

January 2017

Greetings:

On behalf of the Colorado Association of Mechanical & Plumbing Contractors (CAMPC), the Rocky Mountain Chapter of the National Electrical Contractors Association (NECA), and the Sheet Metal and Air Conditioning Colorado Chapter (SMACNA), herein referred to as the MEP Alliance, we would like to thank you for taking the time to review this Fifth Edition of our report outlining the economic impact of the Construction Industry on the State of Colorado.

According to the report, it is estimated in Colorado there will be more than 56,000 new jobs in construction by 2025 (see Table 3 on page 37). This represents a 38% increase above today's employment levels, most of which will be created by specialty trade contractors (subcontractors). These are only NEW jobs, and do not account for the baby boomer generation, which will retire in record levels over the next decade. Some economists believe that could add another 40,000 to the number of jobs in construction. So make no mistake, our industry is heavily focused on better outreach to recruit tomorrow's talent. However, the pending workforce needs of our industry appear to be increasing, not declining. It's clear that the industry, in partnership with the State of Colorado, will need be more aggressive and creative if we hope to avoid importing of our construction workforce from outside Colorado. Unless we seriously address these expected workforce shortages, we must all come to terms that the Colorado of the future may very well be built by a predominantly non-resident workforce – this is an outcome we still have time to avoid.

Speaking of jobs, the state has in recent years made significant investments in maintaining the State's existing 2,400 buildings, while making investments in new buildings. We encourage the legislature to consider the development of a dedicated funding stream for Controlled Maintenance possibly patterned after what some of our neighboring states have done (1% of building value dedicated to maintenance). Dedicated investments in Controlled Maintenance funding will ensure the services of the state will be able to be delivered to the taxpayers of Colorado.

We would also like to thank the Governor, State Legislators, Office of Economic Development and International Trade, Department of Higher Education, and the Colorado Department of Labor and Employment for your devotion and interest to creating a vibrant and robust workforce in Colorado. We collectively worked hard to pass House Bill 15-1276, which created a three-year investment in workforce development and employment. The Construction Industry takes pride in the contributions we make to the State's economy, as well as, building our great state. We are proud of the training programs in which we invest heavily to create tomorrow's workforce. We know there is room for improvement. We look forward to collaborating with you in an inclusive manner to solve this workforce shortage facing our state. It is our intent to carefully seek and construct solutions to recruit the people necessary to fill the needs of our industry for these high paying jobs.

We hope you find the information included in this report valuable. We invite you to learn more about our industry and our associations, and we will be happy to serve as a resource for your questions or business needs. On behalf of our three associations and Boards of Directors, we look forward to working with you in the community, and partnering to help better shape Colorado and its economy for the years to come.

Sincerely,



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Construction is a significant contributor to Colorado's economy. This industry plays a critical role in Colorado employment, wages and contribution to Gross Domestic Product by state. As a subsector of the construction industry, the mechanical, electrical and plumbing trades contribute substantially to the overall impacts of the construction industry. The purpose of this report is to bring together measures of the construction industry's economic impact on the State of Colorado, as well as the importance of the mechanical, electrical and plumbing (MEP) sector. The results support the conclusion that construction is one of the more important industries in Colorado:

- **Between 2015 and 2025, construction employment in Colorado is expected grow 38%, adding 56,874 jobs in the state. Over 42,000 of these positions are projected to be in the specialty trades (page 37)—50% of these jobs by 2018.**
- The national average annual wage for mechanical, electrical, and plumbing contractors was \$58,150, 49% percent higher than the average for those with an associate's degree and 63% higher than the average wage for high school graduates in 2012 (page 20).
- Construction contributed \$14.5 billion (or 4.6%) to Colorado's GDP by state in 2015 (page 43 and Appendix G), a 1.3% decrease in contribution since 2006.
- Total retail sales for construction and related industries in Colorado totaled \$14.5 billion in 2015, 7.9% of the state's total retail sales (page 50).
- Every \$1 million invested in construction in Colorado increases the state's total industry output by \$2.16 million and increases Colorado household earnings by \$0.72 million while creating 17 new jobs in Colorado (page 48).
- Colorado was home to more than 17,770 construction establishments in 2015. Of these establishments, 67% were specialty trade companies and over 25% were MEP contractors<sup>1</sup> (page 10).
- Almost 92% of Colorado's construction industry is comprised of small companies that have fewer than 20 employees. Just over 91% of MEP<sup>1</sup> establishments have fewer than 20 employees (page 12).
- The construction industry employs 7.2% of the total private workforce in Colorado (page 14), accounting for \$8.2 billion of the state's total payroll (page 26).
- Payroll for mechanical, electrical, and plumbing contractors<sup>1</sup> was \$2.4 billion in 2015, representing almost 29% of total construction payroll and 2.1% of total payroll for the state (page 28).
- Nearly 28% of total construction employment in Colorado is in the MEP industries<sup>1</sup>, significantly more than in any other construction subsector. MEP<sup>1</sup> employment accounts for 2.0% of total private employment in Colorado (page 15).
- The percentage of construction workers age 55 and older increased by 7.0% between 2006 and 2015, while the percentage of workers age 34 and younger decreased by 6.6%. During the same time period, mechanical, electrical and plumbing workers<sup>1</sup> that were 55 year of age and older increased by 6.7%, while the percentage under 35 decreased by 6.9% (page 36).
- In 2015, 9.3% of Colorado workers were represented by unions, while nationally 14.0% of all construction workers were represented by unions (page 34).

In summary, this study shows there will be an increasing opportunity for good paying jobs in the construction industry in Colorado. The challenge will be to fund programs that prepare Colorado citizens for these jobs. HB15-1276 was a nice step towards addressing this concern. But, as an industry, there is clearly more work that needs to be done.

<sup>1</sup> Mechanical, electrical, plumbing, and HVAC (MEP) contractors are referred to as 'building equipment contractors' under the NAICS classification codes.

## INTRODUCTION

Nationwide, the construction industry is a significant contributor to the United States economy. In 2015, the construction industry employed 6.4 million people (5.4%) of total non-governmental employment in the US.<sup>2</sup> Construction employees earned an average yearly income of \$57,009, which is 7.8% higher than the \$52,876 average income for all private US industries. In comparison, the 2015 national average income for mechanical, electrical, and plumbing contractors was \$58,150, which is 2.0% higher than the overall construction industry and nearly 10.0% higher than the national average for all private US industries.<sup>2</sup>

The construction industry contributes significantly at the state level as well. The purpose of this study is to present the significance of the construction industry to Colorado in terms of:

- (1) state employment and economics, and
- (2) future educational and employment opportunities.

This report is organized into four sections. Each section presents information for the overall construction industry in Colorado and, when possible, information specific to mechanical, electrical and plumbing contractors. The four sections comprising this report are:

**Section 1 - Colorado Construction Establishments:** determines the size and composition of the construction industry in Colorado. This includes both the overall number of construction establishments and the number of construction establishments by construction subsector.

**Section 2 - Construction Employment and Wages:** focuses on current and past construction employment and wages. This includes information on construction employment, annual wages, and weekly wages.

**Section 3 - Industry Education and Employment Opportunities:** presents information pertaining to the future employment needs of the Colorado construction industry and includes information on construction-related educational opportunities within Colorado.

**Section 4 - Economic Indicators:** focuses on the construction industry's contribution to Colorado's GDP by state, the economic multiplier of construction in Colorado, and construction retail sales in Colorado.



<sup>2</sup> U.S. Department of Labor, Bureau of Labor Statistics. Quarterly Census of Employment and Wages. Retrieved December 2016 from <http://data.bls.gov/>



Data for this report was obtained primarily from the U.S. Department of Labor's Bureau of Labor Statistics, the U.S. Bureau of Economic Analysis, the U.S. Census Bureau, the Colorado Department of Revenue, and the Colorado Department of Labor and Employment. Data was obtained for the following ten subsectors of the construction industry:

- General building contractors – residential
- General building contractors – non-residential
- Utility system contractors
- Land subdivision contractors
- Highway, street, and bridge contractors
- Other heavy and civil engineering construction
- Foundation, structure, and building exterior contractors
- Building equipment contractors (Mechanical, Electrical and Plumbing [MEP] Contractors)<sup>3</sup>
- Building finishing contractors
- Other specialty trade contractors

The six industries selected for comparison purposes are:

- Manufacturing
- Retail trade
- Finance and insurance
- Real estate and rental and leasing
- Professional and technical services
- Health care and social assistance



The 2012 North American Industry Classification System (NAICS) is used as the basis for organizing the data presented in this report. This is the standard used by all Federal statistical agencies, specifically the U.S. Census Bureau, U.S. Department of Labor's Bureau of Labor Statistics and the Colorado Department of Revenue. Following are brief NAICS descriptions for each construction and comparison industry sectors and subsectors as defined on the U.S. Census Bureau's website.

### Construction Sectors

The NAICS classifies industries using a six-digit industrial classification system to describe the nature of a business. This system replaced the Standard Industrial Classification (SIC) system. The following definitions are from the U.S. Census Bureau's NAICS website.<sup>4</sup>

**NAICS 2361 – Residential Building Construction.** This industry comprises establishments primarily responsible for the construction or remodeling and renovation of single-family and multifamily residential buildings. Included in this industry are residential housing general contractors (i.e., new construction, remodeling, or renovating existing residential structures), for-sale builders and remodelers of residential structures, residential project construction management firms, and residential design-build firms.

**NAICS 2362 – Non-Residential Building Construction.** This industry group comprises establishments primarily responsible for the construction (including new work, additions, alterations, maintenance, and repairs) of non-residential buildings. This industry group includes non-residential general contractors, non-residential for-sale builders, non-residential design-build firms, and non-residential project construction management firms. The two subcategories under Non-Residential Building Construction are: 1) Industrial Building Construction; and 2) Commercial and Institutional Building Construction.

<sup>3</sup> This subsector of the Construction Industry is commonly referred to as the Mechanical, Electrical, and Plumbing (MEP) Contractors and includes establishments primarily engaged in the installing or servicing equipment that part of a building's mechanical system (e.g., electricity, water, heating, and cooling). Throughout the remainder of this report, the term Mechanical, Electrical and Plumbing (or MEP) Contractors will be used when referring to this industry subsector.

<sup>4</sup> Additional information about the North American Industry Classification System (NAICS) can be found at <http://www.census.gov/eos/www/naics/>.

**NAICS 2371 – Utility System Construction.** This industry group comprises establishments primarily engaged in the construction of distribution lines and related buildings and structures for utilities (i.e., water, sewer, petroleum, gas, power, and communication). All structures (including buildings) that are integral parts of utility systems (e.g., storage tanks, pumping stations, power plants, and refineries) are included in this industry group. The subcategories under Utility System Construction are: 1) Water and Sewer Line and Related Structures Construction; 2) Oil and Gas Pipeline and Related Structures Construction; and 3) Power and Communication Line and Related Structures Construction.

**NAICS 2372 – Land Subdivision.** This industry comprises establishments primarily engaged in servicing land and subdividing real property into lots, for subsequent sale to builders. Servicing of land may include excavation work for the installation of roads and utility lines. The extent of work may vary from project to project. Land subdivision precedes building activity and the subsequent building is often residential, but may also be commercial tracts and industrial parks. These establishments may do all the work themselves or subcontract the work to others. Establishments that perform only the legal subdivision of land are not included in this industry.

**NAICS 2373 – Highway, Street, and Bridge Construction.** This industry comprises establishments primarily engaged in the construction of highways (including elevated), streets, roads, airport runways, public sidewalks, or bridges. The work performed may include new work, reconstruction, rehabilitation, and repairs. Specialty trade contractors are included in this group if they are engaged in activities primarily related to highway, street, and bridge construction (e.g., installing guardrails on highways).

**NAICS 2379 – Other Heavy and Civil Engineering Construction.** This industry comprises establishments primarily engaged in heavy and engineering construction projects (excluding highway, street, bridge, and distribution line construction). The work performed may include new work, reconstruction, rehabilitation, and repairs. Specialty trade contractors are included in this group if they are engaged in activities primarily related to engineering construction projects (excluding highway, street, bridge, distribution line, oil and gas structure, and utilities building and structure construction). Construction projects involving water resources (e.g., dredging and land drainage), development of marine facilities, and projects involving open space improvement (e.g., parks and trails) are included in this industry.

**NAICS 2381 – Foundation, Structure, and Building Exterior Contractors.** This industry group comprises establishments primarily engaged in the specialty trades needed to complete the basic structure (i.e., foundation, frame, and shell) of buildings. The work performed may include new work, additions, alterations, maintenance, and repairs. Subcategories included under this category are: 1) Poured Concrete Foundation and Structure Contractors; 2) Structural Steel and Precast Concrete Contractors; 3) Framing Contractors; 4) Masonry Contractors; 5) Glass and Glazing Contractors; 6) Roofing Contractors; 7) Siding Contractors; and 8) Other Foundation, Structure, and Building Exterior Contractors.

**NAICS 2382 – Building Equipment Contractors.** This industry group comprises establishments primarily engaged in installing or servicing equipment that forms part of a building mechanical system (e.g., electricity, water, heating, and cooling). The work performed may include new work, additions, alterations, maintenance, and repairs. Contractors installing specialized building equipment, such as elevators, escalators, service station equipment, and central vacuum cleaning systems are also included. Subcategories included under Building Equipment Contractors are: 1) Electrical Contractors and Other Wiring Installation Contractors; 2) Plumbing, Heating, and Air-Conditioning Contractors; and 3) Other Building Equipment Contractors.

**NAICS 2383 – Building Finishing Contractors.** This industry group comprises establishments primarily engaged in the specialty trades needed to finish buildings. The work performed may include new work, additions, alterations, maintenance, and repairs. Subcategories included under Building Finishing Contractors are: 1) Drywall and Insulation Contractors; 2) Painting and Wall Covering Contractors; 3) Flooring Contractors; 4) Tile and Terrazzo Contractors; 5) Finish Carpentry Contractors; and 6) Other Building Finishing Contractors.

**NAICS 2389 – Other Specialty Trade Contractors.** Subcategories included under Other Specialty Trade Contractors are: 1) Site Preparation Contractors; and 2) All other Specialty Trade Contractors.

In addition to the above construction NAICS categories, subcategories of the Building Equipment Contractors subsector were examined to present a more in-depth report. These categories include:

**NAICS 23821 – Electrical Contractors and Other Wiring Installation Contractors.** This industry comprises establishments primarily engaged in installing and servicing electrical wiring and equipment. Contractors included in this industry may include both the parts and labor when performing work. These contractors may perform new work, additions, alterations, maintenance, and repairs. The classification system includes further categorization into residential and non-residential electrical contractors.



**NAICS 23822 – Plumbing, Heating and Air-Conditioning Contractors.** This industry comprises establishments primarily engaged in installing and servicing plumbing, heating, and air-conditioning equipment. Contractors in this industry may provide both parts and labor when performing work. The work performed may include new work, additions, alterations, maintenance, and repairs. The classification system includes further categorization into residential and non-residential plumbing and electrical contractors.

**NAICS 23829 – Other Building Equipment Contractors.** This industry comprises establishments primarily engaged in installing or servicing building equipment (except electrical, plumbing, heating, cooling, or ventilation equipment). The repair and maintenance of miscellaneous building equipment is included in this industry. The work performed may include new work, additions, alterations, maintenance, and repairs. The classification systems include further categorization of other building equipment contractors into residential and non-residential.

### Industry Groups Used for Comparisons:

The following are descriptions of the industry groups used for comparison in this report.

**NAICS 31-33 – Manufacturing.** The Manufacturing sector comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products. The assembling of component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in Sector 23, Construction.

**NAICS 44-45 – Retail Trade.** The Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The retailing process is the final step in the distribution of merchandise; retailers are, therefore, organized to sell merchandise in small quantities to the general public. This sector comprises two main types of retailers: store and non-store retailers.

**NAICS 52 – Finance and Insurance.** The Finance and Insurance sector comprises establishments primarily engaged in financial transactions (transactions involving the creation, liquidation, or change in ownership of financial assets) and/or in facilitating financial transactions.

**NAICS 53 – Real Estate and Rental and Leasing.** The Real Estate and Rental and Leasing sector comprises establishments primarily engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets, and establishments providing related services. The major portion of this sector comprises establishments that rent, lease, or otherwise allow the use of their own assets by others. The assets may be tangible, as is the case of real estate and equipment, or intangible, as is the case with patents and trademarks. This sector also includes establishments primarily engaged in managing real estate for others, selling, renting and/or buying real estate for others, and appraising real estate.

**NAICS 54 – Professional, Scientific, and Technical Services.** The Professional, Scientific, and Technical Services sector comprises establishments that specialize in performing professional, scientific, and technical activities for others. These activities require a high degree of expertise and training. The establishments in this sector specialize according to expertise and provide these services to clients in a variety of industries and, in some cases, to households. Activities performed include: legal advice and representation; accounting, bookkeeping, and payroll services; architectural, engineering, and specialized design services; computer services; consulting services; research services; advertising services; photographic services; translation and interpretation services; veterinary services; and other professional, scientific, and technical services.

**NAICS 62 – Health Care and Social Assistance.** The Health Care and Social Assistance sector comprises establishments providing health care and social assistance for individuals. The sector includes both health care and social assistance because it is sometimes difficult to distinguish between the boundaries of these two activities. The industries in this sector are arranged on a continuum starting with those establishments providing medical care exclusively, continuing with those providing health care and social assistance, and finally finishing with those providing only social assistance. The services provided by establishments in this sector are delivered by trained professionals. All industries in the sector share this commonality of process, namely, labor inputs of health practitioners or social workers with the requisite expertise. Many of the industries in the sector are defined based on the educational degree held by the practitioners included in the industry.

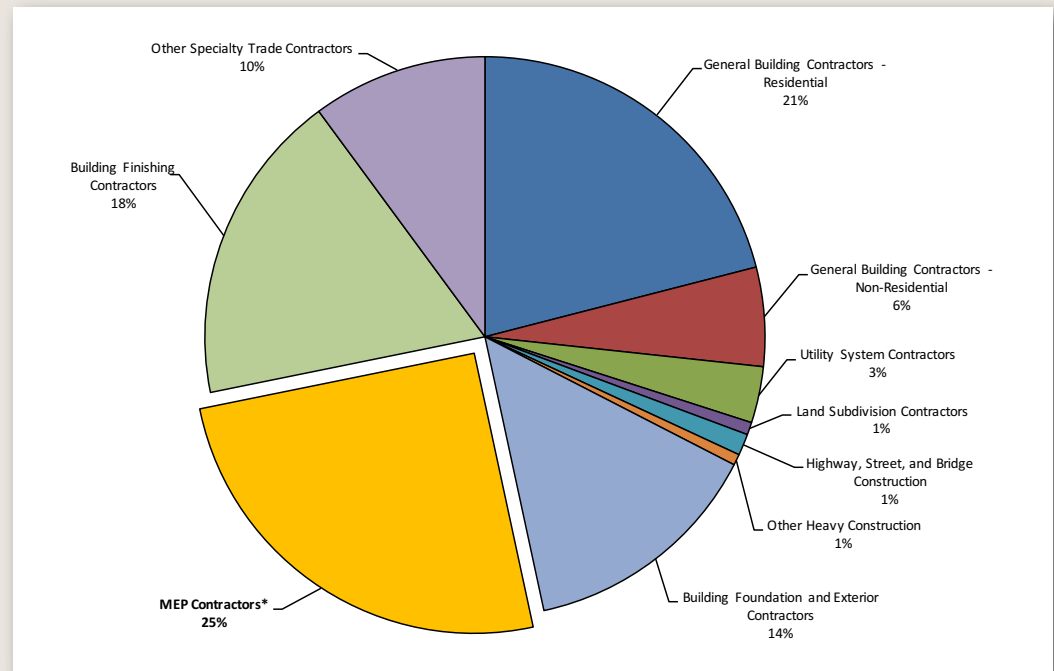
## SECTION 1 Colorado Construction Establishments

In 2015, the highest percentage of construction establishments was specialty trade contractors: mechanical, electrical, and plumbing (MEP) contractors (25%), building finishing contractors (18%); foundation, structure, and building exterior contractors (14%), and other specialty trade contractors (10%) (Figure 1). Combined, the specialty trades accounted for 67% of construction establishments in Colorado.

**Figure 1. Construction establishments in Colorado by industry subsectors, 2015.**

\* NAICS category is Building Equipment Contractors.

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

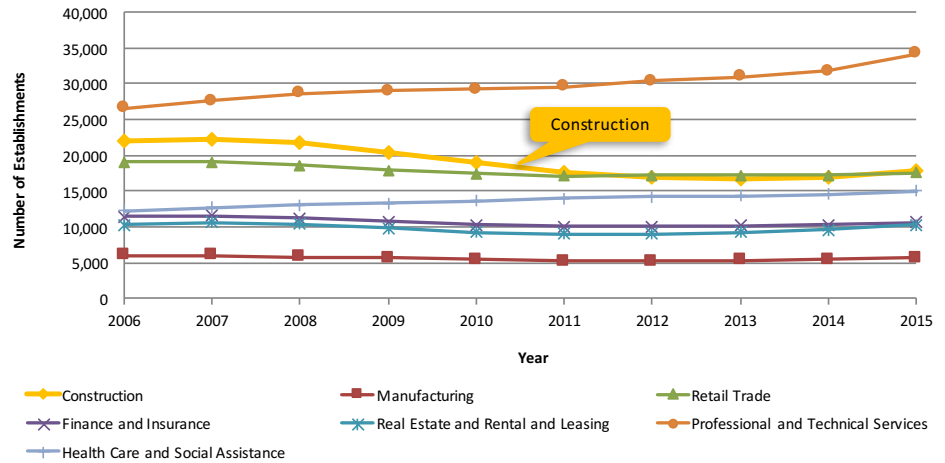


The total number of construction establishments in private industry was 17,770 in 2015. This is a 20.4% decrease from 2007, which saw the highest number of construction establishments in the last ten years, and a 6.6% increase from 2013 (Figure 2). Between 2007 and 2015, the only comparable industries reviewed in this report to increase in number of establishments were health care and social assistance, which increased 18.1%, and professional and technical services, which increased 23.6%. The other four comparable industries all declined in total number of establishments. Finance and insurance establishments declined 8.1%, manufacturing declined 5.5%, retail trade declined 7.8%, and real estate declined 3.0%. (Detailed tables are available in Appendix A.)

## SECTION 1 Colorado Construction Establishments

**Figure 2. Number of private establishments for select industries in Colorado, 2006-2015.**

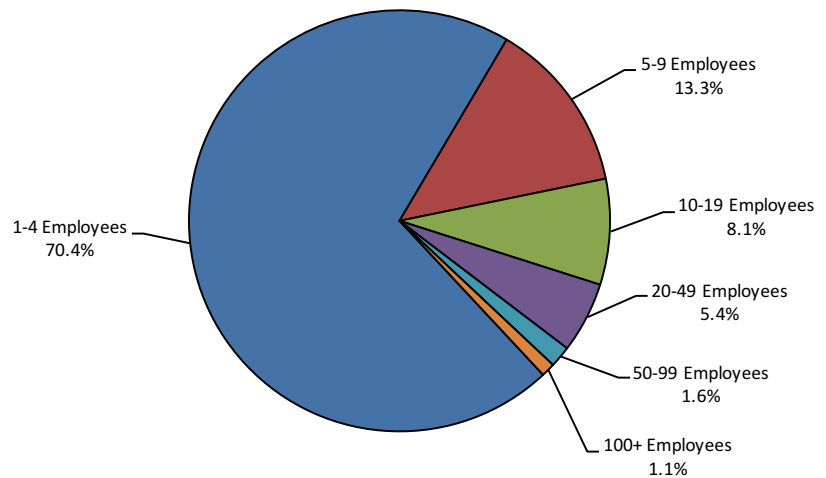
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Information on the number of establishments by number of employees was obtained from the U.S. Census Bureau's County Business Patterns for 2014, the most recent data available at the time this report was compiled. (Detailed tables are provided in Appendix B.) According to this information, 70% of construction establishments in Colorado employ four or less employees and less than 3% have more than 50 employees (Figure 3). The construction of buildings subsector with the highest percentage of small establishments (four or less employees) is residential building (Figure 4). Almost 85% of residential establishments have four or less employees. In contrast, only 54% of non-residential building construction establishments had four or less employees. Of the remainder non-residential building construction establishments, 17% have five to nine employees, 13% have 10-19 employees, 10% have 20-49 employees, and 6% have 50 or more employees.

**Figure 3. Percentage of construction establishments by number of employees, 2014.**

Source: U.S. Census Bureau - County Business Patterns. Retrieved October, 2016.



Other construction subsectors with a high percentage of small establishments (four or less employees) are: land subdivision (84%), building finishing contractors (79%), foundation, structure, and building exterior contractors (66%), MEP contractors (66%), and other specialty trade contractors (63%). Combined, nearly 69% of specialty contractor establishments have four or less employees.

