Construction: Cluster and Workforce Needs Assessment

Valley Vision, Industry Cluster Forum, Rocklin

January 18, 2018

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Presentation Overview

About the COE

Study Goals, Research Methods

Market indicators

Cluster analysis, WED opportunities

Economic Impacts

Training and Education assets maps

Workforce Gap Analysis

Executive Interviews

Occupational Gap Analysis of Clusters

Recommendations, Panel Discussion

Centers of Excellence

California Community Colleges, Economic and Workforce Development

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Region	Director
San Diego-Imperial	Tina Bartel
Inland Empire/Desert	Michael Goss
Los Angeles-Orange	Lori Sanchez
South Central	Adele Hermann
Central	Nora Seronello
Bay Area	John Carrese
North-Far North	Aaron Wilcher
Statewide	Laura Coleman

Study Goals

Overview, Cluster Process

What we did, where do we want to go?

Report: Reference and Resource

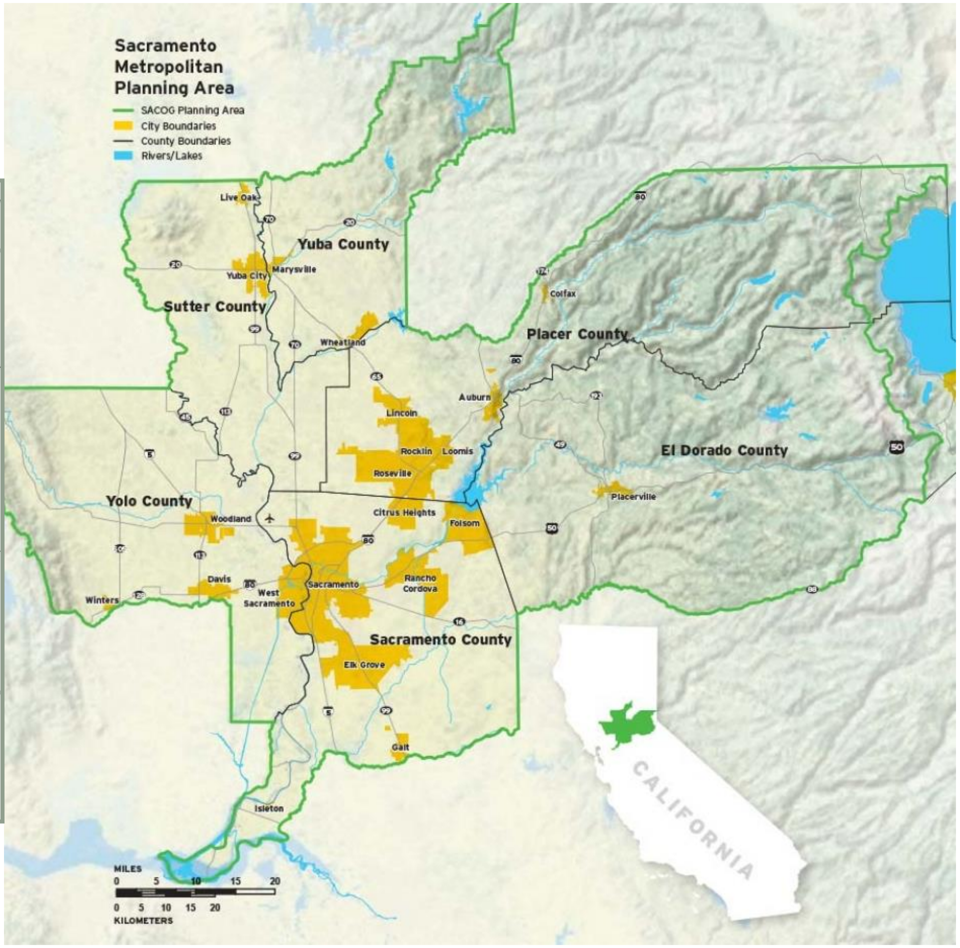
Cluster Work:
1) RESEARCH +
ENGAGEMENT & ACTION

