



**INSIGHT**

CENTER FOR COMMUNITY  
ECONOMIC DEVELOPMENT



**NNSP** National Network of Sector Partners  
Linking Industries, Communities and Workers

# Colorado Construction Sector Workforce Needs Study

June 2008

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# Study Background

## Insight Center for Community Economic Development

The Insight Center for Community Economic Development, formerly the National Economic Development and Law Center (NEDLC), is a national research, consulting and legal organization dedicated to building economic health in vulnerable communities. The Insight Center's multidisciplinary approach utilizes a wide array of community economic development strategies including industry-focused workforce development, individual and community asset building, establishing the link between early care and education and economic development, and advocating for the adoption of the Self-Sufficiency Standard as a measurement of wage adequacy and an alternative to the Federal Poverty Line.

## National Network of Sector Partners (NNSP)

The National Network of Sector Partners was founded in 1999 as a project of the Insight Center. NNSP is a national membership-based organization that provides information and resources to the sector field. Membership includes sector program leaders, policy makers, funders, researchers, and supporters. Its mission is to encourage the use of sector initiatives as valuable tools for enhancing employment and economic-development opportunities for low-income individuals, families, and communities. The goals of NNSP are to:

- Expand the commitment of public and private resources to industry-specific workforce development
- Raise awareness about the benefits of sector initiatives
- Increase the quality, capacity, and number of sector initiatives
- Achieve the enactment of supportive public policy
- Provide information and resources to those working in the sector field

NNSP is guided by a National Advisory Committee of sector initiative leaders, national organization representatives, business and labor leaders, and funders.

## About the Author

Ravi Mangat is a program manager at NNSP and the Insight Center. He has recently published a profile on the state of the sector initiative field nationally, and a white paper highlighting examples of successful sector strategies implemented at the state level in southern states.

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## Introduction

The construction sector faces enormous challenges in Colorado and across the country. The state is anticipating serious skills shortages in the sector, and this trend is likely to be further strained by the Regional Transportation District's FasTracks project. This project is an ambitious and far-sighted transit project which will significantly increase public transit connectivity across the entire metro Denver area.

Implementing successful workforce development interventions to breach this skills gap requires comprehensive research which in turn increases the effectiveness of targeted programs. Sector initiatives are examples of workforce development programs that work at a regional level. They incorporate an industry-focused approach to regional workforce and economic development, and therefore provide an effective means of tackling critical skills shortages.

The first section of the report profiles the local construction industry from a workforce and labor demand perspective. It starts by identifying the number of jobs forecast to be created by the Regional Transit District's extensive FasTracks program (centered in Denver and extending to the Metro-Denver area) and a list of occupations needed for the various projects. The section continues by analyzing labor market information to identify how many new jobs are projected in the construction industry as a whole in the Denver metro area, and highlights occupations that will be most in demand. Finally, it includes an analysis of whether the new jobs meet sector initiative criteria - paying wages that allow individuals to become self sufficient, and directly linking to career pathways into better quality jobs.

Section II identifies labor supply issues, including challenges with increasing the worker pipeline into the industry. This section includes a general description of pathways for new entrants into the industry, focusing mainly on attainment of entry level positions.

Section III describes in more detail what constitutes a sector initiative including their key characteristics, their results (and how those results are produced), and case studies of how sector initiatives have created systems change.

Section IV briefly outlines what elements go into designing an effective sector initiative and what factors determine their successful outcomes.

The final section concludes by initiating a discussion of the implications of the labor market analysis for local policymaking and developing construction sector initiatives.

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## Section I

# Industry Context in Colorado - Demand for Construction Workers

### Study area and time horizon

Within the construction industry in Colorado it is clear that, in the next ten years, there will be a “mini explosion” of jobs created within the transit construction area. The majority of these jobs will be generated by the Regional Transportation District’s (RTD) FasTracks transit development program, which is centered in the Metro Denver area, and the Denver-Aurora Metropolitan Statistical Area (MSA) is the study area for this report. The initial time horizon for this project, in terms of constructing the various transit corridors, is 2008 to 2017, with an acceleration of activity from 2010. Therefore, this study is concentrated on the short to long term (two to ten years) as opposed to immediate labor needs of the Denver-Aurora metropolitan area. This extensive transit program will generate significant demand for construction workers.<sup>1</sup>

### FasTracks

#### FasTracks projects

FasTracks is a \$4.7 billion effort to build 119 miles of new commuter and light rail, 18 miles of bus rapid transit, development of a major multi-modal central station for the system, development of many transit stations, and addition of more than 21,000 parking spaces. The program comprises six completely new rapid transit corridors and three extensions of existing corridors as well as a significantly expanded bus network that will feature more Bus Rapid Transit (BRT) vehicles. The program will also include three new maintenance facilities for commuter rail, light rail and buses. Planning for FasTracks started in 2005. Construction has recently begun on one of the corridors, and the bulk of it is scheduled to be completed between 2008-2016.

