaking is a planning process that improves commercial areas to be recognizable, for people (not just cars), to have spatial definition and architectural character, and to make that place a destination in and of itself.

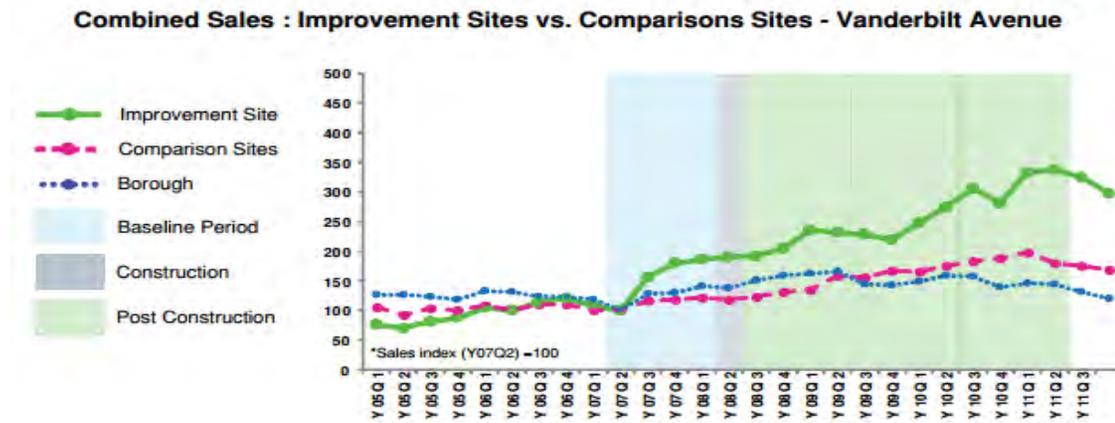
While placemaking is good for residents and improves the aesthetic quality of the City, research has extensively shown that placemaking improves economic outputs and business performance. Improvements in walkability, green space, bike access, and business appearance have a significant impact in the performance of local businesses.

New York City’s Department of Transportation performed the most in-depth study on placemaking factors – specifically addressing walkability – finding that businesses in these improved areas saw significant increases in sales compared to similar areas over the same time period. A sample of these projects and their resulting sales increases include:

1. Bronx Hub, the Bronx – Changed traffic patterns and signals to cater to pedestrians, increased public space, added bicycle infrastructure and added greenery.
 - a. Results: Reduced injuries while maintaining the same level of service for traffic. The intersection had improved sales compared to the rest of the Bronx – by the third year post-construction, sales had increased 50 percent compared 18 percent in the Bronx.
2. St. Nicholas Avenue/Amsterdam Avenue, Manhattan – Improved pedestrian mobility with safety and business access in mind.
 - a. Results: Sales in the intersection increased each year post-construction, with a 48 percent increase by the third year compared to 39 percent improvement in Manhattan.
3. 8th and 9th Avenues, Manhattan – Established bike paths.
 - a. Results: Local business retail sales were up 49 percent compared to three percent borough-wide.
4. Vanderbilt Avenue, Brooklyn – Reduced to one lane each way, parking adjustments, added a bicycle lane and landscaped medians.
 - a. Results: Increased sales each year post improvement with a 102 percent increase in sales by year three compared to the overall 18 percent in all of Brooklyn.

5. Union Square North, Manhattan – Expanded walking facilities.
 - a. Results: Commercial vacancies reduced by 49 percent, compared to a 5 percent increase in vacancies borough-wide
6. Pearl Street, Brooklyn – Converted an underused parking lot into a public park.
 - a. Results: Nearby retail sales volumes increased by 172 percent, compared to only 18 percent borough-wide.
7. Fordham Road, Bronx – Established a bus lane and other transit improvements.
 - a. Results: Increased nearby retail sales 71 percent compared to 23 percent borough-wide
8. First and Second Avenue, Manhattan – Developed bus and bike lanes along streets.
 - a. Results: Commercial vacancies were reduced by 47 percent compared to a small average two percent reduction in the rest of Manhattan over the same time period.

Figure 95: Economic Impacts of Placemaking



Another study completed by Kansas State University found that façade improvements improved gross sales after the improvements. Of the businesses studied, all experienced an increase in the annual percentage increase in the gross sales the year after improvements averaging 272 percent. The majority of businesses sustained an increase in sales an average increase of 222 percent in the average annual percentage increase in gross sales. A majority also experienced an increase in sales after façade improvements above their own business's average before improvements and above the performance of other local businesses over the same time period. Two-thirds of those owners that participated in the study stated that the improvements significantly impacted the increase in sales and all of the businesses reported favorable customer responses to the improvements.

