

The Economics of Land Use



Final Report

Denver Metro Area Housing Diversity Study

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Denver Region Council of Governments

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1. INTRODUCTION

Background

The Denver Regional Council of Governments' (DRCOG) Metro Vision 2035 Plan sets an overall goal to accommodate 50 percent of the region's new housing and 75 percent of new employment in Urban Centers between 2005 and 2035. Key to achieving the housing increment is the ability to attract and develop a range of higher density housing products in Urban Centers, especially in transit oriented development (TOD) at rail transit station locations.

Housing development in the Denver region largely came to a halt during the latest recession. During 2009, the year of lowest production, single family detached housing permits were 25 percent of the 2000-2012 average (2,378/9,456). For-sale attached permits reached a low of 20 percent (592/3,028) and apartments dropped to 13 percent of the peak (438/3,391). Since that time, single family detached permits have recovered 32 percentage points to reach 57 percent of the 13-year average. Apartments have regained 65 percentage points, while for-sale attached has only recovered 12 percentage points. Within the for-sale attached housing segment (including both townhomes and condominiums), development has shifted to townhomes projects. Since 2006, condominium production has fallen from 16 percent of all ownership production (single family, condominiums, and townhomes) to a current (2013) level of approximately 2 percent.

DRCOG is interested in understanding the characteristics and dynamics of higher density housing including the attached for-sale multifamily market and the potential for the Urban Centers to achieve a diversity of housing stock, allowing people of all ages, incomes, and abilities to access a range of housing options. Given the density targets set forth by Urban Centers, stacked flats (i.e., for-sale condominiums and for-rent apartments) will play an important role in meeting the housing goals. In order to meet the goal to accommodate a diversity of residents, a mix of tenure (ownership and rental) is also an important consideration.

DRCOG commissioned this study to research a number of factors identified as potentially contributing to recent housing development trends and conditions. The study goal was to probe across a broad spectrum of causes to gain greater clarity regarding their relative impact. The factors evaluated include:

- Changing development financing requirements for builders and homebuyers;
- Impacts of higher numbers of foreclosure units on the demand for new housing unit construction;
- Changes in demographics with shifting tenure preferences;
- Economic conditions that limit options for homebuyers; and
- Costs and risks associated with construction defects regulations.

There are a number of Denver area metro cities that have completed subarea plans for their urban core areas and transit stations that call for substantial increases in density. The densities that can be achieved from stacked condominiums and apartments range from 35 to 100 units or greater per acre. By contrast, townhomes traditionally have been designed at 12 to 18 dwelling

units per acre. Fulfilling the goals of these communities is dependent on the density associated with condominium and apartment projects. It is also dependent on providing a mix of housing by tenure (for-sale vs. rental) and target market segments (income and age).

Project Scope

DRCOG and a number of its member jurisdictions are concerned that the region may not be able to meet the housing goals of the Metro Vision Regional Plan and its the Urban Centers Component without a full range of higher density housing. As a result, DRCOG retained Economic & Planning Systems (EPS) to provide an independent impartial review of the key factors that may impact the region's ability to achieve its Metro Vision goals.

This report summarizes the analysis and conclusions of EPS including the following tasks:

- **Regional Goals and Policies** – A review of Metro Vision 2035 goals and policies regarding the development of Urban Centers. This includes an analysis of five urban centers to exemplify a range of conditions for urban, suburban, future, and existing centers.
- **Market Conditions** – A broad overview of Denver metro area housing trends, data, and conditions with a specific focus on the development of higher density housing products needed to implement the region's planning goals.
- **For-Sale Attached Housing Economic Factors** – An analysis of the primary economic and market factors that have impacted the construction of for-sale attached housing over the last five years including lending, foreclosures, economic conditions, demographic changes, and developer interest (related to construction defects legislation, litigation, or other factors).
- **Summary and Observations** – A summary of findings based on the data with an assessment of potential impacts and implications.

Study Limitations

Economic & Planning Systems, Inc. (EPS) is a land economics consulting firm experienced in the full spectrum of services related to real estate development, the financing of public infrastructure and government services, land use and conservation planning, and government organization. EPS was founded on the principle that real estate development and land use-related public policy should be built on realistic assessment of market forces and economic trends, feasible implementation measures, and recognition of public policy objectives.

The analysis and findings of this study address the market and economic conditions affecting real estate housing development, the expected impact of these conditions on likely future development, and considerations for improving the market for development. EPS' basis for recommending consideration of potential legislative or legal changes is limited to its real estate market expertise. EPS does not employ attorneys and have therefore not provided any opinion on specific language or strategies for legislative changes or legal remedies.

Concerning terminology, attached for-sale housing is defined in this study to include townhomes (also called townhouses) and condominiums. In most townhome projects, developers sell units with party-wall agreements and buyers own the land fee-simple that is directly under the unit.

By contrast, most condominium projects are built as multistory stacked flats in which individuals own a defined air space (often described as paint-to-paint). Most townhouse and condominium projects have a homeowners association (HOA) responsible for governing the portions of the project in common (condominium) ownership. In a townhouse project, this would generally apply only to common elements such as the parking, landscaping, and drainage. The structure, including foundation walls and roofs, are generally owned fee simple and subject to a party-wall agreement between adjacent units. In a condominium project, the individual homeowner generally owns the interior of the unit and the remaining structure (including foundations, walls, roofs, and common areas) are owned in common and subject to a condominium agreement governed by the HOA. The homeowners association (HOA) is responsible for the building structure and land on which the development is sited.

2. METRO VISION

DRCOG Urban Centers Policy Overview

DRCOG published the Urban Centers Implementation Guide in June 2001, summarizing the importance and characteristics of urban centers and recommending proper development processes for member governments. This document reflects continuity among the member jurisdictions, as it built on the original guiding visions for urban centers stated in the first Metro Vision plan released in 1992. Since that time, the 2011 Metro Vision 2035 Plan and the 2012 Metro Vision 2035 Growth and Development Supplement have been released and set forth goals of accommodating 50 percent of new housing and 75 percent of new employment in Urban Centers between 2005 and 2035.

Urban Centers Characteristics

Recognizing the current impacts of land consumption, air pollution, and traffic congestion associated with auto-dependent suburban land use patterns, Metro Vision recognizes the importance of Urban Centers to create concentrations of jobs, housing, shopping, and community activities oriented around transit destinations. As communicated in the adopted plans, Metro Vision indicates the challenges related to transportation and mobility within the larger metropolitan context can be best addressed if significant portions of future residential and commercial development are accommodated within urban centers.

Metro Vision utilizes three categories for classifying Urban Centers depending on the level of development progress achieved:

- **Emerging Urban Centers** – expect 50 percent or greater growth in combined jobs and housing units;
- **Existing Urban Centers** – already have substantial development and expect less than 50 percent combined growth in jobs and housing units;
- **Planned Urban Centers** – are mostly undeveloped, currently with less than 100 jobs and 100 housing units, but will be intensively developed in the future.

Metro Vision identifies five basic features that distinguish Urban Centers; a mix of uses, compact development at medium to high-densities, pedestrian-orientation, transit-orientation, and serving as a community focal point for a variety of land use activities. Based on these characteristics, all Urban Centers are expected to serve the role of a “downtown” for the market area in which they are located and to fulfill the following goals:

- Be active, pedestrian-, bicycle-, and transit-friendly places that are more dense and mixed in use than surrounding areas;
- Allow people of all ages, incomes, and abilities to access a range of housing, employment, and service opportunities without sole reliance on having to drive;

- Promote regional sustainability by reducing per capita vehicle miles traveled, air pollution, greenhouse gas emissions and water consumption; and
- Respect and support existing neighborhoods.

Housing Diversity within Urban Centers

Urban Centers has been an element of DRCOG plans since the original Metro Vision 2020 Plan was released in 1992. The Metro Vision calls for these Urban Centers to be more dense with a mix of uses (as compared to the surrounding areas) and to allow people of all ages, incomes, and abilities to access a range of housing options. DRCOG established goals for market capture in the Metro Vision 2035 Plan that calls for accommodating 50 percent of new housing and 75 percent of new employment in Urban Centers in the future.

There are now more than 100 Urban Centers throughout the metro area. Between 2000 and 2010 there were 94 Urban Centers for which the Census recorded a change in number of households. As shown in **Table 1**, these Urban Centers grew by 20,000 households from 2000 to 2010, accounting for 10.8 percent of total regional growth of 188,511 households. Approximately three-quarters of the net increase were renter households, with one-quarter owner households.

Table 1
Urban Centers by County, Change in Households 2000 to 2010

Urban Center	# of Urban Centers	Acres	2000			2010			Change 2000-2010		
			HU	Owned	Rented	HU	Owned	Rented	HU	Owned	Rented
Adams County	18	5,507	6,890	1,302	5,588	6,835	879	5,956	-56	-424	368
Arapahoe County	14	8,054	14,110	2,325	11,785	18,454	3,478	14,976	4,344	1,153	3,191
Boulder County	10	3,047	10,149	1,966	8,183	10,513	2,000	8,513	364	34	330
Broomfield County	4	1,142	---	---	---	465	2	463	465	2	463
Denver County	34	6,413	26,334	6,677	19,657	36,272	9,494	26,778	9,938	2,817	7,121
Douglas County	5	2,647	1,706	349	1,357	4,526	998	3,528	2,820	649	2,171
Jefferson County	19	6,356	7,911	2,946	4,965	10,358	3,637	6,721	2,447	691	1,757
DRCOG Urban Centers Total	94	33,166	67,102	15,566	51,536	87,422	20,488	66,935	20,320	4,922	15,398
DRCOG 7 County Metropolitan Area Total			1,009,280	671,047	338,233	1,197,791	770,202	427,589	188,511	99,155	89,356

Source: DRCOG; U.S. Census; Economic & Planning Systems

Note: The DRCOG total for Number of Urban Centers does not match the aggregate total by county because of several Urban Centers that are counted in two or more counties.

Note: Broomfield was a part of Boulder County until November, 2001. Prior to that, the municipality of Broomfield had land in Boulder, Adams, Jefferson, and Weld Counties.

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To meet the Metro Vision Urban Center housing goals, a much greater portion of future housing construction will need to take place in Urban Centers over the next 25 years. It is important to consider there are a wide range of higher density nodes meeting the definition of and qualifying to be designated Metro Vision Urban Centers. Key to their success, these Urban Centers should be planned to be built as a node or focal point at higher densities than their surrounding market areas and contain a mix of uses. Because these Urban Centers are found in a range of urban and suburban market settings, the appropriate mix of uses and densities will vary widely.

The range of Urban Centers is highlighted in the example below. The five centers were selected to represent a range of characteristics including existing relatively developed urban and suburban locations as well as new emerging suburban and exurban locations. The purpose of providing these snapshots is to document the potential for vibrant nodes that fulfill the vision articulated in DRCOG's adopted plans.

Table 2
Urban Centers Summary

Name	Acres	Type	Rail/ TOD	HH Density (per acre)	Employment Density (per acre)
Belmar	287	Suburban	No	31	35
I-25 & Colorado	30	Urban	Yes	17	77
Longmont CBD	640	Urban	Yes	23	22
RidgeGate West Village	424	Suburban	Yes	32	24
Cherry Creek	610	Urban	No	9	33

Source: DRCOG; Economic & Planning Systems

Note: The household density for the Longmont CBD is for the core redevelopment area within the 1st & Main Station Area.

H:\123065-DRCOG Housing Diversity Study\Data\123065-Urban CentersExamples.xlsx] Summary Table

Belmar/Lakewood Center, Lakewood

Type: Suburban

Plan Area: 287 Acres

Gross Household density at buildout:

31 units per acre

Gross Employment density at buildout:

35 jobs per acre

The Lakewood Center was identified in the City's Comprehensive Plan approved in 2003 and built out during 2004 and 2005. It has two main components: Lakewood Commons on the southwest corner of South Wadsworth Blvd and West Alameda Avenue and Belmar on the southeast corner.

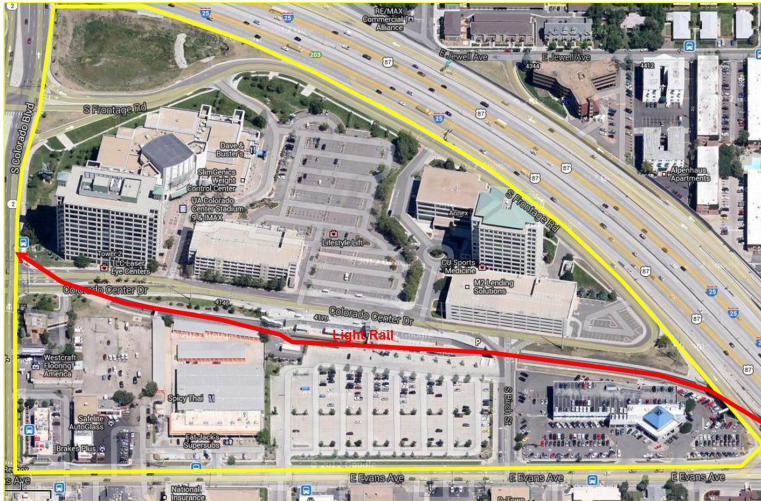
The two components combined cover 287 acres and incorporate a diverse mix of uses including:

- 1.7 million square feet of retail;
- 1.3 million square feet of office space (including the Lakewood Municipal Complex);
- 1,900 multifamily residential units;
- One major open space park;
- One neighborhood park;
- The Lakewood Cultural Arts Center;
- The Jefferson County Library; and
- Several public gathering spaces.

Compared to the surrounding market area, Lakewood Center is being planned at significantly higher densities for both households (31 per acre, compared to 6 per acre) and jobs (35 per acre, compared to 4 per acre). To date, housing construction in the Lakewood Urban Center has included two townhouse projects and several apartment projects, all in Belmar, with the aggregate density close to the 31 units per acre goal.