#### FasTracks job forecasts

Detailed local research has been conducted to forecast the jobs that will be created by the FasTracks project. According to an impact study<sup>2</sup> commissioned by the Metro Denver Economic Development Corporation (MDEDC) and Denver Metro Chamber of Commerce (MDCC), the 12-year design and construction period of FasTracks will create an average of 2,413 construction jobs annually. During the four peak years of construction activity (2011-2014) this number will increase to an average of 4,000

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<sup>1</sup> As corridors are completed there will also be a demand for drivers and staff to operate and maintain the stations. Also maintenance of: the track, necessary signals, power lines and all other associated network infrastructure, as well as buses and trains.

<sup>2</sup> Metro Denver Economic Development Corporation & Denver Metro Chamber of Commerce, The Impact of FasTracks On The Metro Denver Economy (2004)

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construction jobs per year. To emphasize the scale of construction, RTD has recently estimated that FasTracks is likely to create around 10,000 construction-related jobs during the construction peak period of 2011-12, when all the corridors are in some form of construction at the same time.

According to the impact study the FasTracks funding will pay construction workers almost \$1.2 billion dollars throughout the design and construction period. Clearly, the FasTracks program presents an opportunity to train workers to enter the construction industry, and a challenge to meet the labor demands of the projects.

### Types of construction workers needed to build FasTracks

Contractors Herzog and Stacy Witbeck formed a partnership to construct the West Corridor of the project, the first corridor to begin construction, and they started building earlier this year. According to the partnership, in terms of the workforce needed to construct the transit network, this involves around 75% civil construction trades and 25% of workers in other trades such as specialty electrical and building trades.

Demand for labor will be generated by the various construction phases involved in building the transit routes, stations and associated infrastructure. The section below describes the type of labor needed in the construction phase.

### Field construction occupations

In general, most of the tasks will be conducted by teams of contractors (laborers, foreman, superintendent, project manager, etc.) with different responsibilities. A significant proportion of the work is likely to be completed by general civil (including landscaping) and building contractors but specialty contractors will be required for some of the tasks such as power systems, signal work and track work.

In terms of field construction a light rail project typically follows a progression of the following activities.

- a. *Utility relocation*: civil contractors are required that have experience in the following areas - excavation, trucking, grading, underground work, and electrical/gas.
- b. *Roadway/Structure Preparation*: - grading, sidewalk construction (grading, concrete finishing, etc.), asphalt work, traffic signals (excavation, conduit, wire, etc.), street lighting, iron and bridge workers for bridges and tunnels (pile driving, steel fabricators, structure, etc.).
- c. *Track Laying*: grading, civil (including roadway conforms), welding and track work.
- d. *Power Systems*: light rail systems are powered by Overhead Catenary Systems (OCS). Specialty contractors are needed in OCS/Traction Power, general electrical, and foundations and traction power (specialty).
- e. *Signaling/Communications*: excavation/underground work, electrical, track signals and foundations.

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- f. *Landscaping*: contractors required with experience in planting and irrigation
  - g. *Station Finishes*: fabrication, structural, welding, painting, carpentry, specialty concrete (paving), lighting, architectural finishes (tiling, glazing, erecting railings, etc.) and elevator specialists

A similar set of tasks and associated occupations would be required for the commuter rail and bus routes although less specialized power systems are required.

### *Non-construction workers (permanent jobs)*

Although the main focus of this report is construction workers, it is worth noting that workers from the following additional occupations will be needed once the transit corridors are open to the public.

- a. *Station staff*: RTD transit workers to manage stations; and facilities management staff (e.g. maintenance of ticket machines, barriers, elevators, and other electrical, cleaning and building maintenance).
- b. Maintenance of track, associated infrastructure, and cars: occupations needed are similar to many of the areas noted above in the field construction section, these include general civil contractors, track laying specialists, OCS and traction power specialists, signaling specialists, communications specialists, and landscapers.
- c. Bus and train drivers.