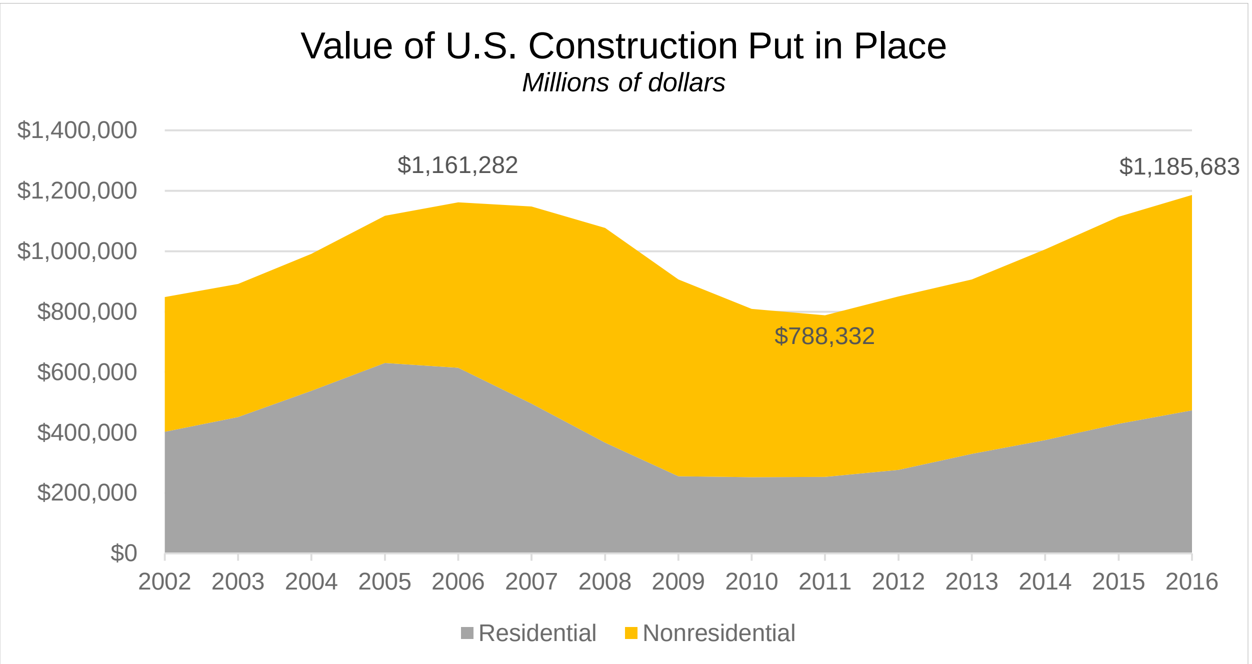
2) REGION & PLACE +
INDUSTRIES & RELATIONSHIPS