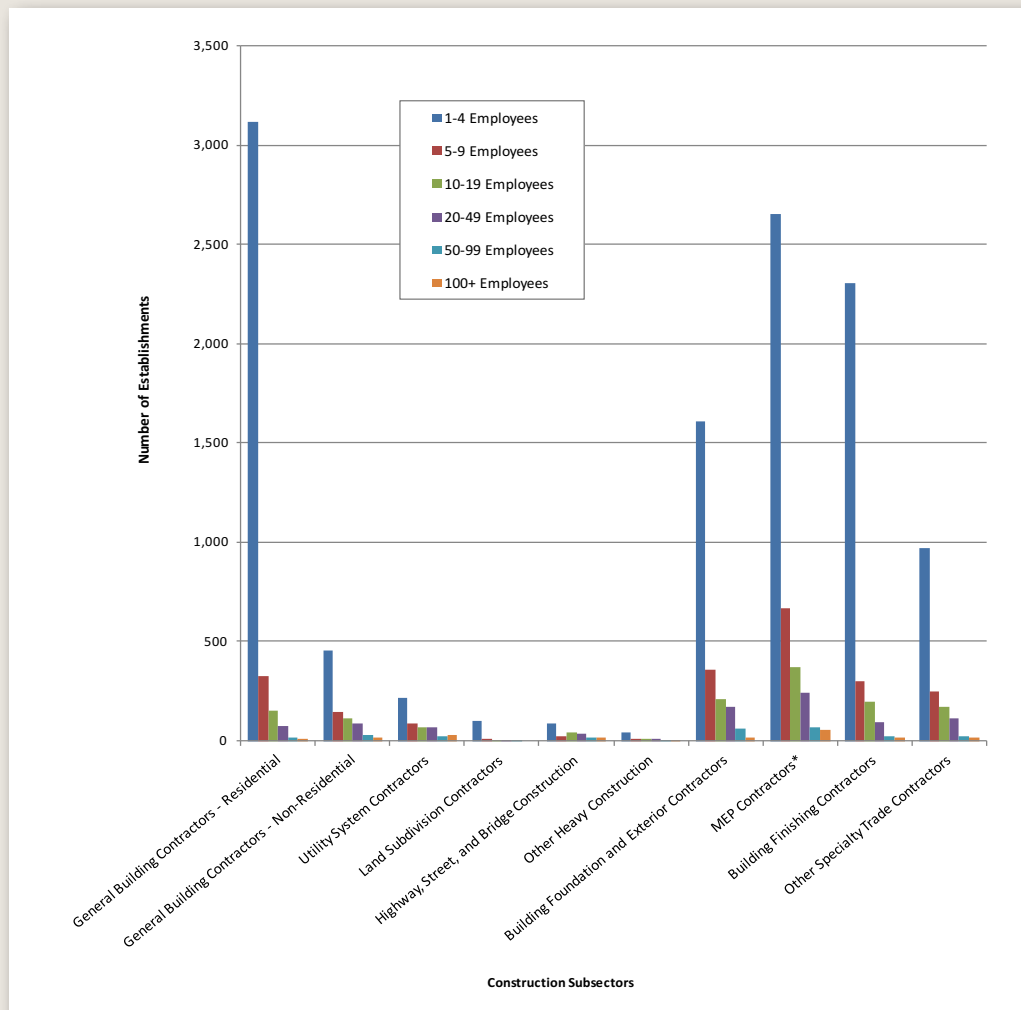
## SECTION 1 Colorado Construction Establishments

The building equipment (MEP) subsector of the construction industry includes mechanical, electrical contractors, plumbing and HVAC contractors, and other building equipment contractors. A majority of these establishments (66%) are small companies with four or less employees. Sixteen percent have between five and nine employees, 9% have between 10 and 19 employees, and almost 6% have between 20 and 49 employees. Three percent of MEP establishments have 50 or more employees. Of these, 1.7% of MEP establishments have between 50 and 99 employees and 1.4% have 100 or more employees.

**Figure 4. Construction subsector establishment by number of employees, 2014.**

\* NAICS category is Building Equipment Contractors.

Source: U.S. Census Bureau - County Business Patterns. Retrieved October, 2016.

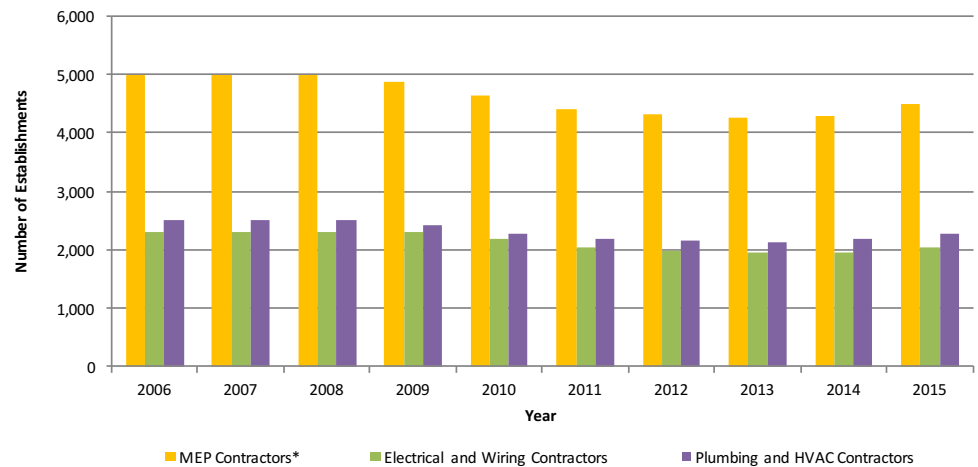


The number of electrical and wiring contractor establishments decreased from 2,305 in 2007 to 1,953 in 2013 (Figure 5). Between 2013 and 2015, the number of electrical and wiring contractor establishments grew to 2,026 (an increase of 3.7%). The number of plumbing and HVAC contractor establishments decreased from 2,516 in 2007 to 2,137 in 2013. Between 2013 and 2015, the number of plumbing and HVAC contractor establishments grew to 2,277 (an increase of 6.6%).

**Figure 5. Number of electrical and wiring, plumbing and HVAC, and other building equipment establishments in Colorado, 2006-2015.**

\* NAICS category is Building Equipment Contractors.

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Of the 2,026 electrical and wiring contractor establishments in Colorado, 1,287 (64%) were residential and 739 (36%) were non-residential in 2015. Of the 2,277 plumbing and HVAC contractor establishments in Colorado, 1,783 (78%) were residential and 494 (22%) were non-residential in 2015. Between 2006 and 2015, electrical and wiring establishments averaged 46% and plumbing and HVAC establishments averaged 50% of the total number of building equipment (MEP) establishments. (Detailed charts are available in Appendix A.)



## SECTION 2 Construction Employment and Wages

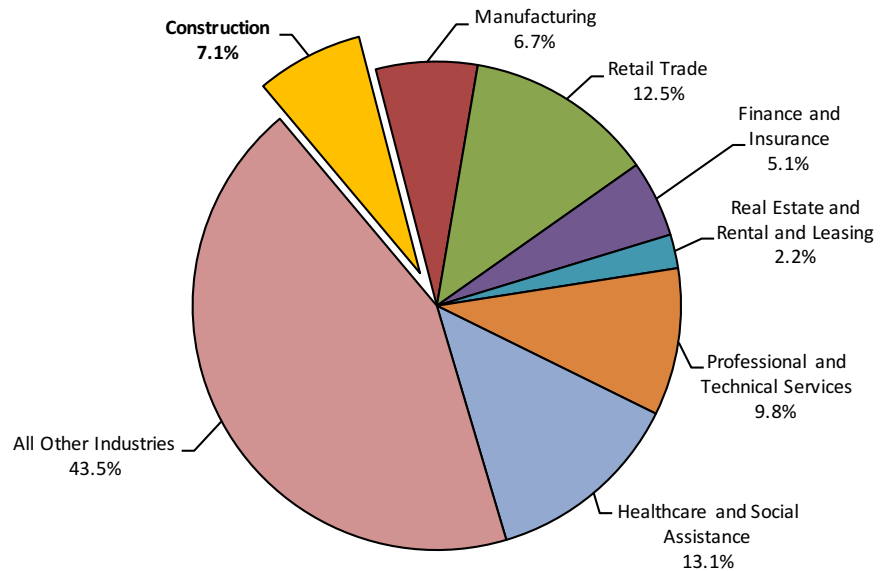
This section contains information on current employment, average wages (both annual and weekly) and total payroll for the construction industry in Colorado. Information on the impact of government employment and union membership on wages is also provided.

### Current Construction Employment in Colorado

Employment data was obtained from the U.S. Department of Labor's Bureau of Labor Statistics for private industries in Colorado.<sup>5</sup> During 2015, the Colorado construction industry provided 148,605 jobs, representing 7.1% of the state's total employment (Figure 6). Over the last ten years, construction employment accounted for an average of 7.2% of total employment in Colorado. During that time, the percentage of construction employment in the state varied from a high of 8.9% in 2006 to a low of 6.1% in 2011 (Figure 7). (Detailed tables are available in Appendix C.)

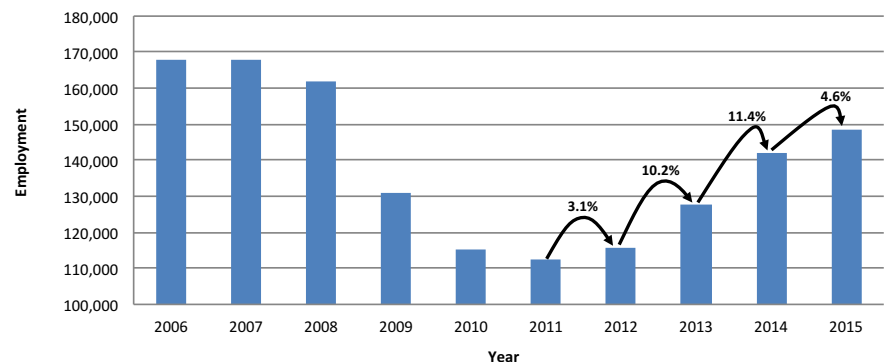
**Figure 6. Colorado employment for selected industries, 2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



**Figure 7. Construction employment in Colorado, 2006 - 2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



<sup>5</sup> This data does not include government employment or wages. The effects of government employment and wages are presented in a separate section of this report.



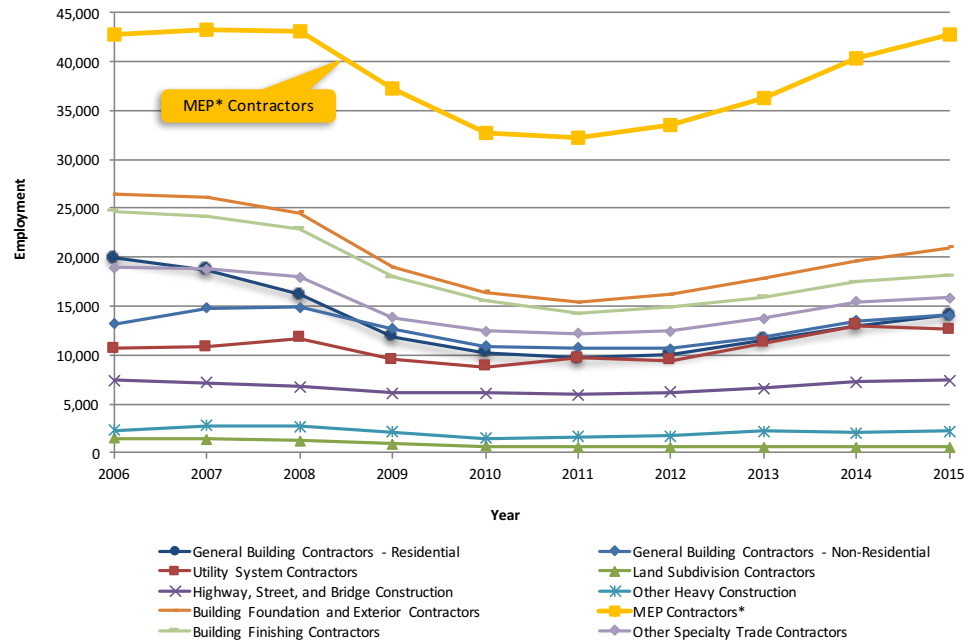
## SECTION 2 Construction Employment and Wages

Mechanical, electrical, and plumbing (MEP) contractors accounted for an average of 27.8% of total construction employment in Colorado between 2006 and 2015, significantly higher than any other subsector (Figure 8). On average, MEP contractors represent 2.0% of total employment in Colorado. The following section presents the average, high, and low percentage of construction employment for each construction industry subgroup.

**Figure 8. Construction employment in Colorado by industry subsectors, 2006-2015.**

\* NAICS category is Building Equipment Contractors.

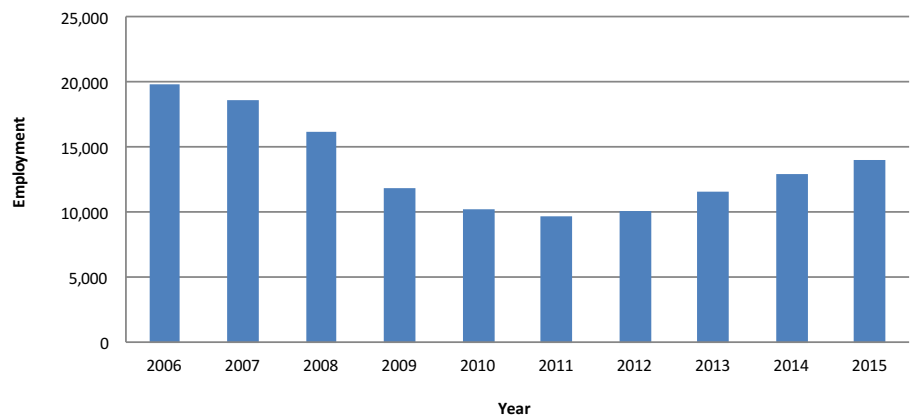
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Residential building employment averaged 9.6% of total construction employment from 2006 to 2015 (Figure 9). The high for this period was 11.9% in 2006, and the low was 8.6% in 2011.

**Figure 9. Residential building contractor employment in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



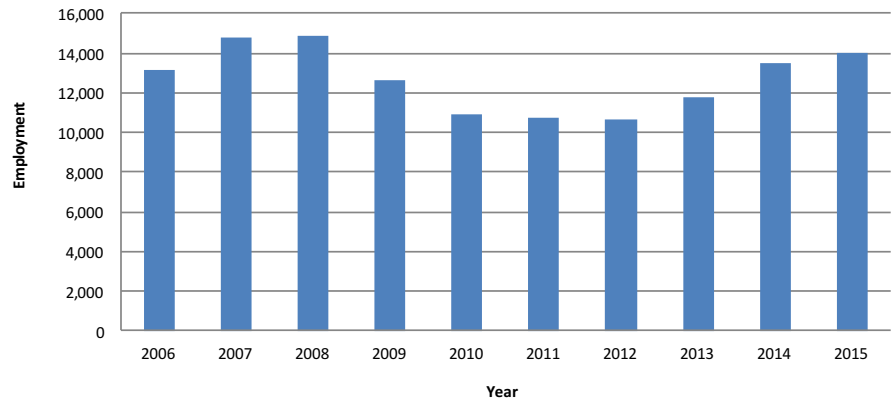
## SECTION 2

### Construction Employment and Wages

Non-residential building employment averaged 9.2% of total construction employment from 2006 to 2015 (Figure 10). The high for this period was 9.7% in 2009, and the low was 7.9% in 2006.

**Figure 10. Non-residential building contractor employment in Colorado, 2006-2015.**

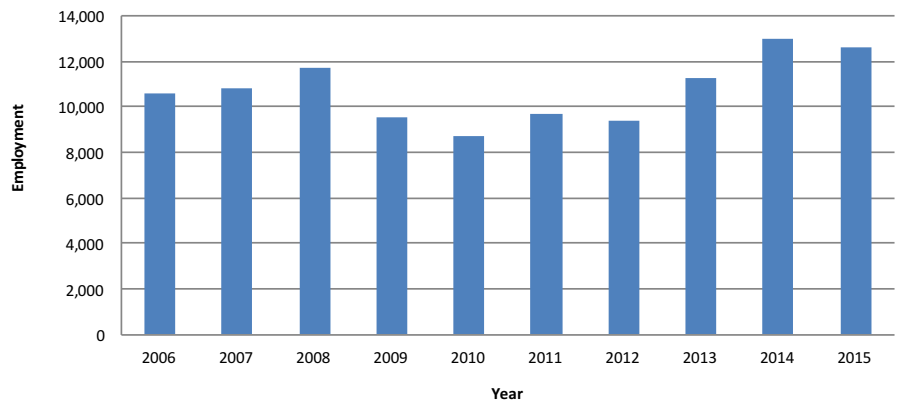
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



From 2006 to 2015, utility systems employment (Figure 11) averaged 7.8% of total construction employment. The high for this period was 9.1% in 2014, and the low was 6.3% in 2006.

**Figure 11. Utility systems contractor employment in Colorado, 2006-2015.**

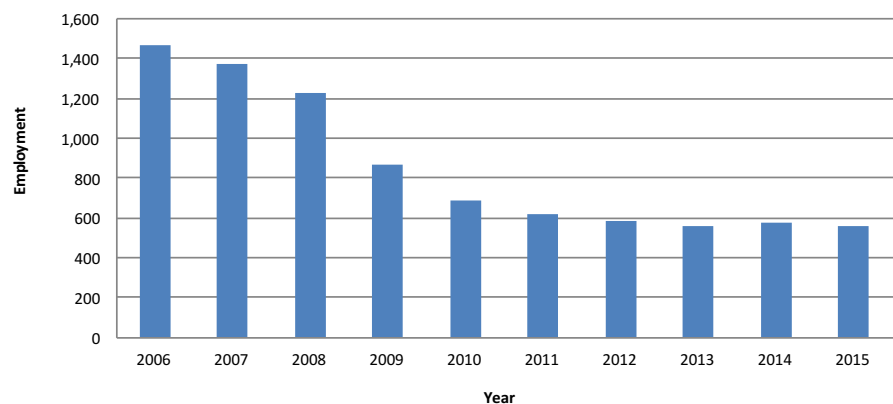
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Land subdivision employment (Figure 12) contributed an average of 0.6% of total construction employment in Colorado from 2006 to 2015. The high for this period was 0.9% in 2006; the low was 0.4% in 2015.

**Figure 12. Land subdivision contractor employment in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

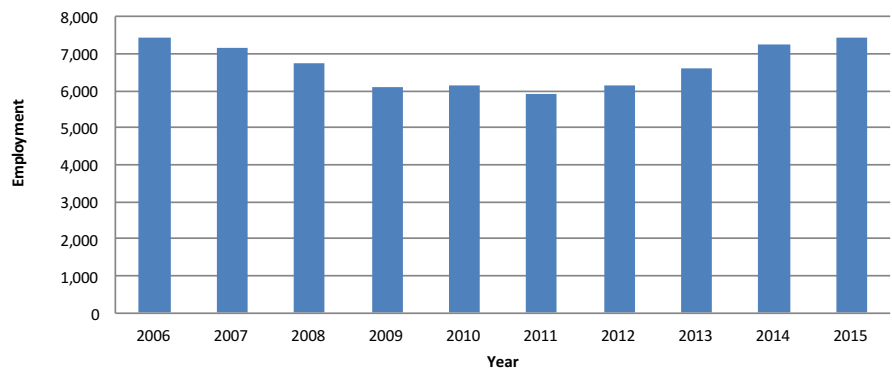


## SECTION 2 Construction Employment and Wages

Highway, street, and bridge employment (Figure 13) contributed an average of 4.9% of total construction employment from 2006 to 2015. The high for this period was 5.3% in 2010, and the low was 4.2% in 2008.

**Figure 13. Highway, street, and bridge construction employment in Colorado, 2006-2015.**

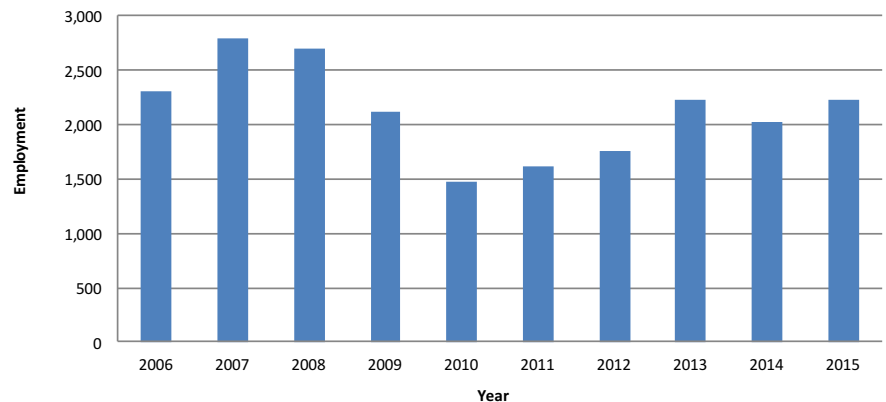
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



From 2006 to 2015, other heavy and civil engineering employment (Figure 14) averaged 1.5% of Colorado's total construction employment. The high for this period was 1.7% in 2013, and the low was 1.3% in 2010.

**Figure 14. Other heavy and civil engineering contractor employment in Colorado, 2006-2015.**

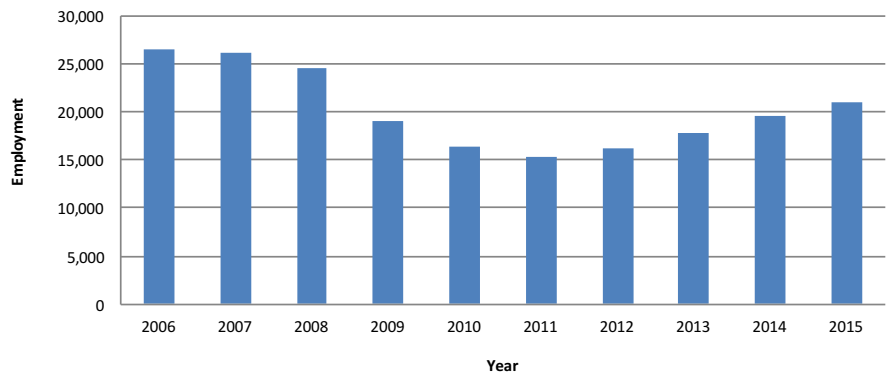
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Foundation, structure, and building exterior employment averaged 14.5% of the state's total construction employment from 2006 to 2015 (Figure 15). The high for this period was 15.7% in 2006, and the low was 13.7% in 2011.

**Figure 15. Foundation, structure, and building exterior contractor employment in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



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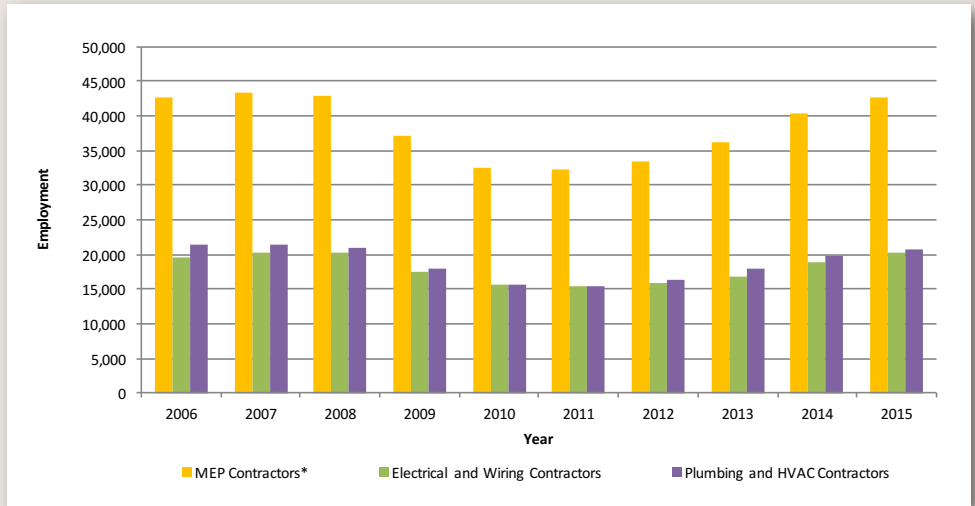
### Construction Employment and Wages

Mechanical, electrical, and plumbing (MEP) contractor employment averaged 27.8% of Colorado's total construction employment from 2006 to 2015 (Figure 16). The high for this period was 29.0% in 2012, and the low was 25.5% in 2006.

**Figure 16. Mechanical, electrical, and plumbing contractor\* employment in Colorado, 2006-2015.**

\* NAICS category is Building Equipment Contractors.

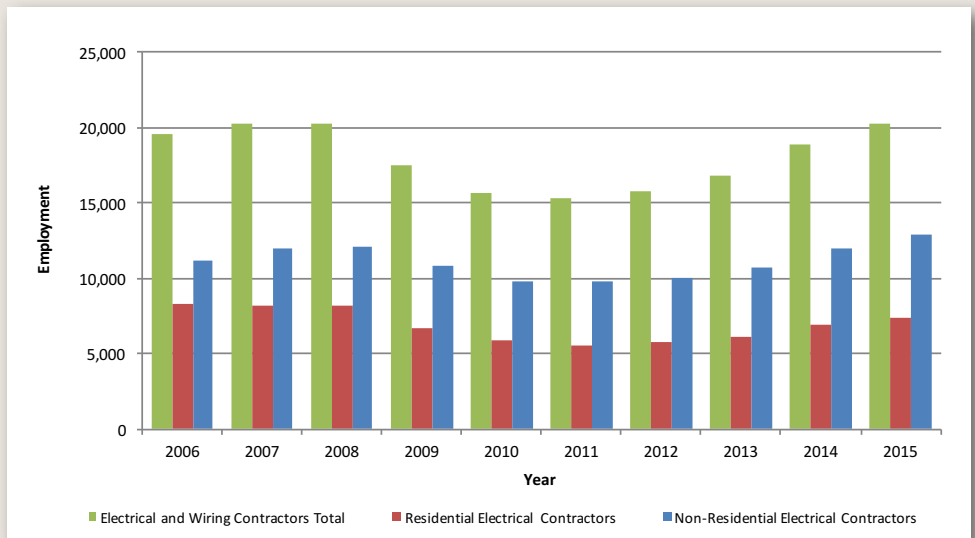
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Electrical and wiring contractor employment averaged 47.0% of total MEP employment from 2006 to 2015, while plumbing and HVAC contractor employment averaged 48.7%. In 2015, the majority (64%) of electrical and wiring contractors were employed in non-residential construction (Figure 17). More than half (52%) of plumbing and HVAC contractors were employed in residential construction (Figure 18).

**Figure 17. Electrical and wiring contractor employment in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



**Figure 18. Plumbing and HVAC contractor employment in Colorado, 2006-2015.**

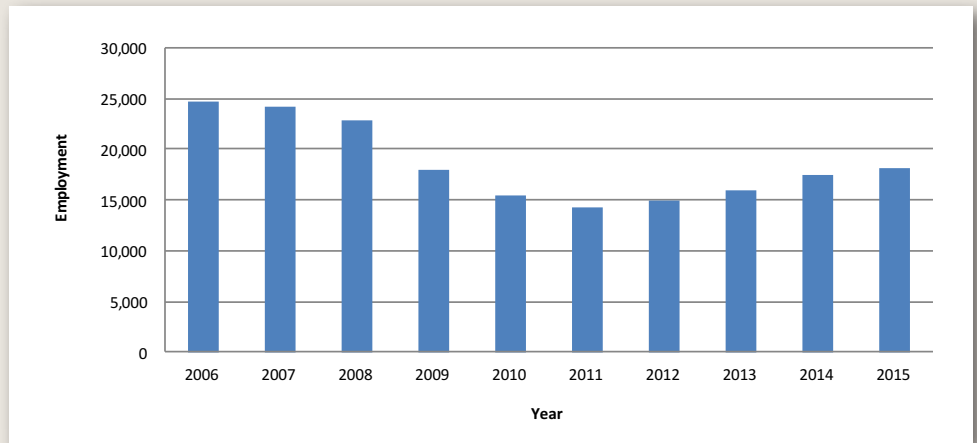
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Building finishing employment (Figure 19) averaged 13.3% of total construction employment in Colorado from 2006 to 2015. The high for this period was 14.7% in 2006, and the low was 12.2% in 2015.