I-25 & Colorado Boulevard, Denver



Type: Urban

Plan Area: 30 acres

Gross Household density at buildout: 17 units per acre

Gross Employment density at buildout: 77 jobs per acre

The Colorado Station Urban Center location in Denver is bounded by I-25 to the northeast, Evans Avenue to the south, and Colorado Blvd to the west. The Framework Plan for the station was adopted in 2003 as an amendment to the Denver's 2000 Comprehensive

Plan. The 30 acre site is bisected by Colorado Center Drive which parallels the below-grade light rail tracks and station and the at-grade bus transfer station. The northern portion of the Urban Center area includes:

- A movie theater/entertainment complex;
- Two office towers;
- Two structured parking facilities and a large surface parking lot.

The southern portion of the site is comprised primarily of:

- Single-story commercial uses;
- A 363-space RTD surface parking lot; and
- Freeway Ford automobile dealership.

The Colorado Station Urban Center currently has substantially higher employment density than the surrounding areas as currently developed, but no new residential development has taken place to date. At full buildout, the City projects that the site will contain 2,300 jobs (77 per acre) and 500 housing units (17 per acre). Because this urban center includes little vacant land, future housing projects will need to be built at higher densities to be feasible.

Central Business District, Longmont

Type: Suburban, Freestanding City

Plan Area: 640 acres

Gross Household density at buildout: 23 units per acre (within the core area)

Gross Employment density at buildout: 22 jobs per acre



The City of Longmont Central Business District (CBD) Urban Center (as originally defined) is bounded by 1st and 9th Avenues and Martin and Bowen Streets, mostly encompassing the original historic square mile of the City. In 2013, the City revised the boundary to include the portion of the 1st & Main RTD Station planning area not previously included, adding approximately 50 additional acres centered on the future end-of-line transit center for RTD's FasTracks program. The CBD is designated in the 2003 Longmont Area Comprehensive Plan, and is recognized as a unique center supported by the efforts of the Longmont Downtown Development Authority as well as its own land use designation and zoning code that encourages mixed uses and higher density residential development.



This Urban Center is forecast to grow from 1,710 residential dwelling units to 3,900 at buildout, with approximately 52 percent of the 2,200 projected new units located within the core 1st & Main transit station area. This will result in a residential density of 23 dwelling units per acre in the core redevelopment area, near the top of the range allowed under the City's mixed use zoning ordinance. CBD employment is forecast to increase from 4,233 jobs to 13,699, providing an employment density of 22 jobs per acre at full buildout.



RidgeGate West Village, Lone Tree

Type: Suburban

Plan Area: 424 acres

Gross Household density at buildout: 32 units per acre (2040)

Gross Employment density at buildout: 24 jobs per acre (2040)

The RidgeGate West Village Urban Center is located in the City of Lone Tree, bounded on the north by Lincoln Avenue, on the east by I-25, on the South by RidgeGate Circle and Crossington Avenue, and on the west by RidgeGate Parkway and Crooked Stick. RidgeGate West Village and RidgeGate City Center are the priority areas for growth in Lone Tree. The entire 3,500 acre RidgeGate project is a mixed use development master planned to be much denser than the traditional suburban areas in the rest of Lone Tree and in the larger Douglas County context. Multiple plans support the development of RidgeGate West Village, including the *Lone Tree Comprehensive Plan*, and various subarea plans addressing residential, retail, and parks and open space issues.



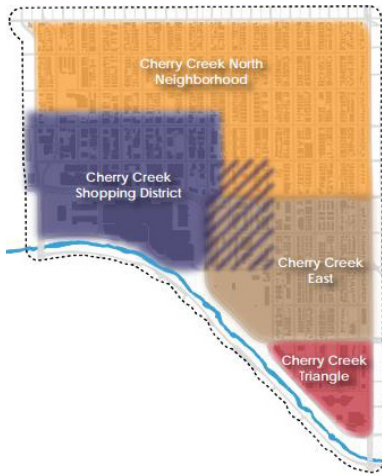
RidgeGate West Village comprises approximately 424 acres. Development has been underway since 2002 and thus far includes the Sky Ridge Medical Center, the Lone Tree Arts and Recreation Centers, community parks, office and retail developments, a 108-unit hotel, and multiple residential developments.

Under the approved master plan, there will be 3,500 housing units in the development at buildout in 2040. Residential densities will range from 18 to 75 units per acre with an average for all projects of 32 units per acre. Employment is forecasted to grow from 1,600 existing jobs in 2012 up to 10,000 jobs at buildout in 2040. This scale of employment growth will result in gross employment densities of 24 jobs per acre.

As of September 2013, there were 1,163 residential units built in RidgeGate West Village. This includes 733 apartments built at approximately 60 units per acre, 321 townhouses at approximately 18 units per acre, and 9 single family units.



Cherry Creek, Denver



Type: Urban

Plan Area: 610 acres

Gross Household density at buildout: 9 units per acre

Gross Employment density at buildout: 33 jobs per acre

The Cherry Creek Urban Center is bounded by four major arterial roads: 6th Avenue along the north, Colorado Blvd along the east, Alameda Avenue to the south, and University Blvd to the west. The area is designated as a mixed use district in *Blueprint Denver 2002* and the *Cherry Creek Area Plan 2012*. Several customized zoning districts are in place to allow continued intensification of both residential and commercial uses. The Cherry Creek Mall and adjacent Cherry Creek North district are a major regional shopping attraction and tax revenue generator for the City of Denver, attracting approximately 15,000 employees per day and 1.3 million visitors per month.

The Cherry Creek Urban Center encompasses 610 acres including residential, office, retail, and open space uses. The area includes a variety of housing unit types (single family detached, single family attached multifamily condominiums and apartments) and has been gradually increasing in density for a number of years as smaller, single family units are replaced with attached and multifamily units. As of mid-2013, there are numerous projects under construction adding mixed use density in four to seven-story buildings, almost exclusively within the "Shopping District" subarea shown in purple on the map above. This core area within Cherry Creek already has higher densities than most of the area as a whole, especially the lower-medium density residential areas in the Cherry Creek North neighborhood subarea.

The Cherry Creek Urban Center currently has approximately 4,000 residential housing units and is expected to increase to 5,500 over time, resulting in gross residential density of nine units per acre. Similarly, employment is forecasted to increase from the current level of 15,000 jobs to 20,000, providing a density of almost 33 jobs per acre.

There are currently five residential infill projects under way in the Cherry Creek Shopping District adding substantial density to the mixed use commercial core. Apartment projects at 360 Monroe and two at 1st and Steele are adding 522 units. There are also two luxury condo projects being built with 33 units at 2nd and St. Paul and 70 units at 250 Columbine.



Observations

The representative Urban Centers profiled are all planned for a mix of housing products and at densities above their surrounding market or catchment areas. Current housing development, consistent with other metro area development trends, is skewed towards apartments. For-sale housing is primarily townhomes with the exception of two luxury condo projects under construction in Cherry Creek North. The next section of the report provides more documentation in recent housing construction in the metro area by location and type of product.

3. HOUSING MARKET TRENDS AND CONDITIONS

Building Permit Trends

The purpose of this section is to evaluate housing construction trends and conditions by product type in the Denver metro region. Denver, as well as many other metro areas, established new records for production and pricing during the middle of the last decade only to contract dramatically during the Great Recession from 2008 through 2010. An important question to this market analysis revolves around the real estate cycle—that is, now that the market is returning, will the housing market return to recent historical patterns, or will the volume and mix of housing construction composition be different?

For the period spanning from 2000 to 2012, the Denver-metropolitan area achieved an average of 15,874 new housing unit permits per year. The peak occurred at the start in 2000 with 29,032, falling to a low of 3,408 in 2009. Single family detached housing production dropped to 25 percent of the 13-year 2000 to 2012 average in 2009. For-sale attached housing reached a low of 20 percent and apartments dropped to 13 percent. Since that time single family detached has recovered 32 percentage points to reach 57 percent of the 13-year average and apartments have regained 65 percentage points. By contrast, for-sale attached housing has only recovered by only 12 percent, as shown in **Table 3**.

In 2012, Genesis Group began to disaggregate townhouses and condominiums in the larger for-sale attached category. A separate data source, MetroStudy, also provided the same level of data and is shown in the lower portion of **Table 3**. Because the two sets of data are derived from two separate sources, the totals vary by a few percentage points. The Genesis data set is based on the number of permits issued by local governmental jurisdictions. The MetroStudy data is based on field observations of construction activity. Overall trends between the two are quite consistent, as summarized below:

- There was an even split between townhomes and condominiums in 2006. Since that time, condominiums have dropped to 16 percent of total for-sale attached product and townhomes have increased to 84 percent.
- In 2012, MetroStudy recorded 121 condo permits and Genesis (compiling HBA data) recorded 108 condo permits. This production volume translates to 1.7 percent or 2.3 percent of all ownership units under construction.
- The 1.7 to 2.3 percent of total construction in 2012 contrasts with 18 percent of all ownership permits (single family, townhomes, and condominiums) in 2006.
- Year-to-date data for 2013 show condominium permit activity of 40 units (YTD Genesis) to 104 units (YTD MetroStudy), as shown.

Table 3
Denver Metropolitan Permit History, 2000 to 2012

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Averages		
														2000-2012	2000-2006	2007-2012
HBA Data Compiled by Genesis																
Residential Construction																
Detached Single-Family	15,875	14,262	13,734	12,656	14,363	15,778	10,952	7,082	3,700	2,378	3,348	3,460	5,342	9,456	13,946	4,218
Attached Single-Family	3,313	4,390	4,425	3,755	4,843	4,642	5,311	3,904	1,318	592	798	1,083	984 ¹	3,028	4,383	1,447
Apartments	<u>9,844</u>	<u>9,090</u>	<u>4,085</u>	<u>1,858</u>	<u>2,681</u>	<u>460</u>	<u>1,727</u>	<u>3,743</u>	<u>4,413</u>	<u>438</u>	<u>1,074</u>	<u>2,008</u>	<u>2,658</u>	<u>3,391</u>	<u>4,249</u>	<u>2,389</u>
Total	29,032	27,742	22,244	18,269	21,887	20,880	17,990	14,729	9,431	3,408	5,220	6,551	8,984	15,874	22,578	8,054
as % of Total																
Detached Single-Family	55%	51%	62%	69%	66%	76%	61%	48%	39%	70%	64%	53%	59%	60%	62%	52%
Attached Single-Family	11%	16%	20%	21%	22%	22%	30%	27%	14%	17%	15%	17%	11%	19%	19%	18%
Apartments	<u>34%</u>	<u>33%</u>	<u>18%</u>	<u>10%</u>	<u>12%</u>	<u>2%</u>	<u>10%</u>	<u>25%</u>	<u>47%</u>	<u>13%</u>	<u>21%</u>	<u>31%</u>	<u>30%</u>	<u>21%</u>	<u>19%</u>	<u>30%</u>
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
MetroStudy Data																
Composition of Attached																
Townhome	---	---	---	---	---	---	2,498	1,500	926	449	487	488	625	---	---	---
Condo	---	---	---	---	---	---	2,514	2,040	520	142	145	63	121	---	---	---
Percent Townhome	---	---	---	---	---	---	50%	42%	64%	76%	77%	89%	84%	---	---	---
Percent Condo	---	---	---	---	---	---	50%	58%	36%	24%	23%	11%	16%	---	---	---

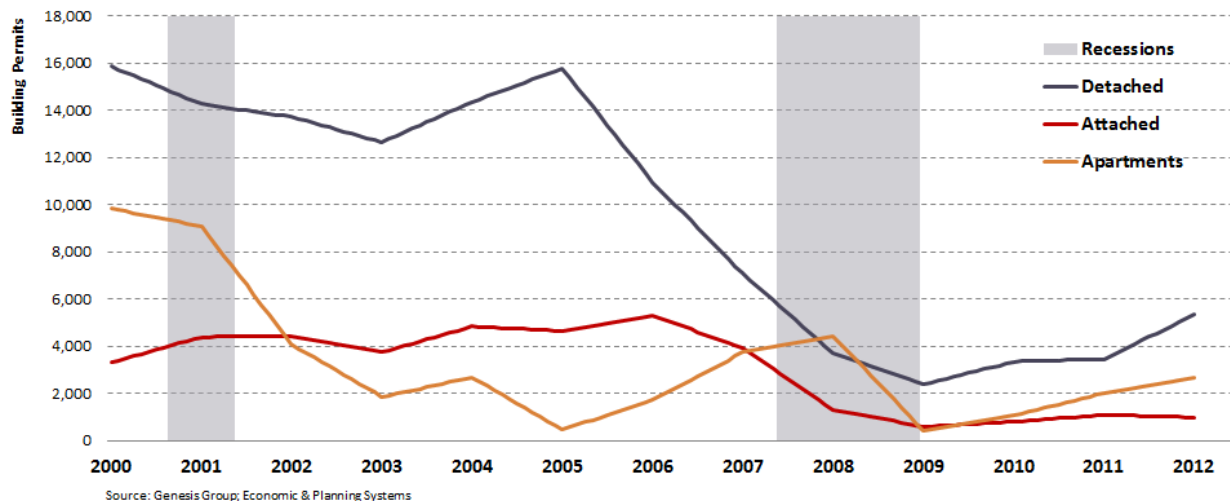
¹876 Townhomes, 108 Condominiums

Source for Residential Construction: Genesis Group/Homebuilders Association. Source for Composition: MetroStudy. Reported by Economic & Planning Systems.

H:\123065-DRCOG Housing Diversity Study\Data\123065-Sales and Metro Permits.xlsx\Permits by Year Table

Figure 1 overlays recession periods on the permit history to show the impact. At the culmination of the Great Recession, housing construction dropped its lowest production level in years.

Figure 1
Denver Metropolitan Permit History, 2000 to 2012



Current Housing Activity

The for-sale attached housing market is predominately built in two locations, in new master planned communities and other housing developments, largely in the suburbs, and in the greater downtown area and other infill locations. The suburban market has historically been dominated by the large national builders, generally focused on providing entry level housing priced below the minimum price point for single family detached housing. By contrast, the infill housing market is dominated by smaller mostly local developers, and primarily oriented to the more affluent buyer seeking an amenity rich in-town location.