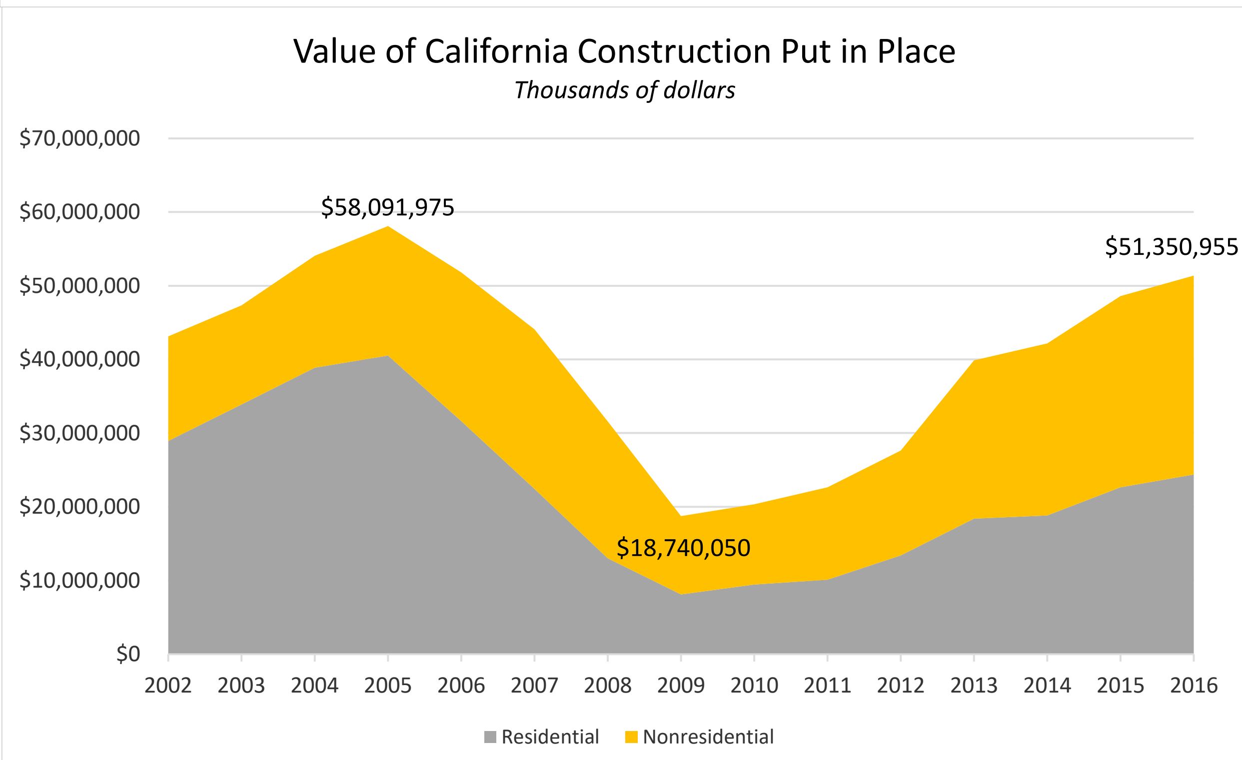
What We Didn't Do

Study regions

6-County Sacramento, 9-County SF Bay Area and CA