**Figure 19. Building finishing contractor employment in Colorado, 2006-2015.**

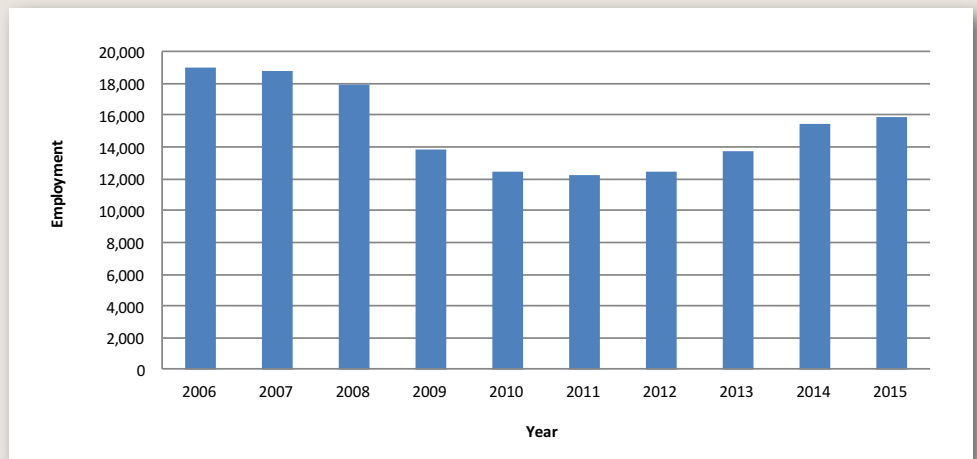
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Other specialty trade employment (Figure 20) averaged 10.9% of Colorado's total construction employment from 2006 to 2015. The high for this period was 11.3% in 2006, and the low was 10.5% in 2009.

**Figure 20. Other specialty trade contractor employment in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



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### Construction Employment and Wages

#### Average Annual Pay

Data for average annual pay were obtained from the U.S. Department of Labor's Bureau of Labor Statistics<sup>6</sup>. During 2015, the average annual pay nationwide was \$52,876 for all private industries. At \$57,009, the average annual construction pay was 7.8% higher than the national average. The average annual pay for MEP contractors increased from \$56,558 in 2014 to \$58,150 in 2015, which was 10.0% higher than the national average for all private industries and 2.0% higher than the national average for construction.

Average annual pay by educational level nationwide is shown in Table 1. The information presented is for 2015. In 2015, high school graduates earned an average of \$35,615, while those with an associate's degree (or some college) earned an average of \$38,943. The national average annual pay for MEP contractors in 2015 was \$58,150, which was 49.3% higher than the average for an associate's degree (or some college) and 63.3% higher than the average pay for high school graduates.

**Table 1. Average earning by educational attainment for workers 18 years old and over, 2015.**

Characteristic <sup>a</sup>	Total	Not a High School Graduate	High School Graduate	Some College or Associate's Degree	Bachelor's Degree	Advanced Degree
Total	\$49,994	\$25,315	\$35,615	\$38,943	\$65,482	\$92,525
Male	\$58,944	\$30,230	\$41,942	\$46,153	\$79,927	\$113,279
Female	\$39,929	\$17,161	\$26,832	\$31,970	\$50,856	\$72,006
White	\$50,981	\$26,268	\$36,948	\$39,835	\$66,733	\$92,571
African-American	\$39,394	\$19,783	\$29,211	\$34,652	\$55,506	\$80,980
Asian	\$61,603	\$23,418	\$34,215	\$36,913	\$65,558	\$101,673
Hispanic Origin (of any race)	\$37,083	\$25,698	\$31,647	\$35,780	\$58,152	\$82,497

<sup>a</sup> Race characteristics are based on the definitions and categories used by the US Census Bureau. White refers to people who reported White and did not report any other race category. Additionally, African American refers to respondents who only reported Black and Asian refers to respondents who only reported Asian.

Source: US Census Bureau, Current Population Survey: Annual Social and Economic (ASEC) Supplement. Retrieved December, 2016.

The 2015 average annual income for all private industries in Colorado was \$54,518, which was 3.1% higher than the national average. The average annual pay of construction employees in Colorado was \$55,347 in 2015, slightly more (1.5%) than the state average for all private industries. Mechanical, electrical, and plumbing (MEP) contractors earned \$55,631, just above both the average annual pay for all private industries and construction industries.

A recent survey conducted at Colorado State University determined the average starting salary for construction management students graduating in May 2016 was \$61,000.

<sup>6</sup> U.S. Department of Labor, Bureau of Labor Statistics. Quarterly Census of Employment and Wages. Retrieved December, 2016, from <http://data.bls.gov/>

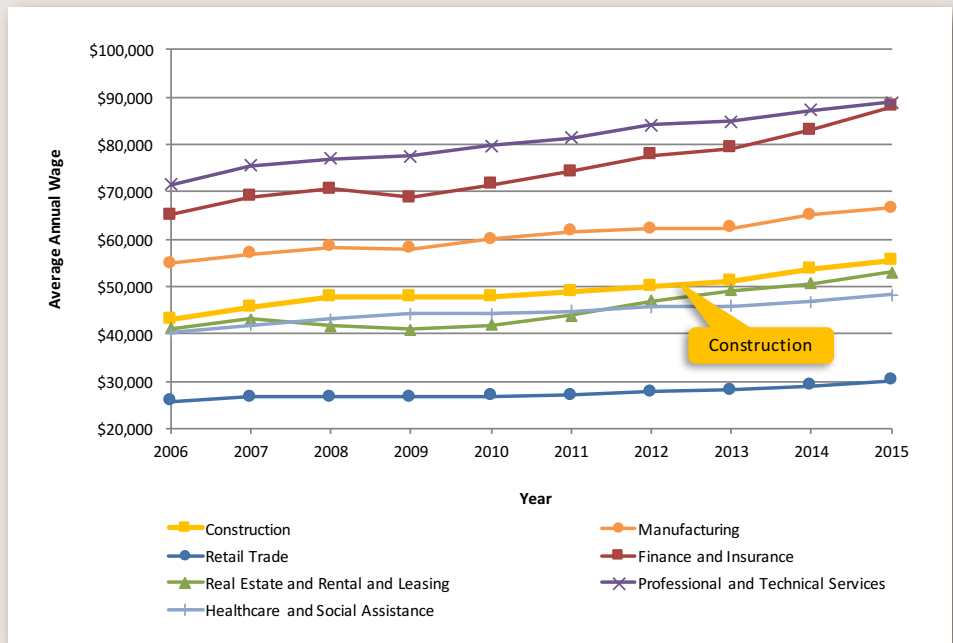


## SECTION 2 Construction Employment and Wages

When compared to average annual pay of selected industries in Colorado, construction consistently ranks fourth (Figure 21). In 2015, professional and technical services paid an average yearly salary of \$88,868, the highest among the comparison industries. The lowest was retail at \$30,070. The largest increase in average annual pay was in finance and insurance, which rose 35.2% between 2006 and 2015. Retail had the lowest increase with 16.3%. During this same time, the average annual pay in construction increased 28.1%.

**Figure 21. Average annual pay for selected industries in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



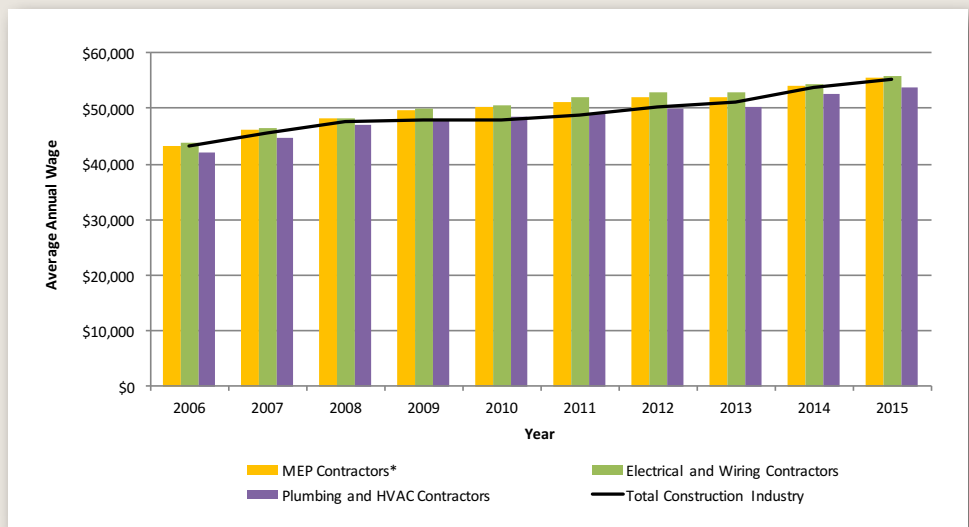
The average annual pay for MEP contractors was \$55,631 in 2015, a 28.3% increase from \$43,369 in 2006 (Figure 22). The average annual pay for electrical and wiring contractors was \$55,949 in 2015, an increase of 27.9% from \$43,753 in 2006. Residential electrical and wiring contractors made an average annual pay of \$48,300 in 2015, while the average annual pay for non-residential electrical and wiring contractors was \$60,340.

Plumbing and HVAC contractors made an average of \$53,861 in 2015, which was a 28.2% increase from \$42,002 in 2006. Residential plumbing and HVAC contractors made an average of \$47,035 in 2015, while non-residential plumbing and HVAC contractors averaged \$61,318.

**Figure 22. Average annual wage for mechanical, electrical, and plumbing\* contractors in Colorado, 2006-2015.**

\*NAICS category is Building Equipment Contractors.

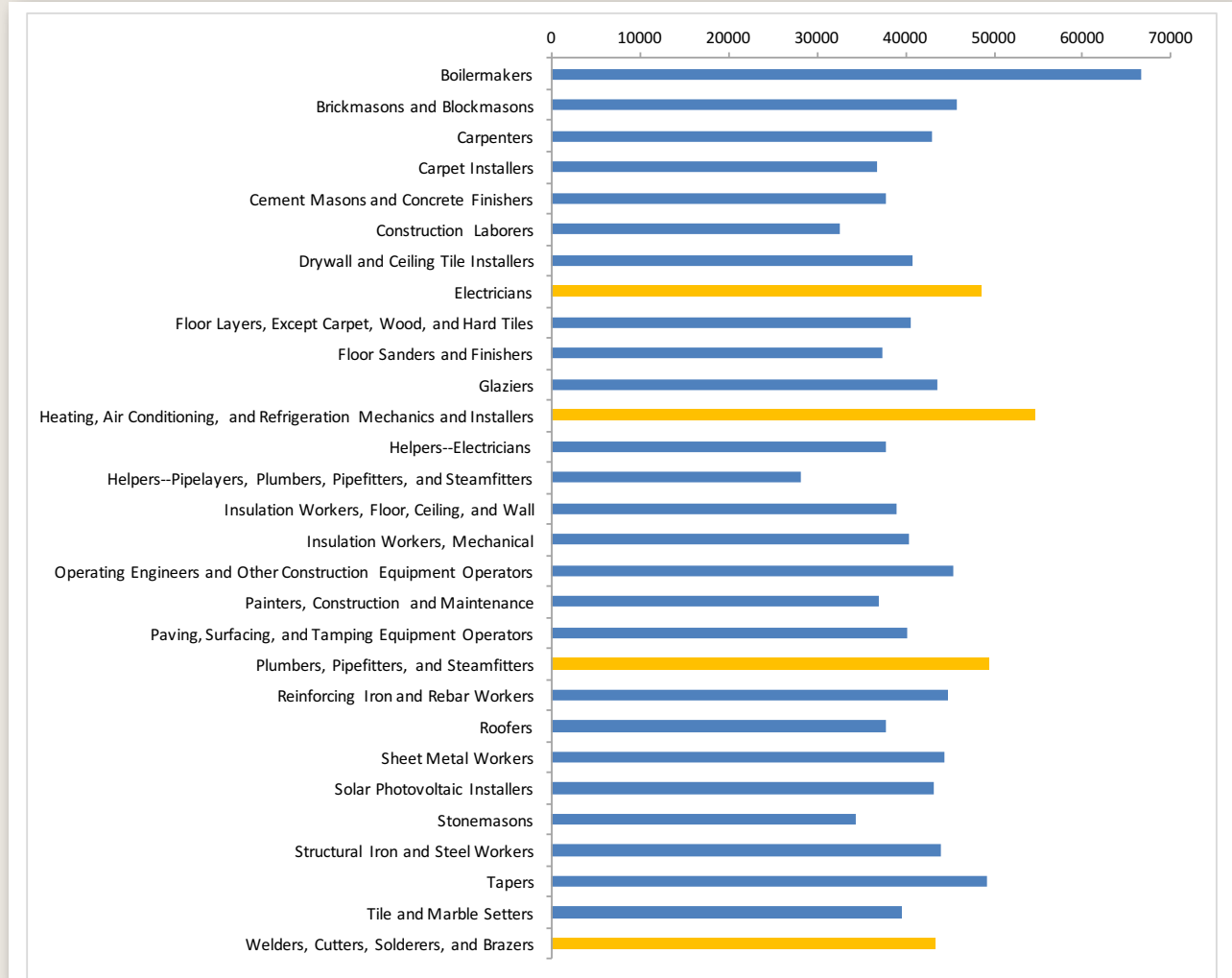
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



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### Construction Employment and Wages

Average annual wage data for construction craft occupations in Colorado were obtained from the U.S. Department of Labor's Bureau of Labor Statistics and are presented in Figure 23. The five occupation categories with the highest annual pay in 2015 were: boilermakers (\$66,598); heating, air conditioning, and refrigeration (\$54,557); plumbers, pipefitters, and steamfitter (\$49,440); tapers (\$49,113); and electricians (\$48,555). Heating, air conditioning, and refrigeration wages ranged from \$38,797 to \$62,437 for entry level and experienced craftworks, respectively. Plumbers, pipefitters, and steamfitter wages ranged from \$33,391 for entry level to \$57,464 for experienced. Electricians wages ranged from \$30,942 for entry level to \$57,361 for experienced.



**Figure 23. Average annual pay for construction crafts in Colorado, 2015.**

NOTE: Occupational categories classified per the Standard Occupational Classification (SOC) system

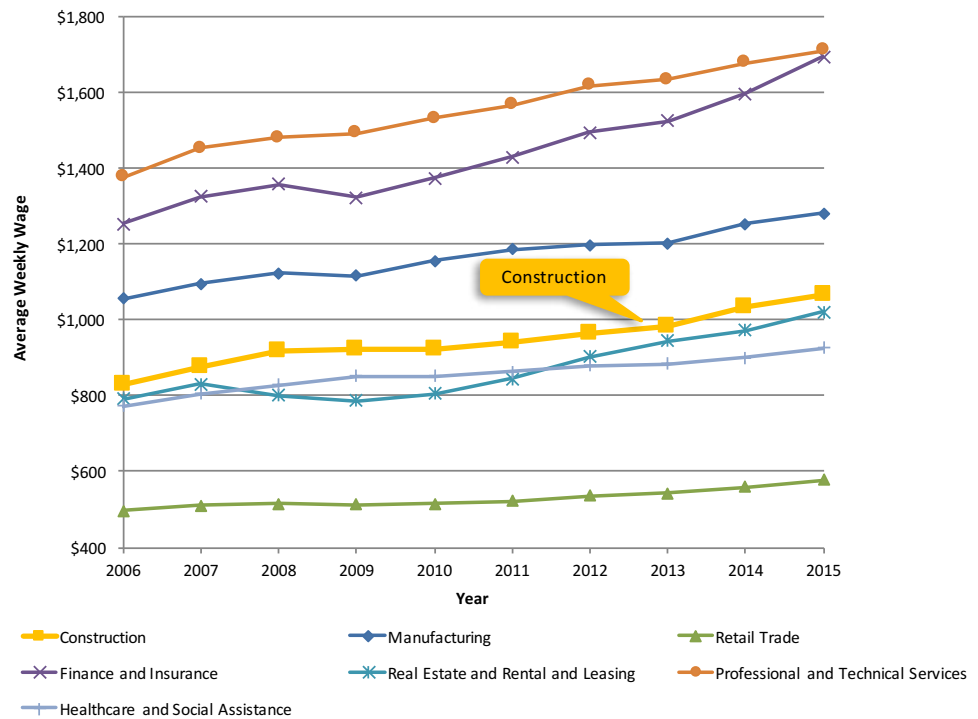
Source: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics Program. Retrieved November, 2016.

### Average Weekly Wage

Data for average weekly wages for selected Colorado industries, including construction, were obtained from the U.S. Department of Labor's Bureau of Labor Statistics and are presented in Figure 24. (Detailed tables are available in Appendix D). In 2015, professional and technical services had the highest average weekly wage (\$1,709) of the six Colorado industries being compared in this study. From 2006 to 2015, finance and insurance weekly wages increased the most (35.2%), and retail weekly wages increased the least (16.3%). Average construction weekly wages were \$1,064, ranked fourth among the comparison industries in 2015. Average weekly wage for construction increased 28.0% between 2006 and 2015. Nationally, the average weekly wage for all industries increased 24.6% from \$816 in 2006 to \$1,017 in 2015. National averages for construction weekly wages increased 28.0% from \$856 in 2006 to \$1,096 in 2015.

**Figure 24. Average weekly wage for selected Colorado industries, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



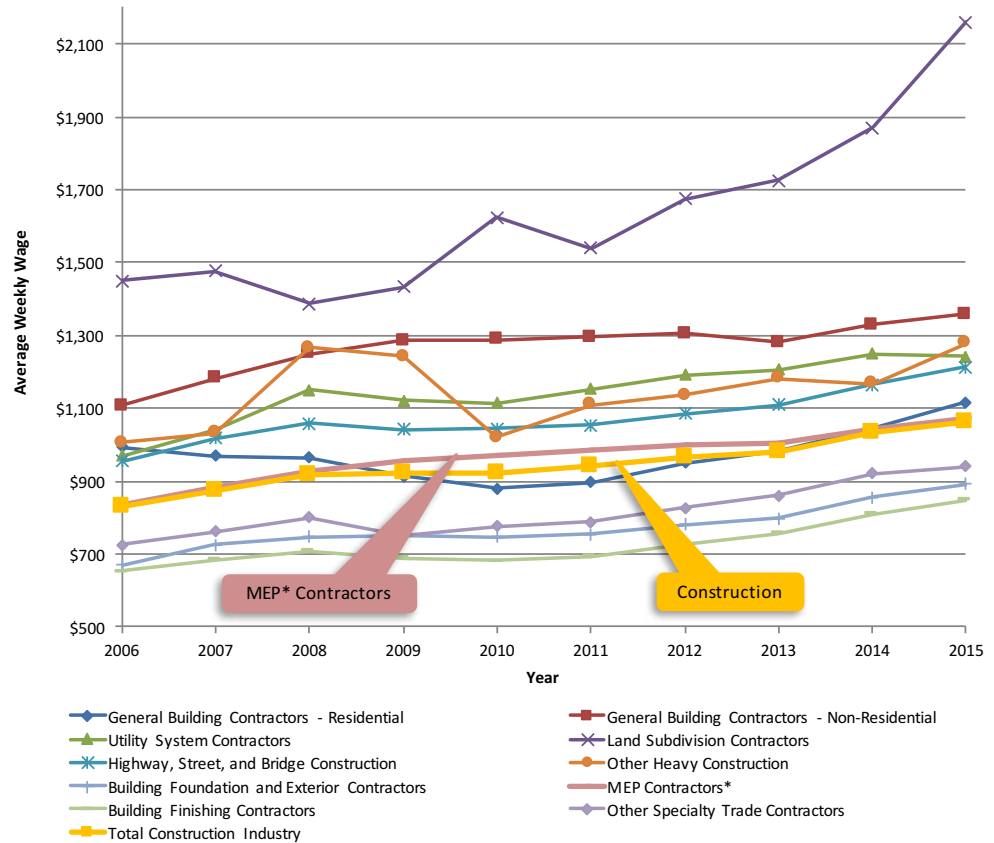
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Average weekly wages for construction subsectors in Colorado from 2006-2015 are presented in Figure 25. In 2015, the construction subsector with the highest weekly wage was land subdivision contractors at \$2,160, a 49.1% increase from 2006; this was the highest increase among construction subsectors. Building finishing contractors had the lowest average weekly wage at \$848, a 29.9% increase from 2006. Residential contractors had the lowest increase (12.4%), going from \$994 in 2006 to \$1,117 in 2015.

**Figure 25. Average weekly wage for construction subsectors in Colorado, 2006-2015.**

\* NAICS category is Building Equipment Contractors.

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

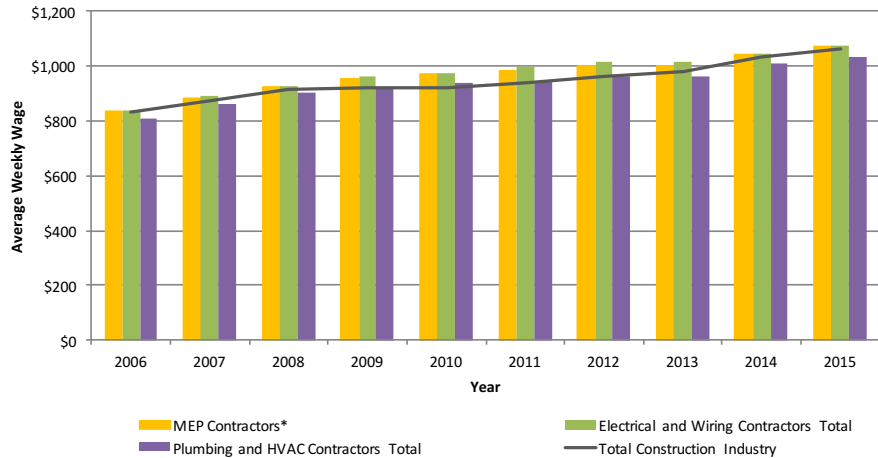


Between 2006 and 2015, the average weekly wage for mechanical, electrical, and plumbing contractors increased 28.3% from \$834 in 2006 to \$1,070 in 2015 (Figure 26). During this same time, electrical and wiring contractor weekly wages increased 27.9% from \$841 in 2006 to \$1,076 in 2015. The weekly wage for plumbing and HVAC contractors increased 28.2% from \$808 in 2006 to \$1,076 in 2015. The average weekly wage for construction overall in Colorado is shown as a black line in Figure 26. For comparison, the national average weekly wages for MEP contractors increased 27.6% from \$876 in 2006 to \$1,118 in 2015.

**Figure 26. Average weekly wage for mechanical, electrical, and plumbing contractors in Colorado, 2006-2015.**

\* NAICS category is Building Equipment Contractors.

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

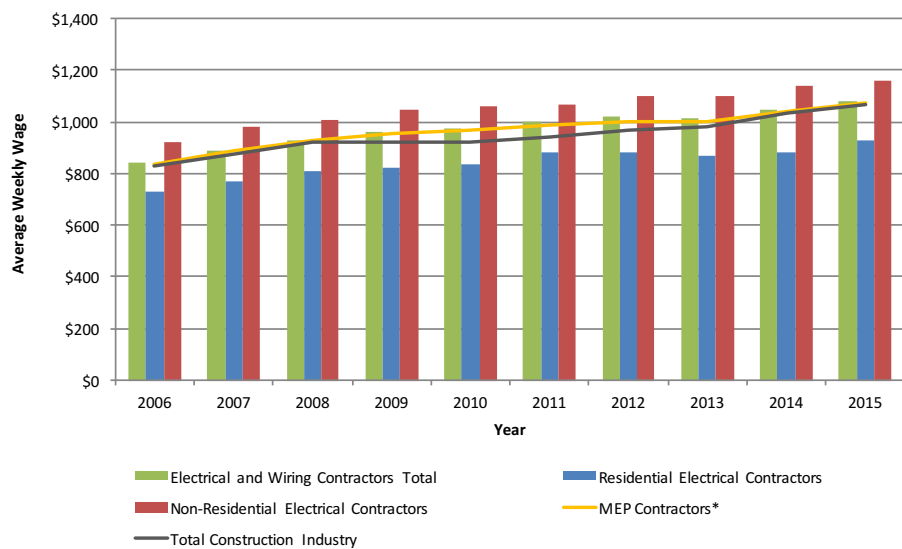


Between 2006 and 2015, the average weekly wage for electrical and wiring contractors in Colorado increased 27.9% from \$841 in 2006 to \$1,076 in 2015. The average for residential electrical and wiring contractors increased 26.9% from \$732 in 2006 to \$929 in 2015. Non-residential weekly wages for electrical and wiring contractors increased 25.7% from \$923 in 2006 to \$1,160 in 2015. While the average weekly wage for electrical and wiring contractors has tended over time to follow the construction average, or to be slightly higher, the average weekly wages for residential electrical contractors has consistently been below this average. The weekly wage for non-residential electrical contractors has consistently been above this average (Figure 27).

**Figure 27. Average weekly wage for electrical and wiring contractors in Colorado, 2006-2015.**

\* NAICS category is Building Equipment Contractors

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Between 2006 and 2015, the average weekly wage for plumbing and HVAC contractors in Colorado increased 28.2% from \$808 in 2006 to \$1,036 in 2015. The average for residential plumbing and HVAC contractors increased 26.9% from \$713 in 2006 to \$905 in 2015. Non-residential weekly wages for plumbing and HVAC contractors increased 26.1% from \$935 in 2006 to \$1,179 in 2015.

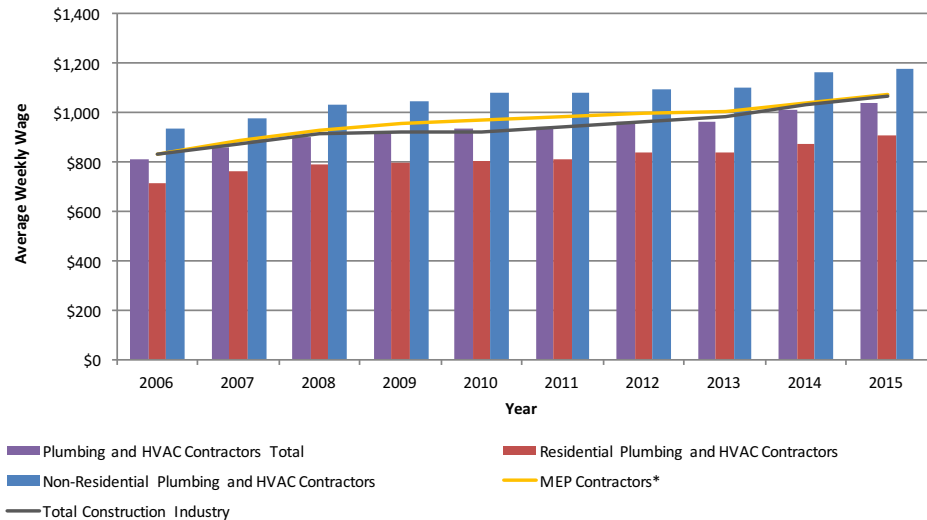
## SECTION 2 Construction Employment and Wages

While the average weekly wage for plumbing and HVAC contractors has tended over time to follow the construction average, it has consistently been slightly below the average for MEP contractors. Additionally, the average weekly wages for residential plumbing and HVAC contractors has consistently been below both the average weekly wage for MEP contractors and construction overall. The weekly wage for non-residential plumbing and HVAC contractors has consistently been above both the construction overall and the MEP contractors average weekly wage (Figure 28).