San Francisco found that their Community Benefit Districts (CBDs) and Business Improvement Districts (BIDs) were insulated from the effects of the 07/09 recession: they retained value in properties, had less reduction in sales tax revenues, and maintained lower vacancy rates than rest of City. CBDs/BIDs are partnerships in which property and or business owners elect to make a collective contribution to the maintenance, development, and promotion of their mixed use neighborhood through a special assessment to their property or business. Four of five districts retained more value during the Recession. These districts only lost 8.9 percent of their value, while citywide declines reached 19.45 percent. Two districts grew by 50.02 percent and 23.93 percent in real value from 2006-2012, while citywide commercial office property values grew only 15.79 percent. Additionally, during the recession, citywide sales tax revenues declined by 20%. All 9 studied districts fared better during the recession, on average retaining 4.8% more value. Two districts grew sales tax revenues in real value by 7% and 5% during the recession. At the point of implementing services through the FY10-11 period, 6 of 9 Districts outperformed the City's growth pattern over the same period by an average of 8%.

The Brookings Institute studied how walkability in Washington, D.C. finding that increases in walkability were correlated with improvements in rental rates, retail sales and home values. Walkability in neighborhoods and commercial centers in the City were scored on their walkability from one to five, with one being poor walkability and five being good. The following table shows the correlation with these scores on various economic performance measures.

Table 41: Economic Improvements with Walkability Increase

Economic Performance Measure	Increase with 1 Point Walkability Score Increase
Average Office Rent per Square Foot	\$8.88
Average Retail Rent per Square Foot	\$6.92
Percent Retail	80%

Economic Performance Measure	Increase with 1 Point Walkability Score Increase
Average Residential Rent per Month	\$301.76
Average For-Sale Home Value per Square Foot	\$81.54

Other smaller case studies and various reports on placemaking factors show the following economic impacts as a result of placemaking efforts:

- **Michigan Municipal League:** “Streetscape improvements increase storefront occupancy rates, encourage private sector investments, and have shown to improve commercial trading by up to 40 percent.”
- **Lancaster, CA:** \$10M redesign with new lighting, landscaping, street furniture and promotions. Within 2 years, it spurred \$125M in private investment, a 26 percent increase in sales tax revenues, and 800 new jobs
- **Lodi, CA:** \$4.5M invested to retrofit five main street blocks with sidewalk widening, curb bump-outs, colored paving stones, street furniture, lighting, and other amenities. Resulted in 60 new businesses, drop in vacancy rate from 18 percent to six percent and a 30 percent increase in sales tax revenues in three years
- **West Palm Beach, FL:** Improvements in pedestrian crossings, traffic calming and streetscape. Went from 80 percent vacancy to 80 percent occupancy over 20 years. Property values increased from \$10-\$40/sq ft to \$50-\$100/sq ft. There was also \$350M in new private investment
- **Toronto Clean Air Partnership:** “Patrons of retail business who arrive by foot and bicycle in a neighborhood shopping area visit the most often and spend the most money per month.”
- **Urban Land Institute:** “Walkable retail areas with unique [...] qualities provide competitive advantages. Their ‘place-making dividend’ attracts people to visit often, stay longer and spend more money.”
- **Boarnet Study:** “In LA, walkable, densely-built shopping districts saw retail activity up to four times greater than strip shopping.”

Appendix B – Funding Options

There are a wide variety of tools available to help the City in achieving its goals. Several of these tools have been discussed in more detail below

Redevelopment Areas – Tax Increment Project Areas

By far and away the most widely-used tool for economic development is the creation of some form of tax increment district – URA, EDA or CDA. The use of tax increment has increased dramatically throughout the State of Utah over the past 30 to 35 years. In 1980, only about \$2.5 million of tax increment was generated statewide; by 2013, this figure had increased to over \$170 million. There are many more communities participating today than there were 30 years ago, and those communities who are not actively involved are at somewhat of a disadvantage compared to those who participate.

Figure 96: State of Utah Tax Increment Generated 1979-2013. *Source: Utah State Office of Education*

If the State of Utah provides economic development incentives, known as EDTIF, it requires that local communities participate with some kind of contribution. Local tax increment is the most commonly-used form of local contribution.

Urban renewal areas require a finding of blight, and require taxing agency approval of project area plans and budget. Economic development areas require the proof of job creation (not transference) and also require taxing agency approval of project area plans and budget. Community development areas are targeted to general municipal development, are more flexible in their formation, but are limited to the use of municipal sales and municipal property tax, unless other taxing entities opt-in.