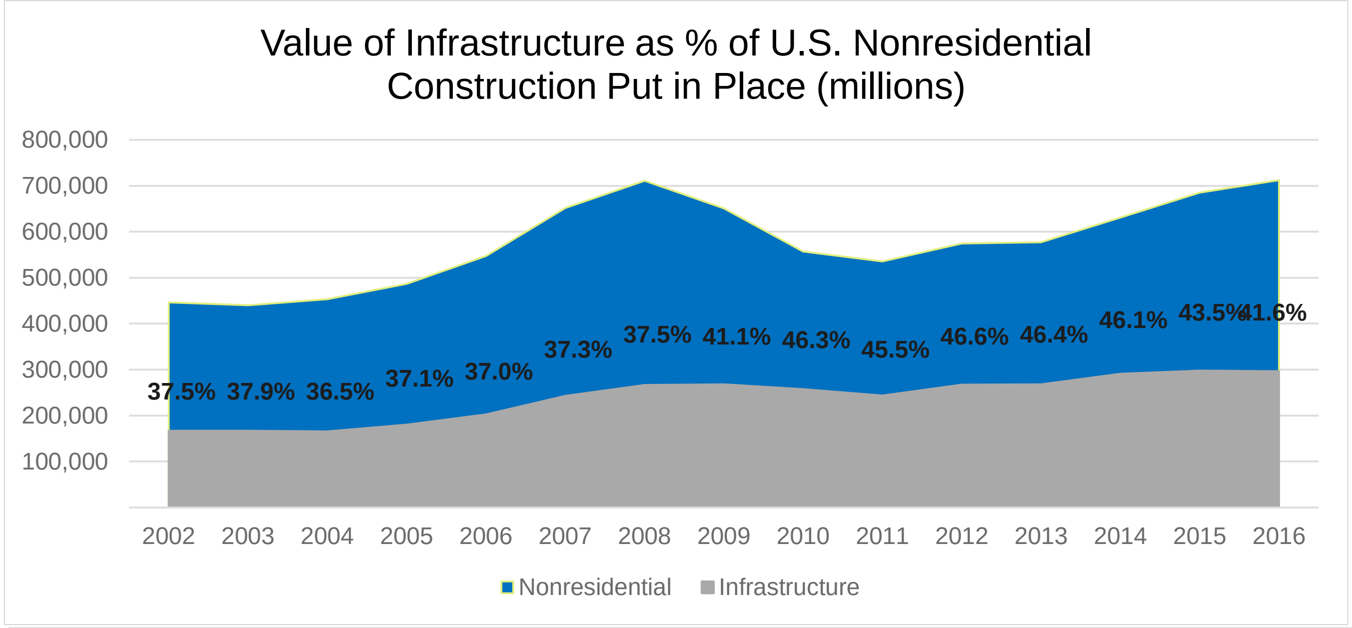


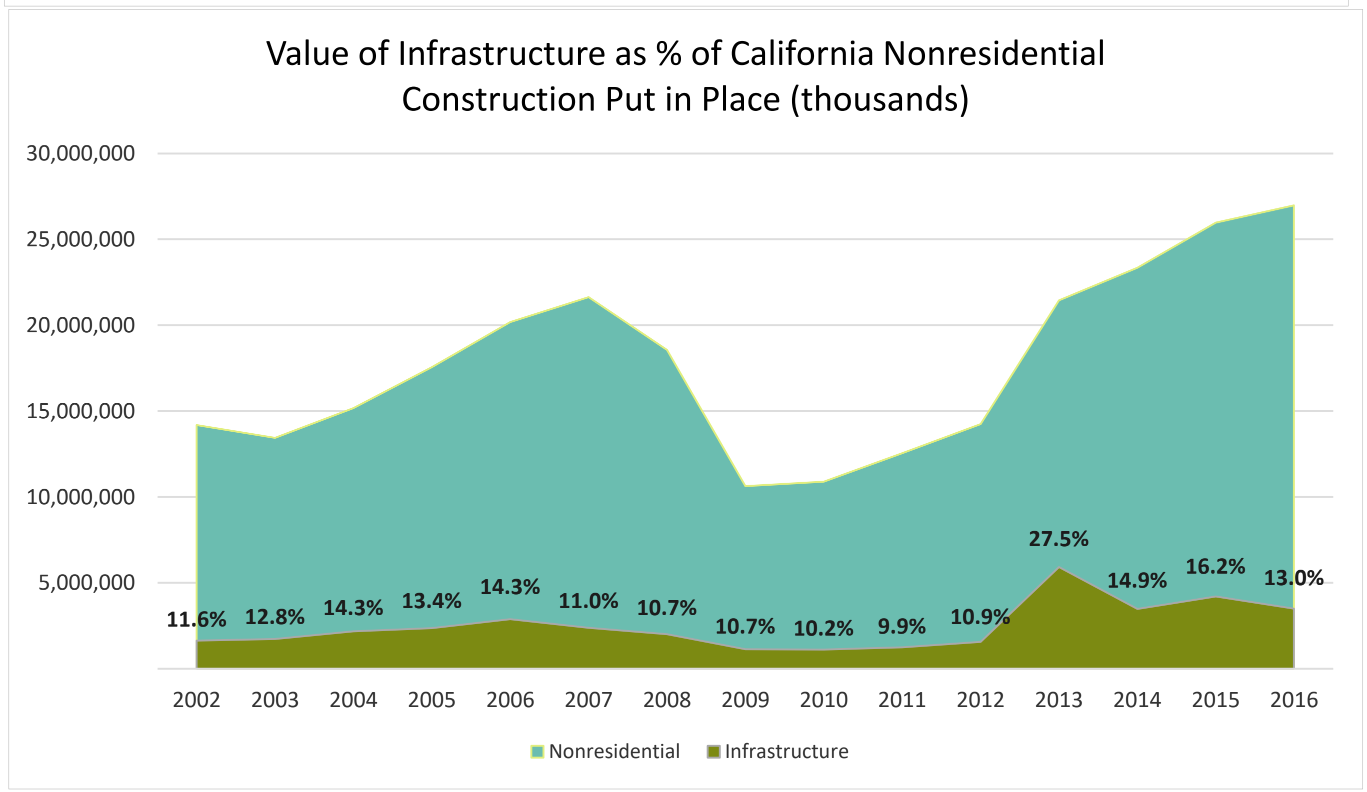


Sources:

U.S. Census

California Homebuilding Foundation/Construction Industry Research Board (CIRB)





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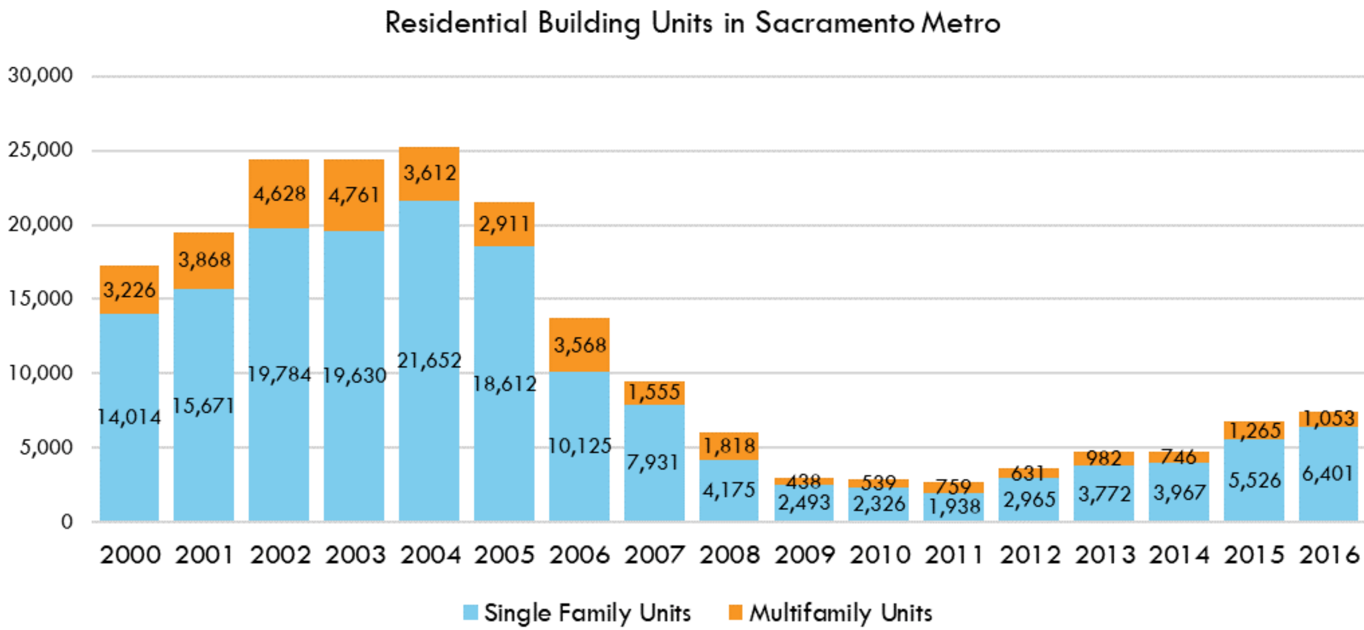