**Figure 28. Average weekly wage for plumbing and HVAC contractors in Colorado, 2006-2015.**

\* NAICS category is Building Equipment Contractors

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

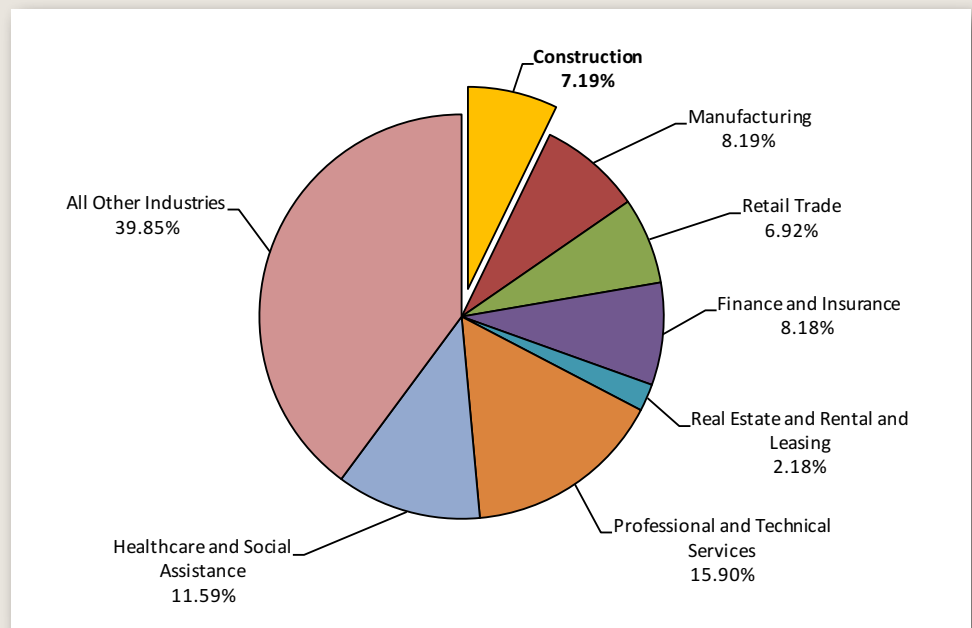


### Construction Payroll

In 2015, construction payrolls in Colorado totaled \$8.225 billion, or 7.2% of total payroll for the state (Figure 29). Among the industries used for comparison purposes in this study, the percentage of total payrolls for all Colorado industries ranged from a low of 2.2% for real estate to a high of 15.9% for professional and technical services. (Detailed payroll information is available in Appendix E.)

**Figure 29. Total payroll in Colorado by industry sector, 2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



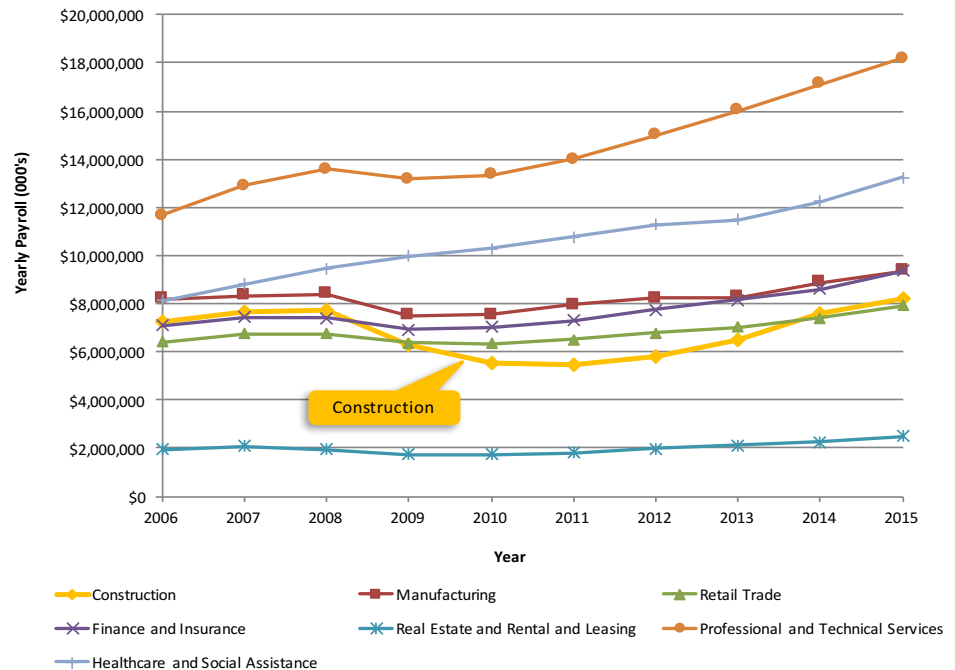


## SECTION 2 Construction Employment and Wages

Yearly payrolls for selected industries in Colorado from 2006 to 2015 are shown in Figure 30. During this time, healthcare and social assistance payroll increased 62.9%, the largest increase of the selected industries. Professional and technical services increased 55.9%, finance and insurance increased 31.8%, real estate increased 27.2%, retail increased 23.2%, and manufacturing increased 14.4%. In comparison, construction increased 13.5%. Total state payroll increased 38.5% between 2006 and 2015.

**Figure 30. Total payroll for selected industries in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Total payrolls for construction subsectors from 2006 to 2015 are shown in Figure 31. During this time, the only construction subsectors that decreased in total payroll were residential general building contractors, land subdivision contractors, and building finishing contractors. The sector with the largest decrease was land subdivision contractors, which had a 43.7% reduction in total payroll. Total payroll for all other construction subsectors increased between 2006 and 2015. Utility system contractors had the largest increase (52.4%). Mechanical, electrical, and plumbing (MEP) contractors increased 28.3%.

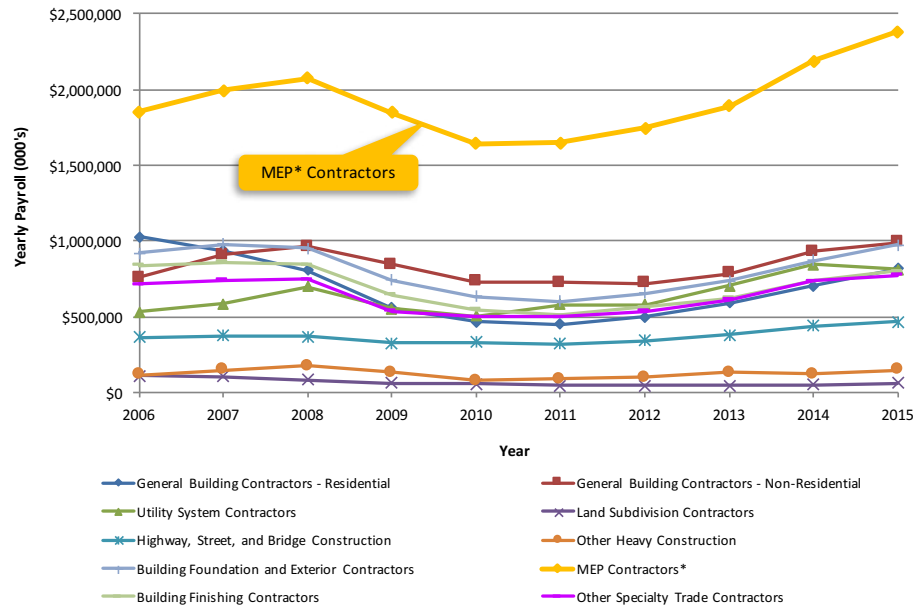


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**Figure 31. Construction payroll by industry subsector, 2006-2015**

\* NAICS category is Building Equipment Contractors

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

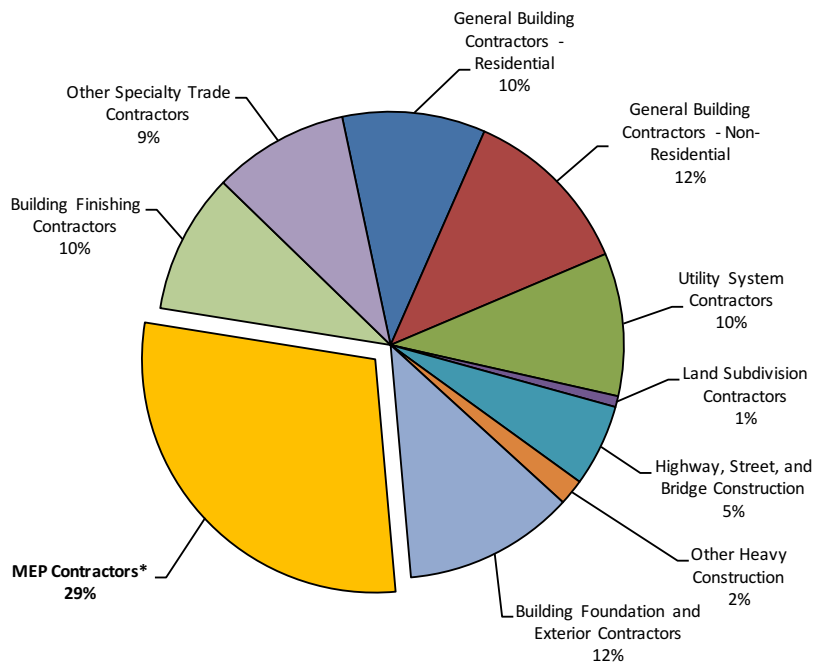


Within the construction industry in 2015, the MEP subsector had the largest total payroll of \$2.379 billion, which accounted for 28.9% of total construction payroll (Figure 32). Total payroll for MEP comprised 2.1% of the total payroll for all industries in Colorado in 2015. Between 2006 and 2015, the payroll for mechanical, electrical, and plumbing contractors has averaged 28.5% of total construction payroll and 2.1% of total payroll for all private Colorado industries.

**Figure 32. Construction payroll by industry subsector, 2015.**

\* NAICS category is Building Equipment Contractors

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

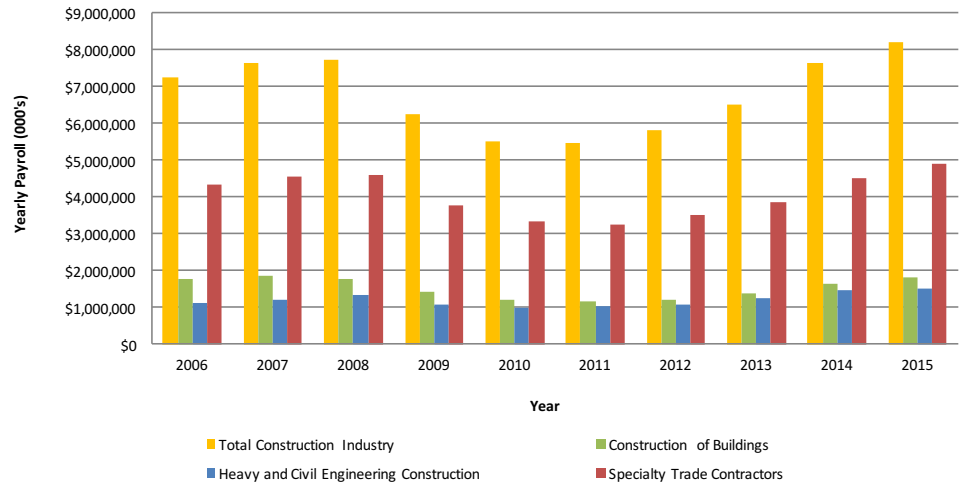


The following charts show the yearly average payroll for each construction industry subsector between 2006 and 2015. For each subsector, the high and low percentage of total construction payroll is also provided in text form. This data does not include government employment or wages. (Detailed information on construction payroll in Colorado is provided in Appendix E.) The impact of government employment and wages is presented in a separate section of this report on page 34.

Total construction payroll from 2006 to 2015 (Figure 33) averaged 7.3% of total payroll for all Colorado industries. The high for this period was 8.8% in 2006, the low was 6.0% in 2012. Over the last 10 years, specialty trade contractor has averaged 59.9% of total construction payroll in Colorado while building construction payroll averaged 22.3% and heavy and civil engineering construction averaged 17.9%.

**Figure 33. Total construction payroll in Colorado, 2006-2015.**

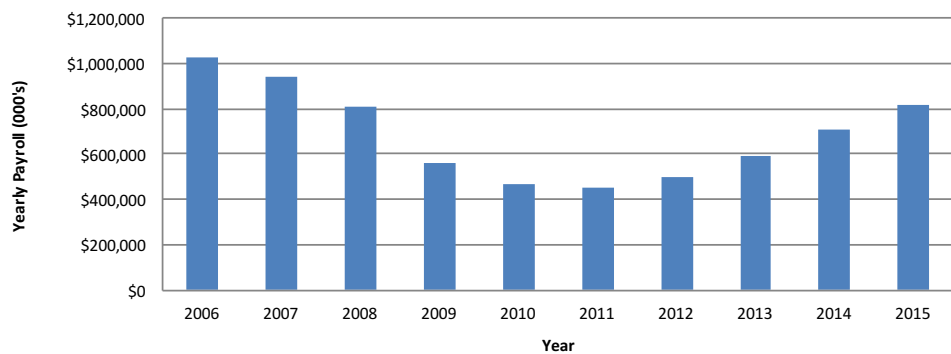
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Residential building payroll from 2006 to 2015 (Figure 34) averaged 9.9% of total construction payroll. The high for this period was 14.2% in 2006, the low was 8.2% in 2011.

**Figure 34. Residential building contractor payroll in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



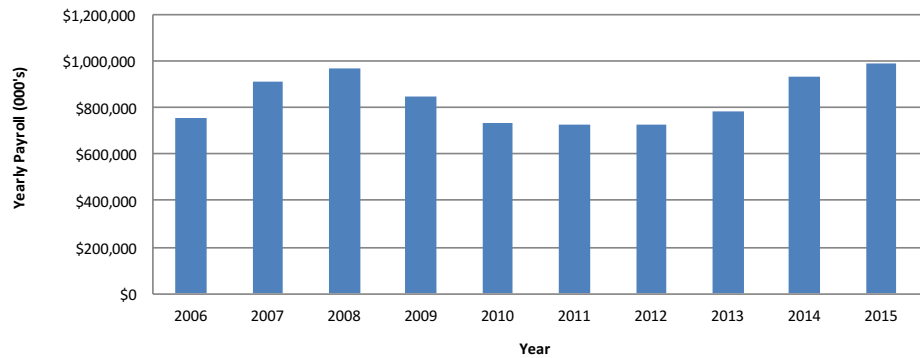
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### Construction Employment and Wages

Non-residential building payroll from 2006 to 2015 (Figure 35) averaged 12.4% of total construction payroll. The high for this period was 13.5% in 2009, the low was 10.5% in 2006.

**Figure 35. Non-residential building contractor payroll in Colorado, 2006-2015.**

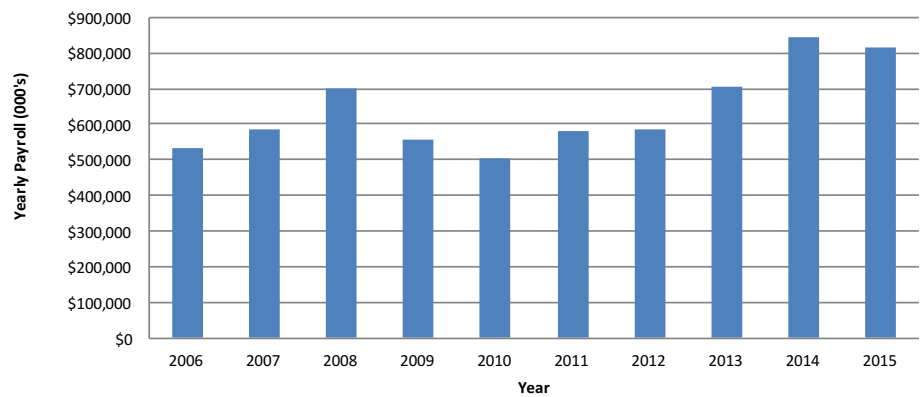
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Utility systems payroll from 2006 to 2015 (Figure 36) averaged 9.5% of total construction payroll. The high for this period was 11.1% in 2014, the low was 7.4% in 2006.

**Figure 36. Utility systems contractor payroll in Colorado, 2006-2015.**

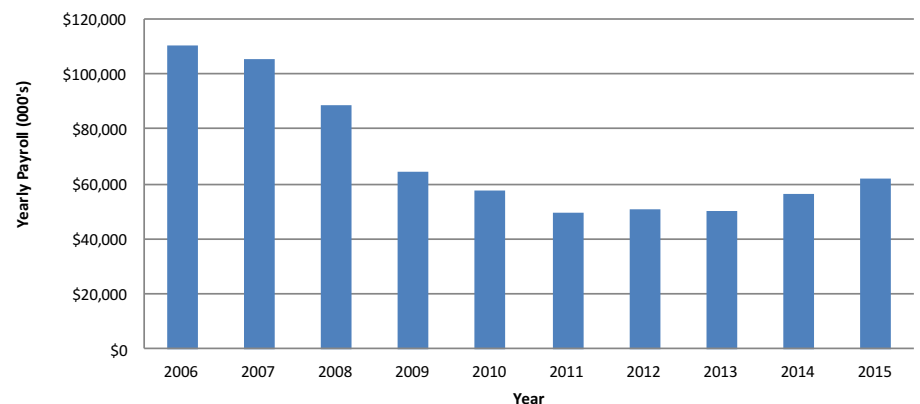
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



From 2006 to 2015, land subdivision payroll averaged 1.0% of total construction payroll (Figure 37). The high for this period was 1.5% in 2006, the low was 0.7% in 2014.

**Figure 37. Land subdivision contractor payroll in Colorado, 2006-2015.**

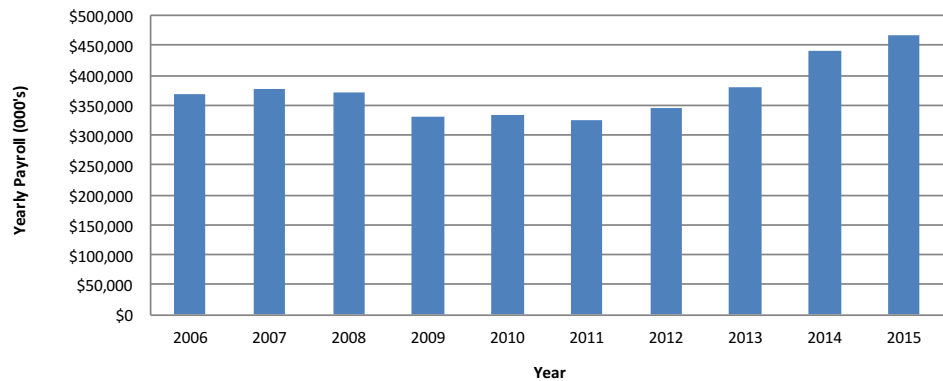
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Highway, street, and bridge payroll from 2006 to 2015 (Figure 38) averaged 5.5% of total construction payroll. The high for this period was 6.1% in 2010, the low was 4.8% in 2008.

**Figure 38. Highway, street, and bridge construction payroll in Colorado, 2006-2015.**

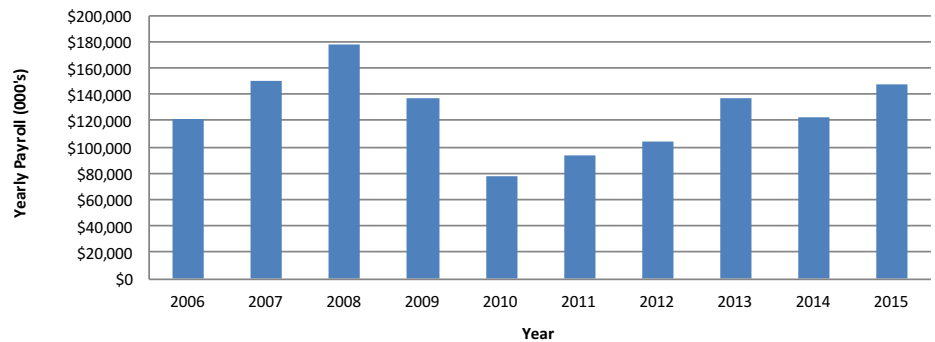
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



Other heavy and civil payroll from 2006 to 2015 (Figure 39), averaged 1.9% of total construction payroll. The high for this period was 2.3% in 2008, the low was 1.4% in 2010.

**Figure 39. Other heavy and civil engineering contractor payroll in Colorado, 2006-2015.**

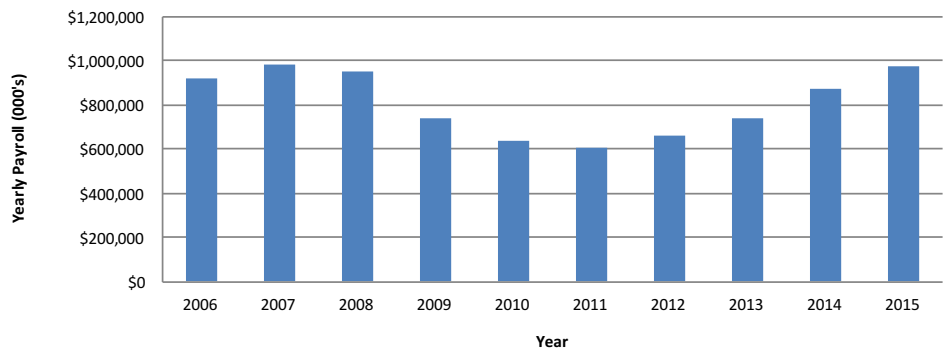
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



From 2006 to 2015, foundation, structure, and building exterior payroll (Figure 40) averaged 11.8% of total construction payroll. The high for this period was 12.8% in 2007, the low was 11.0% in 2011.

**Figure 40. Foundation, structure, and building exterior contractor payroll in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



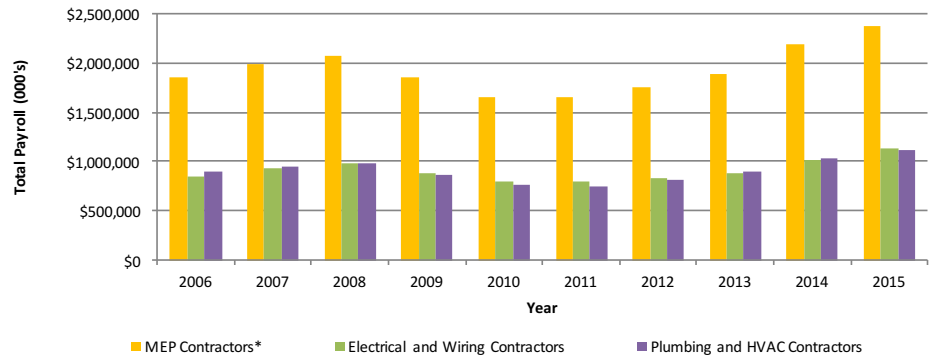
## SECTION 2 Construction Employment and Wages

Mechanical, electrical, and plumbing (MEP) payroll averaged 28.5% of total construction payroll from 2006 to 2015 (Figure 41). The high for this period was 30.0% in 2012, and the low was 25.6% in 2006. During this period, electrical and wiring subsector payroll averaged 47.4% and plumbing and HVAC subsector payroll averaged 47.1% of total MEP contractor payroll. Total payroll for electrical and wiring was \$1.130 billion in 2015, 68.5% of which was non-residential and 31.5% was residential (Figure 42). Total payroll for plumbing and HVAC was \$1.113 billion in 2015, of which 45.6% was residential and 54.4% was non-residential (Figure 43).

**Figure 41. Mechanical, electrical, and plumbing contractor payroll in Colorado, 2006-2015.**

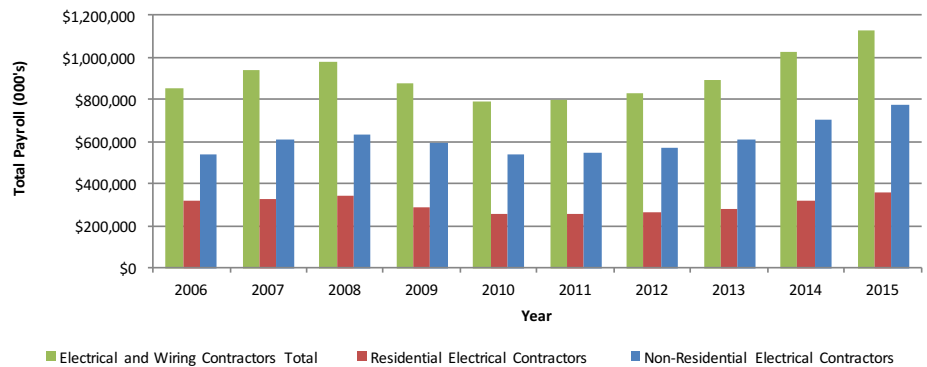
\* NAICS category is Building Equipment Contractors

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



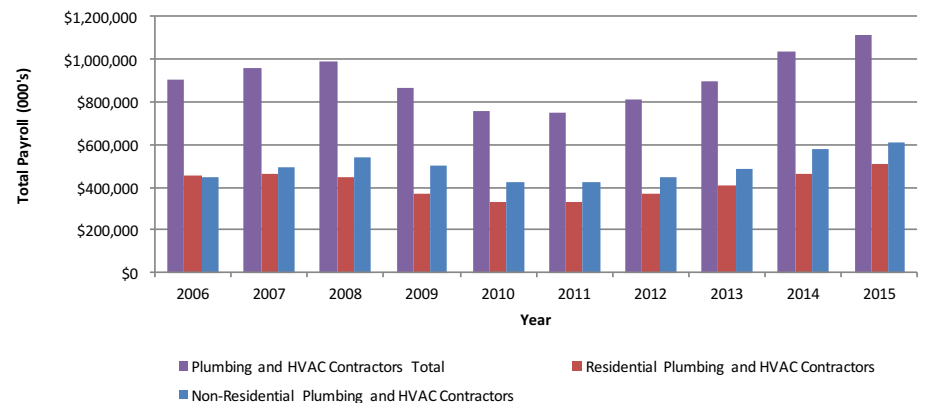
**Figure 42. Electrical and wiring contractor payroll, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



**Figure 43. Plumbing and HVAC contractor payroll, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

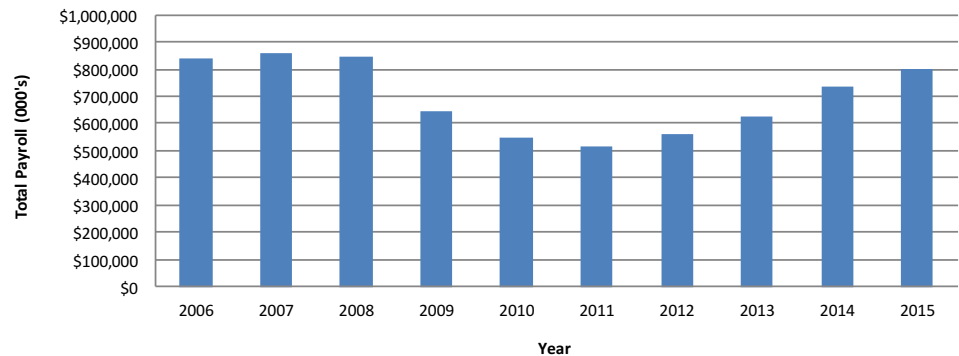




Building finishing payroll (Figure 44) averaged 10.2% of total construction payroll from 2006 to 2015. The high for this period was 11.6% in 2006, the low was 9.4% in 2011.