As noted, coming out the recession, for-sale attached housing construction has lagged other housing segments dropping from a high of 30 percent of total construction in 2006 to a low of 11 percent in 2012. Most if not all of the larger for-sale attached projects are almost exclusively townhome projects built by specialty builders. Over this time period, the portion of total for-sale attached housing comprised of condominium units has dropped from 50 percent in 2006 to 16 percent in 2012 as shown. For-sale condo permits totaled 108 to 121 units in 2012 (depending on source) and are at 104 YTD in 2013. Most of this activity is in smaller infill projects in Denver.

The largest contributor to this decline in construction activity is believed to be largely due to national builders foregoing the construction of for-sale condominium products. EPS compiled available published statistics and interviewed three national builders (Richmond, Shea and Lennar). All were out of or planning to get out of the for-sale multifamily housing market primarily due to experience with and/or fear of potential future liabilities associated with construction defects litigation.

Richmond American Homes - Richmond American Homes, a subsidiary of MDC Holdings, is a national builder based in Denver and active in 12 states. They have not built attached product in Colorado for more than 10 years.

Shea Homes Colorado - Shea Homes is a national builder based in Arizona and active in Colorado in Highlands Ranch in Douglas County and in Reunion in Commerce City. According to company provided statistics, attached housing in Colorado has dropped from 43 percent of total construction in 2009 to 19 percent in 2012 as shown in **Table 4**. They are building out their remaining inventory of townhouse lots in Highlands Ranch and not planning any new for-sale attached housing projects in Colorado.

Table 4
Shea Homes Housing by Type 2007 to 2012

Year	Total Units	Av. Price	National		Colorado	
			% Detached	% Attached	% Detached	% Attached
2007	4,158	\$464,000	79%	21%	73%	27%
2008	2,828	\$429,000	80%	20%	61%	39%
2009	1,669	\$398,000	80%	20%	57%	43%
2010	2,002	\$400,000	78%	22%	74%	26%
2011	1,628	\$412,000	75%	25%	84%	16%
2012	1,921	\$397,000	63%	37%	81%	19%

Source: Annual Professional Builder Surveys

Note: Includes w holly ow ned, UJV and managed closings.

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Lennar Colorado Division – Lennar is the second largest national builder based in Miami and active in Colorado and 17 other states. Lennar Colorado built a high of 819 housing units in 2007 of which 72 or 9 percent were for-sale attached. Housing construction dropped to a low of 151 units in 2009 and has grown since to 356 units in 2012 with an estimated total of 525 units in 2013 as shown in **Table 5**. Lennar ceased for-sale attached construction in 2010 and has not built any units over the last four years and has no future plans to initiate any new for-sale attached housing in the state.

Table 5
Lennar Colorado Housing by Type, 2007 to 2012

Year	Total Units	Av. Price	Colorado	
			% Detached	% Attached
2007	819	\$331,600	91%	9%
2008	222	\$338,700	90%	10%
2009	151	\$361,500	95%	5%
2010	159	\$365,300	100%	0%
2011	236	\$336,800	100%	0%
2012	356	\$326,300	100%	0%

Source: Lennar Colorado Division

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DR Horton – DR Horton is the largest national housing builder based in Fort Worth and active in 26 states. The company built a total of 18,890 housing units in 2012. According to published IRS 10-K Annual Reports, DR Horton nationally built approximately 10 percent attached units in 2012, down from a high of 23 percent in 2008 as shown in **Table 6**. DR Horton Colorado closed TriMark, its primary multifamily division in 2007. “TriMark, primarily a multifamily builder, was the subject of a substantial class action lawsuit in 2005 alleging construction defects that the parent company settled for \$39.5 million.” (Builder 2007). According to current for-sale listings on the company’s website, DR Horton appears to be building very few if any attached units at this time. Their company’s internet site includes nine projects in the Front Range with units listed for sale but with no townhome or condominiums units currently available.

Table 6
DR Horton Housing by Type, 2007 to 2012

Year	Total Units	Av. Price	National	
			% Detached	% Attached
2007	41,370	\$259,200	81%	19%
2008	26,396	\$233,500	77%	23%
2009	16,703	\$213,700	81%	19%
2010	20,875	\$206,100	86%	14%
2011	16,695	\$212,000	88%	12%
2012	18,890	\$223,300	90%	10%

Source: DR Horton 10-K Annual Reports, 2007-2012

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Downtown Denver Housing

The Denver Central Business District (CBD) is a prominent Urban Center and noted in Metro Vision 2035 for its critical importance to the region. The Downtown Denver Partnership (DDP) defines the downtown area to include the following neighborhoods: Auraria, Ballpark, Capitol Hill, CBD, Center Platte Valley, Curtis Park/Five Points, Golden Triangle, Highlands, Jefferson Park, La Alma/Lincoln Park, LoDo, and Uptown. Detailed data regarding the CBD is summarized in **Table 7**. Based on records from the DDP, a total of 13,898 housing units have been permitted in downtown since 2000, composed of 8,568 or 62 percent rental units and 5,330 or 38 percent for-sale units. Since 2010, for-sale units have dropped to 6.4 percent (117 of 1,814). In 2012 and 2013 (to date), there have been zero for-sale units permitted, as shown.

Table 7
Downtown Denver Permit History, 2000 to 2013

Year	Rental	For Sale	Total	% For Sale
2000	83	264	347	76%
2001	841	609	1,450	42%
2002	741	899	1,640	55%
2003	1,123	471	1,594	30%
2004	640	319	959	33%
2005	399	389	788	49%
2006	1,937	158	2,095	8%
2007	112	870	982	89%
2008	442	669	1,111	60%
2009	1,059	565	1,624	35%
2010	212	102	314	32%
2011	98	15	113	13%
2012	408	0	408	0%
2013 ¹	473	0	473	0%
Total	8,568	5,330	13,898	38%

¹ DDP data augmented with RINO projects, falling outside the DDP boundary

Source: Downtown Denver Partnership, Economic & Planning Systems

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Projects under construction in 2013 are concentrated on rental units; of the 8,545 units under construction, 8,352 units or 98 percent are rental and 193 units, or 2 percent are ownership as shown in **Table 8**. A more detailed review of the ownership projects shows an average project size of 15 units, and most are in a townhome configuration.

Table 8
Current Downtown Area Construction Activity, 2013

Neighborhood	For Sale	For Rent	Total	% For Sale
Auraria	---	---	---	---
Ballpark	0	863	863	0%
Capitol Hill	0	260	260	0%
Central Business District (CBD)	0	422	422	0%
Central Platte Valley	0	3012	3012	0%
Curtis Park/Five Points	44	148	192	23%
Golden Triangle	0	809	809	0%
Highland	100	638	738	14%
Jefferson Park	49	597	646	8%
La Alma/Lincoln Park	0	745	745	0%
Lower Downtown (LoDo)	---	---	---	---
RiNo	0	506	506	0%
Uptown	<u>0</u>	<u>352</u>	<u>352</u>	<u>0%</u>
Total	193	8352	8545	2%

Source: Downtown Denver Partnership; Economic & Planning Systems

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Apartment Permits

Apartment development was one of the first sectors to emerge from the recession. There have been 43,547 multifamily units permitted since 2000 in the metropolitan area, or an average of 3,350 units per year, as shown in **Table 9**. Markets with the greatest capture include Denver (27 percent) and Arapahoe County (25 percent). In 2002, over 9,000 units were permitted compared to 738 in 2006. Apartment construction reached a low of 498 units in 2010 rebounding to 1,438 units in 2011 and 1,973 units in 2012.

Apartment development continues to surge with new permits in 2013 expected to be at the highest level since 2002. Industry experts have reported a sizeable number of apartment projects in the development pipeline, with some citing a figure as high as 30,000 units at some stage of design, entitlement, financing, or construction. It is unlikely that all of these projects will move forward; nevertheless, the annual permit figure is expected to increase and may exceed the levels established in the early part of the decade.

Table 9
Metro Area Apartment Permits by County

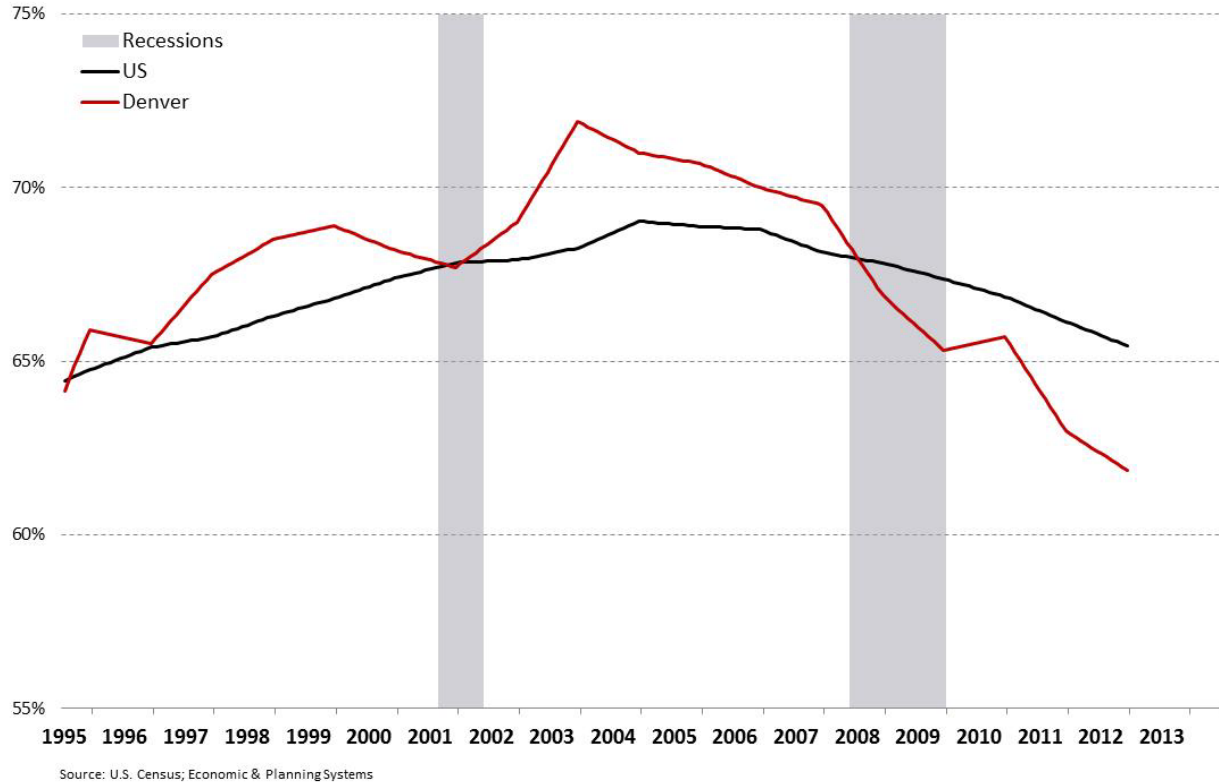
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2000-2012	
														Total	Average
Apartments Constructed															
Adams	911	2,141	2,048	850	88	212	124	240	342	39	0	19	0	7,014	540
Arapahoe	1,589	2,748	2,147	1,029	479	353	20	558	976	520	166	454	36	11,075	852
Boulder / Broomfield	221	682	1,583	310	298	98	0	368	637	545	96	285	146	5,269	405
Denver	37	1,436	1,810	1,055	1,164	1,313	140	116	555	2,477	153	512	1,071	11,839	911
Douglas	1,263	10	1,187	340	458	382	0	728	347	210	0	62	292	5,279	406
Jefferson	<u>750</u>	<u>400</u>	<u>348</u>	<u>0</u>	<u>61</u>	<u>159</u>	<u>454</u>	<u>252</u>	<u>30</u>	<u>0</u>	<u>83</u>	<u>106</u>	<u>428</u>	<u>3,071</u>	<u>236</u>
Total	4,771	7,417	9,123	3,584	2,548	2,517	738	2,262	2,887	3,791	498	1,438	1,973	43,547	3,350
% Above/Below Average	42%	121%	172%	7%	-24%	-25%	-78%	-32%	-14%	13%	-85%	-57%	-41%	---	---

Source: Apartment Vacancy & Rent Survey; Economic & Planning Systems

H:\23065-DRCOG Housing Diversity Study\Data\23065-Sales and Metro Permits.xlsx\Apt Const by County

One of the factors behind the surge in apartment demand in Denver, as well as in a number of other markets, is the falling homeownership rate. Ownership rates steadily increased over the last decade to reach a peak of 72 percent in 2003, as shown in **Figure 2**. As of 2012, the Denver region has declined to 62 percent, below the national average of 65 percent. The spike in foreclosures in the recent past contributes to this change in tenure, and will be addressed in greater detail in the next section of this study.

Figure 2
National Homeownership Rates, 1995 to 2013



Sales Volume and Pricing Trends

The data that follow suggest there are two general categories of for-sale attached buyers, those driven by economic factors seeking value and low price, and those driven by lifestyle options seeking location and amenities. The value-priced end of the attached market includes first-time homeowners who cannot afford a single family detached home. It also includes singles and couples with no kids who seek maintenance free living. The amenity-driven market includes empty nester households moving from the homes where they raised their children to maintenance free housing in high amenity locations like downtown and Cherry Creek. It also includes more affluent singles and couples without children with higher incomes and willing to pay for these higher amenity locations. Some project features, such as greater security, elimination of exterior maintenance responsibility, and the ability to lock-and-leave, appeal to both high- and low-end buyers.

Historically, a majority of for-sale attached housing has been sold below the cost of single family detached homes. The per unit land costs for attached for-sale units are traditionally lower given the higher densities (units per acre) that allow the land cost to be allocated to a greater number of units. It has also provided options for smaller households, appealing to starter households, retirees, single individuals, and single parents. It is important to note, however, that the construction cost per square foot for attached product is typically higher than single family homes.