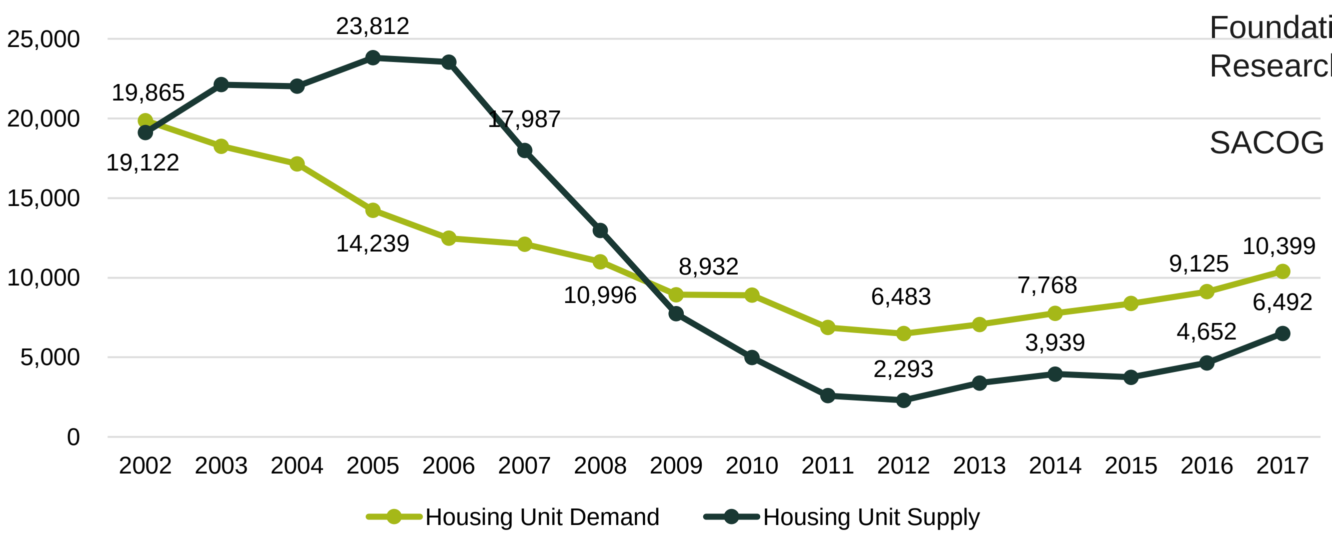

Sources:

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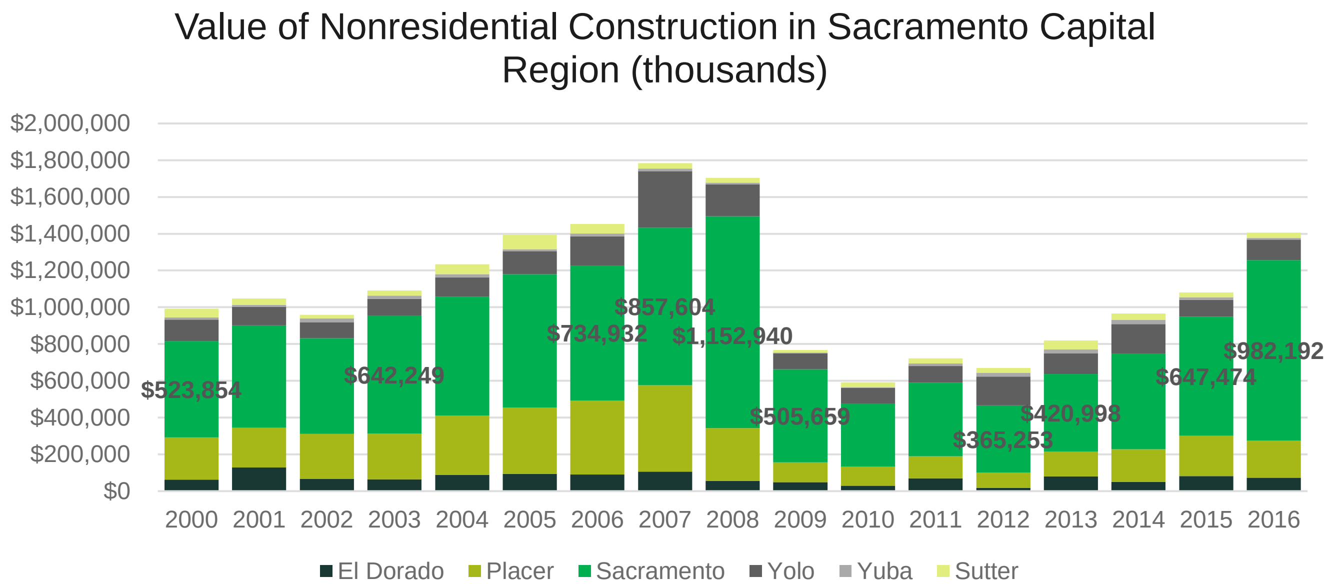
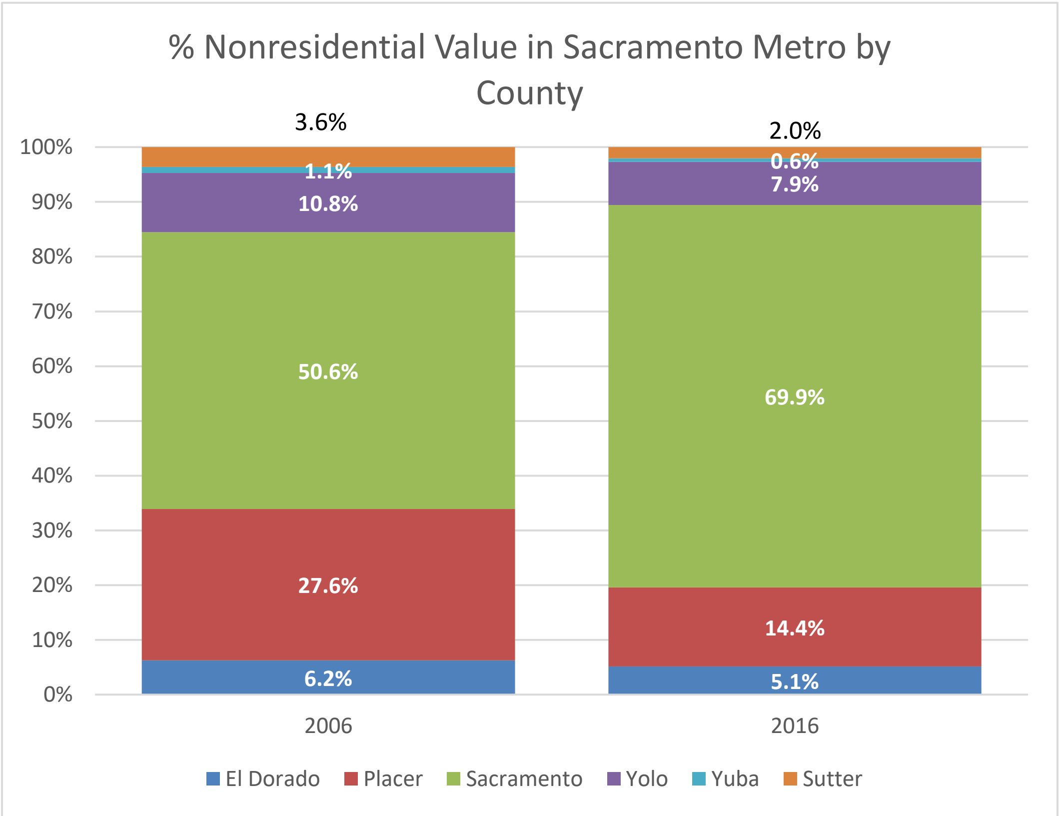
SACOG