**Figure 44. Building finishing contractor payroll in Colorado, 2006-2015.**

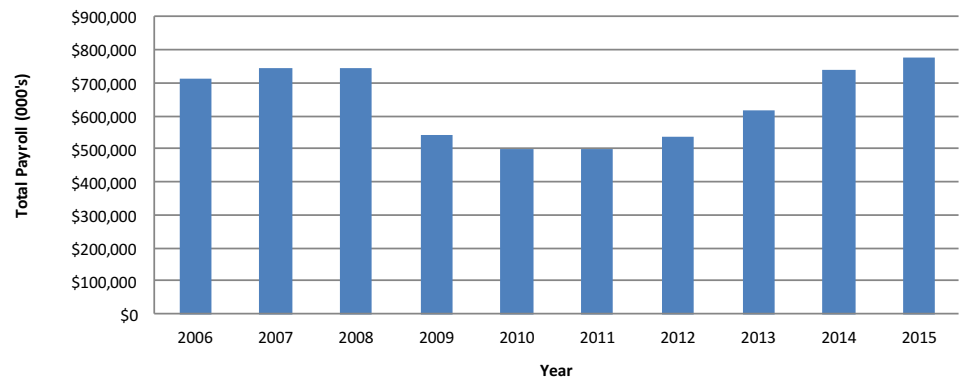
Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



From 2006 to 2015, other specialty trade payroll (Figure 45) averaged 9.4% of total construction payroll. The high for this period was 9.9% in 2006, the low was 8.6% in 2009.

**Figure 45. Other specialty trade contractor payroll in Colorado, 2006-2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



## SECTION 2 Construction Employment and Wages

### State and Local Government Employment and Wages

The most current data on state and local government construction employment and wages from the Quarterly Census of Employment Wages is for 2015; state data was not available for 2010 and local data was not available for 2009, 2010, and 2013 (Table 3). In 2015, the state government employed 3,039 individuals in construction, bringing total construction employment in Colorado to 151,760 for 2015. All of these jobs (3,039) were in the heavy and civil engineering construction sector. None were reported in either the building construction or specialty trades sectors. The average weekly wage for state employees in 2015 was \$1,175 and the annual pay for state employees was \$61,095 in 2015, both of which were 10.4% higher than the average weekly and annual pay for the private construction industry. The weighted average weekly wage for private and government employment was \$1,066 and the weighted average annual pay for private and government employment was \$55,458.

**Table 2. Private, state and local government construction employment and wages in Colorado, 2006–2015.**

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>Employees</b>										
Private	167,647	167,717	161,815	131,003	115,110	112,242	115,754	127,604	142,134	148,604
State	3,126	3,130	3,202	3,163	ND	3,072	3,068	3,075	3,056	3,039
Local	356	310	178	ND	ND	136	138	ND	125	117
Total Employment	171,129	171,157	165,195	134,166	115,110	115,450	118,960	130,679	145,315	151,760
<b>Average Annual Pay</b>										
Private	\$43,219	\$45,549	\$47,736	\$47,824	\$47,827	\$48,865	\$50,151	\$51,052	\$53,668	\$55,347
State	\$52,588	\$49,615	\$56,359	\$57,817	ND	\$56,375	\$56,295	\$58,181	\$60,175	\$61,095
Local	\$43,529	\$44,541	\$43,217	ND	ND	\$39,921	\$46,706	ND	\$56,492	\$50,465
<b>Average Weekly Wage</b>										
Private	\$831	\$876	\$918	\$920	\$920	\$940	\$964	\$982	\$1,032	\$1,064
State	\$1,011	\$954	\$1,084	\$1,112	ND	\$1,084	\$1,083	\$1,119	\$1,157	\$1,175
Local	\$837	\$857	\$831	ND	ND	\$768	\$898	ND	\$1,086	\$970
<b>Total Wages (in 000's)</b>										
Private	\$7,245,580	\$7,639,275	\$7,724,390	\$6,265,031	\$5,505,346	\$5,484,646	\$5,805,216	\$6,514,415	\$7,628,035	\$8,224,713
State	\$164,404	\$155,302	\$180,484	\$182,889	ND	\$173,195	\$172,723	\$178,930	\$183,889	\$185,689
Local	\$15,485	\$13,823	\$7,707	ND	ND	\$5,436	\$6,426	ND	\$7,061	\$5,896
<b>Weighted Average (Avg) Annual Pay and Weekly Wage</b>										
Avg Annual Pay	\$43,391	\$45,622	\$47,898	\$48,060	\$47,827	\$49,054	\$50,305	\$51,220	\$53,807	\$55,458
Avg Weekly Wage	\$834	\$877	\$921	\$925	\$920	\$944	\$967	\$985	\$1,035	\$1,066

ND: Data not available.

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

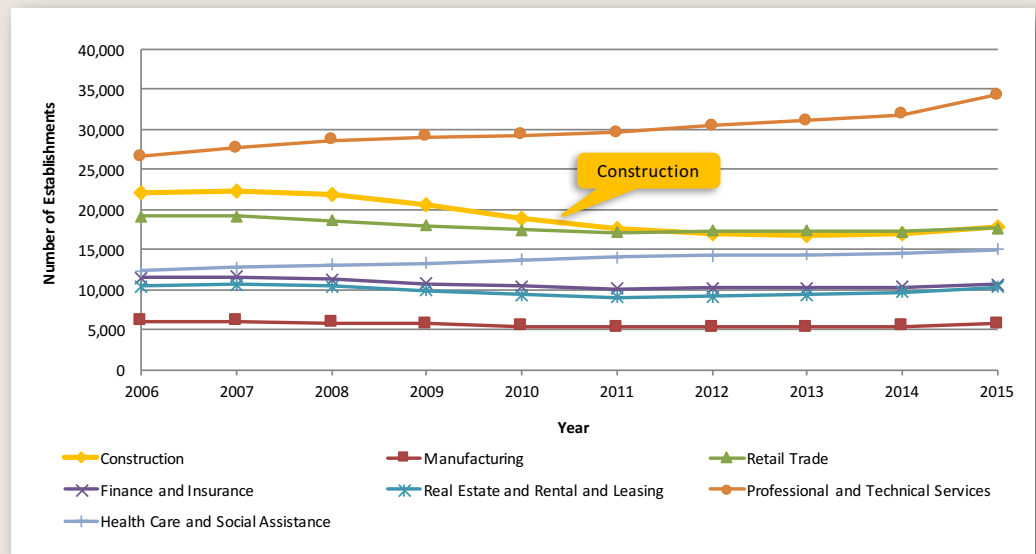
### Union Affiliation

In 2015, 8.4% of all wage and salary workers in Colorado were members of a union, while 9.3% of workers were represented by a union according to a news release on union membership by the U.S. Department of Labor's Bureau of Labor Statistics (January 28, 2016). Within the construction industry nationally, 13.2% of construction workers were members of a union and 14.0% were represented by a union in 2015 (this includes both union members and non-union members whose jobs are covered by a union or employee association contract). For comparison, in 2014, 13.9% of construction workers were union members, while 14.7% were represented by unions.

Construction industry establishments in Colorado decreased 25.3% from 22,327 in 2007 to 16,669 in 2013, an average decrease of 4.8% per year. During this same time, the residential sector had an average decrease of 6.1% per year. When data for the residential building sector is removed, the change in construction establishments only changes slightly to a decrease of 23.6% between 2007 and 2013. Similar trends are reflected in some of the comparison industries, although construction had the largest decline. The change in number of establishments for the comparison industries from 2007 to 2013 ranged from a decrease of 9.3% for retail trade to an increase of 13.1% for healthcare and social assistance (Figure 46). Manufacturing, retail trade, finance and insurance, and real estate all decreased in the number of establishments between 2007 and 2013. Of these, real estate decreased the most going from 10,641 establishments in 2007 down to 9,288 establishments in 2013, a decrease of 12.7%. Establishments in the construction and comparison industries all increased between 2013 and 2015; the increase ranged from 1.6% for retail trade to 11.2% for real estate. Construction industry establishments increased 6.6% during this time. (See Appendix A for detailed data tables on the number of construction establishments in Colorado from 2006 to 2015.)

**Figure 46. Trends in establishments per industry sector in Colorado, 2006 to 2015.**

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.



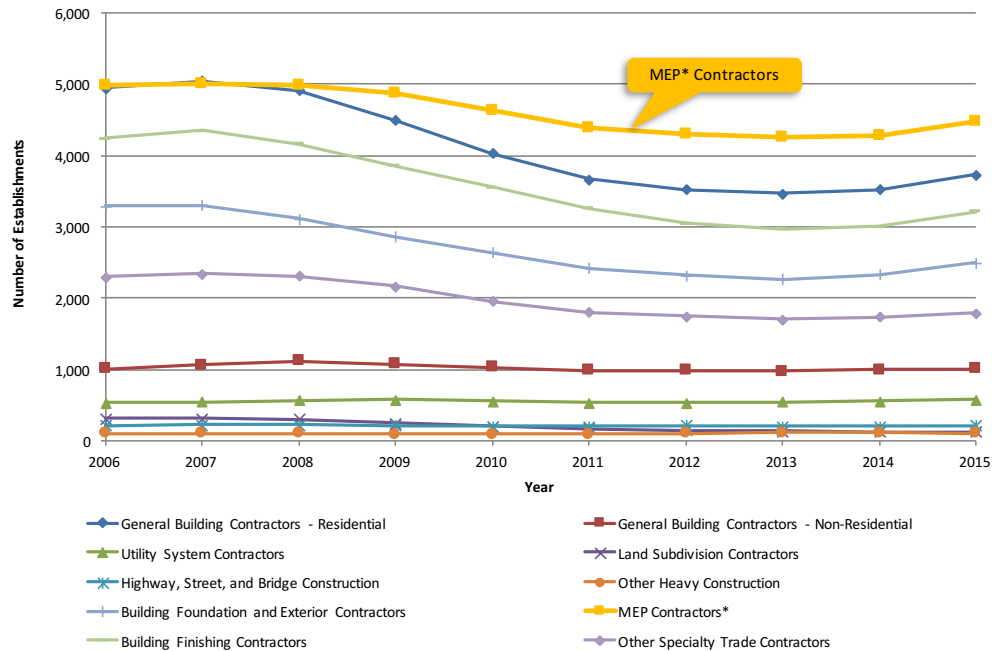
All construction industry subsectors experienced negative growth trends between 2007 and 2013 with the exception of utility system contractors and other heavy construction (Figure 47). The largest declines between 2007 and 2013 occurred in land subdivision contractors (-57.1%), building finishing contractors (-31.7%), residential building construction (-31.3%), and building foundation and exterior contractors (-31.2%). Between 2013 and 2015, all construction industry subsectors increased the number of establishments with the exception of land subdivision contractors (-6.6%) and other heavy construction (-3.4%). Building foundation and exterior contractors had the largest increase (9.9%) between 2013 and 2015, followed by building finishing contractors (8.2%), and residential building construction (7.5%).

## SECTION 3 Industry Education and Employment Opportunities

**Figure 47. Number of establishments per Colorado construction industry subsector, 2006 to 2015.**

\*NAICS category is Building Equipment Contractors.

Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

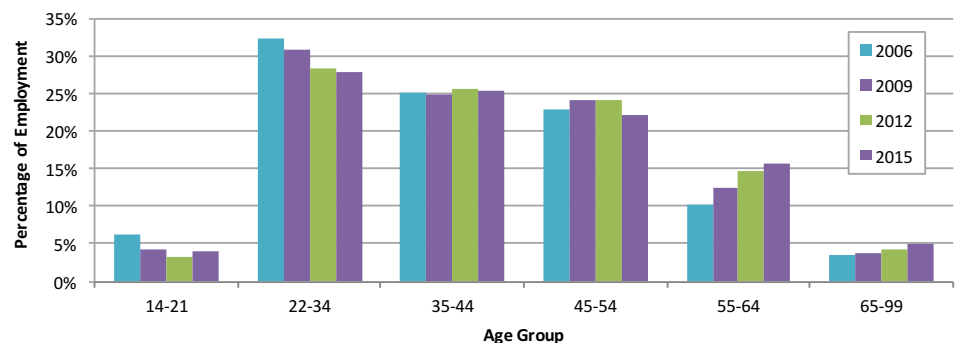


### Age of the Workforce

Data from the Colorado Department of Labor and Employment's Labor Market Information website indicates Colorado's construction workforce is continuing to age (Figure 48). In 2006, 13.7% of construction workers employed in private industry were 55+ years old. This percentage increased to 16.1% in 2009, 18.8% in 2012, and 20.7% in 2015. In contrast, the percentage of workers who were 34 years old or younger was 38.5% in 2006. This percentage decreased to 35.0% in 2009, 31.5% in 2012. This percentage was 31.9% in 2015.

**Figure 48. Age distribution for the construction industry in Colorado, 2006-2015.**

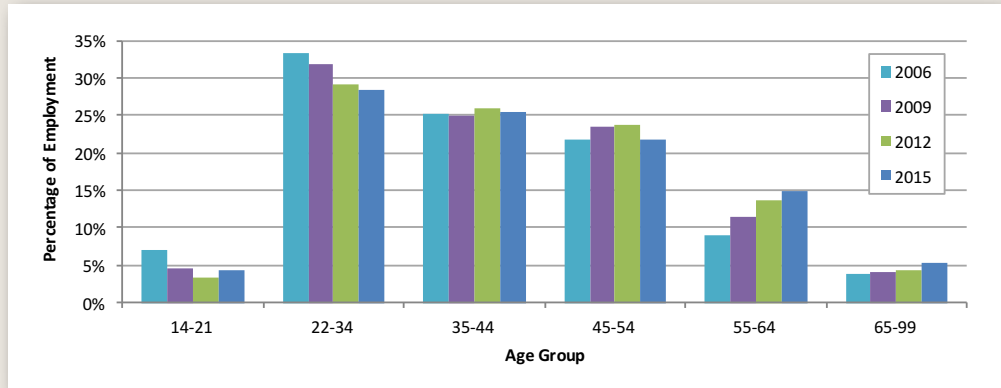
Source: Colorado Department of Labor and Employment's Labor Market Information website. Retrieved October, 2016.



The ages of Colorado's specialty trade contractors follow a similar trend (Figure 49). Workers 55 and older comprised 13.0% of all specialty trade workers in private industry in 2006. This percentage increased to 20.2% in 2015. In contrast, workers 34 years old or younger represented 40.2% of specialty trade workers in private industry in 2006. This percentage decreased to 32.6% in 2015.

**Figure 49. Age distribution for specialty trade contractors in Colorado, 2006-2015.**

Source: Colorado Department of Labor and Employment's Labor Market Information website. Retrieved October, 2016.

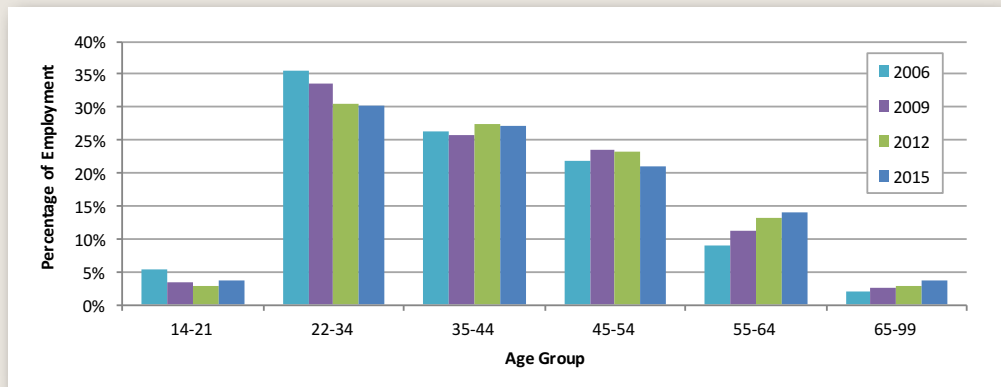


The portion of MEP contractors who were 55 and older increased from 11.2% in 2006 to 17.9% in 2015 (Figure 50). At the same time, MEP contractors 34 years old and younger decreased from 40.8% in 2006 to 33.9% in 2015.

**Figure 50. Age distribution for MEP contractors in Colorado, 2006-2015.\***

\*NAICS category is Building Equipment Contractors.

Source: Colorado Department of Labor and Employment's Labor Market Information website. Retrieved October, 2016.



### Projected Future Employment Needs of Colorado's Construction Industry

Employment projections for the construction industry in Colorado are summarized in Table 4. This information was obtained from the Colorado Department of Labor and Employment's Labor Market Information website and was combined with current employment information for 2015 from U.S. Labor Department's Quarterly Census of Labor Statistics.

According to the Colorado Department of Labor, total construction employment is projected to increase 17.0% from 148,604 in 2015 to 173,899 in 2018. The greatest increase in employment between 2015 and 2018 is projected to come from MEP contractors (18.8%), followed by building construction (18.6%), and heavy and civil construction (7.6%).

Between 2015 and 2025, construction employment is projected to increase by over 56,000 jobs. This is a total increase of 38.3%, and an average annual increase of 3.3%. Specialty trades will account for the largest number of new employees, with over 42,000 new hires projected between 2015 and 2025. Additionally, heavy and civil construction is projected to add over 5,000 employees and over 9,000 new hires are projected in building construction between 2015 and 2025.

**Table 3. Employment projections for the construction industry in Colorado.**

	2015	2018		2025		Total Projected Change between 2015 and 2025
	Current Employment <sup>a</sup>	Projected Employment <sup>b</sup>	Avg. Annual % Change from 2015	Projected Employment <sup>b</sup>	Avg. Annual % Change from 2015	
Construction of Buildings	28,070	33,276	5.84%	37,174	2.85%	32.43%
Heavy and Civil Engineering Construction	22,820	24,546	2.46%	28,420	2.22%	24.54%
Specialty Trade Contractors	97,714	116,077	5.91%	139,884	3.65%	43.16%
<b>Total Construction Jobs</b>	<b>148,604</b>	<b>173,899</b>	<b>5.38%</b>	<b>205,478</b>	<b>3.29%</b>	<b>38.27%</b>

<sup>a</sup> Source: U.S. Department of Labor – Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

<sup>b</sup> Source: Colorado Department of Labor and Employment's Labor Market Information website. Retrieved October, 2016.

Appendix F presents detailed long term employment projections for each construction industry subsector obtained from the Colorado Department of Labor and Employment's Labor Market Information website. The average total percent change between 2015 and 2025 is projected to be 38.8%. According to this information, MEP contractors are expected to have moderate to good growth rates compared to other construction occupations. The total percent change for this time period is 51.7% for heating, air conditioning, and refrigeration technician employment, 50.5% for electrician employment, and 42.7% for plumber, pipefitter, and steamfitter employment.

### **Construction Education**

In an effort to address the demand for new hires in the Colorado construction industry, numerous organizations have made contributions to support construction education programs within the state. The MEP Alliance organizations, combined, have donated or contributed \$6 million to support construction education in Colorado.

Numerous educational opportunities are available for individuals interested in working in the construction industry. Information on construction education opportunities can be found on the Colorado Department of Higher Education's website. This site lists all institutions of higher education in Colorado and the programs of study available at each institution. This information is summarized in Table 5 and 6.

**Table 4. Construction-related community college and university programs in Colorado.**

Institution Name	Program Name	Degree(s) Offered
Aims Community College	Building/Construction Site Management	Certificate and AAS
	Carpentry	Certificate
	Engineering Technology: Computer Aided Drafting (CAD)	Certificate and AAS
	Welding Technology	Certificate and AAS
Arapahoe Community College	Architectural Engineering	AAS
	Architectural Engineering: Computer Aided Drafting (CAD)	Certificate
	Architectural Engineering: Contracts and Materials	Certificate
	Construction Management: Estimating	Certificate
	Construction Management	AAS

*Continues on page 39*

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**Table 4. Construction-related community college and university programs in Colorado. (Continued)**

<b>Institution Name</b>	<b>Program Name</b>	<b>Degree(s) Offered</b>
Colorado Mesa University	Construction Electrical	Certificate and AAS
	Construction Management	BS
	Construction Technology: Supervision	AAS
	Electric Lineworker	Certificate and AAS
	Manufacturing Technology: Basic Welder	Certificate
	Manufacturing Technology: Computer Aided Design	Certificate and AAS
	Manufacturing Technology: Welding Technology	Certificate and AAS
Colorado Mountain College	Basic Solar Photovoltaic Installer	Certificate
	Basic Welding and Cutting	Certificate
	Pipe Welding	Certificate
Colorado School of Mines	Engineering and Technology Management	MS
Colorado State University	Civil Engineering - CEM Specialization	PhD
	Construction Management	BS, MS
Colorado State University - Pueblo	Civil Engineering Technology	BSCET
	Construction Management	BS
Community College of Denver	Architectural Technologies	Certificate and AAS
	Fabrication Welding	Certificate and AAS
Front Range Community College	Architectural and Building Science	AAS
	Architectural Drafting	Certificate
	Computer Aided Drafting and Design (CAD)	Certificates and AAS
	Heating, Ventilation, and A/C and Refrigeration	Certificates and AAS
	Welding Technology	Certificate and AAS
Lamar Community College	Construction Trades	AAS
	Construction Trades: Carpentry	Certificate
	Construction Trades: Electrical	Certificate
	Construction Trades: Welding	Certificate
	Renewable Energy Technologies	AAS
	Welding	Certificate and AAS
Metropolitan State University of Denver	Civil Engineering Technology	BS
	Land Surveying	Certificate
Morgan Community College	Welding and Fabrication	Certificate
	Welding Technology	AAS
Northeastern Junior College	Welding Fabricator	Certificate
	Welding Technology	AAS

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### SECTION 3

#### Industry Education and Employment Opportunities

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**Table 4. Construction-related community college and university programs in Colorado. (Continued)**

Institution Name	Program Name	Degree(s) Offered
Pikes Peak Community College	Architectural Engineer/Construction Management	Certificate and AAS
	Computer Aided Drafting and Design	Certificate and AAS
	Heating, Air Conditioning and Refrigeration Technology	Certificate and AAS
	Welding	Certificate and AAS
Pueblo Community College	Energy Maintenance Technology	Certificate
	Engineering Technology	Certificate and AAS
	Welding Technology	Certificate and AAS
Red Rocks Community College	Air Conditioning, Heating & Refrigeration Degrees	Certificate and AAS
	Carpentry	Certificate
	Electricity	Certificate and AAS
	Engineering Graphics Technology	Certificate and AAS
	Plumbing	Certificate
	Renewable Energy Technology	Certificate and AAS
	Welding	Certificate and AAS
	Woodworking	Certificate and AAS
Trinidad State Junior College	Electrical Line Worker	Certificate and AAS
	Heavy Equipment Technology	Certificate and AAS
	Occupational Safety Administration Technology	Certificate and AAS
	Welding Technology - EPIC	Certificate and AAS
University of Colorado	Civil Engineering - CEM Specialization	BS, MS, PhD
University of Denver*	Business: Construction Project Management Minor	BS
	Real Estate and the Built Environment (CM)	Certificate, BS, MS

\* Private Institution

Source: Colorado Department of Higher Education website. Retrieved October, 2016.

**Table 5. Construction-related vocational/trade school programs in Colorado.**

School	Program Offered	Degree(s) Offered
Construction Industry Training Council (CITC) <sup>a</sup>	Carpentry	Apprenticeship
	Electrical	Apprenticeship
	Masonry	Apprenticeship
	Pipefitting	Apprenticeship
	Plumbing	Apprenticeship
	Sheet Metal	Apprenticeship
Delta-Montrose Technical College	Technical Drafting/Computer Aided Drafting (CAD)	Certificate
	Welding <sup>a</sup>	Training
Emily Griffith Opportunity School	<u>Apprenticeship Training Division</u>	
	Bricklayer	Apprenticeship
	Carpenter	Apprenticeship
	Carpet and Tile Layer	Apprenticeship
	Glazier	Apprenticeship
	Painter	Apprenticeship
	Pipefitter	Apprenticeship
	Plumber	Apprenticeship
	Iron Worker	Apprenticeship
	Sheet Metal Worker	Apprenticeship
	Operating Engineer	Apprenticeship
	Voice Data Video Technician	Apprenticeship
	Electrician	Apprenticeship
	<u>College of Trades &amp; Industry</u>	
	Computer Aided Drafting/Building Information Modeling	Certificate
	Heating, Ventilation, Air Conditioning and Refrigeration	Certificate
	Welding	Training
IntelliTec College (2 locations) <sup>*a</sup>	Refrigeration and HVAC Technician	Training
Pickens Technical College	Computer Aided Drafting	Certificate
	Heating, Air Conditioning and Refrigeration Technology	Certificate
	Welding	Certificate

<sup>a</sup> Source: Institution's website. Retrieved November, 2016.