Cottonwood Heights may award incentives to companies locating in CDA, RDA or EDA districts. Incentives are generally based on a percentage of the property tax increment generated by a specific development or within the project area. Tax increment dollars are often returned to the developer in the form of infrastructure development, land cost write-down, or other appropriate means. Tax increment financing is dependent on *increment* – additional property value over the baseline property value at the time that the project area plan and budget are approved. Tax increment from a project area is available for a specific number of years only or to a specified increment amount as agreed upon with the taxing entities. Therefore, timing becomes especially important in the creation of project areas, in order to maximize the amount of increment generated and returned to development within the project area boundaries.

Revolving Loan Funds and Grants

A revolving loan fund (“RLF”) is a source of money from which loans are made for small business development projects. A loan is made to a business and as repayments are made, funds become available for new loans to other businesses. The major purpose is to provide a source of financing, which may not otherwise be available within the community, for local, expanding, or start-up businesses. Often they are used to fill a “financing gap” in a business development project. A gap occurs when the business lacks the funds to meet the equity requirements of bank financing or needs a lower interest rate.

The source of capitalization (the funds used to create the RLF) may have regulations governing program design. For example, RLF’s which are capitalized with Community Development Block Grant (CDBG) funds must follow the rules and regulations established by the U.S. Department of Housing and Urban Development (HUD), and must show some benefit to low- and moderate-income households. It is our experience that revolving loan funds are more successful during periods when interest rates are relatively high, rather than in the recent marketplace where low-interest loans have been fairly easy to obtain from the private sector. **Matching grants or revolving loan**

funds have been highly successful in a wide variety of communities. Businesses that choose to participate generally report increased sales from the improved appearance of their properties. Research shows that improvements that create more of a place increase property values and sales generation.

Figure 97: "Before" and "After" Façade Renovations





ZAP or RAP Taxes

Many communities have initiated Zoo, Arts, and Parks (ZAP) or Recreation, Arts, and Parks (RAP) taxes which have been very effective in raising funds to complete parks, recreation, trails and open space projects. They are generally administered by a municipality or county. Cottonwood Heights has not enacted this tax, although Salt Lake County has.

Business Improvement District

The Fort Union business owners could potentially benefit from forming a Business Improvement District to facilitate projects along Fort Union, including joint marketing opportunities, ad campaigns, festivals and events along the corridor, signage, assistance with business recruitment, planning for parking facilities, and storefront improvement programs.

Community Development Block Grants

Community Development Block Grants (CDBG) can be used for development in areas that qualify as low and moderate income areas. This would be difficult for Cottonwood Heights. However, CDBG funds may also be used for projects that remove barriers to access for the elderly and for persons with severe disabilities.

Utah Arts Council

The Utah Arts Council offers grants to non-profit organizations and entities for arts education programs and program grants. The funding is limited and requires a match, and may be useful in developing a program or event within the community; however, these funds are not designed to develop arts facilities or enhance building programs.

Utah Historic Preservation Tax Credit

Historic homes can benefit from a 20 percent nonrefundable tax credit for the rehabilitation of historic buildings which are used as owner-occupied residences or residential rentals. Twenty percent of all qualified rehabilitation costs may be deducted from Utah income or corporate franchise taxes.

Streamlined Permitting Process

Generally permits are processed in the order they are received. However, the process can be streamlined for those businesses that are dependent on a fast process. This can include allowing a fee to move to the front of the queue (a fee the City can waive as a developer

incentive), reducing the number of items that have to in front of the city council, and the implementation of a form-based code to reduce further Council approval.

Retail Incentives

For businesses that are highly desirable to the City, sales tax incentives could be provided for a period of time. These would be considered on a case-by-case basis for a major tax-generating retailer to retain or improve the business.

Bonding

Prior to summarizing the financing mechanisms that may be used for each type of capital project, key federal tax laws that come into play when contemplating the issuance and timing of issuance of tax exempt bonds are listed below:

- With the exception of some facilities that can be funded through tax-increment bonds, all facilities funded must be owned by the tax-exempt issuer and generally cannot be utilized for the benefit of a single private entity unless allowed to do so free of charge;
- If the issuer chooses to utilize capitalized interest in the structuring of the debt, the capitalized interest can only be funded for a three-year period or less;
- With the exception of general obligation bonds, revenue bonds will sometimes require a debt service reserve fund, either funded from bond proceeds or with a surety policy;
- Generally, debt service can be structured to match estimated available revenues that will be used to pay the debt; and
- State law does not allow for the use of “double-barrel” bonds, those that pledge both an asset and a revenue stream.