## Projected jobs across construction industry as a whole

### *Methodology*

The occupational projections shown in table 1 are sourced from the State of Colorado Department of Labor & Employment's Labor Market Information (LMI) Gateway. Occupations are derived from the Standard Occupational Classification (SOC) codes, which look at particular jobs, as opposed to particular industries. The SOC codes are hierarchical with two digits representing the broad occupational category and six digits the set of individual occupations. The LMI data displayed in table 1 shows occupations at the six digit level.

Utilizing the SOC, a set of individual occupations was derived from an overarching grouping of broad occupation categories<sup>3</sup>. The broad categories were selected because they contain occupations relevant to the construction industry. The list of individual occupations was then sorted according to those with the highest projected number of new jobs by 2015. In other words, Table 1 shows the occupations where new jobs in the construction industry will be most concentrated. Demand for skills in these occupations will be most sought after in the period up to 2015.

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<sup>3</sup> The overall list of two digit SOCs: 47 Construction & Extraction Occupations; 53 Transportation and Material Moving Occupations; 37 Building and Grounds Cleaning and Maintenance Occupations; 49 Installation, Maintenance, and Repair Occupations; 17 Architecture and Engineering Occupations; 11 Management Occupations

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## Projected jobs

LMI projections, which are based on current employer surveys and historical data, confirm that there will be a large number of new jobs created in the construction industry in the period leading up to 2015. The two most relevant (SOC) broad level occupational groupings to the construction industry are *Construction & Extraction Occupations*, and, *Transportation and Material Moving Occupations*. Combined Jobs in these construction related classifications are projected to increase by almost 40% in 2015. Additional positions in these two SOCs alone will aggregate to **over 60,000 new jobs** that will need to be filled by 2015.

It is clear that, in general, there will be major demands for new workers in the construction industry in the metro Denver region. These job openings, at least in the next year, are unlikely to be generated within the residential construction market and therefore the data implies that much of the new labor demand is being driven by civil projects such as FasTracks.

Investigating in more depth individual occupations in the construction sector, it is noteworthy that the types of jobs being created are at all skill levels, from helpers to laborers, first line supervisors and construction managers. Rapid expansion is also occurring right across the construction sector, from civil to building trades, as well as associated trades such as landscaping and trucking. The LMI data strongly signals that this industry offers abundant career pathway opportunities from lesser skilled work into better paid positions, and therefore meets one of the main criteria of implementing a successful sector initiative (see Table 1).

**Table 1: High demand occupations in construction sector**

SOC Code	Occupational Title	2005 Estimated Employment	2015 Projected Employment	Total 2005-2015 Employment Change
<b>2 digit</b>				
47	Construction and Extraction Occupations	83,298	124,555	<b>41,257</b>
53	Transportation and Material Moving Occupations	82,627	102,550	<b>19,923</b>
<b>6 digit</b>				
373011	Landscaping and Groundskeeping Workers	13,683	19,687	<b>6,004</b>
472061	Construction Laborers	12,210	17,014	<b>4,804</b>
472031	Carpenters	11,218	15,803	<b>4,585</b>
472111	Electricians	7,572	12,102	<b>4,530</b>
537062	Laborers and Freight, Stock, and Material Movers, Hand	16,329	20,184	<b>3,855</b>
471011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	9,018	12,759	<b>3,741</b>
472152	Plumbers, pipefitters and steamfitters	5,747	9,492	<b>3,745</b>
533032	Truck Drivers, Heavy and Tractor-Trailer	13,831	16,767	<b>2,936</b>
499042	Maintenance and Repair Workers, General	9,393	11,977	<b>2,584</b>
472141	Painters, Construction and Maintenance	4,674	7,151	<b>2,477</b>
119021	Construction Managers	7,529	9,751	<b>2,222</b>
472081	Drywall and Ceiling Tile Installers	4,212	6,393	<b>2,181</b>
472051	Cement Masons and Concrete Finishers	3,692	5,757	<b>2,065</b>
472073	Operating Engineers and Other Construction Equipment Operators	3,554	5,451	<b>1,897</b>
473000	Helpers, Construction Trades, Drafters, Engineering, and Mapping	2,403	3,707	<b>1,304</b>
472121	Glaziers	1,660	2,564	<b>904</b>
472211	Sheet Metal Workers	1,608	2,477	<b>869</b>
472021	Brickmasons and Blockmasons	1,260	1,984	<b>724</b>

Source: Colorado Department of Labor & Employment LMI Gateway (accessed May 25, 2008)

### Wages and economic self sufficiency

Table 2 shows a typical set of occupations across both civil and building construction trades, and the associated median wages of each occupation. Also, included in the table are the self sufficiency wages needed for three different family types<sup>4</sup>. The data indicates that, at the lower end of the skills scale, occupations meet most but not all the self sufficiency benchmarks, but as workers progress within the industry they quickly move

<sup>4</sup> Pearce, D. (2008) The Self-Sufficiency Standard For Colorado 2008: A Family Needs Budget, prepared for Colorado Fiscal Policy Institute by The Center for Women's Welfare at the University of Washington

into jobs which pay well above self sufficiency thresholds. This data confirms that the construction industry in Colorado has clear career pathways and pays relatively good wages, thereby meeting another criterion of a successful sector initiative.