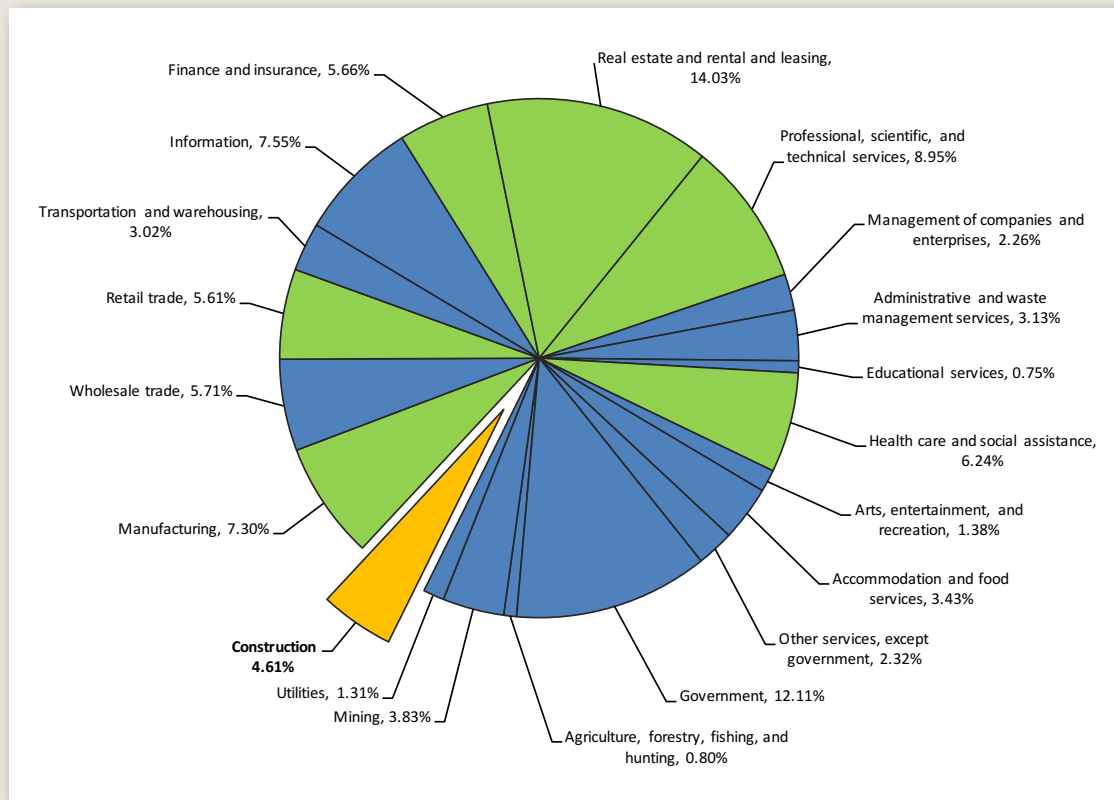
<sup>\*</sup> Private Institution

Source: Colorado Department of Higher Education website. Retrieved October, 2016.

### **Contribution of Construction to Colorado's Gross Domestic Product by State**

The primary measure used to identify the impact of the Colorado construction industry on the state is the Gross Domestic Product (GDP) by state. The Bureau of Economic Analysis<sup>7</sup> defines GDP by state as “a comprehensive measure of overall economic activity in individual states” (p. 111). It is calculated as “the sum of incomes earned by labor and capital and the costs incurred in the production of goods and services” (p. 112). Therefore, the GDP includes: (a) workers’ wages and salaries; (b) the income of individual and joint entrepreneurs and corporations; and (c) business taxes, including sales taxes, property taxes, and Federal excise taxes. The industry portion of the GDP by state is calculated by dividing the industry GDP by the state’s total GDP. (Detailed tables appear in Appendix G.) All GDP data for the State of Colorado and the Colorado construction industry were obtained from the Bureau of Economic Analysis. This information, however, is only available at the aggregate level for the construction industry, meaning it is not possible to estimate the contribution of construction specialty trades based on GDP by state. To address this issue, data is pulled from the 2012 Economic Census for Colorado and is provided later in this report.

The percentage contribution of each industry during 2015 is shown in Figure 51. The contribution of each industry to the Colorado’s GDP from 2006 to 2015 is shown in Figure 52. Figure 53 shows the percentage change in each industry’s contribution to Colorado’s GDP between 2006 and 2015. Percentage of change was calculated using indexed values obtained from the U.S. Bureau of Economic Analysis. (Detailed tables for all graphs are provided in Appendix G.)



**Figure 51. Percentage contribution of industries to GDP by state for Colorado, 2015.**

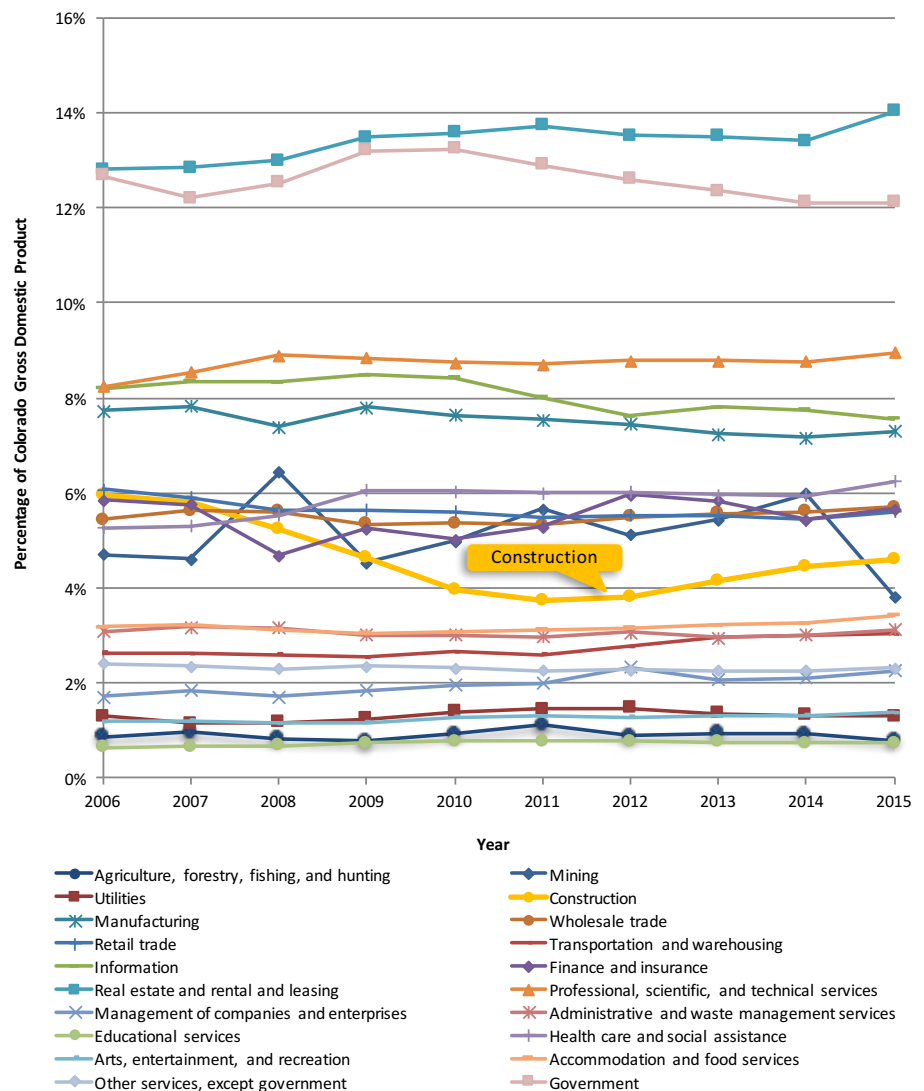
NOTE: Percentages shown do not sum to 100% due to rounding.

Source: U.S. Bureau of Economic Analysis, Economic Product Division. Retrieved October 2016.

<sup>7</sup> Woodruff, C.H., Panek, S. D., & McInerney, T. P. (2007, July). Gross domestic product by state: Advanced estimates for 2006 and revised estimates for 2003-2005. Survey of Current Business, 87(7), 111-139.

## SECTION 4 Economic Indicators

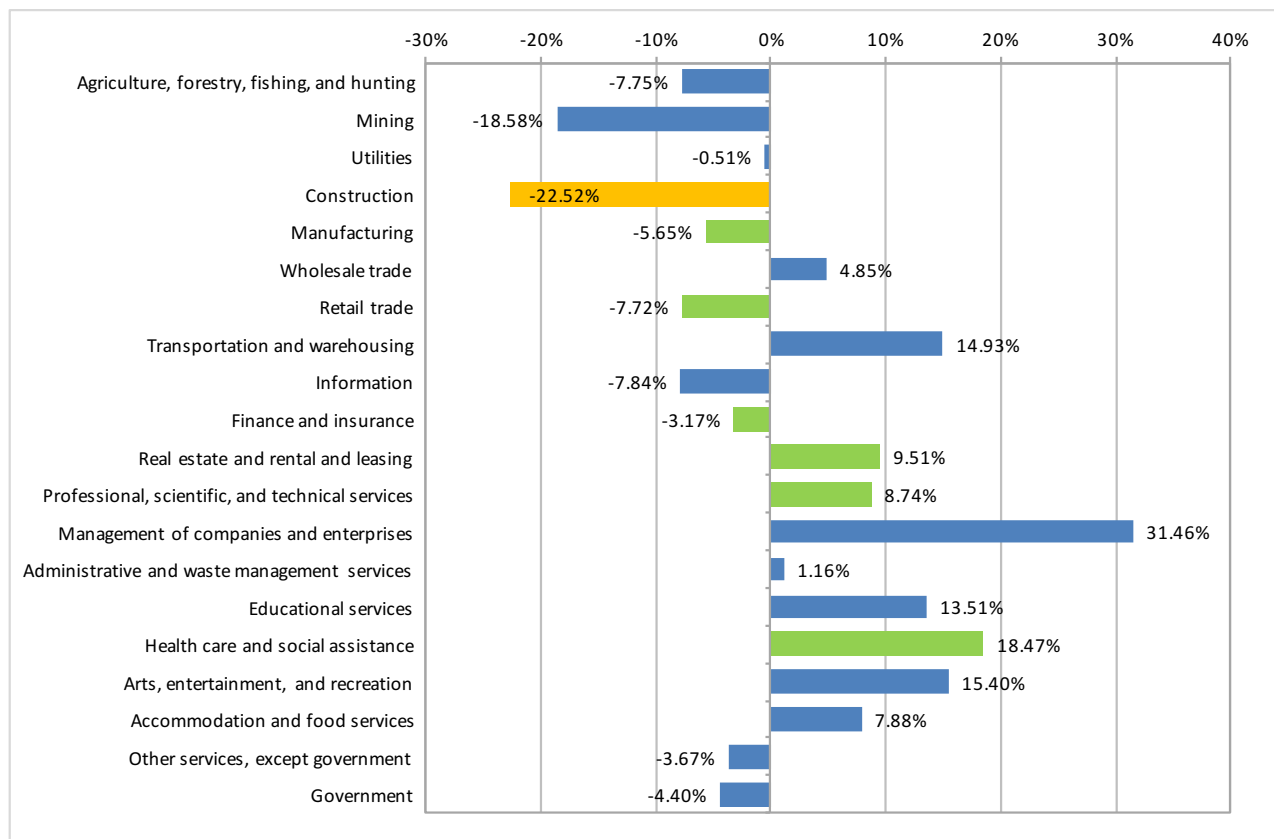
Construction accounted for 4.6% of Colorado's GDP in 2015, ranking eleventh among all industries (Figure 51). This was a significant decline from 2006 when construction was 5.9% and ranked seventh (Figure 52). In terms of percentage contribution to Colorado's GDP, construction decreased by 22.5% between 2006 and 2015 (Figure 53). This was the largest decrease of any industry sector. Other industries of interest are manufacturing, retail trade, finance and insurance, real estate, professional and technical services, and health care and social assistance. Real estate contributed the highest percentage to Colorado's GDP by state, with an average contribution of 13.4% to Colorado's GDP by state from 2006 to 2015.



**Figure 52. Percentage contribution of industries to GDP by state for Colorado, 2006-2015.**

Source: U.S. Bureau of Economic Analysis, Regional Product Division. Retrieved October, 2016.

## SECTION 4 Economic Indicators



**Figure 53. Change in industry contributions to GDP by state for Colorado between 2006 and 2015.**

*Note: Percentage of change was calculated using indexed values for yearly contribution.*

*Source: U.S. Bureau of Economic Analysis, Regional Product Division. Retrieved October, 2016.*

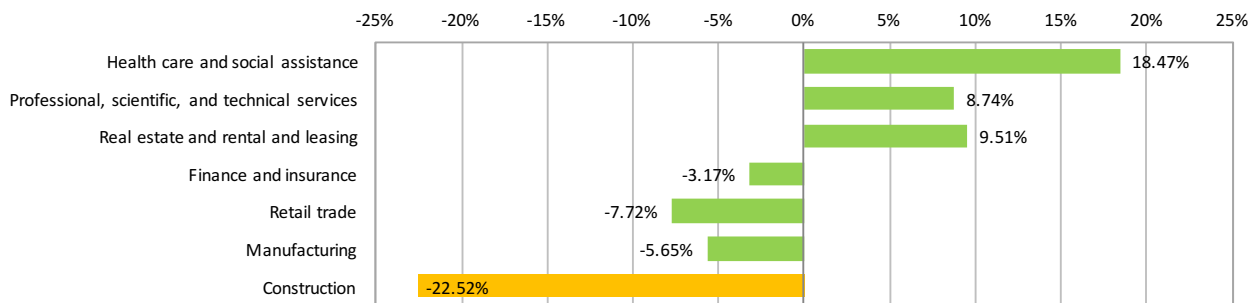
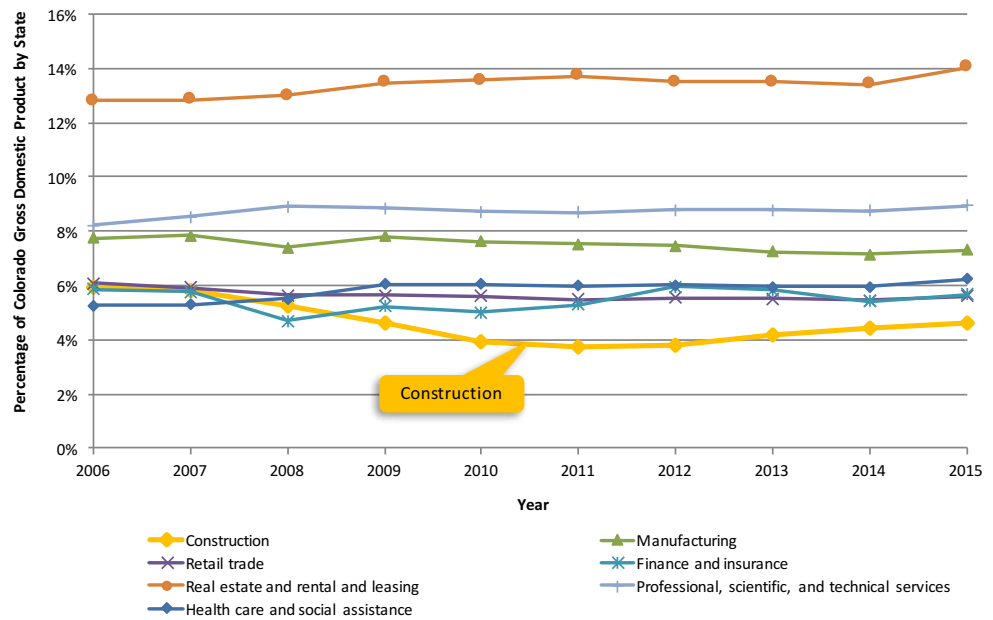
Figure 53 shows the change in each industry's percentage contribution to Colorado's GDP by state between 2006 and 2015. Management of companies and enterprises is the industry whose percentage contribution to Colorado's GDP by state grew the most, increasing 31.5% from 1.7% in 2006 to 2.3% in 2015; though this industry experienced tremendous growth, the average annual contribution was just 2.0% during this time period.

Looking just at construction and the six comparison industries, construction had the largest decrease in contribution to GDP by state (Figure 54 and 55). Construction's average contribution during this time was 4.6%. The real estate and rental and leasing industry was the largest contributor for the comparison group with 14.0% in 2015 and an average contribution of 13.4% from 2004 to 2013. The professional, scientific, and technical services industry increased over 8%, the second largest increase among the comparison group from 2006 to 2015.

## SECTION 4 Economic Indicators

**Figure 54. Percentage contribution of selected industries to GDP by state for Colorado, 2006-2015.**

Source: U.S. Bureau of Economic Analysis, Regional Product Division. Retrieved October, 2016.



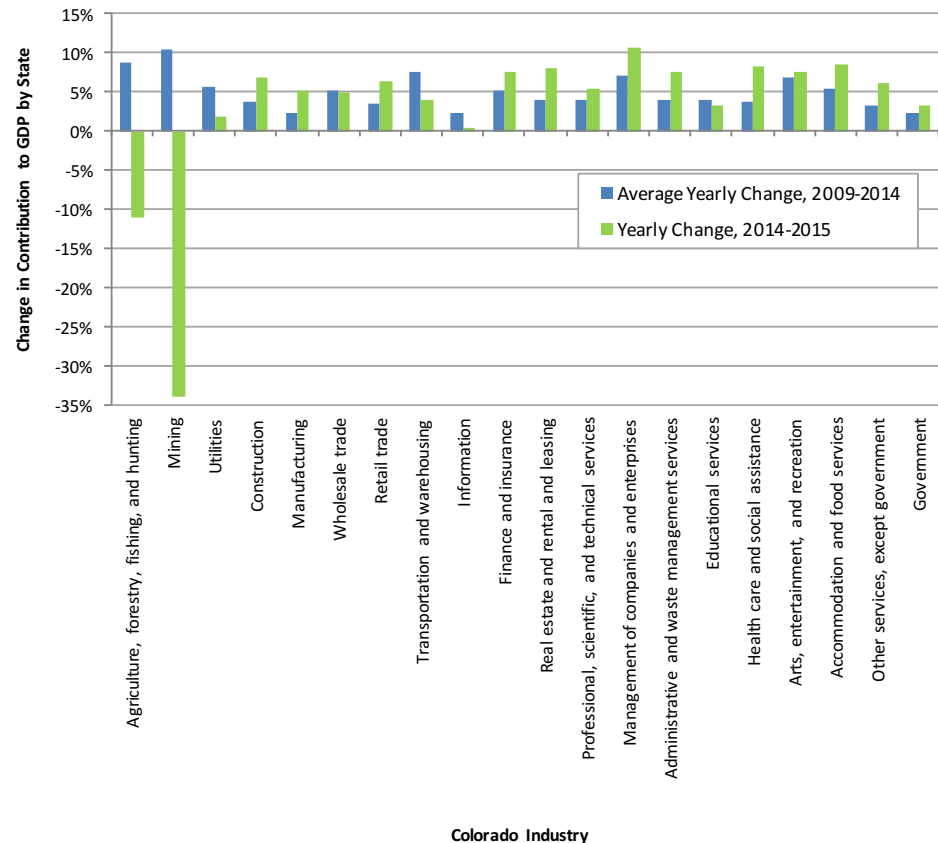
**Figure 55. Change in selected industry contributions to GDP by state for Colorado between 2006 and 2015.**

Note: Percentage of change was calculated using indexed values for yearly contribution.

Source: U.S. Bureau of Economic Analysis, Regional Product Division. Retrieved October, 2016.

Figures 56 and 57 compare industry growth rates between 2014 and 2015 to the average for the preceding five years. Growth rates are based on changes in value added by each industry to Colorado's GDP by state. (Detailed table appears in Appendix H.) Average growth rates are for the period from 2009 to 2014. All industries in Colorado averaged positive growth rates between 2009 and 2014 (Figure 56). The industry with the highest average growth rate during this was mining, which averaged 10.3%. The next three industries with the highest growth rates were agriculture (8.65%), transportation and warehousing (7.55%), and management of companies and enterprises (7.15%). Additionally, all industries in Colorado had positive growth rates between 2014 and 2015 with the exception of mining and agriculture. The two industries with the largest change between their five-year average and the change between 2014 and 2015 were also mining and agriculture.

## SECTION 4 Economic Indicators



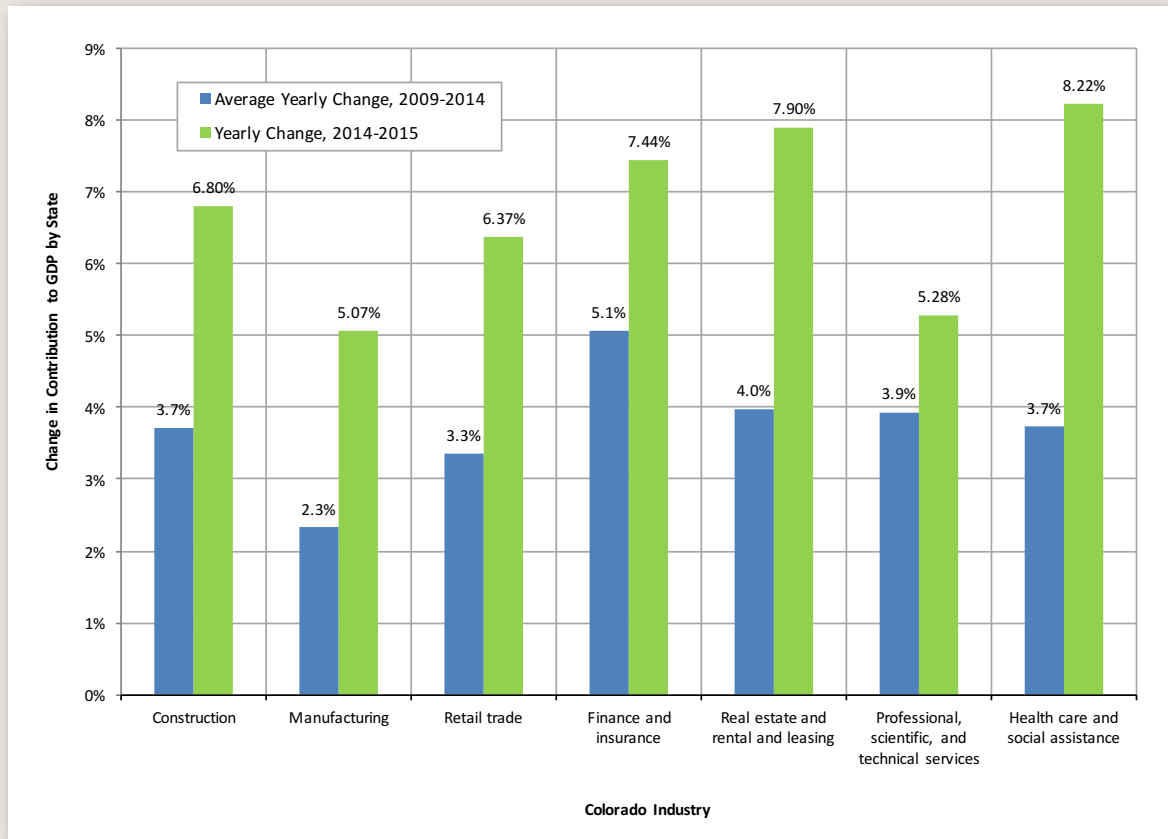
**Figure 56: Growth rates for Colorado industries based on contribution to Colorado GDP by state.**

Source: U.S. Bureau of Economic Analysis, Regional Product Division.  
Retrieved October, 2016.

Construction had a 6.8% growth rate between 2014 and 2015 and an average yearly change of 3.7% from 2009 to 2014. All the comparison industries also averaged positive growth rates (Figure 57). The health care and social assistance industry had the largest change between their five-year average (3.37%) and their change between 2014 and 2015 (8.22%). (Detailed tables for all graphs are provided in Appendix H.)

According to the McGraw-Hill Construction Research and Analytics' (2016) Dodge MarketLook® Report, the value of all construction in Colorado is expected to increase 13% between 2015 and 2016, then increase 7% in 2017, and 6% in 2018. Non-residential building construction is projected to increase 3% between 2015 and 2016, then increase by 7% in 2017, and 10% in 2018. Residential building construction is projected to increase 28% between 2015 and 2016, then 3% in both 2017 and 2018. Non-building construction is projected to decrease 17% between 2015 and 2017, then increase 22% in 2017 and 8% in 2018. Between 2017 and 2018, non-residential building construction is projected to account for 49% of growth in the industry, while residential building construction is projected to account for 31% and non-building construction for the remaining 20%.



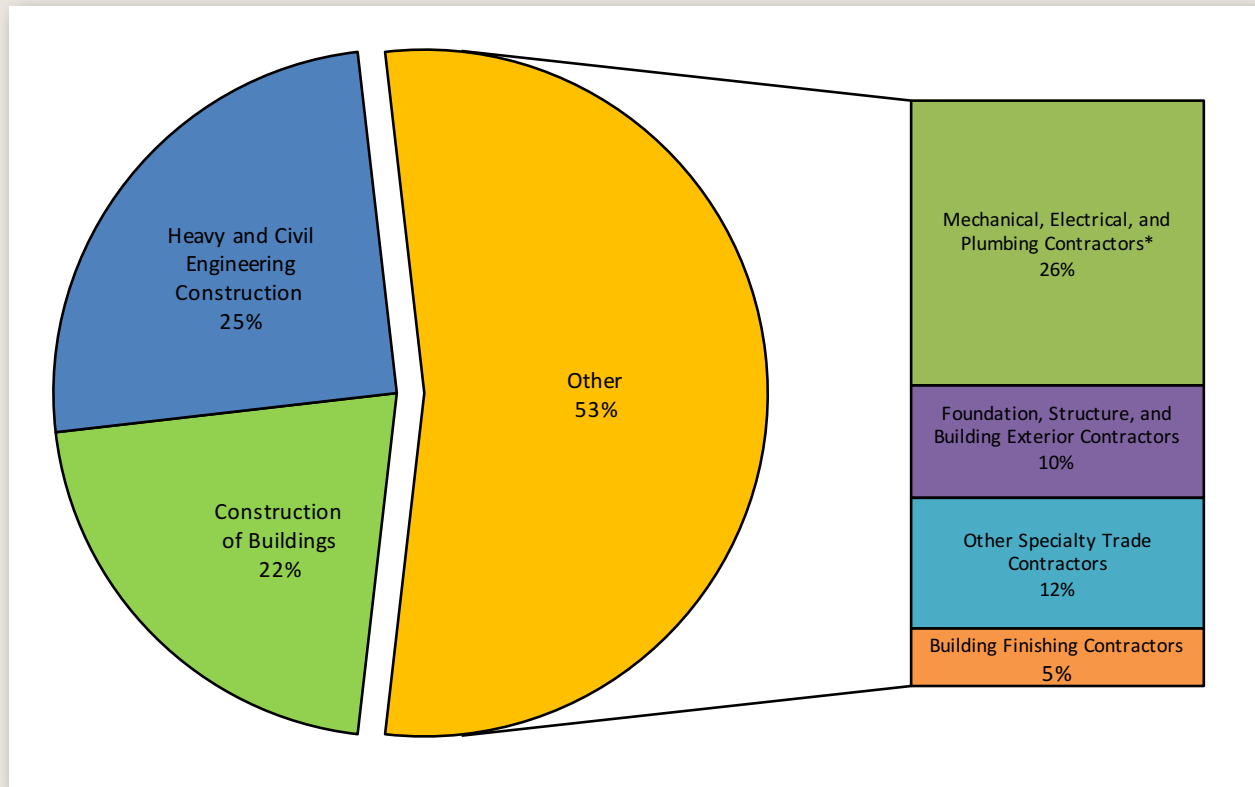


**Figure 57: Growth rates for selected Colorado industries based on contribution to Colorado GDP by state.**

Source: U.S. Bureau of Economic Analysis, Regional Product Division. Retrieved October, 2016.