Financing alternatives that are available to local governments in Utah are summarized as follows:

General Obligation Bonds. General Obligation bonds (“GO”) are subject to simple majority voter approval by the constituents of the issuing entity. General obligation elections can be held once each year, in November, following certain notification procedures that must

be adhered to in accordance with State Statutes in order to call the election (pursuant to Utah State Code 11-14-2 through 12). Following a successful election, it is not necessary to issue bonds immediately, but all bonds authorized must be issued within ten years. Once given the approval to proceed with the issuance of the bonds, it would take approximately 90 days to complete the bond issuance.

General obligation bonds can be issued for any governmental purpose as detailed in Utah Code §11-14-1. The amount of general obligation debt is subject to the following statutory limitations:

- Counties are limited to two percent (2%) of the total taxable value of the County;
- School Districts are limited to four percent (4%) of the total taxable value in the District;
- Cities of the 1st and 2nd class are limited to a total of eight percent (8%) of the total taxable value, four (4%) for general purposes and four (4%) for water, sewer and lights; and
- Cities of other classes or towns are limited to a total of twelve percent (12%) of total taxable value, four percent (4%) for general purposes and eight percent (8%) for water, sewer and lights.

Notwithstanding the limits noted above, most local governments in Utah have significantly less debt than the statutory limitations. Practical limitations imposed on the market will be based on ratios such as general obligation debt per capita and general obligation debt compared to total taxable value. Medians vary somewhat depending on the size of the issuer. A summary of medians can be provided upon request.

Pursuant to state law, general obligation bonds must mature in not more than forty years from their date of issuance. Typically, however, most GO bonds mature in 15- 20 years.

Advantages of G.O. Bonds:

- Lowest cost form of borrowing
- ‘New’ source of revenues identified
- No encumbrance of utility system revenues
- No requirement to raise utility rates to meet debt service coverage requirements
- Lowest bond issuance costs

- No Debt Service Reserve Fund requirement

Disadvantages of G.O. Bonds:

- Timing issues; limited date to hold required G.O. election
- Risk of a “no” vote while still incurring costs of holding a bond election
- Possibility of election failure due to lack of perceived benefit to majority of voters
- Must levy property tax on all property even if some properties receive limited or no benefit from the proposed improvements
- Can only bond for physical facilities, not ongoing or additional operation and maintenance expense

Utility System Revenue Bonds. To some extent, a city operates in a manner similar to a private business in that it provides utility services for which city residents and businesses pay fees. The fees charged for service should be sufficient to allow a city to pay ongoing operation and maintenance costs, fund periodic replacement of capital facilities, issue debt when prudent and construct new facilities as demand for its services increase.

State law allows a city to issue debt secured by a pledge of the net revenues⁶ generated by the operation of the system. Bonds structured in this manner are typically referred to as System Revenue Bonds or Revenue Bonds and are commonly used by utility service providers to finance capital costs.

Under Utah law, Revenue Bonds may not be secured by a pledge of the physical assets of a city. Bondholders can look only to system revenues as the source of bond repayment. A city is obligated to (i) maintain the system in good operating condition such that the revenue stream is maintained and (ii) charge user rates sufficient to operate the system, service the debt and maintain net revenue coverage levels as required under the terms of such debt.

Revenue bonds do not require a bond election and may therefore be issued much more quickly than G.O. bonds. If revenue sufficiency exists, Revenue Bonds can typically be issued in as little as 90 days. Generally, entities that issue Revenue Bonds are required under the terms of the bond documents to maintain a rate structure that will insure net revenues are sufficient to provide debt service coverage of 125 percent. In other words, there should be net revenues of \$1.25 for each \$1.00 of Revenue Bond debt service.

⁶ Net Revenues: Total system revenues less operation and maintenance expenses.

Because Revenue Bonds are not secured by a city's ability to levy property taxes, but solely from revenues generated by the utility system, bond purchasers are likely to require a slightly higher interest rate to compensate them for the perceived increase in the risk related to the underlying security. Historically, the interest rate differential between a G.O. bond and a Revenue bond is between 10 and 25 basis points.⁷ Large cities that serve a wide customer base, including a diverse mix of residential and commercial users, and are not overly reliant on a small percentage of its users to generate the majority of its revenues, will be able to issue bonds at interest rates much closer to G.O. rates.