As shown in **Table 10** on the following page, newly constructed attached units have been selling for approximately three-quarters of the average price of single family homes. There is a correlation between size and price, as the average size of an attached unit is approximately two-thirds the size of a single family home. It is important to note that the cost per square foot for smaller product is typically higher than larger product. On a cost per square foot basis, larger homes (attached or detached) cost less than their smaller counterparts. Overall, the cost per square foot for attached is higher than detached. In terms of the housing payment made on a monthly basis, however, attached housing can translate to a lower cost entry point.

In higher cost communities like Boulder, the premiums available for attached development can be substantial, raising the average cost of attached units and narrowing the gap between attached and detached. Similarly, recent sales in downtown Denver have been very strong. In fact, the average sales prices of attached product exceed those of single family homes. This inversion of historic norms can be attributed to a restructuring of pricing of several downtown high-rises (started during the boom years) in which closings had lingered since the downturn. The adjusted prices were nonetheless strong and the sales of these projects resulted in an unusual peak that has since returned to a level that is consistent with regional averages.

Lifestyle factors have been increasingly important in the past decade as developers have constructed attached for-sale product in locations with amenities that drive premiums. The market support for attached product in urban and suburban locations that offer walkable neighborhoods with nearby retail destinations has increased. Attached developments in communities like Lakewood, Greenwood Village, Boulder, and Denver have achieved significantly higher price points based on their location and neighborhood amenities.

Table 10
Denver Area Housing Characteristics by County, 2000 to 2012

County	Square Footage	Base Price	\$/Sq. Ft.
<u>Adams</u>			
Attached	1,410	\$200,197	\$142
Detached	2,199	\$296,482	\$135
Att. As % of Detach.	64%	67%	105%
<u>Arapahoe</u>			
Attached	1,538	\$398,623	\$259
Detached	2,558	\$413,718	\$162
Att. As % of Detach.	60%	78%	160%
<u>Boulder</u>			
Attached	1,470	\$376,323	\$256
Detached	2,227	\$396,072	\$178
Att. As % of Detach.	66%	83%	144%
<u>Broomfield</u>			
Attached	1,541	\$263,854	\$171
Detached	2,525	\$426,966	\$169
Att. As % of Detach.	61%	60%	101%
<u>Denver</u>			
Attached	1,466	\$570,239	\$389
Detached	2,269	\$421,734	\$186
Att. As % of Detach.	65%	115%	209%
<u>Douglas</u>			
Attached	1,690	\$293,580	\$174
Detached	2,622	\$410,375	\$157
Att. As % of Detach.	65%	68%	111%
<u>Jefferson</u>			
Attached	1,499	\$300,357	\$200
Detached	2,571	\$489,499	\$190
Att. As % of Detach.	58%	62%	105%
<u>Metro Average</u>			
Att. As % of Detach.	63%	76%	134%

Source: Genesis Group; Economic & Planning Systems

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Average pricing for attached and detached homes for each year from 2000 to 2012 for each county in the region is provided in **Appendix A-3**. The historic norms for this time for most counties reflect the average attached price at 75 percent of the average single family home price. In the recent past, this ratio has been increasing, and now (as noted previously) exceeds the single family home price in some counties.

Trends in the number of sales of housing are shown below in **Table 11**. The number of sales reached a low in 2010 for both existing and new homes. Based on the first two quarters of the year, it appears that 2013 may set a new high for sales of existing homes (26,261 * 2 = 52,522) since 2000. New homes sales are picking up as well. Assuming the pace of the first two quarters of 2013 continues through the year, the annual sales of 13,528 (6,764*2) will be substantially higher than any of the past five years.

More importantly, the data show that the composition of sales of existing homes has been stable since 2000. The split between detached and attached homes has been highly consistent, at 75 percent and 25 percent, respectively. That is not the case with new home sales. Prior to the low of 2010, 34 percent of new homes were attached. Since the market has begun its recovery (post 2010) the average of attached homes has fallen to 21 percent. The pool of new homes is smaller and the percentage of attached homes within that pool is 13 percentage points lower.

It is important to note that the year of sale for new homes does not equate to the year of construction. In the case of several downtown Denver luxury high rises, the rate of sales slowed, well after the projects were complete. Based on the increasing average sales prices for attached product shown in **Appendix Table A-3**, and the diminishing supply shown below, it appears that the volume of construction at the lower priced portion of the attached market has dropped off. In other words, the new attached product sold at the traditional price points (below those of single family averages) is no longer being built.

Table 11
Composition of Sales, 2000 to 2013

Year	Existing Homes			New Homes		
	# of Sales	Det.	Att.	# of Sales	Det.	Att.
2000	48,307	73%	27%	19,432	70%	30%
2001	48,119	73%	27%	15,704	67%	33%
2002	47,197	73%	27%	16,889	70%	30%
2003	47,326	74%	26%	16,557	71%	29%
2004	52,460	75%	25%	17,784	68%	32%
2005	51,830	75%	25%	17,543	65%	35%
2006	47,946	75%	25%	13,958	61%	39%
2007	47,295	75%	25%	9,498	60%	40%
2008	45,801	77%	24%	4,988	62%	38%
2009	40,499	76%	24%	4,194	64%	36%
2010	37,906	75%	25%	4,107	71%	29%
2011	38,321	76%	25%	4,135	76%	24%
2012	45,876	75%	25%	4,890	78%	22%
2013 ¹	26,261	75%	25%	6,764	82%	18%
Average 00 - 13	44,653	75%	25%	11,175	69%	31%
Average 00 - 10	46,790	75%	25%	12,787	66%	34%
Average 11 - 13	36,819	75%	25%	5,263	79%	21%

¹ 2013 Data Through Q2

Source:Genesis Group; Economic & Planning Systems

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Peer Communities

EPS surveyed peer cities in the western U.S. to help determine if the decline in multifamily for-sale housing construction was unique to Denver or whether it is a broader more national condition. Peer cities were identified as western U.S. metro markets with two million or greater population with an existing or developing transit system and a highly professional-technical workforce. Data splitting out for-sale from for-rent multifamily units was not available for all markets meeting this definition. EPS contracted with MetroStudy to aggregate available data for San Diego, San Francisco, Dallas, and Denver.

The selection of comparable communities provides an understanding of Denver's performance relative to other communities. It is critical to note that each community has its own characteristics and some are more similar to Denver than others. The average and income statistics are shown in **Table 12**.

Table 12
Peer Cities Income and Wages, 2000 to 2010

	2000	2010	2000-2010		
			Total	Ann. \$	Ann. %
Median Household Incomes					
San Francisco	\$62,024	\$73,027	\$11,003	\$1,100	1.6%
San Diego	\$47,067	\$59,923	\$12,856	\$1,286	2.4%
Dallas	\$47,418	\$54,449	\$7,031	\$703	1.4%
Denver	\$51,088	\$58,732	\$7,644	\$764	1.4%
US	\$53,187	\$51,914	-\$1,273	-\$127	-0.2%
Per Capita Income					
San Francisco	\$30,769	\$37,693	\$6,924	\$692	2.1%
San Diego	\$22,976	\$28,498	\$5,522	\$552	2.2%
Dallas	\$23,616	\$27,016	\$3,400	\$340	1.4%
Denver	\$26,011	\$30,891	\$4,880	\$488	1.7%
US	\$27,341	\$27,334	-\$7	-\$1	0.0%
Average Wages¹					
San Francisco	\$63,369	\$66,826	\$3,457	\$346	0.5%
San Diego	\$49,567	\$50,746	\$1,179	\$118	0.2%
Dallas	\$48,534	\$51,110	\$2,576	\$258	0.5%
Denver	\$51,746	\$52,888	\$1,142	\$114	0.2%
US	\$44,748	\$46,751	\$2,003	\$200	0.4%

[Note] All figures are shown in 2010 inflation-adjusted dollars.

¹Base Year for Average Wages is 2001; Cpi is adjusted accordingly.

Source: U.S. Census; BLS; Economic & Planning Systems

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The for-sale housing construction trends for the peer cities is compared to Denver in **Table 13** and summarized below.

- The Denver metropolitan region represents seven counties in the data for this study. There is an active transit system with 45 active stations. The area has an urban growth boundary that reflects DRCOG planning policy with land supply constraints to the west, but not to the north, east and south. Housing density (total housing units divided by land area within the relevant counties) is 260 dwelling units (du) per square mile.
- The San Diego metropolitan area is comparable to the Denver region in term of population (3.1 million compared to 2.8 million). It is served by transit with 54 active stations. Given its costal setting and surrounding context, there are land supply constraints to the west, south, and north. Housing density is slightly less than Denver's at 240 du per square mile.
- San Francisco is a unique international gateway market. Its topography, density, and historical position as an international link to Asian destinations make it a unique city. While direct comparisons to Denver are limited, it has been included as it often is a source of real estate trends that migrate to other markets. The data covered in this analysis are based on a five-county area, with a population of 4.4 million and corresponding density of 700 du per square mile.
- The Dallas/Fort Worth consolidated metropolitan statistical area (CMSA) is composed of 9 counties with a population of 6.3 million and 2.47 million households over more than 8,857 square miles, or a gross density of 279 du per mile. The Dallas area Rapid Transit (DART) has 90 miles of light rail service with 56 stations. In spite of its larger size, Dallas has relatively similar demographic characteristics compared to Denver. It also has the lowest percent of condominium construction over the 2006 to 2013 time period, as shown.

Table 13
Comparison of Attached and Detached by Size and Price

City	2006	2007	2008	2009	2010	2011	2012	2013 ¹
San Francisco								
<i>Single Family Detached</i>	4,549	3,446	1,602	1,522	1,570	1,018	1,967	1,389
<i>Townhome</i>	1,055	1,420	368	332	353	414	628	435
<i>Condo</i>	<u>7,344</u>	<u>4,160</u>	<u>1,304</u>	<u>282</u>	<u>179</u>	<u>517</u>	<u>467</u>	<u>944</u>
Total	12,948	9,026	3,274	2,136	2,102	1,949	3,062	2,768
<i>% Condo</i>	57%	46%	40%	13%	9%	27%	15%	34%
San Diego								
<i>Single Family Detached</i>	3,011	2,512	1,204	914	1,580	1,488	1,578	1,167
<i>Townhome</i>	852	788	329	213	171	116	251	147
<i>Condo</i>	<u>6,831</u>	<u>3,014</u>	<u>669</u>	<u>164</u>	<u>354</u>	<u>277</u>	<u>516</u>	<u>821</u>
Total	10,694	6,314	2,202	1,291	2,105	1,881	2,345	2,135
<i>% Condo</i>	64%	48%	30%	13%	17%	15%	22%	38%
Dallas								
<i>Single Family Detached</i>	44,571	28,327	18,591	12,844	14,512	13,267	16,765	9,553
<i>Townhome</i>	2,900	2,638	1,496	780	745	794	994	634
<i>Condo</i>	<u>654</u>	<u>472</u>	<u>141</u>	<u>10</u>	<u>3</u>	<u>194</u>	<u>36</u>	<u>90</u>
Total	48,125	31,437	20,228	13,634	15,260	14,255	17,795	10,277
<i>% Condo</i>	1%	2%	1%	0%	0%	1%	0%	1%
Denver								
<i>Single Family Detached</i>	9,175	5,329	2,816	1,900	2,879	2,703	4,363	2,531
<i>Townhome</i>	2,498	1,500	926	449	487	488	625	415
<i>Condo</i>	<u>2,514</u>	<u>2,040</u>	<u>520</u>	<u>142</u>	<u>145</u>	<u>63</u>	<u>121</u>	<u>104</u>
Total	14,187	8,869	4,262	2,491	3,511	3,254	5,109	3,050
<i>% Condo</i>	18%	23%	12%	6%	4%	2%	2%	3%

Source: City of San Francisco; City of San Diego; City of Dallas; Economic & Planning Systems

¹ 2013 Data is for 1st and 2nd Quarters only

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The comparable communities surveyed provide an understanding of Denver's performance relative to other communities. It is important to note that none of the cities surveyed have returned to pre-recession total housing construction levels. Denver's total 2012 housing permits were 36 percent of 2006 volumes. The same ratio for the peer cities were 24 percent in San Francisco, 22 percent in San Diego, and 37 percent in Dallas.

The peer communities data indicate that San Francisco and San Diego are experiencing a relatively brisk recovery of condominium construction. Although total for-sale housing construction is still below pre-recession averages, the condominium percent of the total has been increasing. Condominium construction in Dallas is very low, but current data are consistent with pre-recession levels. By contrast, Denver condominium construction figures are well below pre-recession levels and are in the 2 to 3 percent range compared to 18 percent and 23 percent in 2006 and 2007. In 2012, 121 units were permitted. In 2013, 104 units were permitted (through the second quarter).

Peer Cities Summary

There is insufficient data from the peer cities upon which to base any major conclusions other than to note that Denver condominiums activity on a percentage of total basis remain well below pre-recession levels and are well below those in the peer cities surveyed. The California markets in particular have increased well above the 2009 and 2010 recession lows.

4. FACTORS AFFECTING HOUSING CONSTRUCTION

Real estate markets are complex; many factors affect the supply and demand for development, and these factors are not independent of each other and vary over time. The factors identified as impacting the market for attached for-sale housing from the start of the recession in 2008 are grouped into five major topics: lending, foreclosures, economic conditions, demographics, and developer interest relative to construction defects. The impact on construction over the last five years is reviewed by major topic below. Based on available data, the potential impacts on future construction are also identified to the degree possible.