### **Economic Census Data**

Data from the U.S. Census Bureau's 2012 Economic Census, the most recent available, for Colorado is used to determine the contribution of construction specialty trades to Colorado's economy. According to the 2012 Economic Census conducted by the U.S. Census Bureau, the construction industry in Colorado had over \$12.155 billion of value added business in 2012. Value added is a measure of construction activity equal to the value of business done, less costs for construction work subcontracted out to others and costs for materials, components, supplies, and fuels. Of the \$12.155 billion of added value, \$2.486 billion (20%) came from construction of buildings, \$2.910 billion (24%) came from heavy and civil engineering construction, and \$6.759 billion (56%) was specialty trade contractors (Figure 58). In the construction of buildings, \$1.268 billion (51%) was residential and \$1.217 billion (49%) was non-residential.



**Figure 58. Percentage of value added by major construction sectors in Colorado, 2012.**

\* NAICS category is Building Equipment Contractors.

Source: U.S. Census Bureau, 2012 Economic Census. Retrieved October, 2016.

Of the \$6.759 billion done by specialty trade contractors, \$3.045 billion (45%) was by MEP contractors, which is 25% of total value added for the construction industry in Colorado. More specifically, \$1.366 billion was by electrical contractors and \$1.476 billion was by plumbing, heating, and air conditioning contractors, which is 11.2% and 12.1% respectively of total value added for the construction industry in Colorado.

### **Multiplier Effect of Construction in Colorado**

The construction industry ranks twenty-fourth in Colorado, based on its output multiplier (Table 7), which estimates the increase in total output of all 64 industries due to additional invested in the given industry. The following estimations are based on Regional Input-Output Modeling System (RIMS II) multipliers, calculated by the Bureau of Economic Analysis. They do not include the impact of state and local government. Every \$1 million added into the construction industry increases output of all Colorado industries by \$2.160 million and household earnings by \$0.723 million, and results in 16.778 new jobs (Table 7). By comparison, \$1 million of investment into the management of companies and enterprises industry resulted in a \$2.282 million increase in output of all industries, a \$0.815 million increase in household earnings, and the creation of 14.121 new jobs.

**Table 6. RIMS II final demand multipliers for selected industries in Colorado.**

<b>Industry</b>	<b>Output</b>	<b>Earnings</b>	<b>Employment</b>
Construction	2.1596	0.7216	16.7783
Manufacturing			
Computer and electronic product manufacturing	1.9394	0.5401	9.6163
Fabricated metal product manufacturing	2.0067	0.5128	11.5820
Food and beverage and tobacco product manufacturing	2.3365	0.5131	12.3891
Machinery manufacturing	1.9615	0.4894	10.0934
Retail Trade			
General merchandise stores	2.0762	0.6586	22.8912
Motor vehicle and parts dealers	1.9542	0.7193	16.3968
Finance and Insurance			
Federal Reserve banks, credit intermediation, and related activities	2.2301	0.6554	13.8025
Insurance carriers and related activities	2.0342	0.5472	11.7313
Securities, commodity contracts, and investments	2.6141	0.8325	20.9068
Real Estate and Rental and Leasing			
Real estate	1.7652	0.3818	16.5917
Rental and leasing services and lessors of intangible assets	2.0425	0.5312	12.2334
Professional and Technical Services			
Administrative and support services	2.2117	0.8157	25.0136
Management of companies and enterprises	2.2815	0.8152	14.1213
Professional, scientific, and technical services	2.3046	0.8593	17.7537
Healthcare and Social Assistance			
Ambulatory health care services	2.2919	0.8585	18.7789
Hospitals	2.3194	0.8288	17.8228
Social assistance	2.3222	0.8683	34.1726

Source: U.S. Bureau of Economic Analysis, RIMS II Multipliers (National 2007 Benchmark I-O Data/Colorado 2013 Regional Data): Total Multipliers (Type II) for Output, Earnings, and Employment.

In Colorado, construction ranks seventeenth in terms of earnings (0.723). The earnings multiplier is the amount that household earnings of all industries increase for every dollar increase in output by a specific industry, such as construction. Construction is twenty-third out of 64 industries in terms of final demand multiplier for employment (16.778), which is the number of jobs created in all industries for each additional \$1 million of output in a given industry.

### **Construction Related Retail Sales in Colorado**

Colorado retail sales for 2015 totaled \$182.845 billion, according to the Colorado Department of Revenue (Table 8). Construction retail sales for 2015 were \$4.686 billion, an increase of over 12% from 2014. Over the last four years, construction retail sales have averaged 2.2% of the state's total retail sales, with a high of 2.6% in 2015.

## SECTION 4 Economic Indicators

**Table 7. Retail sales for Colorado, 2012-2015 (thousands of dollars).**

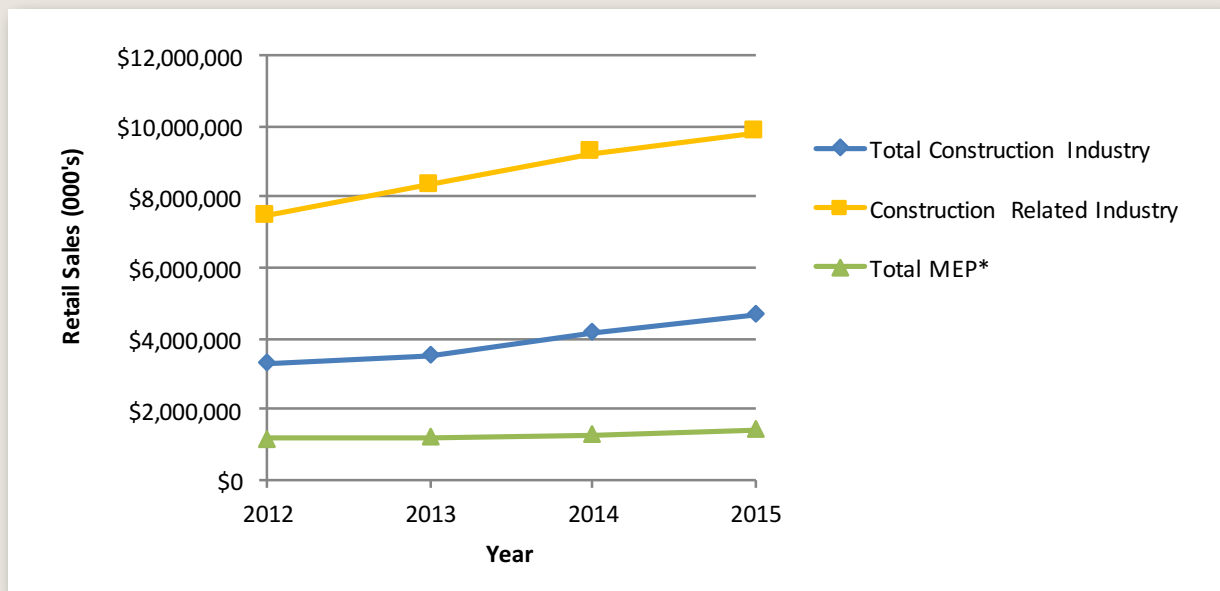
	2012	2013	2014	2015
Construction Industry Retail Sales	3,309,480	3,531,548	4,170,517	4,685,822
Plumbing, Heating, and Air-Conditioning	716,763	724,511	759,322	835,958
Electrical	385,623	403,404	434,502	435,727
Other Building Equipment	81,296	85,655	98,977	147,531
Total MEP <sup>a</sup>	1,183,682	1,213,570	1,292,801	1,419,216
Construction Related Industry Retail Sales	7,489,521	8,350,963	9,226,457	9,833,092
Total Retail Sales for Construction and Construction Related Industries	10,799,001	11,882,511	13,396,974	14,518,914
Total Retail Sales for Colorado	164,175,977	172,784,033	182,709,977	182,845,280

<sup>a</sup> Total MEP is calculated by summing total retail sales for Plumbing/Heating/AC, Electrical, and Building Equipment Installers Subcategories.

Source: Colorado Department of Revenue, Retail Sales Report. Retrieved October, 2016

Total retail sales for the MEP trades were obtained by summing the retail sales for: (1) plumbing, heating, and air-conditioning; (2) electrical; and (3) other building equipment retail sales. The resulting MEP total retail sales were \$1.184 billion in 2012 and \$1.419 billion in 2015. MEP retail sales accounted for 30.3% of construction retail sales in 2015, a decrease from 2012 when MEP retail sales accounted for 35.8% of construction retail sales.

Additional retail sales numbers were obtained for industries related to construction. A list of these industries is provided in Appendix I. Retail sales for construction related industries totaled \$9.833 billion in 2015, an increase of 6.6% from the previous year (Table 8 and Figure 59). Combined with construction retail sales, total construction related retail sales were \$14.519 billion in 2015, an increase of 8.4% from the previous year. Total retail sales for the construction industry (including construction related industries) accounted for 7.9% of Colorado's total retail sales in 2015. Over the last four years, total construction related retail sales have averaged 7.2% of the state's total retail sales, with a high of 7.9% in 2015.



**Figure 59. Construction related retail sales, 2012-2015.**

Source: Colorado Department of Revenue. Retrieved October, 2016.

NOTE: Total MEP is calculated by summing total retail sales for Plumbing/Heating/AC Retail Sales, Electrical, and Building Equipment Installers subcategories.

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**APPENDIX A**  
**Construction Establishments in Colorado, 2006-2015**

<b>NAICS Construction Industry Subsectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Construction of Buildings</b>										
General Building Contractors - Residential	4,951	5,050	4,918	4,499	4,030	3,674	3,526	3,471	3,522	3,731
General Building Contractors - Non-Residential	1,013	1,072	1,121	1,073	1,033	989	991	983	996	1,015
<b>Heavy and Civil Engineering Construction</b>										
Utility System Contractors	533	548	573	577	562	542	542	550	561	578
Land Subdivision Contractors	318	319	303	251	208	170	153	137	132	128
Highway, Street, and Bridge Construction	221	228	225	218	211	205	216	210	209	220
Other Heavy Construction	105	107	112	101	96	102	107	117	117	113
<b>Specialty Trade Contractors</b>										
Building Foundation and Exterior Contractors	3,289	3,307	3,118	2,865	2,646	2,421	2,326	2,274	2,330	2,500
Building Equipment Contractors*, **	4,994	4,998	4,982	4,873	4,638	4,402	4,306	4,249	4,291	4,477
Building Finishing Contractors	4,247	4,350	4,167	3,857	3,557	3,259	3,055	2,969	3,011	3,213
Other Specialty Trade Contractors	2,299	2,348	2,316	2,170	1,963	1,806	1,753	1,710	1,744	1,796
<b>Total Construction Industry Establishments</b>	<b>21,969</b>	<b>22,327</b>	<b>21,835</b>	<b>20,485</b>	<b>18,944</b>	<b>17,570</b>	<b>16,973</b>	<b>16,669</b>	<b>16,913</b>	<b>17,770</b>
<b>Selected NAICS Comparison Industries</b>										
Manufacturing	6,028	5,993	5,848	5,662	5,437	5,278	5,280	5,324	5,430	5,665
Retail Trade	19,133	19,072	18,569	17,963	17,417	17,119	17,261	17,296	17,230	17,581
Finance and Insurance	11,428	11,549	11,248	10,720	10,347	10,110	10,137	10,203	10,289	10,615
Real Estate and Rental and Leasing	10,355	10,641	10,388	9,813	9,289	8,991	9,091	9,288	9,636	10,324
Professional and Technical Services	26,621	27,673	28,632	29,062	29,242	29,592	30,434	31,020	31,760	34,204
Health Care and Social Assistance	12,321	12,717	13,031	13,286	13,665	13,961	14,255	14,382	14,531	15,022
* MEP Contractors										
** Additional detail provided below										

Source: US Department of Labor - Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

<b>NAICS Building Equipment Contractors* Subsectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Electrical and Wiring Contractors</b>										
Residential Electrical Contractors	1,485	1,502	1,509	1,488	1,416	1,305	1,256	1,230	1,236	1,287
Non-Residential Electrical Contractors	821	803	798	802	782	747	730	723	716	739
<b>Electrical and Wiring Contractors Total</b>	<b>2,306</b>	<b>2,305</b>	<b>2,307</b>	<b>2,290</b>	<b>2,198</b>	<b>2,052</b>	<b>1,986</b>	<b>1,953</b>	<b>1,952</b>	<b>2,026</b>
<b>Plumbing and HVAC Contractors</b>										
Residential Plumbing and HVAC Contractors	1,972	1,976	1,963	1,880	1,764	1,691	1,674	1,656	1,682	1,783
Non-Residential Plumbing and HVAC Contractors	541	540	543	534	515	499	488	481	489	494
<b>Plumbing and HVAC Contractors Total</b>	<b>2,513</b>	<b>2,516</b>	<b>2,506</b>	<b>2,414</b>	<b>2,279</b>	<b>2,190</b>	<b>2,162</b>	<b>2,137</b>	<b>2,171</b>	<b>2,277</b>
<b>Other Building Equipment Contractors</b>										
Other Residential Building Equipment Contractors	41	40	37	39	33	37	36	38	44	46
Other Non-Residential Building Equipment Contractors	34	137	132	130	128	123	122	121	124	128
<b>Other Building Equipment Contractors Total</b>	<b>175</b>	<b>177</b>	<b>169</b>	<b>169</b>	<b>161</b>	<b>160</b>	<b>158</b>	<b>159</b>	<b>168</b>	<b>174</b>
<b>Building Equipment Contractors* Total</b>	<b>4,994</b>	<b>4,998</b>	<b>4,982</b>	<b>4,873</b>	<b>4,638</b>	<b>4,402</b>	<b>4,306</b>	<b>4,249</b>	<b>4,291</b>	<b>4,477</b>
* MEP Contractors										

Source: U.S. Department of Labor - Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

**APPENDIX B**  
**Construction Establishments in Colorado by Employment-Size, 2014**

NAICS Construction Industry Sectors	Total Number of		Number of Employees								
	Establishments in Data Set		1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000 +
Construction of Buildings											
General Building Contractors - Residential	3,691	3,118	327	153	72	14	7	0	0	0	0
General Building Contractors - Non-Residential	840	455	142	112	85	31	9	4	1	1	1
Heavy and Civil Engineering Construction											
Utility System Contractors	491	214	89	68	70	22	20	5	1	2	2
Land Subdivision Contractors	120	101	12	4	1	2	0	0	0	0	0
Highway, Street, and Bridge Construction	218	84	25	40	37	18	12	1	1	0	0
Other Heavy Construction	70	40	8	7	7	5	3	0	0	0	0
Specialty Trade Contractors											
Building Foundation and Exterior Contractors	2,427	1,606	360	211	170	63	12	5	0	0	0
Building Equipment Contractors*,**	4,052	2,653	666	369	240	68	45	8	2	1	1
Building Finishing Contractors	2,935	2,304	300	197	95	24	12	3	0	0	0
Other Specialty Trade Contractors	1,544	970	248	170	115	23	16	1	1	0	0
Total Construction Industry	16,388	11,545	2,177	1,331	892	270	136	27	6	4	4
* MEP Contractors											
** Additional detail provided below											

Source: U.S. Census Bureau – County Business Patterns website. Retrieved October, 2016.

NAICS Building Equipment Contractors* Subsectors	Total Number of Establishments in Data Set	Number of Employees								
		1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000 +
Electrical and Wiring Contractors	1,785	1,183	307	134	102	32	19	7	1	0
Plumbing and HVAC Contractors	2,132	1,397	347	212	120	31	22	1	1	1
Other Building Equipment Contractors	135	73	12	23	18	5	4	0	0	0
* MEP Contractors										

Source: U.S. Census Bureau – County Business Patterns website. Retrieved October, 2016.



**APPENDIX C**  
**Construction Employment in Colorado, 2006-2015**

<b>NAICS Construction Industry Subsectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Construction of Buildings</b>										
General Building Contractors - Residential	19,901	18,643	16,137	11,846	10,257	9,648	10,078	11,543	12,963	14,044
General Building Contractors - Non-Residential	13,154	14,775	14,841	12,644	10,919	10,758	10,670	11,789	13,471	14,026
<b>Heavy and Civil Engineering Construction</b>										
Utility System Contractors	10,611	10,802	11,699	9,502	8,738	9,691	9,417	11,240	12,994	12,619
Land Subdivision Contractors	1,467	1,374	1,225	868	683	621	584	558	578	554
Highway, Street, and Bridge Construction	7,423	7,131	6,749	6,085	6,137	5,926	6,147	6,603	7,256	7,419
Other Heavy Construction	2,312	2,789	2,705	2,123	1,473	1,620	1,754	2,219	2,022	2,229
<b>Specialty Trade Contractors</b>										
Building Foundation and Exterior Contractors	26,368	26,047	24,550	18,948	16,399	15,357	16,195	17,750	19,591	20,979
Building Equipment Contractors* **	42,757	43,263	43,008	37,237	32,604	32,165	33,540	36,256	40,369	42,756
Building Finishing Contractors	24,714	24,135	22,929	17,940	15,489	14,256	14,901	15,920	17,491	18,146
Other Specialty Trade Contractors	18,941	18,759	17,971	13,811	12,410	12,201	12,469	13,725	15,399	15,833
<b>Total Construction Industry</b>	<b>167,648</b>	<b>167,718</b>	<b>161,814</b>	<b>131,004</b>	<b>115,109</b>	<b>112,243</b>	<b>115,755</b>	<b>127,603</b>	<b>142,134</b>	<b>148,605</b>

<b>NAICS Building Equipment Contractors* Subsectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Electrical and Wiring Contractors</b>										
Residential Electrical Contractors	8,339	8,236	8,156	6,694	5,856	5,556	5,801	6,135	6,888	7,370
Non-Residential Electrical Contractors	11,222	12,028	12,113	10,842	9,767	9,806	9,966	10,708	11,960	12,839
<b>Electrical and Wiring Contractors Total</b>	<b>19,561</b>	<b>20,264</b>	<b>20,269</b>	<b>17,536</b>	<b>15,623</b>	<b>15,362</b>	<b>15,767</b>	<b>16,843</b>	<b>18,848</b>	<b>20,209</b>
<b>Plumbing and HVAC Contractors</b>										
Residential Plumbing and HVAC Contractors	12,348	11,706	10,976	8,888	8,005	7,854	8,400	9,352	10,192	10,793
Non-Residential Plumbing and HVAC Contractors	9,151	9,628	10,018	9,142	7,559	7,459	7,843	8,515	9,540	9,878
<b>Plumbing and HVAC Contractors Total</b>	<b>21,499</b>	<b>21,334</b>	<b>20,994</b>	<b>18,030</b>	<b>15,564</b>	<b>15,313</b>	<b>16,243</b>	<b>17,867</b>	<b>19,732</b>	<b>20,671</b>
<b>Other Building Equipment Contractors</b>										
Other Residential Building Equipment Contractors	94	101	115	130	77	148	125	120	140	97
Other Non-Residential Building Equipment Contractors	1,603	1,564	1,631	1,540	1,340	1,342	1,406	1,426	1,649	1,779
<b>Other Building Equipment Contractors Total</b>	<b>1,697</b>	<b>1,665</b>	<b>1,746</b>	<b>1,670</b>	<b>1,417</b>	<b>1,490</b>	<b>1,531</b>	<b>1,546</b>	<b>1,789</b>	<b>1,876</b>
<b>Building Equipment Contractors* Total</b>	<b>42,757</b>	<b>43,263</b>	<b>43,008</b>	<b>37,237</b>	<b>32,604</b>	<b>32,165</b>	<b>33,540</b>	<b>36,256</b>	<b>40,369</b>	<b>42,756</b>

\* MEP Contractors

\*\* Additional detail provided below

Source: US Department of Labor - Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

**APPENDIX D**  
**Average Weekly Wages for Construction in Colorado, 2006-2015**

<b>NAICS Construction Industry Sectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Construction of Buildings</b>										
General Building Contractors - Residential	\$1,039	\$1,063	\$1,100	\$1,106	\$1,090	\$1,106	\$1,132	\$1,133	\$1,189	\$1,237
General Building Contractors - Non-Residential	\$994	\$969	\$963	\$913	\$879	\$896	\$950	\$984	\$1,045	\$1,117
	\$1,107	\$1,181	\$1,250	\$1,286	\$1,288	\$1,295	\$1,304	\$1,280	\$1,328	\$1,358
<b>Heavy and Civil Engineering Construction</b>										
Utility System Contractors	\$1,000	\$1,059	\$1,149	\$1,124	\$1,101	\$1,129	\$1,165	\$1,186	\$1,230	\$1,258
Land Subdivision Contractors	\$969	\$1,040	\$1,149	\$1,122	\$1,114	\$1,153	\$1,192	\$1,205	\$1,248	\$1,241
Highway, Street, and Bridge Construction	\$1,449	\$1,477	\$1,386	\$1,432	\$1,623	\$1,539	\$1,673	\$1,724	\$1,870	\$2,160
Other Heavy Construction	\$955	\$1,018	\$1,058	\$1,041	\$1,045	\$1,053	\$1,084	\$1,110	\$1,164	\$1,213
	\$1,005	\$1,031	\$1,266	\$1,242	\$1,020	\$1,108	\$1,135	\$1,182	\$1,168	\$1,277
<b>Specialty Trade Contractors</b>										
Building Foundation and Exterior Contractors	\$738	\$784	\$818	\$825	\$833	\$848	\$873	\$889	\$939	\$970
Building Equipment Contractors*,**	\$670	\$724	\$746	\$752	\$746	\$753	\$780	\$798	\$855	\$892
Building Finishing Contractors	\$834	\$885	\$927	\$954	\$970	\$985	\$1,000	\$1,003	\$1,042	\$1,070
Other Specialty Trade Contractors	\$653	\$685	\$708	\$690	\$682	\$693	\$726	\$756	\$810	\$848
	\$725	\$762	\$799	\$752	\$775	\$788	\$826	\$861	\$920	\$940
<b>Total Construction Industry</b>	<b>\$831</b>	<b>\$876</b>	<b>\$918</b>	<b>\$920</b>	<b>\$920</b>	<b>\$940</b>	<b>\$964</b>	<b>\$982</b>	<b>\$1,032</b>	<b>\$1,064</b>

<b>Selected NAICS Comparison Industries</b>										
Manufacturing	\$1,055	\$1,094	\$1,122	\$1,116	\$1,154	\$1,186	\$1,197	\$1,200	\$1,253	\$1,279
Retail Trade	\$497	\$511	\$514	\$513	\$516	\$521	\$535	\$542	\$560	\$578
Finance and Insurance	\$1,252	\$1,324	\$1,356	\$1,322	\$1,373	\$1,429	\$1,493	\$1,524	\$1,595	\$1,693
Real Estate and Rental and Leasing	\$790	\$831	\$800	\$786	\$805	\$845	\$903	\$944	\$972	\$1,021
Professional and Technical Services	\$1,376	\$1,452	\$1,479	\$1,492	\$1,531	\$1,565	\$1,617	\$1,632	\$1,676	\$1,709
Healthcare and Social Assistance	\$773	\$804	\$828	\$851	\$852	\$863	\$879	\$883	\$900	\$926
U.S. Total Construction	\$856	\$900	\$943	\$948	\$954	\$975	\$1,006	\$1,023	\$1,058	\$1,096
U.S. Total MEP Contractors	\$876	\$927	\$977	\$987	\$997	\$1,016	\$1,046	\$1,061	\$1,088	\$1,118
U.S. Total Electrical and Wiring contractors	\$882	\$935	\$990	\$1,001	\$1,009	\$1,031	\$1,065	\$1,077	\$1,102	\$1,133
U.S. Total Plumbing and HVAC Contractors	\$851	\$899	\$942	\$951	\$961	\$976	\$1,002	\$1,017	\$1,045	\$1,075

\* MEP Contractors

\*\* Additional detail provided on the following page

Source: US Department of Labor - Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

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**APPENDIX D (Continued)**  
**Average Weekly Wages for Construction in Colorado, 2006-2015**

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<b>MACIS Building Equipment Contractors* Subsectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Electrical and Wiring Contractors</b>										
Residential Electrical Contractors	\$732	\$766	\$808	\$823	\$833	\$879	\$878	\$869	\$883	\$929
Non-Residential Electrical Contractors	\$923	\$977	\$1,007	\$1,048	\$1,060	\$1,067	\$1,098	\$1,099	\$1,137	\$1,160
<b>Electrical and Wiring Contractors Total</b>	<b>\$841</b>	<b>\$891</b>	<b>\$927</b>	<b>\$962</b>	<b>\$975</b>	<b>\$999</b>	<b>\$1,017</b>	<b>\$1,015</b>	<b>\$1,044</b>	<b>\$1,076</b>
<b>Plumbing and HVAC Contractors</b>										
Residential Plumbing and HVAC Contractors	\$713	\$763	\$788	\$795	\$801	\$813	\$839	\$837	\$870	\$905
Non-Residential Plumbing and HVAC Contractors	\$935	\$980	\$1,029	\$1,049	\$1,078	\$1,082	\$1,092	\$1,104	\$1,163	\$1,179
<b>Plumbing and HVAC Contractors Total</b>	<b>\$808</b>	<b>\$861</b>	<b>\$903</b>	<b>\$924</b>	<b>\$936</b>	<b>\$944</b>	<b>\$961</b>	<b>\$964</b>	<b>\$1,012</b>	<b>\$1,036</b>