While G.O. bonds require that a city impose a property tax on all property within a city, System Revenue bonds are repaid from the service charges paid by all system users regardless of whether or not the individual system user benefits from a particular system addition or upgrade. Typically, all system revenues are pledged for the bond repayment and not just those within various service areas within a city even if the rate structure is different in different areas. Additionally, no revenues would be collected from properties until they are developed and using the utility services, which is unpredictable. Also, a city would be pledging all of its system revenues and would be required to covenant to raise its rates to meet the debt covenants. If revenues were insufficient to make the debt service payments, system rates would likely need to be increased.

Revenue bonds can be issued for any capital facility associated with the operation of the utility enterprise of the issuer. The amount of revenue bonds that a local government can issue is not subject to any specific statutory limitations. That stated, there are many practical limitations imposed by the tax-exempt bond market that may limit the capacity of an issuer to issue utility system revenue bonds. In addition, there are legal restrictions, including an Additional Bonds Test coverage ratio established in the bond documents that limits issuance. Credit considerations include, but are not limited to, the following;

- Availability of source (water, gas, electricity) to run the enterprise and meet projected demand
- Comparability of utility system user rates to the surrounding area
- Number of system users
- Revenue and expense history

⁷ Basis Point: 1/100th of a percent. (i.e. 25 basis points equals ¼ percent)

- Reasonable debt service coverage ratios (1.25x coverage is typical but lower coverage factors have been negotiated down to as low as 1.10x)
- Utility system not being overly dependent on impact fees
- Cash balances

In order to strengthen its credit or provide enough net revenues to support the issuance of bonds, an issuer, prior to the issuance of utility system revenue bonds, may need to go through a rate study and adjust its rate structure. New utility rates are implemented by resolution under the requirements of Utah Code Section 10-3-7. The Resolution may become effective any time within three months of passage of the Resolution, as determined by the governing body (10-3-719). The form of the Resolution will follow that of an Ordinance, as described in 10-3-704.

Since net revenues can, to a large degree, be controlled by the issuer, revenue bonds are considered low risk investments and generally viewed as strong credits in the bond market. Pursuant to state law, utility system revenue bonds, like G.O. bonds, must mature in not more than forty years from their date of issuance. Typically, however, most system revenue bonds mature in twenty to twenty-five years and are always constrained by the useful life of the facilities being financed that will be used to produce the system revenues.

In addition to issuing bonds through the public markets, the State of Utah has four state revolving loan funds that obtain funding through both state and federal sources that may be available. These entities are the Board of Water Quality, the Drinking Water Board, the Board of Water Resources, and the Community Impact Fund Board. Depending on the type of project, perceived need and benefits, and the current availability of funds at each of the boards, they may provide significant no or low interest loan funding or possibly some grant funding. The level of interest charged is generally a function of the utility rates being charged compared to the median gross household income in the area.

Advantages of Utility System Revenue Bonds:

- Low cost form of borrowing only slightly higher than G.O. Bonds
- No requirement to hold a bond election
- Can be completed relatively quickly

Disadvantages of System Revenue Bonds:

- Non system-wide improvements could end up being paid for by all users even though no benefit is realized by those outside the specific development area
- May require a user rate increase to all City residents to meet debt service coverage tests
- Revenues may be slow to materialize since they are somewhat dependent on new construction
- Typically require a Debt Service Reserve Fund

Excise Tax Revenue Bonds. Revenue bonds payable from excise tax revenues are governed pursuant to Utah State Code Section 11-14-307. Without the need for a vote, Cities and Counties may issue bonds payable solely from excise taxes levied by the City, County or those levied by the State of Utah and rebated to the City or County such as gasoline taxes or sales taxes. State law limits the amount of bonds that can be issued through this mechanism by limiting annual bond debt service to a maximum of 80 percent of the preceding fiscal year's receipts.

Class B&C Road Bonds. Gasoline taxes are collected and distributed pursuant to Cities and Counties in a formula that is based upon population and number of City or County road miles within the local government's boundaries. These funds can be utilized by cities and counties to construct, repair and maintain City and County roads and can be utilized as a sole pledge for repayment of debt issued for those purposes.

State law limits the amount of bonds that can be issued through this mechanism by limiting annual bond debt service to a maximum of 80 percent of the preceding fiscal year's receipt of Class B & C road funds. These bonds may not exceed ten years. This state law matches well with the general requirements of the market relative to revenue bonds as it automatically serves to create a 1.25X debt service coverage ratio.

Practical consideration for the issuance of this type of debt for most cities and counties lies with the fact that most local governments spend these funds and more on the maintenance of roads. Therefore, while it is used as the means for securing the debt, other general funds may actually be utilized by the issuer to make the annual payments or to pay for maintenance while the excise tax bonds are being retired with Class B&C road fund revenues.