**Table 2: Does the construction industry in Colorado pay self sufficiency wages?**

SOC	Occupation	Median hourly wage	Single Adult	Two Adults, One* Preschooler, & One School age Child	One Adult, One Preschooler
		<b>Hourly*</b>	<b>\$9.14</b>	<b>\$11.69 per adult**</b>	<b>\$16.97</b>
<b>47-0000</b>	<b>Construction and Extraction Occupations</b>	<b>\$18.04</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
47-3019	Helpers, Construction Trades, All Other	\$11.90	Yes	Yes	No
47-3102	Helper - Carpenter	\$12.95	Yes	Yes	No
47-2061	Construction Laborers	\$13.44	Yes	Yes	No
51-4121	Welders, Cutters, Solderers, and Brazers	\$16.58	Yes	Yes	No
47-2051	Cement Masons and Concrete Finishers	\$16.87	Yes	Yes	No
47-2211	Sheet Metal Workers	\$18.34	Yes	Yes	Yes
47-2031	Carpenters	\$18.61	Yes	Yes	Yes
53-7032	Excavating and Loading Machine and Dragline Operators	\$18.66	Yes	Yes	Yes
47-2071	Paving, Surfacing, and Tamping Equipment Operators	\$18.88	Yes	Yes	Yes
47-2121	Glaziers	\$19.58	Yes	Yes	Yes
47-2021	Brickmasons and Blockmasons	\$21.08	Yes	Yes	Yes
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	\$21.42	Yes	Yes	Yes
47-2111	Electricians	\$22.25	Yes	Yes	Yes
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	\$27.75	Yes	Yes	Yes
119021	Construction Managers	\$36.22	Yes	Yes	Yes

\* Pearce, D. (2008) The Self-Sufficiency Standard For Colorado 2008: A Family Needs Budget  
**Source:** Colorado Department of Labor & Employment LMI Gateway, accessed May 23, 2008

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## Section II

# Labor Supply and Construction Career Pathways in Colorado

### Can Colorado meet the demand for construction workers in-state?

Thus far this report has examined and identified the likely significant impact on labor demand that will be generated by FasTracks and other projects in the construction sector in the metropolitan Denver area. This section will focus on the labor supply to meet that demand.

According to Terry Kish, Director of Safety and Workforce Development at the Colorado Contractors Association (which represents civil contractors), Colorado is facing serious challenges with regard to plugging skill shortages and this situation is likely to worsen in the near and long term.

According to Mr. Kish, one major challenge facing the industry in Colorado, in common with most states in the country, is that of an aging skilled construction workforce. For instance, next year around 40% of members of the pipefitters union will be eligible for retirement. The skills shortages are serious and affect many of the trades and are present across all skill levels. In addition, any improvement in the residential market is likely to exacerbate the problem. Mr. Kish also commented that the industry was not training people fast enough to meet these skill shortages

The contractors Herzog and Stacy Witbeck, who are involved in building the first of the FasTracks projects - the West Corridor - are not yet far enough advanced in terms of their staffing plans to determine if labor needs will be met in-state. However, their initial expectations are that although some of their labor needs will be met in-state, assisted by contractors shifting to civil projects due to the slow down in the residential market, it is likely that they will have to go out of state to bring in skilled workers, particularly in some of the specialty trades.

However, Mr. Kish also commented on the difficulties of importing workers from other states. Previously it had been relatively easy to bring in construction labor from other states to work on projects like the Denver International Airport, but now that all states are facing construction skills shortages this will be very difficult, particularly when FasTracks enters its busiest period, between 2011 and 2014. In his opinion the only viable option is for each state to “grow their own” workforce to meet the labor demands ahead.

It is clear that Colorado will struggle to meet the demand for construction workers, from within the state, in the near to long term without intervention. Also, the tightening of the national construction labor market emphasizes the need to rapidly increase the pool of skilled workers in the state. However, in one sense Colorado is in a good position to be able to increase their labor supply - it is a ‘Merit Shop’ state, that is, the construction industry in the state is both union and non-union and therefore provides several access points for employment in the construction industry.