\* MEP Contractors

Source: US Department of Labor - Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

**APPENDIX E**  
**Total Payroll for Construction and Comparison Industries in Colorado (in 000's), 2006-2015**

<b>NAICS Construction Industry Sectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Construction of Buildings</b>	\$1,785,184	\$1,846,604	\$1,772,647	\$1,407,918	\$1,200,291	\$1,173,752	\$1,221,681	\$1,375,170	\$1,634,485	\$1,805,961
General Building Contractors - Residential	\$1,028,184	\$939,164	\$807,939	\$562,347	\$469,067	\$449,609	\$497,962	\$590,724	\$704,540	\$815,863
General Building Contractors - Non-Residential	\$757,000	\$907,440	\$964,708	\$845,571	\$731,224	\$724,143	\$723,719	\$784,446	\$929,945	\$990,098
<b>Heavy and Civil Engineering Construction</b>	\$1,134,276	\$1,216,708	\$1,336,856	\$1,085,674	\$975,144	\$1,048,808	\$1,084,546	\$1,271,850	\$1,461,312	\$1,492,576
Utility System Contractors	\$534,419	\$584,109	\$699,299	\$554,646	\$505,991	\$581,158	\$583,923	\$704,370	\$842,972	\$814,533
Land Subdivision Contractors	\$110,488	\$105,519	\$88,285	\$64,634	\$57,649	\$49,659	\$50,773	\$50,035	\$56,210	\$62,186
Highway, Street, and Bridge Construction	\$368,554	\$377,586	\$371,265	\$329,322	\$333,364	\$324,640	\$346,385	\$381,040	\$439,361	\$467,819
Other Heavy Construction	\$120,815	\$149,494	\$178,007	\$137,072	\$78,140	\$93,351	\$103,465	\$136,405	\$122,769	\$148,038
<b>Specialty Trade Contractors</b>	\$4,326,118	\$4,575,963	\$4,614,887	\$3,771,440	\$3,329,911	\$3,262,086	\$3,498,989	\$3,867,397	\$4,532,238	\$4,926,175
Building Foundation and Exterior Contractors	\$919,326	\$980,602	\$952,180	\$740,820	\$636,379	\$601,471	\$656,668	\$736,717	\$871,168	\$973,409
Building Equipment Contractors*, **	\$1,854,314	\$1,991,874	\$2,072,067	\$1,847,151	\$1,643,711	\$1,646,984	\$1,743,928	\$1,890,211	\$2,187,981	\$2,378,587
Building Finishing Contractors	\$838,754	\$860,254	\$844,245	\$643,638	\$549,570	\$513,585	\$562,573	\$626,016	\$736,272	\$800,415
Other Specialty Trade Contractors	\$713,724	\$743,233	\$746,395	\$539,831	\$500,251	\$500,046	\$535,820	\$614,453	\$736,817	\$773,764
<b>Total Construction Industry</b>	<b>\$7,245,578</b>	<b>\$7,639,275</b>	<b>\$7,724,390</b>	<b>\$6,265,032</b>	<b>\$5,505,346</b>	<b>\$5,484,646</b>	<b>\$5,805,216</b>	<b>\$6,514,417</b>	<b>\$7,628,035</b>	<b>\$8,224,712</b>

<b>Selected NAICS Comparison Industries</b>										
Manufacturing	\$8,181,712	\$8,345,550	\$8,407,816	\$7,521,750	\$7,533,772	\$7,964,927	\$8,214,567	\$8,277,436	\$8,876,464	\$9,361,858
Retail Trade	\$6,422,307	\$6,741,880	\$6,751,959	\$6,364,177	\$6,349,723	\$6,506,801	\$6,783,245	\$7,018,399	\$7,418,028	\$7,908,782
Finance and Insurance	\$7,098,403	\$7,434,579	\$7,398,019	\$6,935,548	\$7,014,905	\$7,286,716	\$7,744,142	\$8,172,075	\$8,593,721	\$9,358,814
Real Estate and Rental and Leasing	\$1,959,018	\$2,067,766	\$1,950,441	\$1,754,144	\$1,730,805	\$1,808,983	\$1,966,451	\$2,103,774	\$2,249,717	\$2,490,887
Professional and Technical Services	\$11,662,107	\$12,880,922	\$13,568,211	\$13,157,951	\$13,337,392	\$14,004,598	\$14,990,011	\$16,036,189	\$17,136,517	\$18,181,218
Healthcare and Social Assistance	\$8,137,599	\$8,801,919	\$9,469,348	\$9,997,042	\$10,291,634	\$10,762,466	\$11,286,332	\$11,506,950	\$12,231,857	\$13,255,801
All Other Industries	\$31,846,153	\$34,377,634	\$35,525,541	\$33,635,630	\$34,588,326	\$36,786,570	\$39,543,719	\$40,195,737	\$43,552,747	\$45,575,431
<b>Total for All Industries</b>	<b>\$82,552,877</b>	<b>\$88,289,525</b>	<b>\$90,795,725</b>	<b>\$85,631,274</b>	<b>\$86,351,903</b>	<b>\$90,605,707</b>	<b>\$96,333,683</b>	<b>\$99,824,977</b>	<b>\$107,687,086</b>	<b>\$114,357,503</b>

\* MEP Contractors

\*\* Additional detail provided on the following page

Source: US Department of Labor - Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

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APPENDIX E (Continued)

Total Payroll for Construction and Comparison Industries in Colorado (in 000's), 2006-2015

Continued from page 57

<b>MACIS Building Equipment Contractors* Subsectors</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Electrical and Wiring Contractors</b>										
Residential Electrical Contractors	\$317,366	\$328,153	\$342,767	\$286,496	\$253,758	\$254,091	\$264,721	\$277,364	\$316,095	\$355,973
Non-Residential Electrical Contractors	\$538,479	\$610,860	\$634,365	\$590,955	\$538,436	\$543,853	\$568,810	\$611,759	\$707,173	\$774,720
<b>Electrical and Wiring Contractors Total</b>	<b>\$855,845</b>	<b>\$939,013</b>	<b>\$977,132</b>	<b>\$877,451</b>	<b>\$792,194</b>	<b>\$797,944</b>	<b>\$833,531</b>	<b>\$889,123</b>	<b>\$1,023,268</b>	<b>\$1,130,693</b>
<b>Plumbing and HVAC Contractors</b>										
Residential Plumbing and HVAC Contractors	\$457,916	\$464,601	\$449,886	\$367,623	\$333,621	\$331,852	\$366,684	\$407,168	\$460,941	\$507,648
Non-Residential Plumbing and HVAC Contractors	\$445,072	\$490,819	\$536,016	\$498,638	\$423,771	\$419,741	\$445,162	\$488,740	\$576,949	\$605,720
<b>Plumbing and HVAC Contractors Total</b>	<b>\$902,988</b>	<b>\$955,420</b>	<b>\$985,902</b>	<b>\$866,261</b>	<b>\$757,392</b>	<b>\$751,593</b>	<b>\$811,846</b>	<b>\$895,908</b>	<b>\$1,037,890</b>	<b>\$1,113,368</b>

\* MEP Contractors

Source: US Department of Labor - Bureau of Labor Statistics website on Quarterly Census of Employment and Wages. Retrieved October, 2016.

**APPENDIX F**  
**Occupational Employment Projections in Colorado, 2015-2025**

<b>Occupation Code (SOC)</b>	<b>Occupational Title</b>	<b>2015 Estimated Employment</b>	<b>2018 Projected Employment</b>	<b>2025 Projected Employment</b>	<b>Total 2015-2025 Employment Change</b>	<b>Annual Avg. Percent Change from 2015</b>	<b>Total Percent Change from 2015</b>
472011	Boilermakers	53	59	64	11	1.9%	20.8%
472021	Brickmasons and Blockmasons	1,301	1,581	2,084	783	4.8%	60.2%
472031	Carpenters	11,788	13,821	15,728	3,940	2.9%	33.4%
472041	Carpet Installers	222	256	273	51	2.1%	23.0%
472051	Cement Masons and Concrete Finishers	4,559	5,375	6,521	1,962	3.6%	43.0%
474011	Construction and Building Inspectors	120	136	154	34	2.5%	28.3%
470000	Construction and Extraction	95,569	112,082	133,450	37,881	3.4%	39.6%
474099	Construction and Related Workers, All Other	777	916	1,059	282	3.1%	36.3%
472061	Construction Laborers	15,830	18,424	22,036	6,206	3.4%	39.2%
472000	Construction Trades Workers	81,730	95,882	114,483	32,753	3.4%	40.1%
472081	Drywall and Ceiling Tile Installers	2,587	3,031	3,453	866	2.9%	33.5%
475021	Earth Drillers, Except Oil and Gas	335	382	446	111	2.9%	33.1%
472111	Electricians	13,699	16,386	20,614	6,915	4.2%	50.5%
474021	Elevator Installers and Repairers	334	397	483	149	3.8%	44.6%
475000	Extraction Workers	556	641	752	196	3.1%	35.3%
474031	Fence Erectors	415	490	575	160	3.3%	38.6%
472042	Floor Layers, Except Carpet, Wood, and Hard Tiles	88	106	133	45	4.2%	51.1%
472043	Floor Sanders and Finishers	112	131	153	41	3.2%	36.6%
472121	Glaziers	670	784	890	220	2.9%	32.8%
474041	Hazardous Materials Removal Workers	***	***	***	***	***	***
499021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	3,895	4,680	5,910	2,015	4.3%	51.7%
473000	Helpers, Construction Trades	1,552	1,848	2,270	718	3.9%	46.3%
473019	Helpers, Construction Trades, All Other	***	***	***	***	***	***
473011	Helpers—Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	295	357	463	168	4.6%	56.9%
473012	Helpers—Carpenters	203	238	267	64	2.8%	31.5%
473013	Helpers—Electricians	422	506	637	215	4.2%	50.9%
475081	Helpers—Extraction Workers	***	***	***	***	***	***
473014	Helpers—Painters, Paperhangers, Plasterers, and Stucco Masons	***	***	***	***	***	***
473015	Helpers—Pipelayers, Plumbers, Pipefitters, and Steamfitters	354	416	501	147	3.5%	41.5%
473016	Helpers—Roofers	177	211	260	83	3.9%	46.9%
474051	Highway Maintenance Workers	107	113	123	16	1.4%	15.0%
472131	Insulation Workers, Floor, Ceiling, and Wall	631	741	849	218	3.0%	34.5%
472132	Insulation Workers, Mechanical	1,084	1,306	1,675	591	4.4%	54.5%
472073	Operating Engineers and Other Construction Equipment Operators	6,915	7,878	9,171	2,256	2.9%	32.6%

*Continues on page 60*

**APPENDIX F (Continued)**  
**Occupational Employment Projections in Colorado, 2015-2025**

*Continued from page 59*

<b>Occupation Code (SOC)</b>	<b>Occupational Title</b>	<b>2015 Estimated Employment</b>	<b>2018 Projected Employment</b>	<b>2025 Projected Employment</b>	<b>Total 2015-2025 Employment Change</b>	<b>Annual Avg. Percent Change from 2015</b>	<b>Total Percent Change from 2015</b>
474000	Other Construction and Related Workers	1,992	2,331	2,725	733	3.2%	36.8%
472141	Painters, Construction and Maintenance	3,453	4,060	4,795	1,342	3.3%	38.9%
472142	Paperhangers	***	***	***	***	***	***
472071	Paving, Surfacing, and Tamping Equipment Operators	1,680	1,829	2,035	355	1.9%	21.1%
472072	Pile-Driver Operators	***	***	***	***	***	***
472151	Pipelayers	939	1,053	1,212	273	2.6%	29.1%
472161	Plasterers and Stucco Masons	587	691	806	219	3.2%	37.3%
472152	Plumbers, Pipefitters, and Steamfitters	7,290	8,622	10,404	3,114	3.6%	42.7%
474061	Rail-Track Laying and Maintenance Equipment Operators	***	***	***	***	***	***
472171	Reinforcing Iron and Rebar Workers	233	282	371	138	4.8%	59.2%
472181	Roofers	2,706	3,226	3,932	1,226	3.8%	45.3%
475012	Rotary Drill Operators, Oil and Gas	***	***	***	***	***	***
475071	Roustabouts, Oil and Gas	***	***	***	***	***	***
474091	Segmental Pavers	***	***	***	***	***	***
474071	Septic Tank Servicers and Sewer Pipe Cleaners	***	***	***	***	***	***
472211	Sheet Metal Workers	3,109	3,666	4,293	1,184	3.3%	38.1%
472231	Solar Photovoltaic Installers	***	***	***	***	***	***
472022	Stonemasons	306	368	472	166	4.4%	54.2%
472221	Structural Iron and Steel Workers	826	956	1,061	235	2.5%	28.5%
471000	Supervisors, Construction and Extraction Workers	9,739	11,380	13,220	3,481	3.1%	35.7%
472082	Tapers	432	507	578	146	3.0%	33.8%
472044	Tile and Marble Setters	525	619	725	200	3.3%	38.1%
514121	Welders, Cutters, Solderers, and Brazers	1,605	1,828	2,115	510	2.8%	31.8%

\*\*\* Information not available.

Source: Colorado Department of Labor and Employment's Labor Market Information Report. Retrieved October, 2016.



**APPENDIX G**  
**Colorado Gross Domestic Product by State, 2006-2015 (millions of current dollars)**

Industry Name	2006		2007		2008		2009		2010	
	% of Total GDP		% of Total GDP		% of Total GDP		% of Total GDP		% of Total GDP	
<b>All industry total</b>	<b>233,142</b>	<b>100.00%</b>	<b>245,169</b>	<b>100.00%</b>	<b>255,213</b>	<b>100.00%</b>	<b>250,082</b>	<b>100.00%</b>	<b>258,148</b>	<b>100.00%</b>
<b>Private industries</b>										
Agriculture, forestry, fishing, and hunting	203,615	87.34%	215,258	87.80%	223,263	87.48%	217,093	86.81%	223,984	86.77%
Mining	2,021	0.87%	2,365	0.96%	2,145	0.84%	1,965	0.79%	2,403	0.93%
Utilities	10,969	4.70%	11,289	4.60%	16,399	6.43%	11,356	4.54%	12,874	4.99%
Construction	3,061	1.31%	2,827	1.15%	3,002	1.18%	3,113	1.24%	3,626	1.40%
Manufacturing	13,860	5.94%	14,266	5.82%	13,345	5.23%	11,573	4.63%	10,212	3.96%
Wholesale trade	18,035	7.74%	19,184	7.82%	18,849	7.39%	19,507	7.80%	19,702	7.63%
Retail trade	12,689	5.44%	13,813	5.63%	14,286	5.60%	13,354	5.34%	13,826	5.36%
Transportation and warehousing	14,183	6.08%	14,494	5.91%	14,363	5.63%	14,102	5.64%	14,479	5.61%
Information	6,135	2.63%	6,417	2.62%	6,652	2.61%	6,379	2.55%	6,874	2.66%
Finance and insurance	19,113	8.20%	20,487	8.36%	21,240	8.32%	21,207	8.48%	21,766	8.43%
Real estate and rental and leasing	13,632	5.85%	14,132	5.76%	11,945	4.68%	13,115	5.24%	12,954	5.02%
Professional, scientific, and technical services	29,863	12.81%	31,474	12.84%	33,172	13.00%	33,682	13.47%	35,019	13.57%
Management of companies and enterprises	19,192	8.23%	20,934	8.54%	22,711	8.90%	22,086	8.83%	22,547	8.73%
Administrative and waste management services	4,013	1.72%	4,546	1.85%	4,407	1.73%	4,647	1.86%	5,089	1.97%
Educational services	7,222	3.10%	7,823	3.19%	8,056	3.16%	7,542	3.02%	7,772	3.01%
Health care and social assistance	1,531	0.66%	1,616	0.66%	1,746	0.68%	1,873	0.75%	1,994	0.77%
Arts, entertainment, and recreation	12,280	5.27%	13,004	5.30%	14,094	5.52%	15,125	6.05%	15,593	6.04%
Accommodation and food services	2,789	1.20%	2,951	1.20%	2,965	1.16%	2,932	1.17%	3,332	1.29%
Other services, except government	7,407	3.18%	7,876	3.21%	7,993	3.13%	7,626	3.05%	7,913	3.07%
<b>Government</b>	<b>5,621</b>	<b>2.41%</b>	<b>5,759</b>	<b>2.35%</b>	<b>5,892</b>	<b>2.31%</b>	<b>5,909</b>	<b>2.36%</b>	<b>6,008</b>	<b>2.33%</b>
	29,527	12.66%	29,912	12.20%	31,950	12.52%	32,989	13.19%	34,164	13.23%

Source: U.S. Bureau of Economic Analysis, Regional Product Division -- 14 June 2016 Gross Domestic Product by State (millions of current dollars). Retrieved October, 2016.

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**APPENDIX G (Continued)**  
**Colorado Gross Domestic Product by State, 2006-2015 (millions of current dollars)**

Continued from page 61

Industry Name	2011		2012		2013		2014		2015	
	% of Total GDP		% of Total GDP		% of Total GDP		% of Total GDP		% of Total GDP	
<b>All industry total</b>	<b>266,796</b>	<b>100.00%</b>	<b>277,647</b>	<b>100.00%</b>	<b>288,809</b>	<b>100.00%</b>	<b>305,367</b>	<b>100.00%</b>	<b>314,878</b>	<b>100.00%</b>
<b>Private industries</b>	<b>232,398</b>	<b>87.11%</b>	<b>242,674</b>	<b>87.40%</b>	<b>253,135</b>	<b>87.65%</b>	<b>268,398</b>	<b>87.89%</b>	<b>276,752</b>	<b>87.89%</b>
Agriculture, forestry, fishing, and hunting	2,991	1.12%	2,501	0.90%	2,727	0.94%	2,832	0.93%	2,518	0.80%
Mining	15,086	5.65%	14,217	5.12%	15,690	5.43%	18,274	5.98%	12,062	3.83%
Utilities	3,892	1.46%	4,107	1.48%	3,905	1.35%	4,039	1.32%	4,113	1.31%
Construction	9,989	3.74%	10,631	3.83%	12,026	4.16%	13,579	4.45%	14,503	4.61%
Manufacturing	20,099	7.53%	20,678	7.45%	20,908	7.24%	21,873	7.16%	22,981	7.30%
Wholesale trade	14,231	5.33%	15,264	5.50%	16,081	5.57%	17,119	5.61%	17,969	5.71%
Retail trade	14,665	5.50%	15,374	5.54%	15,959	5.53%	16,619	5.44%	17,677	5.61%
Transportation and warehousing	6,952	2.61%	7,700	2.77%	8,550	2.96%	9,153	3.00%	9,523	3.02%
Information	21,381	8.01%	21,132	7.61%	22,566	7.81%	23,676	7.75%	23,789	7.55%
Finance and insurance	14,086	5.28%	16,560	5.96%	16,818	5.82%	16,592	5.43%	17,827	5.66%
Real estate and rental and leasing	36,595	13.72%	37,507	13.51%	38,987	13.50%	40,934	13.40%	44,167	14.03%
Professional, scientific, and technical services	23,220	8.70%	24,387	8.78%	25,347	8.78%	26,771	8.77%	28,185	8.95%
Management of companies and enterprises	5,352	2.01%	6,480	2.33%	5,982	2.07%	6,442	2.11%	7,125	2.26%
Administrative and waste management services	7,950	2.98%	8,530	3.07%	8,544	2.96%	9,183	3.01%	9,867	3.13%
Educational services	2,057	0.77%	2,172	0.78%	2,208	0.76%	2,275	0.75%	2,347	0.75%
Health care and social assistance	15,995	6.00%	16,736	6.03%	17,239	5.97%	18,156	5.95%	19,649	6.24%
Arts, entertainment, and recreation	3,487	1.31%	3,569	1.29%	3,795	1.31%	4,043	1.32%	4,347	1.38%
Accommodation and food services	8,333	3.12%	8,810	3.17%	9,294	3.22%	9,947	3.26%	10,792	3.43%
Other services, except government	6,037	2.26%	6,318	2.28%	6,509	2.25%	6,890	2.26%	7,313	2.32%
<b>Government</b>	<b>34,399</b>	<b>12.89%</b>	<b>34,973</b>	<b>12.60%</b>	<b>35,674</b>	<b>12.35%</b>	<b>36,969</b>	<b>12.11%</b>	<b>38,126</b>	<b>12.11%</b>

Source: U.S. Bureau of Economic Analysis, Regional Product Division -- 14 June 2016 Gross Domestic Product by State (millions of current dollars), Retrieved October, 2016.

**APPENDIX H**  
**Percent Change in GDP by State from Preceding Year**

<b>Industry</b>	<b>2006-2007</b>	<b>2007-2008</b>	<b>2008-2009</b>	<b>2009-2010</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>	<b>2013-2014</b>	<b>2014-2015</b>
<b>All industry total</b>	<b>5.16%</b>	<b>4.10%</b>	<b>-2.01%</b>	<b>3.23%</b>	<b>3.35%</b>	<b>4.07%</b>	<b>4.02%</b>	<b>5.73%</b>	<b>3.11%</b>
<b>Private industries</b>									
Agriculture, forestry, fishing, and hunting	17.02%	-9.30%	-8.39%	22.29%	24.47%	-16.38%	9.04%	3.85%	-11.09%
Mining	2.92%	45.27%	-30.75%	13.37%	17.18%	-5.76%	10.36%	16.47%	-33.99%
Utilities	-7.64%	6.19%	3.70%	16.48%	7.34%	5.52%	-4.92%	3.43%	1.83%
Construction	2.93%	-6.46%	-13.28%	-11.76%	-2.18%	6.43%	13.12%	12.91%	6.80%
Manufacturing	6.37%	-1.75%	3.49%	1.00%	2.02%	2.88%	1.11%	4.62%	5.07%
Wholesale trade	8.86%	3.42%	-6.52%	3.53%	2.93%	7.26%	5.35%	6.45%	4.97%
Retail trade	2.19%	-0.90%	-1.82%	2.67%	1.28%	4.83%	3.81%	4.14%	6.37%
Transportation and warehousing	4.60%	3.66%	-4.10%	7.76%	1.13%	10.76%	11.04%	7.05%	4.04%
Information	7.19%	3.68%	-0.16%	2.64%	-1.77%	-1.16%	6.79%	4.92%	0.48%
Finance and insurance	3.67%	-15.48%	9.79%	-1.23%	8.74%	17.56%	1.56%	-1.34%	7.44%
Real estate and rental and leasing	5.39%	5.39%	1.54%	3.97%	4.50%	2.49%	3.95%	4.99%	7.90%
Professional, scientific, and technical services	9.08%	8.49%	-2.75%	2.09%	2.98%	5.03%	3.94%	5.62%	5.28%
Management of companies and enterprises	13.28%	-3.06%	5.45%	9.51%	5.17%	21.08%	-7.69%	7.69%	10.60%
Administrative and waste management services	8.32%	2.98%	-6.38%	3.05%	2.29%	7.30%	0.16%	7.48%	7.45%
Educational services	5.55%	8.04%	7.27%	6.46%	3.16%	5.59%	1.66%	3.03%	3.16%
Health care and social assistance	5.90%	8.38%	7.32%	3.09%	2.58%	4.63%	3.01%	5.32%	8.22%
Arts, entertainment, and recreation	5.81%	0.47%	-1.11%	13.64%	4.65%	2.35%	6.33%	6.53%	7.52%
Accommodation and food services	6.33%	1.49%	-4.59%	3.76%	5.31%	5.72%	5.49%	7.03%	8.50%
Other services, except government	2.46%	2.31%	0.29%	1.68%	0.48%	4.65%	3.02%	5.85%	6.14%
<b>Government</b>	<b>1.30%</b>	<b>6.81%</b>	<b>3.25%</b>	<b>3.56%</b>	<b>0.69%</b>	<b>1.67%</b>	<b>2.00%</b>	<b>3.63%</b>	<b>3.13%</b>

Source: U.S. Bureau of Economic Analysis, Regional Product Division. Retrieved October, 2016.  
Note: NAICS Industry detail is based on the 2007 North American Industry Classification System (NAICS)

**APPENDIX I**  
**Industries Related to Construction**

<b>2012 NAICS Codes</b>	
212321	Construction Sand and Gravel Mining
236115	New Single-Family Housing Construction (except For-Sale Builders)
236116	New Multifamily Housing Construction (except For-Sale Builders)
236117	New Housing For-Sale Builders
236118	Residential Remodelers
236210	Industrial Building Construction
236220	Commercial and Institutional Building Construction
237110	Water and Sewer Line and Related Structures Construction
237120	Oil and Gas Pipeline and Related Structures Construction
237130	Power and Communication Line and Related Structures Construction
237210	Land Subdivision
237310	Highway, Street, and Bridge Construction
237990	Other Heavy and Civil Engineering Construction
238110	Poured Concrete Foundation and Structure Contractors
238120	Structural Steel and Precast Concrete Contractors
238130	Framing Contractors
238140	Masonry Contractors
238150	Glass and Glazing Contractors
238160	Roofing Contractors
238170	Siding Contractors
238190	Other Foundation, Structure, and Building Exterior Contractors
238210	Electrical Contractors and Other Wiring Installation Contractors
238220	Plumbing, Heating, and Air-Conditioning Contractors
238290	Other Building Equipment Contractors
238310	Drywall and Insulation Contractors
238320	Painting and Wall Covering Contractors
238330	Flooring Contractors
238340	Tile and Terrazzo Contractors
238350	Finish Carpentry Contractors
238390	Other Building Finishing Contractors
238910	Site Preparation Contractors
238990	All Other Specialty Trade Contractors

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<b>2012 NAICS Codes</b>	
327120	Clay Building Material and Refractories Manufacturing
327310	Cement Manufacturing
327320	Ready-Mix Concrete Manufacturing
327331	Concrete Block and Brick Manufacturing
327332	Concrete Pipe Manufacturing
327390	Other Concrete Product Manufacturing
327410	Lime Manufacturing
327420	Gypsum Product Manufacturing
327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing
423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers
423320	Brick, Stone, and Related Construction Material Merchant Wholesalers
423330	Roofing, Siding, and Insulation Material Merchant Wholesalers
423390	Other Construction Material Merchant Wholesalers
423710	Hardware Merchant Wholesalers
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers
423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers
423740	Refrigeration Equipment and Supplies Merchant Wholesalers
444110	Home Centers
444130	Hardware Stores
444190	Other Building Material Dealers
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing
541310	Architectural Services
541320	Landscape Architectural Services
541330	Engineering Services
541340	Drafting Services
541360	Geophysical Surveying and Mapping Services
541370	Surveying and Mapping (except Geophysical) Services