Lending

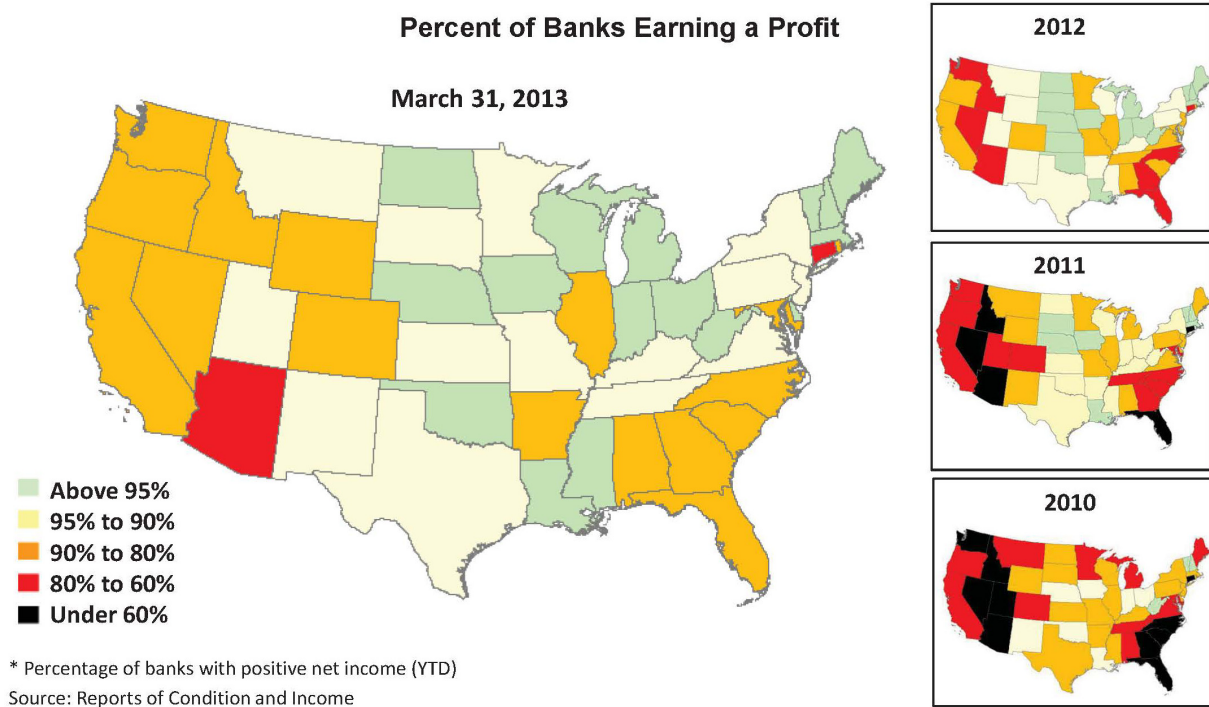
Lending, specifically the availability of loans for housing construction projects, has had an impact on the number of attached for-sale developments. High risk lending practices and appraisal standards were in fact contributing factors to the collapse of the housing market that led to the collapse of multiple banks and financial institutions beginning with the recession in 2007 to 2010.

Lending Conditions

Federal regulators reacted by imposing more stringent lending standards including higher pre-sales and equity requirements. Lenders eliminated 'soft' presales and mandated more stringent requirement to ensure future end-buyers were 'real.' The tougher presale requirement created an additional challenge for developers as they could not generate a sufficient number of buyers that were qualified and willing to wait until completion of construction. As projects were delayed due to an insufficient number of buyers, those who committed originally withdrew given the extended duration of the project. These trends exacerbated the cycle and developers were not able to achieve the presale thresholds needed to secure construction loans.

A number of data points indicate lending is stabilizing, both nationally and regionally. **Figure 3** below shows the percentage of banks earning a profit from 2010 through Q1 2013. In 2010, 10 states had fewer than 60 percent of their banks reaching profitability. Currently, all states surpass the 60 percent level and only two fall in the 60 to 80 percent range. Improving performance has been documented by the Federal Reserve in the 10th District and throughout the nation. The relevance of these trends to local developers is addressed following **Figures 3, 4, and 5.**

Figure 3
Change in Bank Profitability, 2010 to 2013 Q1



Figures 4 and 5 show bank earnings as a percentage of average assets. Both nationally and regionally (within the 10th District of the Federal Reserve), banks are nearing or exceeding their pre-recession status. Note that smaller institutions within the 10th District lag and underperform the national and regional averages.

Figure 4
U.S. Bank Earnings as a Percentage of Assets

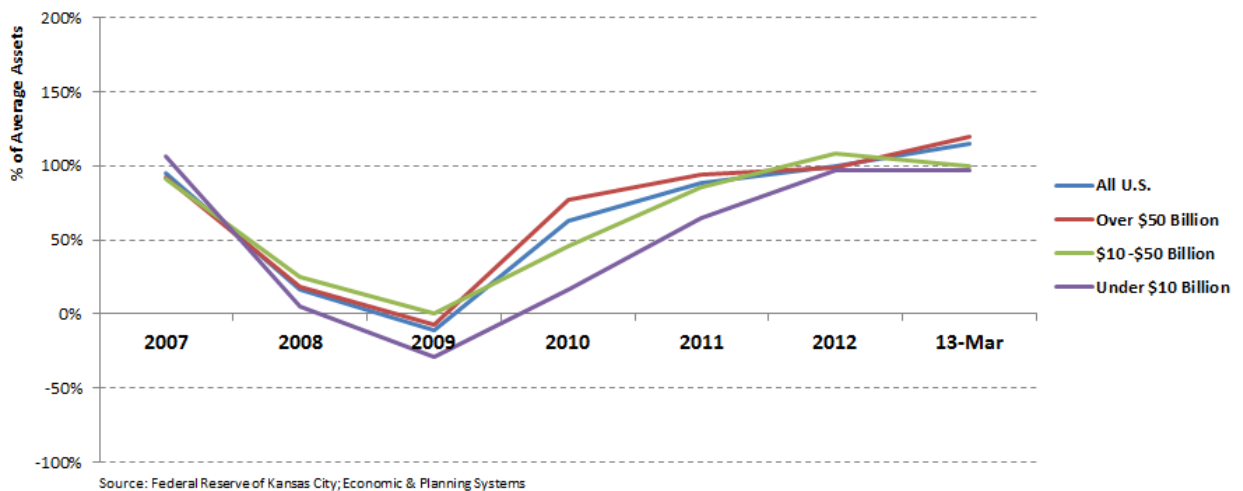
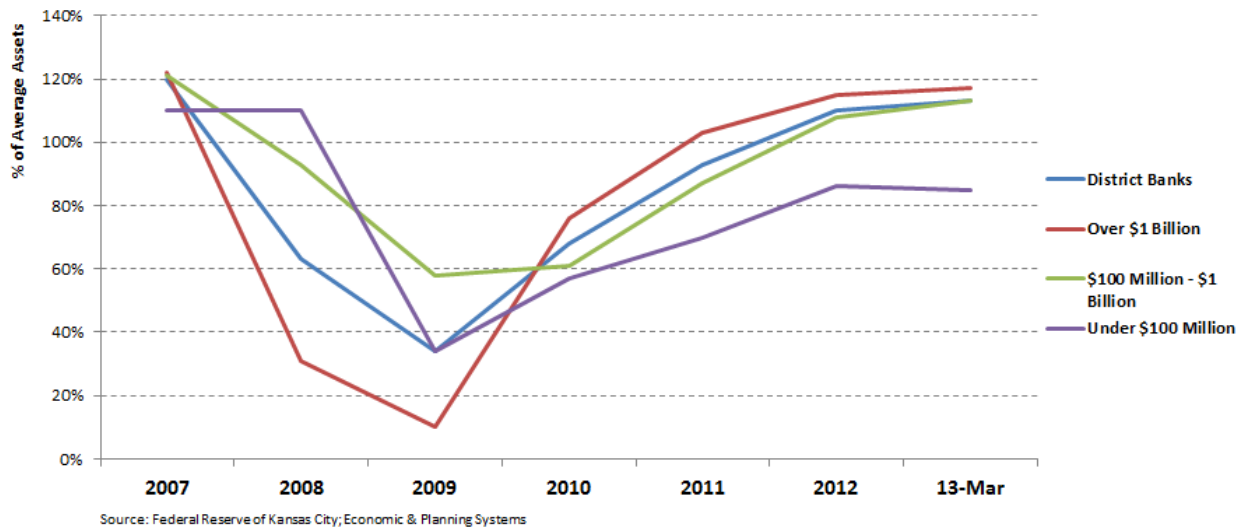


Figure 5
Bank Earnings as a Percentage of Assets, 10th District



Based on interviews with Denver area lenders and real estate professionals, overall economic conditions have improved and there is growth in lending activity in several sectors including apartments, office, flex, and single family speculative housing. These recent activities reflect greater availability of financing and also are indicators of greater lender interest in lending and therefore more favorable financing terms for developers. There continues to be less activity in the retail, attached for-sale, and land development sectors, reflecting poorer real estate conditions or other factors. Some industry leaders have expressed concern that the apartment cycle may be nearing its peak. As the stability of lending institutions return and as other sectors prove out their credit worthiness, lenders report that they expect to re-evaluate underwriting standards for attached for-sale projects and potentially move into this product line.

Lending Summary

The availability of construction financing and stringent lending standards have been factors in the reduction of residential construction and especially for attached for-sale housing in the recent past. Federal lending requirements and weaker bank balance sheets greatly reduced the availability of lending for real estate projects. As the Denver metro market (and nation) emerges from the recession, the strength of the lending institutions is recovering. The lenders interviewed believe we are near the start of a new cycle and are increasing their activity as specific sectors recover, though the stricter lending requirements are put in place after the housing crisis are expected to continue.

Foreclosures

Foreclosure Conditions

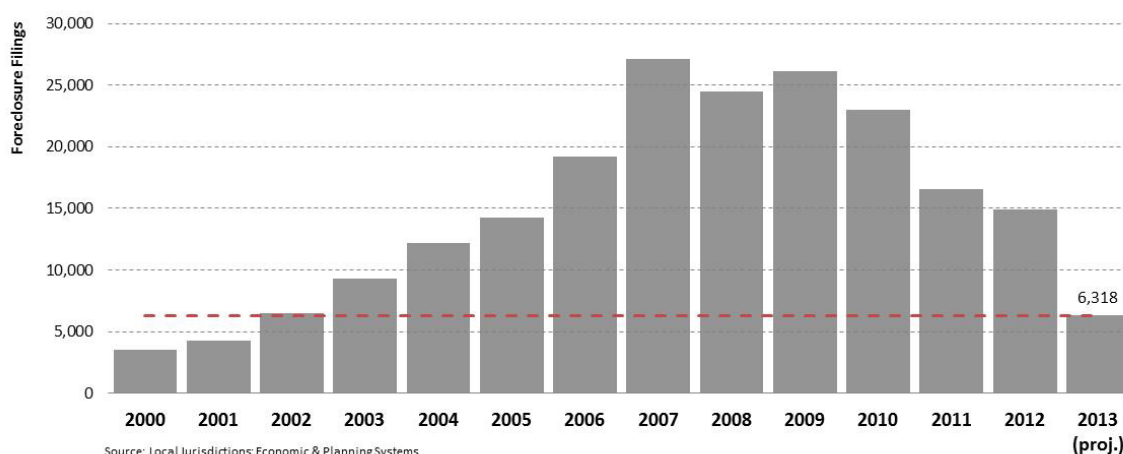
The number of foreclosure filings grew each year from 3,600 in 2000 to a peak of 27,000 in 2007, as shown in **Table 14** and **Figure 6**. During the recession, the Denver area continued to experience high numbers of foreclosure filings, creating an oversupply of available housing. Not until 2011 did the magnitude of filings drop considerably. By 2012, total foreclosure filings had receded to 14,900 or 50 percent of the 2007 peak. Recent 2013 reports have shown a continued decline in the number of filings by comparison to 2012. At the state level, foreclosures in August 2013 were down 74 percent from August 2012 and down 58 percent (to 6,318) in the Metro Area for the 12 months ending in July, 2013 ("National Foreclosure Report," CoreLogic, July 2013).

Table 14
Denver Metro Area Foreclosure Trends

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
County													
Adams	727	799	1,313	1,899	2,499	3,281	4,330	6,210	5,631	5,646	4,761	3,553	3,182
Arapahoe	780	1,000	1,575	2,250	3,125	3,600	4,719	6,225	5,860	6,243	5,500	3,962	3,589
Boulder	193	231	291	487	523	619	790	1,011	1,041	1,441	1,352	969	793
Denver	924	1,134	1,752	2,500	3,351	3,713	5,162	8,240	6,145	6,141	5,053	3,434	3,064
Douglas	212	270	415	652	794	912	1,258	1,856	2,180	2,680	2,511	1,860	1,621
<u>Jefferson</u>	<u>731</u>	<u>808</u>	<u>1,130</u>	<u>1,532</u>	<u>1,880</u>	<u>2,120</u>	<u>2,971</u>	<u>3,588</u>	<u>3,669</u>	<u>4,027</u>	<u>3,849</u>	<u>2,756</u>	<u>2,650</u>
Total	3,567	4,242	6,476	9,320	12,172	14,245	19,230	27,130	24,526	26,178	23,026	16,534	14,899
% Change		19%	53%	44%	31%	17%	35%	41%	-10%	7%	-12%	-28%	-10%

Source: DOLA; Arapahoe County Public Trustee; Jefferson County Public Trustee; Economic & Planning Systems
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Figure 6
Metro Area Foreclosure Filings, 2000 to 2013 (est.)



Foreclosure Summary

The number of foreclosures and the related supply of existing units in the available inventory have greatly declined each year since 2009 and are 44 percent below the recession peak in 2012. Based on current reports, 2013 foreclosures are expected to be down an additional 58 percent below 2012 figures and in line with pre-recession numbers. Based on current trends, it is expected that foreclosures will become a much less significant factor affecting future housing construction going forward.

Economic and Market Factors

The economic and market factors impacting housing demand are employment, wages, and total household income. Economic conditions in the Denver metro area have markedly improved from recession lows and are more favorable than in the country as a whole.

Economic Conditions

The Denver metro area added 32,500 jobs in 2012 and now exceeds pre-recession employment levels. The unemployment rate stands at 6.8 percent (July 2013 BLS), which is down from a peak of 9.7 (March 2010 BLS) and 0.6 percent under the national average. However, it is important to note that prospective buyers must not only be employed, they must also have the ability to save for a down payment and qualify for a mortgage.