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According to Mr. Kish, skills are highly transferable between the transit sub-sector and other construction sectors. If there is a downturn within the transit sector, workers who have been trained to work on FasTracks will be able to apply those skills within the residential sector or other areas of the construction industry.

## Pathways into construction sector

This section describes the different ways in which workers can enter the construction industry. Specifically, those that are entirely new to the industry or those that are returning to the industry after an extended period.

### Apprenticeships

The main entry to the construction industry is via registered apprenticeships. Apprenticeships can be sponsored jointly by unions and management, or alternatively by single employers, and are approved and registered by the U. S. Department of Labor's Bureau of Apprenticeship and Training. Registered Apprenticeships ensure quality training by combining on-the-job training with theoretical and practical classroom instruction. Typical requirements to enroll in an apprenticeship are fairly minimal, including proof of age (must be of legal working age), ID documents and in some cases, depending on the trade a GED or High School Diploma and a math requirement. The example below is taken from the Denver Joint Electrical Apprenticeship Training Committee Web Site.

<p style="text-align: center;"><b>PROGRAMS:</b></p> <ol style="list-style-type: none"><li><b>1. INSIDE WIREMAN – 5 YEAR CURRICULUM CONDENSED INTO A FOUR YEAR PROGRAM.</b></li><li><b>2. RESIDENTIAL WIREMAN – 3 YEAR PROGRAM</b></li><li><b>3. VOICE DATA VIDEO TELECOMMUNICATIONS – 3 YEAR PROGRAM.</b></li></ol> <p>REQUIRED DOCUMENTATION:</p> <ul style="list-style-type: none"><li>&gt; MUST BE AT LEAST 18 YEARS OF AGE</li><li>&gt; TWO FORMS OF I.D. (DRIVER'S LICENSE, BIRTH CERTIFICATE, PASSPORT, ETC.) OFFICIAL H.S. TRANSCRIPTS</li><li>&gt; HIGH SCHOOL DIPLOMA OR G.E.D. (ONLY REQUIRED WHEN TRANSCRIPTS DO NOT HAVE A GRADUATION DATE)</li><li>&gt; ONE UNIT OF ALGEBRA</li></ul>
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### Basic construction readiness training

In addition to the registered apprenticeship programs, there are outreach and training programs aimed at increasing the number of those from minority, women, and low-income populations that enter the construction industry. These programs generally train individuals in basic construction hard skills they will need in the industry, and "life skills" such as communication with supervisors and time management; they can also involve physical conditioning training. These programs are not necessarily tied to a specific apprenticeship program but could be tied to the industry through partnerships, and their

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ultimate aim is to help graduates join and succeed in an apprenticeship program. Several examples of these programs are summarized below:

*Cypress Mandela Training Center, Oakland, California.* The Center operates a construction pre-apprenticeship training program. Courses are 16 weeks long and are full-time. Their courses are intensive in skills training which includes: applied math for construction purposes, industry skills such as introduction to cement work and steel and ironwork work, job safety and environmental training. “Soft” skills training is also included.

*Mi Casa, Denver, Colorado.* This organization operates a construction readiness program which is aimed at helping women enter careers in construction trade related careers. Training is twelve weeks long. Six weeks is spent on industry skills training, two weeks on job readiness and four weeks on job search.

### Cost of delivering construction readiness programs

Increasing the number of trained workers to enter the industry is key to meeting Colorado’s demand for construction workers, and as described above this may well require outreach and tailored training for women, minorities and low income populations. Wisconsin Regional Training Partnership and Building Industry Group Skilled Trades Employment Program (WRTP/BIGSTEP) are sector initiatives that train low-income, unemployed and young workers to enter different industries. WRTP/BIGSTEP construction program uses a benchmark of \$4,000 for supplying training to individuals and this includes placement and retention services.

The New Jersey Institute for Social Justice (NJISJ), as part of its mission to expand economic opportunities for New Jersey’s low-income population, launched a pilot pre-apprenticeship program in 2001 to train Newark residents for careers in the construction and building trades. The average cost per participant is approximately \$6,000<sup>5</sup>.