While toll roads are common in the east, they have only been used rarely in Utah for two specialized road projects.

Depending on the ownership of the road(s) being financed, the City or possibly the County could issue the excise tax revenue bonds. The issuer would need to adopt a Notice of Intent to Issue Bonds, hold a public hearing, and allow for a thirty-day contestability period prior to closing on the bonds. Once the Notice of Intent has been adopted it would take approximately 90 days to complete an issuance of these bonds.

While neither the City nor the State can control the amount of gas tax generated, there exists in State law a non-impairment clause (11-14-307 (a)) that restricts the State's ability to change the distribution formula in such a way that would harm bondholders while local governments have debt outstanding.

Sales Tax Revenue Bonds. Sales taxes are also collected and distributed by the State of Utah. With a change in the State's constitution in November of 2000, and with a clarification from the Attorney General's office regarding a technical matter, the first non-voted sales tax revenue bond was issued in July 2001. Sales tax revenues can also be utilized as a sole pledge for repayment of debt without a vote of the constituents and funds can be utilized for the acquisition and construction of any capital facility owned by the issuing local government. They are frequently used for parks and recreation facilities or other city buildings such as City Hall or Public Safety buildings.

Just as with Class B&C road bonds, state law limits the amount of bonds that can be issued through this mechanism by limiting annual bond debt service to a maximum of 80 percent of the preceding fiscal year's receipt of sales tax revenues. However, sales taxes are not limited to a pledge for a ten-year period but can legally be issued for up to forty years. While this state law provides an 1.25X debt service coverage ratio, due to the elasticity of sales tax revenues and local governments typical heavy reliance on these revenues for general government operations, the market will usually demand a significantly higher debt service coverage ratio of at least two or three times revenues to debt. Most sales tax revenue bonds are structured to mature in twenty-five years or less.

Depending on the ownership of the capital facilities to be financed, the City or the County could issue sales tax revenue bonds. The issuer would need to adopt a Notice of Intent to Issue Bonds, hold a public hearing, and allow for a thirty-day contestability period prior to closing on the bonds. Once the Notice of Intent has been adopted it would take approximately 90 days to complete an issuance of these bonds.

Municipal Building Authority Lease Revenue Bonds (“MBA”). Pursuant to the Utah Municipal Building Authority Act (17D-2-1) cities, counties and school districts⁸ are allowed to create a non-profit organization solely for the purpose of accomplishing the public purpose of acquiring, constructing, improving and financing the cost of a project on behalf of the public body that created it.

The security for a MBA bond is a first trust deed on the real property, any buildings or improvements and a security interest in any furniture, fixtures and equipment financed pursuant to a particular MBA transaction and an annual lease payment from the City to the MBA. Bonds structured in this fashion are not considered long-term debt as the lease payments are subject to an annual appropriation by the City.

Due to the security structure, the best types of capital facilities to finance under this mechanism are those that are deemed as “essential purpose” by the bond market. Municipal buildings such as city halls, public safety buildings and public works buildings are typically considered essential public purpose. That stated, many other capital improvements and facilities have been funded using MBA bonds including parks and recreation facilities. To strengthen the credits of facilities that are not deemed as essential purpose, it is common to cross collateralize facilities. However, under Utah law once a facility has been completely paid for and is owned outright by the local government it cannot be utilized to collateralize debt on another facility.

The legal limitation for maturity on bonds issued pursuant to the Building Authority Act is forty years. From a market perspective however, the final term on this type of debt will be governed by the maximum useful life of the facility(ies). Most MBA bond transactions are structured to mature in 25 or less.

Due to the real property nature of the transaction it may take some additional time to process and close an MBA bond due to the need to run a title report and clear any liens or encumbrances that may appear on the title so that clear title policies can be provided to the owner and lenders.

Impact Fee Revenue Bonds. Utah State law allows the City to charge new development for the cost of providing service to newly-developed areas through the imposition of Impact Fees once a complete impact fee analysis has been completed and adopted. Impact

⁸ Although available for use by school districts, the mechanism is rarely utilized by them.

fees are calculated to cover the cost of bringing new development up to the same or proposed service standard (if less than the existing standard), often referred to as the “level of service.”

Although impact fees can technically be pledged as a repayment source on bonds, due to the uncertainty related to timing of collection of impact fees, they are not considered a secure enough source of revenue on their own to secure financing at a reasonable cost. Typically impact fee revenues are utilized as one portion of the funding available to make debt payments when system revenue bonds are issued, with the bulk of the revenues coming from user fees. A city, if it wished to finance a capital project using impact fees, would still need to issue either G.O. Bonds or Revenue Bonds as previously discussed to secure the bonds and then use any impact fees received to offset the debt service payments due from the actual pledged sources. In this case, the city takes the risk that the impact fees will materialize and be available for debt repayment rather than investors.