Table 15 shows that Denver Metro Area household incomes and wages have stagnated, exacerbating the housing industry's challenges. The national and state-level declines in median household incomes have been adjusted for inflation and are shown in 2010 dollars. Incomes fell from 2000 to 2010 in all Denver metro area counties. On average, declines ranged between 0.3 percent and 1.1 percent per year, where in Adams, Boulder, Denver, and Jefferson counties fell 0.6 percent on average and 1.1 percent per year in Arapahoe County at the most. Per capita incomes also declined in Adams, Arapahoe, and Douglas counties, but grew slightly in Boulder, Denver, and Jefferson counties.

For the workforce, conditions were slightly better, but only marginally. Average wage and salary worker wages (also adjusted for inflation and shown in 2010 dollars) increased slightly between 2000 and 2010, except in Arapahoe and Boulder counties. Douglas County experienced the largest increase in average worker wages, growing from approximately \$40,000 per year in 2000 to nearly \$52,000 by 2010—an average increase of 2.6 percent per year. Adams, Denver, and Jefferson counties experienced more modest wage growth of between 0.3 and 0.8 percent per year, but wages dropped by 0.3 and 0.4 percent per year in Boulder and Arapahoe counties, respectively. Compared to the nation and state, the metro area neither under- nor outperformed on wage growth.

Table 15
Denver Area Income and Wages, 2000 to 2010

	2000	2010	2000-2010		
			Total	Ann. \$	Ann. %
Median Household Incomes					
Adams	\$58,046	\$54,666	-\$3,380	-\$338	-0.6%
Arapahoe	\$65,709	\$58,719	-\$6,990	-\$699	-1.1%
Boulder	\$68,519	\$64,839	-\$3,680	-\$368	-0.6%
Denver	\$48,451	\$45,501	-\$2,950	-\$295	-0.6%
Douglas	\$101,721	\$99,198	-\$2,523	-\$252	-0.3%
Jefferson	\$70,332	\$66,075	-\$4,257	-\$426	-0.6%
US	\$53,187	\$51,914	-\$1,273	-\$127	-0.2%
CO	\$57,899	\$56,456	-\$1,443	-\$144	-0.3%
Per Capita Income					
Adams	\$24,463	\$23,999	-\$464	-\$46	-0.2%
Arapahoe	\$34,525	\$31,898	-\$2,627	-\$263	-0.8%
Boulder	\$35,542	\$36,947	\$1,405	\$141	0.4%
Denver	\$29,562	\$30,806	\$1,244	\$124	0.4%
Douglas	\$42,745	\$42,418	-\$327	-\$33	-0.1%
Jefferson	\$34,426	\$34,714	\$288	\$29	0.1%
US	\$27,341	\$27,334	-\$7	-\$1	0.0%
CO	\$29,498	\$30,151	\$653	\$65	0.2%
Average Wages					
Adams	\$41,091	\$42,176	\$1,085	\$108	0.3%
Arapahoe	\$56,771	\$54,572	-\$2,199	-\$220	-0.4%
Boulder	\$55,953	\$54,325	-\$1,628	-\$163	-0.3%
Denver	\$54,443	\$57,896	\$3,453	\$345	0.6%
Douglas	\$40,154	\$51,968	\$11,814	\$1,181	2.6%
Jefferson	\$44,476	\$48,328	\$3,852	\$385	0.8%
US	\$44,748	\$46,751	\$2,003	\$200	0.4%
CO	\$45,639	\$47,868	\$2,229	\$223	0.5%

[Note] All figures are shown in 2010 inflation-adjusted dollars.

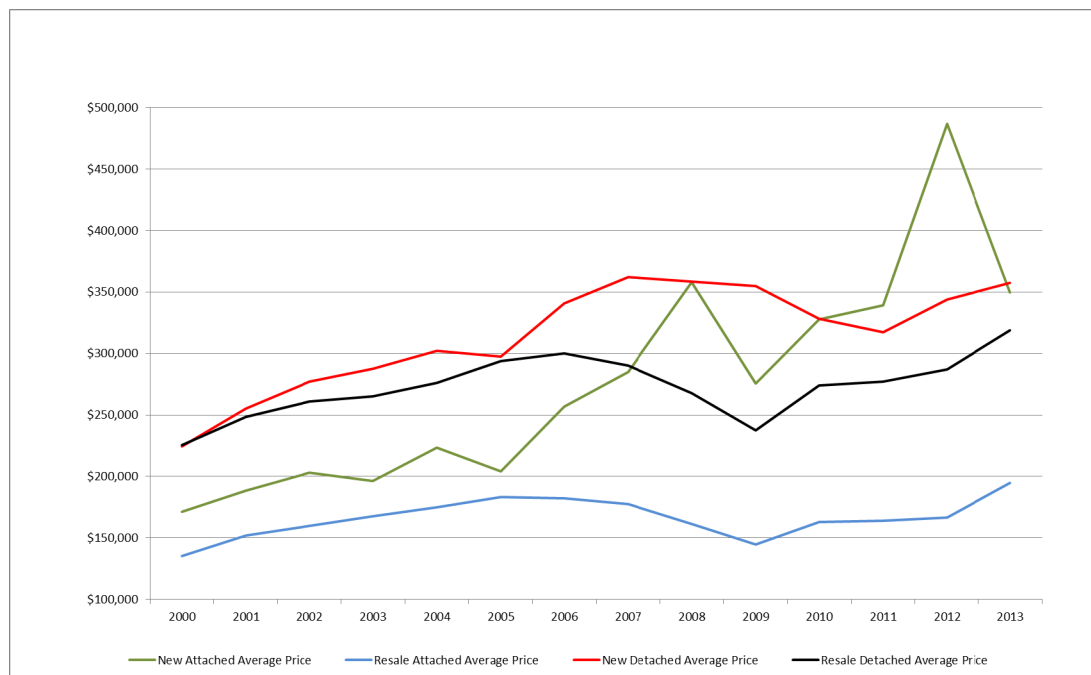
Source: U.S. Census; BLS; Economic & Planning Systems

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Market Conditions

Some have observed that attached for-sale housing products have reached price points that are unaffordable to many Denver metro households, particularly given wage stagnation. Recent high-profile condominium developments have achieved new levels of pricing and data show strong year-over-year increases. As shown below in **Figure 7**, the average price for new attached product in 2012 was \$486,894, which is 41 percent higher than the average for new single family homes (\$343,871).

Figure 7
Denver MultiList Sales Activity, 2000 to 2013



However, the spike in sales prices for new attached housing units in 2012 is an anomaly compared to historical averages and 2013 data due to a repricing strategy for a number of high-rise condominium structures, which increased sales volume on projects that had been completed for some time and had not performed well. Although prices were discounted, the original premiums were nevertheless substantial and the final sales prices remained well above regional averages.

In addition to the spike of 2012, the long-term trends also indicate higher average prices of for-sale attached product. As discussed previously (**Tables 7 and 8**), average prices for attached for-sale product throughout the metropolitan area have been rising above the traditional market position, in which attached homes cost less than single family homes. The increase in averages may be due to an increase in the amount of luxury units built and/or to reduction in the number of conventional, entry level attached housing unit permits being built. This is supported by the data provided by the major national housing builders who had largely stopped building condominium units in Colorado.

Economic and Market Summary

The overall housing market has improved in concert with positive employment growth and declining unemployment. Continued wage compression suggests that demand for lower priced units will grow and the role of attached for-sale product will become increasingly important. It is important to recognize that attached for-sale product typically has a higher cost per square foot (compared to larger, single family homes), but that the purchase price in most suburban locations has traditionally been lower, resulting in lower monthly housing costs for a majority of the product.

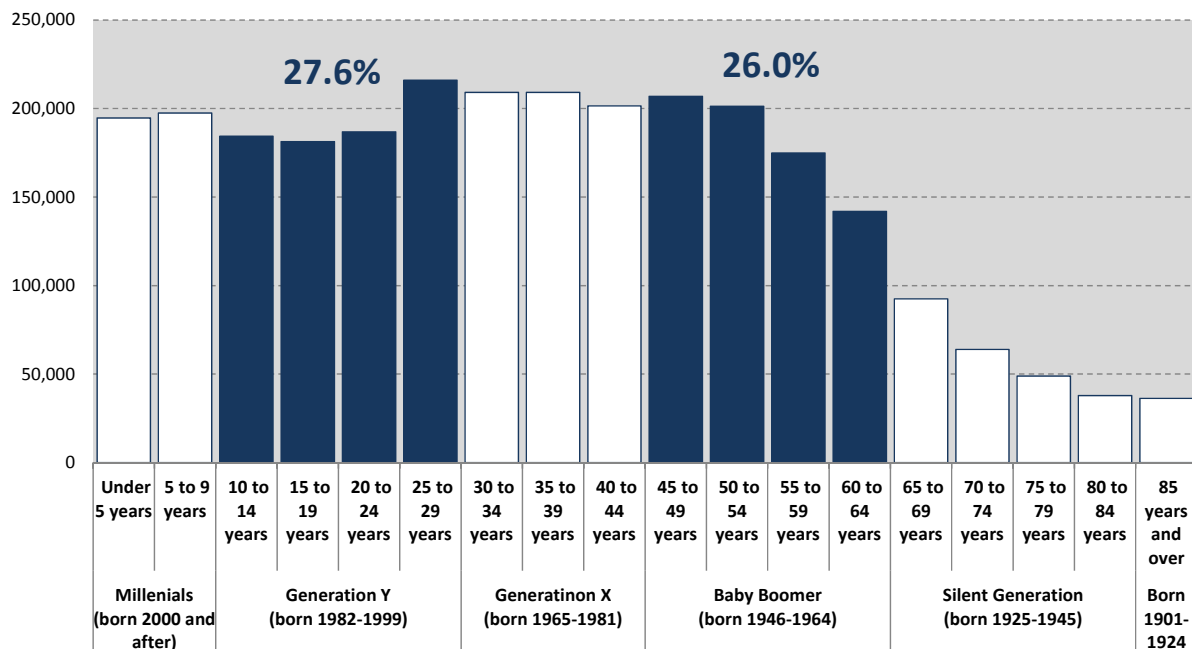
Demographics

The most important demographic factor affecting housing demand is growth in the age cohorts where households are changing housing products. The two largest age cohorts, Baby Boomers and Generation Y, are reaching thresholds that are impacting the housing market.

Demographic Trends

The demographic composition of the Denver Metro area shows the greatest growth in the Gen Y and Baby Boomer cohorts, consistent with national trends. As of the 2010 Census, Gen Y covers individuals from age 10 to 29 and Baby Boomers include ages 45 to 64. Gen Y is the largest cohort and accounts for 27.6 percent of the Denver area population, while boomers account for slightly less at 26.0 percent, as shown in **Figure 8**.

Figure 8
Denver Metro Population by Age Cohort, 2010



Source: U.S. Census; Economic & Planning Systems

A significant household group that is growing among all age cohorts is single-person households. As shown below in **Table 16**, the State Demographer’s office projects an increase of 82,000 single-person households for the decade ending in 2020, and another 74,000 by 2030, tapering to 47,000 by 2040. As a percentage of all households, single-person households are expected to increase from 28.1 percent currently to 30.2 percent by 2040. This change in household composition is expected to affect the market by increasing demand for smaller units.

Table 16
Change in One-Person Households, 2010 to 2040

Year	Total H.H.	One-Person H.H.	Increase	Percent
2010	1,153,709	324,360	--	28.1%
2020	1,392,076	407,010	82,650	29.2%
2030	1,603,036	481,564	74,554	30.0%
2040	1,751,416	529,152	47,588	30.2%

Source: DRCOG; Economic & Planning Systems

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The relevant question pertaining to demographics is how these changes will impact housing demand. Given high growth demographic sectors of Boomers, Gen Y, and single-person households, what is the corresponding demand for attached for-sale housing? There is a vigorous academic debate on the relative impact of demographic changes on housing preference. A number of studies conclude that Gen Y is not interested in for-sale housing while other studies conclude that the shift towards rental housing will change as the millennials start having children. The Urban Land Institute (ULI) conducted a national study in 2010 that included a survey of 1,240 Gen Y respondents and concluded that long-term tenure patterns of this cohort align with historic trends. (Generation Y: America’s New Housing Wave, Lachman and Brett, 2010) In aggregate, 67 percent of Gen Y would like to own their homes, compared to the current average of 65 percent of households. **Table 17** disaggregates the response to show that as Gen Y individuals age, their desire for ownership increases. For those between ages 18 and 24, 53 percent express a desire to own. For those aged 25 to 32, 75 percent desire to own. It is important to note that the questions probed aspirations, which may or may not be financially realistic for all members of the cohort.

Regardless of ownership preferences, the Gen Y cohort places a priority on walkable/urban environments. When asked about this aspect of their future place of residence, nearly two-thirds report that living within walking distance to social gathering spaces and shopping is “essential” or “preferable,” suggesting a reasonable demand for the mix of uses envisioned to be provided in Urban Centers.

Table 17
Interest in Homeownership by Gen Y

Age Today	Age in Five Years	Own	Rent	Total
18-24	23-29	53%	47%	100%
25-32	30-37	75%	25%	100%
All Respondents		67%	33%	100%

Source: Urban Land Institute; Economic & Planning Systems

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Demographic Summary

The study suggests that impacts of generational preferences on reductions in for-sale condo construction have been minor. The research indicates that Gen Y has as strong an interest in purchasing units as previous age cohorts (compared to long-term renting). If anything, Boomers are likely to increase demand for condominium product, as national studies have indicated that a growing portion of this demographic group has an interest in downsizing to smaller units, in amenitized developments, that offer single-level living.

Construction Defects

EPS constructed a static pro forma model to illustrate the potential financial impact of current regulations pertaining to construction defects. The illustrative model compares the estimated difference in costs between a \$30 million apartment project and a \$30 million condominium project for items identified as being impacted by the requirements for construction defects insurance coverage. The inputs to this model are based on interviews with insurance brokers and building contractors.