This figure is higher than the figure quoted by WRTP/BIGSTEP because the NJIST initiative provides more holistic services and stipends for participants. Although the WRTP/BIGSTEP and NJISJ curricula are basically similar, the NJISJ initiative provides:

- Greater investment in outreach, screening methods (including drug testing);
- Stipends for students of \$50 a week during the winter and spring terms and \$100 a week in the summer; also, during the summer students are provided daily free lunches in the school cafeteria;
- The program also assists graduates after they have completed the program with low-interest loans to pay expenses, including a car to get them to work and work materials (clothes, work boots, tools) they incur in order to join some of the trades unions. The loans for assistance with purchasing a car average about \$1,000 to \$1,200; and

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<sup>5</sup> An Evaluation of the Newark/Essex Construction Careers Consortium Pre-Apprenticeship Training Program, John J. Heldrich Center for Workforce Development Rutgers, The State University of New Jersey, The New Jersey Institute for Social Justice June 2007

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- The program provides students with other types of assistance; for instance disqualified drivers are assisted to have their licenses reinstated.

### Returning workers

There is a route back into the industry for people who have previous construction experience but who have not worked in the industry for a period of time. The Colorado Contractors Association provides competency testing to give credit for time spent in the industry, and this helps determine at what position workers will come back into the industry. This means that skilled former construction workers *do not* need to return to apprenticeship if they want to re-enter the industry, and instead can obtain jobs as journeymen, etc. Other organizations, such as the laborers union and operating engineers union in Colorado, also offer competency testing.

### Career pathways within the construction industry

As described above, registered apprenticeships are the main route into the industry and these are most typically accessed in union/employer association or employer sponsored programs. In terms of the career pathway in the industry, helpers are the entry level position in the industry. Helpers, as well as others, can become apprentices. After 2-5 years (that include consistent work and classroom related instruction) apprentices “turn-out” or become journeymen, which makes them eligible for hire as first line supervisors and foremen. Following two more years’ consistent work and journeymen upgrade training journeymen can become Masters, though not all trades have that category. Other career pathways for skilled tradesperson include becoming a contractor, building inspector, estimator, union representative, construction instructor, etc.

From a policy perspective, identifying the number of workers at each level is not straightforward as LMI data is not aligned to these job titles.

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## Section III

# What Are Sector Initiatives?

Sector initiatives provide an effective solution to address the challenges that this report has identified as facing the construction sector in the Denver metropolitan area. Sector initiatives are particularly effective because of their in-depth focus on strategies for workforce development, in addition to strategies to change industry practices, public policies, and the publicly funded entities with which the industry and its workers interact.

### Introduction to sector initiatives

Sector initiatives are industry-focused efforts that benefit workers; the industry in which they work; and their communities. Sector initiatives accomplish this by improving skills and employment opportunities, especially for low-income individuals, and by changing industry practices, related to public policies, and public institutions with which workers and the industry interact.

Sector initiatives create regional partnerships that work with multiple employers within an industry to articulate the specific skill and labor needs of those employers; address obstacles; and develop solutions. Sector initiatives also identify existing and potential labor pools; analyze and overcome barriers to employment in good jobs; and provide workers with enhanced training and employment opportunities.

Furthermore, innovative sector models in industries throughout the country are demonstrating that it is possible to both help construction employers with recruiting issues, and simultaneously assist disadvantaged job seekers and low wage workers obtain quality employment. For instance, Heartland Works, in Topeka, Kansas, a private, nonprofit company that operates five WIA-funded Workforce Centers engaged multiple employers in the construction industry and jointly developed a program to meet the industry's challenges in finding skilled workers to replace an aging skilled labor force. As part of this program Heartland Works developed a screening protocol and negotiated with the Kansas Department of Corrections to implement this tool as a pre-release screening for ex-offenders who expressed an interest in construction employment.<sup>6</sup>

Successfully implementing a sector initiative in any industry first requires research and design, which is then followed by program implementation.

- Research on a regional labor market is aimed at analyzing the underlying causes of issues facing the industry and its workers. Research includes utilizing findings from labor market information (LMI) which is derived from surveys of employers and projecting from historical data. LMI data is then validated by conducting focus groups with employers and workers in order to gain in-depth knowledge about the problems they face. By doing so, the sector initiative develops credibility and support.