Advantages of Impact Fee Revenue Bonds:

- Those benefiting from the improvements, pay for the improvements
- No requirement to hold a bond election

Disadvantages of Impact Fee Revenue Bonds:

- Unpredictable nature of source of revenues would significantly drive up the cost of financing and in today’s market may be difficult
- In order for this type of financing to be marketable, the City would most likely have to pledge other revenue sources (such as user fees) as a backstop
- Would require a Debt Service Reserve Fund

Special Assessment Area Bonds. Special Assessment Areas (“SAAs”), formerly known as Special Improvement Districts or “SID”s, are a financing mechanism that allows governmental entities to designate a specific area which will be benefited by public improvement(s) and levy a special assessment, on parity with a tax lien, to pay for those improvements. The special assessment is then pledged to retire bonds, known as Special Assessment Bonds, issued to finance construction of the project.

The underlying rationale of an SAA is that only those property owners who benefit from the public improvements will be assessed for the improvement costs as opposed to previously discussed financing structures in which all City residents pay either through property taxes or increased service fees.

While not subject to a bond election as is required for the issuance of General Obligation bonds, SAAs may not be created if 50 percent or more of those liable for the assessment payment⁹ protest its creation. Despite this legal threshold, most local government governing bodies tend to find it difficult to create an SAA if 10-20 percent of property owners oppose the SAA.

Once created, an SAA's ability to levy an assessment has similar collection priority / legal standing as a property tax assessment. However, since it is not a property tax, any financing secured by that levy would likely be done at higher interest rates than either of the other options discussed in this analysis. Interest rates will depend on a number of factors including the ratio of the market value to the assessment bond amount, the diversity of property ownership and the perceived willingness and ability of property owners to make the assessment payments as they come due. Even with the best of special assessment credit structure, the bonds are likely to be non-rated and therefore would be issued at rates quite a bit higher than similar General Obligation Bonds that would likely be rated. Compared to an 'A' rated GO bond, a special assessment bond will likely carry an interest rate about 300 basis points (three percent) higher. All improvements financed via an SAA must be owned by the City and the repayment period cannot exceed twenty (20) years.

If an SAA is used, the City will have to select a method of assessment (i.e. per lot, per unit (ERU), per acre, by front-footage, etc.) which is reasonable, fair and equitable to all property owners within the SAA. Typically for utility improvements, we would expect the City to utilize an assessment based on acreage, buildable acreage, or equivalent residential units ("ERUs") rather than basing assessments on such factors such as front-footage which have no correlation to the utilization of utility services. State law does not allow property owned by local government entities such as cities or school districts to be assessed.

One possible advantage of SAA's is their ability to finance the project during its construction phase through the use of Interim Warrants or Bond Anticipation Notes which work in a fashion similar to a construction loan on a new house. In our current market it is difficult to find buyers willing to take the construction risk without actual assessments levied, however, a lender is secured through either a negotiated or a competitive process and, as construction proceeds, advances are taken by the City against a pre-authorized loan

⁹ Based on the method of assessment selected, i.e. acreage, front footage, per-lot, etc.

amount. The use of Interim Warrants has two compelling advantages over bonding for all of the construction costs before actually beginning construction. First, interest accrues only on the amount actually drawn upon for actual construction whereas a bond begins to accrue interest on the entire par amount of the bonds as soon as the bonds are issued. Second, it allows the City to complete all construction, gather accurate cost data and calculate the assessment on each property once all actual costs are known rather than estimating the costs in advance. This second advantage is most pronounced in a time of escalating construction costs because once the assessment is levied on each property, it cannot be increased even if the actual construction costs exceed the original estimate on which the assessment was based. In such a circumstance, the City would have to pay any cost over-runs.