Insurance Premiums

Current construction liability insurance premiums are written in such a way that the full set of entities on the development team is covered by a single policy, known in the industry as a wrap. Typically, developers purchase these wrap policies at the onset of a project and rely on them during the construction period as well as the six-year period of response (combined with a two-year statute of limitations from notice of a defect), resulting in an eight-year post-construction period of exposure. During this time period, claims related to the construction or operations of a given project are covered by these policies. Wrap policies are an insurance industry product that has gained popularity in response to construction defects legislation and is written to uniquely address the risk of development teams on condominium projects. Historically, developers (and their partners) could achieve adequate coverage with annual renewable policies that covered the full set of building types and construction activity. Due to the prolonged exposure related to construction defects for properties controlled by an HOA, the industry has created a wrap policy with a unique pricing structure.

As with any type of insurance program, developers may purchase greater coverage for greater protection. Additional coverage can limit risk and comes with a commensurately higher set of costs. For the purposes of this analysis, industry standards have been used and a 'typical' amount of insurance has been assumed.

It should be noted that following the passage of SB 1394 in 2010, the number of commercial insurance firms providing construction liability policies in Colorado has also dropped. Approximately a dozen carriers have left the state over the past few years and brokers attribute their departure to the passage of the 2010 legislation. Some new providers have entered the state, as they work in the "high cost/high risk" arena. These providers do not write conventional policies. As the standard national carriers have exited Colorado, the only carriers that remain are those that will write what the industry considers "higher risk policies." The stipulations of the legislation and the reduction in the supply of insurance providers have resulted in higher premiums. According to an insurance broker interviewed, insurance premiums are 25 to 45 percent higher in Colorado than other states for comparable products.

Apartment Construction Insurance Costs

The static pro forma model shown in **Table 18** illustrates the estimated additional costs for for-sale attached housing in the current market. The first provides a baseline case of an apartment building, the second addresses a condominium project. Both are assumed to have \$30 million in hard costs. Soft costs, land, and profit are not included in this figure. Typically, the insurance policy should provide coverage at 25 percent to 40 percent of total hard costs. Thus, a \$30 million project warrants coverage of \$12 million (at the upper end of the bracket).

This coverage is written in two components. The first is the primary policy, written most frequently as a 2-2-2, which represents \$2 million of coverage for three categories: per occurrence, aggregate, and continuing operations. In addition, another \$10 million is typically required as a secondary policy to reach the \$12 million threshold.

The primary policy would typically cost \$5.00 per \$1,000 of construction value. The secondary policy could be written at 70 percent of the primary, or \$2.80 to \$3.50 per \$1,000 of construction value. All in, a developer would pay \$7.50 to \$8.50 per \$1,000 of construction value. At these rates, total insurance costs would range from \$225,000 to \$255,000 for a \$30 million project.

Condominium Construction Insurance Costs

Condominium buildings typically require additional insurance over apartment buildings due to two factors:

- Industry experts report that condominium buildings typically include a layer of governance, such as an HOA, that introduce an element of risk for litigation that apartment properties do not have.
- Apartment building owners typically have on-site management, overseeing the building on a day-to-day basis. The goal is to maximize annual revenues by ensuring the building is performing well. Maximizing annual revenues also serves to increase long-term sales value, given that sales proceeds are determined by applying a capitalization rate to the annual net operating income. A condo building managed by an HOA does not enjoy the same hands-on management.

The insurance industry has priced its products to respond to these two factors, notwithstanding that in this example both are assumed to be constructed with the same quality, type, and cost of materials. The insurance industry recognizes these factors and has priced its products accordingly. The factors include the focus on rectifying defects quickly to preserve cash flow and exposure to potential litigation.

Under an ownership scenario, the insurance industry typically looks for coverage at approximately 75 percent of construction costs. In this case, the primary policy would provide coverage at the 2-2-2 level, translating to \$2 million per occurrence/aggregate/ and continuing operations. The additional coverage would bring the balance up to \$20 to 25 million (67 percent to 83 percent). The all-in project cost for the additional coverage rise to \$780,000 to \$850,000 for the project.

Translating these costs to a per-unit factor can be completed based on a hard cost factor of \$155,000 for apartments and \$186,000 for condominiums. The apartment factor is based on an average of four apartment projects currently under construction and is based on the hard cost and corresponding unit count. The condominium cost per unit has been factored up by 20 percent to account for the increment associated with ownership product, given that quality of finishes and extent of amenities are typically higher for ownership units. Based on these calculations, the per unit apartment cost for an insurance wrap is an estimated \$1,160 to \$1,320. For condominiums, the estimated cost ranges from \$4,800 to \$5,300 in this scenario, as shown below in **Table 18**.

Quality Assurance

Developers interviewed for this study cite that monitoring the construction site and documenting the process is an increasingly important effort. Third party firms that specialize in quality assurance can be retained to review specifications and conduct site visits throughout the process to photograph the construction. The scope for a QA contract can range from high level to very thorough, and the cost varies accordingly. The estimated figure used for this analysis is \$1,800 per unit, which is the average of the per unit QA costs collected from interviews.

Sub-Contractor Premium

A general contractor usually relies on subs to complete a majority of the construction activity. Within the industry, subs can range in quality, cost, and duration in the market. Those with longevity, stability, a strong balance sheet, and the ability to secure insurance meet the eligibility requirements to be a general contractor. Many subs do not meet these tests, and while their rates may be lower, are not hired for projects in which the GC is looking to lower risk. It is also significant to note that many of the established subs must comply with their own insurers, which can either prohibit work on condominium projects, or may stipulate a ceiling on the revenue generated from residential construction (either apartment or condominium). Thus, the pool of subs that have the credentials to perform the work and are not precluded from bidding on for-sale attached residential projects has become very small due to these insurance exclusions.

For those subs that will bid on condominium projects, the premium can potentially range from 5 to 10 percent above standard costs. This premium is seen by many as necessary for all work related to the skin of the building, but not necessary for some interior work (such as painting or carpets). When accounted for within the larger cost and scope of the project, premiums are needed for only a portion of the subcontractors and the net effect on total project budget is an estimated increase of 4 to 6 percent. EPS used an average of 5 percent for the calculations provided below.

Table 18
Summary of Costs Attributed to Construction Defects

	Apartment	Condominium	Difference
Hard Construction Costs	\$30,000,000	\$30,000,000	\$0
Insurance Coverage Target			
Low	25%	65%	n/a
High	40%	75%	n/a
Amount Used for Analysis	40%	70%	n/a
Cost Per \$1,000			
Low	\$7.50	\$26.00	\$18.50
High	\$8.50	\$28.33	\$19.83
Project Cost			
Low	\$225,000	\$780,000	n/a
High	\$255,000	\$849,900	n/a
Per Unit Cost			
Hard Costs	\$155,000	\$186,000	n/a
Insurance Costs			
Low	\$1,163	\$4,836	\$3,674
High	\$1,318	\$5,269	\$3,952
Quality Assurance			
Direct Cost per unit	0	\$1,800	\$1,800
Subcontractor Selection Pool			
% of hard costs	5%	0	\$9,300
Total			
	\$1,163	\$15,936	\$14,774
	\$1,318	\$16,369	\$15,052

Source: Economic & Planning Systems

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Project Viability

Do these estimated costs, by themselves and absent other factors, represent such a substantial hurdle that they can stop production of all for-sale attached development? The question can be evaluated in terms of relative risk and return. Assuming all factors are held constant and that the additional costs must be absorbed within the project pro forma, the developer would need to cover the costs by reducing its profit.

EPS used a 10 percent return-on-cost as a desirable industry standard for profitability. At this ROC, a condominium development with units selling for \$200,000 would require an estimated return of \$20,000 per unit. With the additional costs related to construction defects (approximated at \$15,000), 75 percent of the estimated profit margin would be required to cover the additional expenses, rendering projects at this price point largely infeasible. For projects at higher price points, the margin may be sufficiently large to allow a developer to absorb the cost, assuming it would be willing to accept a lower return or alternately could raise sales prices sufficiently to cover the additional costs. It is reported that a 70-unit mixed use condominium tower is slated for construction in the near future in Cherry Creek with preliminary pricing from \$0.5 to \$3.0 million per unit. At these prices, the development team appears to have found a viable project.

While every project is unique (as there are many factors that affect profitability), EPS would presume most developers would not be willing to proceed on a project for which margins are cut by more than 33 percent. Based on this assumption, the minimum price point would approximate \$450,000 ($(\$15,000/.33)/10$ percent). Projects that can support this type of average price point may be viable in the future, while those that fall below this average price point are likely not viable. Generally, one can conclude that the region will continue to see some condominium development for higher priced units in high-demand locations. However, most projects priced at affordable levels (defined as \$450,000 or below in this case) are not likely to move forward.

Qualitative Comments

The focus of the report has been to the degree possible on quantifiable data points to underpin policy regarding Urban Centers. EPS also sought additional insight from housing professionals from all industries. The professions represented in the interviews included 7 attorneys (both plaintiff and defense), 4 developers, 3 national home builders, 3 lenders, 2 commercial insurance brokers, 2 architects, and 2 contractors. While there was a concerted effort to reach out to both plaintiff and defense attorneys, very few plaintiffs made themselves available for interviews. As a result, the perspectives summarized below reflect more of the development industry and should be recognized as one side of the discussion.

Although all of those interviewed believe the overall housing market was returning and there was at least some demand for attached for-sale product, none were building at this time nor had plans to do so. The reasons were largely tied directly or indirectly to current construction defects litigation issues. The primary issues identified were:

- **Probability**– For a variety of reasons (some quantifiable, some not), there is a belief held throughout the development community that the probability of being sued is nearly 100 percent, for attached residential for-sale projects involving an HOA.

- **Costs** – In addition to the increased cost for insurance, several noted that the deductibles are typically high. The cost of litigation, retaining experts to evaluate defects, and legal costs associated with the builders’ insurance companies seeking to recover costs from contractors are also a deterrent to future development. Many expressed frustration at the near-automatic costs associated with the large number of consulting firms retained by both HOAs and developers to opine on construction quality.
- **Size of Settlements** – The size of the damage awards in at least a number of well publicized suits exceeded \$10 million with one case nearly \$40 million.
- **Market Niche** – The National home builders interviewed all indicated they have no plans for building additional attached housing. Several builders interviewed reported that the risk of being sued was “just not worth it,” and will not consider for-sale attached projects.
- **Subcontractors**– The number of subcontractors and development team members willing and/or able to work on attached for-sale housing has diminished. The efforts of builders’ insurance companies to recover costs from other members on the development team can be particularly damaging to professional relationships and is also a deterrent to future development.

Construction Defects Summary

Since 2010, the costs attributed to construction defects liability have grown. Based on the assumptions modeled in this study, developers are estimated to need to pay an average of \$15,000 of additional cost per unit due to construction defects. Developers are unlikely to absorb this cost as a reduction in profit margin, unless the margins are sizeable. These increased costs have a larger impact on the profitability of entry-priced housing and appear to be disproportionately impacting the affordable end of the market. Additionally, the national builders interviewed for this project indicated they are not currently building for-sale condominium projects in Colorado and have no plans to do so in the near future. The identified reasons were the real and/or perceived costs and risks associated with construction defects, insurance costs, and the potential for construction defects lawsuits.

5. FINDINGS AND OBSERVATIONS

This section of the report summarizes EPS' analysis of the various economic and market factors affecting housing diversity. Given the impact of the Great Recession on the real estate market in the past five years, there have been many factors in play. This section summarizes the status of each of the factors identified on the onset of the study and narrows the focus to those that, in our professional opinion, will continue to affect the market.

Findings

Based on the analysis of market factors, the data indicate that most of the factors are inter-related but each may have had some impact on the reduction in the construction of attached for-sale housing over the last five years, as summarized below.

- **Lending** – The availability of construction financing and stringent lending standards have been factors in the reduction of residential construction and especially for attached for-sale housing in the recent past. Federal lending requirements and weaker bank balance sheets greatly reduced the availability of lending for real estate projects. As the Denver metro market (and nation) emerges from the recession, the strength of the lending institutions is recovering. The lenders interviewed believe we are near the start of a new cycle and are increasing their activity as specific sectors recover, though the stricter lending requirements are put in place after the housing crisis are expected to continue.
- **Foreclosures** – The number of foreclosures and the related supply of existing units in the available inventory have greatly declined each year since 2009 and are 44 percent below the recession peak in 2012. Based on current reports, 2013 foreclosures are expected to be down an additional 58 percent below 2012 figures and in line with pre-recession numbers. Based on current trends, it is expected that foreclosures will become a much less significant factor affecting future housing construction going forward.
- **Economic and Market Conditions** – The overall housing market has improved in concert with positive employment growth and declining unemployment. Continued wage compression suggests that demand for lower priced units will grow and the role of attached for-sale product will become increasingly important. It is important to recognize that attached for-sale product typically has a higher cost per square foot (compared to larger, single family homes), but that the purchase price in most suburban locations has traditionally been lower, resulting in lower monthly housing costs for a majority of the product.
- **Peer Cities** – Other western cities, specifically San Diego, and San Francisco have experienced a resurgence of condominium development (distinct from townhomes). These markets reflect conditions in which developers can build and consumers can buy condominium product. Although the market share for condominiums has improved in those communities, the Denver regional market has not experienced the same uptick in construction over the same time period.

- **Demographics** – The study suggests that impacts of generational preferences on reductions in for-sale condo construction have been minor. The research indicates that Gen Y has as strong an interest in purchasing units as previous age cohorts (compared to long-term renting). If anything, Boomers are likely to increase demand for condominium product, as national studies have indicated that a growing portion of this demographic group has an interest in downsizing to smaller units, in amenitized developments, that offer single-level living.
- **Construction Defects** – Since 2010, the costs attributed to construction defects liability have grown. Based on the assumptions modeled in this study, developers are estimated to need to pay an average of \$15,000 of additional cost per unit due to construction defects. Additionally, according to an industry source, insurance premiums are 25 to 45 percent higher in Colorado than other states for comparable products. Developers are unlikely to absorb this cost as a reduction in profit margin, unless the margins are sizeable. These additional costs appear to be disproportionately impacting the feasibility of entry-level housing. Additionally, the national builders interviewed for this project are not currently building for-sale condominium projects in Colorado and have no plans to do so in the near future. The identified reasons were the real and/or perceived costs and risks associated with construction defects, insurance costs, and the potential for construction defects lawsuits.