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<sup>6</sup>Conway, M. et. al. (2007). *Sectoral Strategies for Low-Income Workers: Lessons from the Field*, the Aspen institute

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- Having analyzed challenges and their causes, the sector initiative designs strategies to address them. This involves multiple aspects, which include convening the right partnership of organizations to support the project, identifying industry changes that the project will achieve and leverage points that may be helpful in doing so, designing services aimed at addressing industry needs, and obtaining start up resources.
  - During sector initiative operations the intermediary organization carries out activities such as managing and coordinating resources, managing the initiative's progress, ensuring that the sector initiative's strategies change in response to new needs and new conditions, brokering or delivering services, stimulating systems change, monitor outcomes for industry and workers, and publicizing the sector initiative's progress. Partners provide a variety of services that meet the needs of the industry's businesses, job seekers, and workers. Partners also seek and contribute resources, help analyze progress and celebrate success, and participate in data-driven learning and decisions. Some partners also participate in efforts to change public policies, the infrastructure of entities that deliver services to industry employers and the workforce, and industry practices.

Having implemented program(s) aimed at meeting industry and worker needs, the sector initiative evaluates their success. It also continually updates its understanding of the issues affecting the industry and the labor market. Based on ongoing analysis of these information sources, the sector initiative then revises its strategies.

### Key Characteristics of Sector Initiatives

The National Network of Sector Partners defines sector initiatives as having four characteristics:

- They target a specific industry, customizing workforce solutions for multiple employers in that industry, community, and region.
- They are led by a workforce intermediary that has deep knowledge of the target industry.
- They provide training and career pathways that benefit low-income and other disadvantaged individuals.
- They promote systems change that benefits both workers and employers, crafting win-win solutions for communities.

## How Sector Initiatives Improve Opportunities for Workers and Overcome Industry Challenges

### Business involvement

A key to sector initiatives' effectiveness is their involvement of business partners. Construction industry sector initiatives have a variety of forms, but all of them emphasize business involvement. They typically involve businesses in governance; provision of in-kind support, collaboration on program design, and publicizing the partnership. In addition, many receive financial support and staff support from businesses.

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## Improving opportunities for workers

Sector initiatives take two approaches to improving opportunities for workers. They may increase job seekers' and workers' access to good jobs. Or, they may improve the quality of the jobs themselves. Often, sector initiatives combine efforts to increase access to good jobs with efforts to improve job quality. Activities to increase access to good jobs may include skill development methods that work for industry and workers and lead to hiring/promotion; establishment of career paths so workers can move up; development of support services so workers can succeed in skill acquisition and employment; provision of support from peers or mentors; calibration of hiring requirements to occupational requirements; changing human resource practices to increase retention and support skill development, and enforcement of legal requirements. Activities to improve the quality of jobs may include improvement of working conditions; supervisory training; establishing tiers of service to employers; establishing industry recognized credentials; enforcing the law regarding worker treatment; marketing of companies with good HR practices; initiatives to bring about inclusion, diversity, and cultural competence.

## Services to workers

Sector initiatives provide a variety of services to job seekers and workers depending on the needs of the industry and the relevant workforce. In addition to the activities described above, the following services are typical: orientation and training for job seekers, career counseling and management, assistance in obtaining employment, peer mentoring and training for incumbent workers, case management, and support services.

## Services to businesses

Services to businesses also depend on the needs of the industry and the relevant workforce. In addition to the activities described above sector initiatives typically assist businesses by meeting hiring needs; providing customized training; improving human resource practices; and creating culture change.

## Systems Change

Sector initiatives change three systems in order to produce broad impact. They may make changes: 1) in the industry; 2) in institutions that provide workforce, economic, and skill development services to the industry; and/or 3) in public policies.

The Milwaukee Jobs Initiative, a Wisconsin Regional Training Partnership (WRTP) program that included a construction sector initiative (and occurred prior to WRTP/BIGSTEP) is an example of systems change in the construction industry. It was financed through public, private and philanthropic funds and boasted average starting wages<sup>7</sup> of \$11 an hour plus benefits. As of April 2006, about 70% of the workers placed were still at work a year later, at which point they typically have more than doubled their annual incomes. To many of the 2,500 workers who landed jobs through the initiative participation had real *transformative* impact on their lives.

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<sup>7</sup> Dresang, J. (April 22, 2006 ), Rebuilding lives with good jobs, Milwaukee Journal Sentinel, accessed 27 May, 2008, <http://www.jsonline.com/story/index.aspx?id=417862>

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Julia Taylor, president of the Greater Milwaukee Committee praised the program for anticipating the Milwaukee-area's building boom and gearing up to develop a pool of workers with the skills needed for construction. The late Eric Parker, executive director of Wisconsin Regional Training Partnership commented that a key lesson from the Milwaukee Jobs Initiative is a move away from the approach of focusing first on training workers and then helping those trainees to find jobs.