Advantages of Special Assessment Bonds:

- Tax-exempt interest cost although not as low as a GO or revenue bond but interest cost is passed along to the property owners who are assessed
- No requirement to hold a bond election but the City must hold a meeting for property owners to be assessed before the SAA can be created
- Only benefited property owners pay for the improvements
- Improvements are owned by the City
- Assessment lien is on parity with tax levy
- Expedited foreclosure procedures in the event of non-payment of assessment
- Limited risk to the City as there is no general tax or revenue pledge
- City controls the construction and can insure work is done to City standards
- Flexibility since property owners may pre-pay their assessment prior to bond issuance or annually thereafter as the bond documents dictate
- Diversity of property ownership reduces default risk
- Ability to issue interim warrants during construction phase
- Assessments can begin as soon as construction is completed

Disadvantages of Special Assessment Bonds:

- Fifty percent of the assessed liability, be it one property owner or many could defeat the effort to create the SAA if they do not want to pay the assessment
- Some increased administrative burden for the City although State law permits an additional amount to be included in each assessment to either pay the City's increased administrative costs or permit the City to hire an outside SAA administrator
- The City cannot assess certain government-owned property within the SAA (none or little anticipated)

Community Development (CDA), Urban Renewal (RDA) and Economic Development Area (EDA) Tax Increment Revenue Bonds. Under Utah law, redevelopment agencies may create Community Development Project Areas (CDA's), Economic Development Areas (EDA's) and Urban Renewal Areas (URA's). Urban renewal areas are governed by Title 17C of the Utah State Code and can be created by a city or county for the general purpose of providing for redevelopment and economic development through various tools associated with the buying and selling of property and utilizing tax increment as a means to promote development.

The availability of property tax increment for urban renewal and economic development project areas is impacted by a number of matters including the date of adoption of the project area plan budget, the first taking of increment and the rate at which development occurs and property tax values increase.

Unfortunately, but understandably, the bond market will severely discount the projected tax increment cash flows due to the fact that they are solely reliant on tax-increment as the source for repayment of the debt and at the outset of a new project, little if any tax-increment is being generated. Without multiple years of historical tax-increment revenue receipts, the bonds may not be marketable at reasonable rates and at best projected increment will be discounted by at least half, if buyers are willing to buy at all.

One method that has been used to overcome the market challenges posed by direct tax-increment financing is to use a SAA in conjunction with the use of tax increment. This provides a means to leverage the potential tax-increment at an earlier stage in the development process by collateralizing land as opposed to immaterial future incremental dollars.

Under this structure, a tax increment project area (URA, EDA or CDA) is created and the developer / landowner enters into an Agreement to Develop Land ("ADL") with the local government wherein the developer negotiates receipt of a portion of the tax increment to be generated. Then, SAA bonds are issued and assessments are placed on the benefited property of the developer / landowner who

provide security to the bonds noting that the property then serves as the ultimate security for the debt (not projected increment receipts). If the developers proceed with development and building in a timely fashion, they can utilize the increment received to make the assessment payments, although they are not pledging this stream of revenues.

Industrial Revenue Bonds. Industrial revenue bonds can be issued by a city. There is a \$10 million cap per issue for small manufacturing facilities and a \$150 million total annual state allocation cap. Industrial revenue bonds have strict regulations regarding business types that are eligible; a 501(c)(3) can generally use them for a wider variety of projects.

Bond or Tax Anticipation Notes (BAN's or TAN's). State statute (11-14-311) allows for the issuance of Notes in anticipation of a bond issue or future tax receipts if the legislative body of a City, County or School District deems it advisable and beneficial. These are sold in advance of bonds being sold and may only have to do with time.

TAN's are typically utilized by school districts that receive nearly all of their revenues in one lump sum in November when property tax revenues are received. Knowing that expenses occur monthly, or more frequently, the timing of revenues and expenses may not always be synchronized.

Special Service Districts (SSD's). Special Service Districts are not a type of debt security, but rather the creation of a legal entity that can provide some governmental services and issue debt. Special Service Districts have been widely used throughout the State for water, sewer and fire protection services.

Special Service Districts can be created by a county, city or town for the purpose of providing water service, sewer service, storm retention, electrical or natural gas services, fire protection, recreation, mosquito abatement and public transit.

Creation and appointment of board members is dependent on the type of district, who forms the district and when it is formed.

Local Districts. Local districts were authorized by the Utah Legislature to provide services for: 1) the operation of an airport; 2) the operation of a cemetery; 3) fire protection, paramedic, and emergency services; 4) garbage collection and disposal; 5) health care, including health department or hospital service; 6) the operation of a library; 7) abatement or control of mosquitoes and other insects; 8) the operation of parks or recreation facilities or services; 9) the operation of a sewage system; 10) street lighting; 11) the construction and



maintenance of curb, gutter, and sidewalk; 12) transportation, including public transit, streets and roads; 13) operation of a system for the collection, storage, retention, control, conservation, treatment, supplying, distribution, or reclamation of water, including storm, flood, sewage, irrigation, and culinary water, whether the system is operated on a wholesale or retail level or both; 14) extended police protection; and 15) underground installation of an electric utility line.

A local district may not be created to provide, and may not after its creation provide, more than four of the services listed above.