Observations

The ability of the Denver Metropolitan Region to achieve the goals identified in DRCOG's MetroVision 2035 may therefore be compromised by recent construction trends and the current economic and financial climate for development. The density afforded by condominium development, and the corresponding concentration of residents with shorter commutes, are important ingredients to the region's goals regarding traffic congestion management, infrastructure investment policies, and air quality, as outlined below.

Affordability – The research documents net incremental costs attributed to construction defects of approximately \$15,000 per unit. While higher cost projects may generate sufficient margins to absorb these costs, most if not all affordable products will become less viable. What has traditionally been a stepping stone for households to enter the housing market is likely to diminish.

Mix – The number of for-sale attached units building permits has declined (both in absolute figures and as a percentage). Within the subset of attached units, the number of condominium units being built has declined further. In terms of sales data, the number and percentage of new attached product has dropped. A range of data suggests that the housing inventory is becoming less diverse.

Relevant Factors - The trends that show a depletion of the construction of condominium development were driven by a number of factors during the Great Recession. Given the emergence from the recession and strengthening economic conditions, most of these factors have dissipated with the exception of the real or perceived costs associated construction defects litigation. (It should be noted that the wage compression evaluated in the study is likely to continue, suggesting the need for more affordable product across all unit types.)

Urban Centers – Metro Vision has identified characteristics for urban centers that include a mix of uses, compact development and medium and high densities, pedestrian orientation, transit orientation, and focal points for a variety of land uses. A goal of 50 percent of new housing is to be located within these centers, allowing people of all ages, incomes, and abilities to access a range of housing options. Without a robust condominium sector, the goals related to Urban Centers housing will be difficult to achieve.



APPENDIX

**Table A-1
Urban Center Designations by County and Size**

Urban Center	County (acres if split between 2 or more)	Acres	Urban Center	County (acres if split between 2 or more)	Acres
10th & Osage Station	Denver	146	Highlands Ranch Town Center	Douglas	165
1st Avenue Center	Arapahoe	339	I-225/Parker Road	Arapahoe (175) / Denver (34)	209
28th/30th Streets (BVRC)	Boulder	634	I-25 & SH 7 Activity Center	Broomfield	270
29th Ave. Town Center	Denver	90	I-25 / Hwy 7 Activity Center	Adams	502
38th and Blake TOD	Denver	238	I-25 Corridor	Arapahoe (3,573) / Douglas (1,946) / Denver (436)	5,956
41st and Fox TOD	Denver	59	Iliff Avenue Center	Arapahoe	315
56th Avenue	Adams	203	Interlocken Loop Activity Center	Broomfield	586
62nd and Pena TOD	Denver	161	Jewell Avenue	Arapahoe	294
Adams Crossing Activity Center	Adams	779	Ken Pratt Extension	Boulder	158
Airport Gateway	Adams	40	Lakewood Center	Jefferson	288
Alameda Station	Denver	201	Lincoln Station TOD	Douglas	61
Aurora City Center	Arapahoe	681	Lowry Town Center	Denver	92
Bear Valley	Denver	83	MLK Town Center	Denver	27
Bellview Station	Denver	51	North End Station	Adams	126
Bergen Park	Jefferson	149	North I-25 Activity Center	Adams	561
Bowles	Jefferson	264	North Main Street AC	Boulder	122
Broadway Station TOD	Denver	145	Northglenn City Center	Adams	252
Bromley Park Activity Center	Adams	393	Northwest TOD Wheat Ridge	Jefferson	119
Buckingham Center	Arapahoe (398) / Denver (16)	414	Oak Street	Jefferson	287
C-470 Corridor	Jefferson	826	Olde Town/New Town	Jefferson	158
Candelas	Jefferson	629	Original Broomfield TOD	Broomfield	36
CBD of Longmont	Boulder	591	Pena & 40th	Denver	50
Central Business District	Denver	1,688	Prairie Center Activity Center	Adams	36
Cherry Creek	Denver	672	Ralston Fields	Jefferson	257
CityCenter Englewood	Arapahoe	62	RidgeGate City Center	Douglas	195
Colfax Avenue	Arapahoe (193) / Adams (143)	336	S Westminster Activity Center	Adams	232
Colorado Blvd and Smith Road	Denver	73	SH66 Mixed Use Corridor	Boulder	159
Colorado Blvd Health Care District	Denver	137	Sheridan Station	Jefferson (90) / Denver (19)	109
Colorado Station	Denver	171	Smoky Hill	Arapahoe	375
Denargo Market	Denver	99	Southmoor Park TOD	Denver	50
Denver Technology Center	Denver	287	Southwest Plaza	Jefferson	293
Denver West/CO Mills Center	Jefferson	546	St. Anthony's Urban Center	Denver	30
Downtown Boulder	Boulder	382	Stapleton Multimodal Station	Denver	63
Downtown Brighton Activity Ctr	Adams	178	Stapleton North Regional Center	Denver	240
DU Campus Urban Center	Denver	204	Superior Town Center	Boulder	81
E-470 / I-70	Arapahoe (1038) / Adams (5)	1,043	Tamarac & Hampden	Denver	79
East Colfax Main Street	Denver	499	Thornton City Center	Adams	491
Eastlake	Adams	99	Twin Peaks Activity Center	Boulder	240
Evans Station TOD	Denver	45	Union Center	Jefferson	639
Federal and Decatur TOD	Denver	155	University Hill	Boulder	542
Federal and Evans	Denver	60	Urban Transit Village	Broomfield	250
Fehringner Ranch	Jefferson	334	Wadsworth Boulevard	Jefferson	294
Fitzsimons	Adams (655) / Arapahoe (166)	821	Wadsworth Wheat Ridge	Jefferson	112
Glendale City Center	Arapahoe	353	West 120th Ave Activity Ctr	Adams	591
Golden Downtown	Jefferson	132	Westminster Ctr Activity Ctr	Jefferson (401) / Adams (221)	622
Greater Downtown District (Parker)	Douglas	280	Westminster Promenade Act Ctr	Jefferson	538
Gunbarrel Activity Center	Boulder	138			
Hampden Town Center	Arapahoe (92) / Denver (13)	105			

Source: DRCOG; Economic & Planning Systems
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Table A-2
Square Footage of Sales of New Product

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Adams														
Attached Avg Size	1,462	1,429	1,417	1,404	1,375	1,364	1,380	1,379	1,387	1,426	1,423	1,427	1,454	1,410
Detached Avg Size	1,982	2,065	2,187	2,240	2,185	2,164	2,202	2,275	2,323	2,373	2,245	2,161	2,186	2,199
Attached as % of Detached Size	74%	69%	65%	63%	63%	63%	63%	61%	60%	60%	63%	66%	66%	64%
Arapahoe														
Attached Avg Size	1,419	1,379	1,393	1,407	1,412	1,428	1,515	1,615	1,653	1,652	1,622	1,752	1,744	1,538
Detached Avg Size	2,317	2,402	2,480	2,608	2,625	2,643	2,646	2,638	2,658	2,591	2,518	2,515	2,614	2,558
Attached as % of Detached Size	61%	57%	56%	54%	54%	54%	57%	61%	62%	64%	64%	70%	67%	60%
Boulder														
Attached Avg Size	1,528	1,459	1,467	1,434	1,397	1,355	1,382	1,413	1,431	1,493	1,592	1,574	1,590	1,470
Detached Avg Size	2,225	2,214	2,251	2,327	2,375	2,320	2,303	2,263	2,222	2,125	2,046	2,128	2,152	2,227
Attached as % of Detached Size	69%	66%	65%	62%	59%	58%	60%	62%	64%	70%	78%	74%	74%	66%
Broomfield														
Attached Avg Size	1,595	1,543	1,508	1,493	1,485	1,430	1,470	1,561	1,592	1,594	1,713	1,556	1,490	1,541
Detached Avg Size	2,618	2,665	2,635	2,689	2,564	2,613	2,547	2,480	2,432	2,503	2,360	2,279	2,438	2,525
Attached as % of Detached Size	61%	58%	57%	56%	58%	55%	58%	63%	65%	64%	73%	68%	61%	61%
Denver														
Attached Avg Size	1,336	1,297	1,291	1,363	1,355	1,329	1,346	1,439	1,521	1,609	1,680	1,695	1,799	1,466
Detached Avg Size	2,121	2,010	1,989	2,337	2,421	2,539	2,521	2,371	2,247	2,156	2,229	2,242	2,308	2,269
Attached as % of Detached Size	63%	65%	65%	58%	56%	52%	53%	61%	68%	75%	75%	76%	78%	65%
Douglas														
Attached Avg Size	1,733	1,757	1,732	1,593	1,445	1,485	1,537	1,690	1,734	1,745	1,841	1,838	1,843	1,690
Detached Avg Size	2,442	2,512	2,540	2,595	2,586	2,647	2,658	2,767	2,803	2,748	2,658	2,577	2,548	2,622
Attached as % of Detached Size	71%	70%	68%	61%	56%	56%	58%	61%	62%	63%	69%	71%	72%	65%
Jefferson														
Attached Avg Size	1,498	1,461	1,427	1,415	1,455	1,406	1,399	1,473	1,546	1,556	1,630	1,638	1,582	1,499
Detached Avg Size	2,410	2,453	2,383	2,520	2,530	2,558	2,621	2,715	2,726	2,693	2,661	2,580	2,568	2,571
Attached as % of Detached Size	62%	60%	60%	56%	58%	55%	53%	54%	57%	58%	61%	63%	62%	58%

Source: Genesis Group; Economic & Planning Systems

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Table A-3
Average Price of Sales of New Product

County	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Average
Adams														
Attached Base Price	\$167,813	\$175,664	\$186,740	\$191,943	\$189,750	\$189,626	\$197,153	\$196,534	\$191,626	\$195,557	\$206,585	\$204,884	\$209,042	\$200,197
Detached Base Price	\$250,531	\$271,258	\$296,070	\$297,768	\$290,501	\$281,060	\$280,677	\$306,707	\$320,121	\$319,248	\$290,271	\$277,164	\$281,188	\$296,482
Att. As % of Detach.	67%	65%	63%	64%	65%	67%	70%	64%	60%	61%	71%	74%	74%	67%
Arapahoe														
Attached Base Price	\$176,394	\$183,442	\$189,088	\$198,402	\$209,378	\$221,194	\$268,181	\$345,040	\$387,090	\$404,609	\$430,663	\$467,986	\$486,794	\$398,623
Detached Base Price	\$280,017	\$313,856	\$339,228	\$388,956	\$404,493	\$427,405	\$434,045	\$428,406	\$433,368	\$418,004	\$391,128	\$392,387	\$398,691	\$413,718
Att. As % of Detach.	63%	58%	56%	51%	52%	52%	62%	81%	89%	97%	110%	119%	122%	78%
Boulder														
Attached Base Price	\$206,231	\$223,975	\$233,093	\$233,069	\$244,395	\$260,429	\$278,581	\$298,879	\$351,926	\$390,632	\$442,342	\$432,390	\$439,513	\$376,323
Detached Base Price	\$300,477	\$317,473	\$332,672	\$342,187	\$360,090	\$363,999	\$377,600	\$383,626	\$380,297	\$391,586	\$408,156	\$419,940	\$411,298	\$396,072
Att. As % of Detach.	69%	71%	70%	68%	68%	72%	74%	78%	93%	100%	108%	103%	107%	83%
Broomfield														
Attached Base Price	\$194,982	\$214,790	\$213,614	\$220,407	\$227,515	\$228,121	\$243,282	\$275,881	\$281,237	\$274,466	\$280,348	\$248,103	\$243,663	\$263,854
Detached Base Price	\$346,216	\$365,731	\$367,381	\$373,158	\$381,618	\$441,942	\$459,795	\$463,463	\$420,865	\$432,007	\$420,332	\$385,084	\$407,219	\$426,966
Att. As % of Detach.	56%	59%	58%	59%	60%	52%	53%	60%	67%	64%	67%	64%	60%	60%
Denver														
Attached Base Price	\$279,711	\$297,661	\$300,093	\$322,546	\$338,852	\$373,127	\$416,198	\$478,943	\$556,135	\$594,586	\$600,032	\$640,536	\$705,240	\$570,239
Detached Base Price	\$307,217	\$288,171	\$283,144	\$419,892	\$467,591	\$488,044	\$487,783	\$453,447	\$438,458	\$424,766	\$400,481	\$384,368	\$362,832	\$421,734
Att. As % of Detach.	91%	103%	106%	77%	72%	76%	85%	106%	127%	140%	150%	167%	194%	115%
Douglas														
Attached Base Price	\$198,703	\$228,547	\$231,645	\$214,764	\$198,597	\$224,620	\$229,421	\$268,961	\$287,334	\$300,361	\$314,617	\$322,219	\$332,148	\$293,580
Detached Base Price	\$288,183	\$324,140	\$336,377	\$348,071	\$359,483	\$390,555	\$409,499	\$436,926	\$461,951	\$439,573	\$397,808	\$365,518	\$361,349	\$410,375
Att. As % of Detach.	69%	71%	69%	62%	55%	58%	56%	62%	62%	68%	79%	88%	92%	68%
Jefferson														
Attached Base Price	\$208,650	\$224,872	\$223,961	\$226,605	\$249,708	\$248,238	\$269,424	\$326,830	\$340,014	\$311,005	\$296,925	\$293,321	\$264,980	\$300,357
Detached Base Price	\$316,398	\$356,618	\$350,423	\$374,634	\$406,949	\$439,558	\$479,156	\$525,124	\$530,906	\$510,532	\$482,084	\$455,387	\$443,307	\$489,499
Att. As % of Detach.	66%	63%	64%	60%	61%	56%	56%	62%	64%	61%	62%	64%	60%	62%

Source: Genesis Group; Economic & Planning Systems

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