Mr. Parker also commented: "What we did is turn that around and start with employers and unions who were very interested in working with us to fill job openings so that we would run classes when demand was there . . . That was why we were able to connect the program with economic development but also we were able to recruit candidates who were motivated by the knowledge that there were real jobs at the end of the line."

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## Section IV

# Design Principles for Sector Initiatives & Success Factors

### 1) Planning/development and operations

Successful sector initiatives have a planning/development phase and an operations phase. The following are key design principles for a successful sector initiative during each of those phases. Notably, sector initiatives return to the planning/development phase in order to identify and respond to changes in the needs of the industry sector and its workforce.

- Planning/development:
  - Convene a partnership of key stakeholders. As a minimum this should include members from industry and the workforce system
  - Establish a strong intermediary that has credibility with industry
  - Conduct research to better understand the local workforce and determine target occupations for the sector initiative
  - Design program services that meet the needs of industry and can effectively train workers according to their needs
  - Obtain start-up resources to fund the new program
- Operations
  - Provide programmatic services to workers and employers
  - Coordinate activities to produce outcomes
  - Obtain resources for sustainability and expansion, and in that way ensure that initial successes can be built upon
  - Bring about system change, by focusing on changes in the local workforce system that fundamentally shifts how employers interface with workers in a region, or potentially at a state level

### 2) Importance of engaging a sector intermediary in delivering change

As mentioned above, the intermediary role is vital to a sector initiative. Sector initiative intermediaries must meet a set of design principles regarding the roles they play.

Effective sector intermediaries:

- Manage the financing of the initiative and coordinate resources
- Manage and monitor the initiative's progress, and ensure that its strategies change in response to new needs and new conditions
- Broker or deliver training or other workforce services
- Stimulate systems change within the local workforce system. This could range from a fundamental change in the way employers hire to innovative training models for low income populations
- Monitor outcomes for industry and workers
- Market the sector initiative and publicize progress

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### 3) Success factors

The following are factors that will determine the ultimate success of sector initiatives. These fall within the following areas – involving business and meeting industry needs; recruiting workers and meeting their needs; and forming effective regional partnerships.

- Deep knowledge of an industry, its culture, and employers' needs
- Credibility with industry, or an effective strategy to gain it
- Entrepreneurial character
- Focus on quick response to changing industry needs
- Governance that involves business leaders in key decisions
- Deep understanding of workers' and job seekers' needs and perspectives
- Credibility with community leaders
- Effective communication and marketing vehicles
- Capacity to manage financing and particularly to simplify the process
- Manage and monitor the initiative's progress, and ensure that its strategies change in response to new needs and new conditions

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## Section V

### Next Steps

The workforce to fill construction jobs does not exist in the metro-Denver region. A “grow your own” strategy could provide a large number of individuals who currently lack both skills and jobs that provide family supporting incomes with opportunities for advancement while meeting crucial industry needs.

Participants in the Denver assessment<sup>8</sup> commented that workforce development programs lack the capacity to provide training and other services required for access to those opportunities, and in particular to enter apprenticeship programs. Pursuing such a strategy will require significant investment.

In addition, discussions with CCA and other stakeholders have revealed the importance of implementing new approaches to address skill shortages in the industry. These approaches can be adopted by stage agencies in partnership with industry stakeholders and, regional stakeholders such as construction focused sector initiatives. These approaches include:

- Encouraging those with previous experience to come back into the industry. Publicizing the fact that they can undertake competency testing and receive credit for time spent in industry and re-enter at a comparable position to when they left the sector.
- Although training providers are considered fairly effective in Colorado they need to improve outreach to address the problem of “not getting enough people through the door.” In order to improve this situation:
  - Market the industry to combat its negative image, starting at school level. The industry needs to increase school leavers entering the industry and educate school students and young adults on the potential jobs in the industry and relatively high wage levels that can be achieved.
  - Address the problem of people not being “work ready”. Increase their basic skills by following the model of training delivered by Mi Casa and WRTP/BIGSTEP which offer programs that combine industry basic skills with life skills, so that people are able to go straight into industry apprenticeships and succeed in them. Also, significantly expanding the capacity of such programs
  - Expand collaboration between the public workforce development system and contractors associations, and the contractors themselves. If contractors can directly communicate with training providers & policymakers in the workforce system it will make it possible to more effectively communicate what skills and abilities new entrants and incumbent workers need to thrive in the industry, while simultaneously helping to address the chronic skill shortages that the industry is facing.

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<sup>8</sup> Mills, J. (2007) Denver Regional Workforce Funding Collaborative Assessment Report, NNSP

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