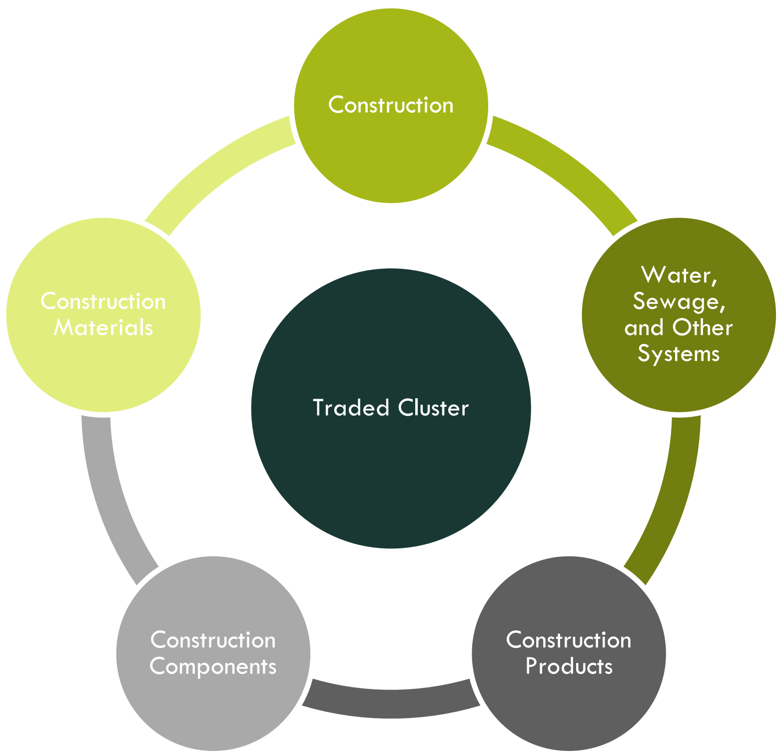


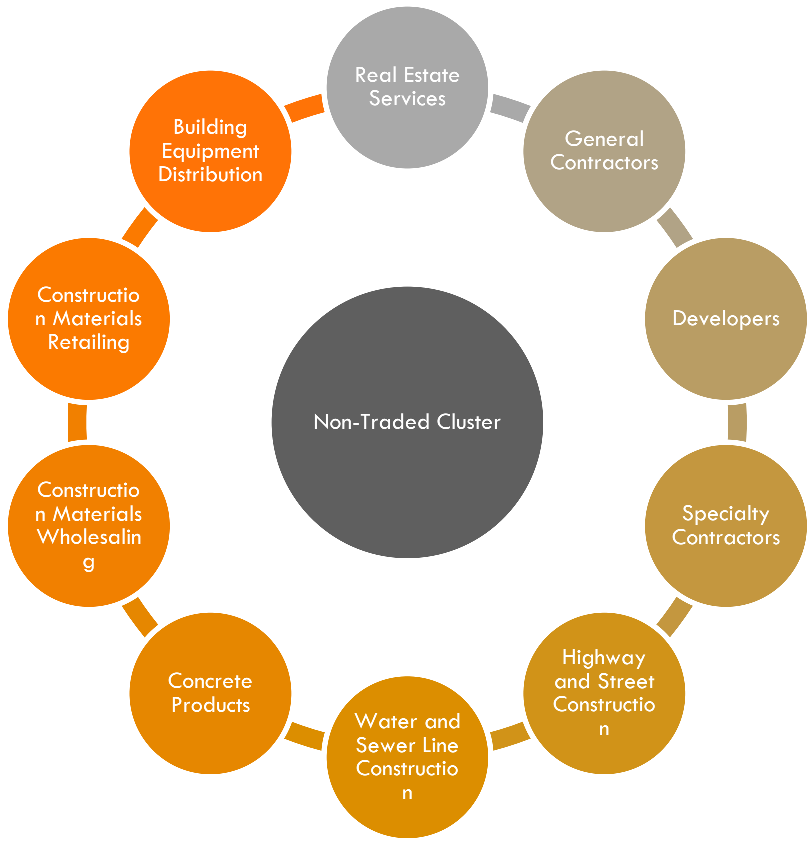
Source:

California Homebuilding Foundation/Construction Industry Research Board (CIRB)

Cluster Analysis

Traded Subclusters, Non-Traded Subclusters





Traded Cluster (Basic, Export-Oriented)

Non-Traded Cluster (Non-Basic, Locally Serving)

Cluster Analysis

Employment By Region

TRADED CLUSTER, 2016	NON-TRADED CLUSTER, 2016
Sacramento: **3,500 Jobs**	**Sacramento:** **98,000 Jobs**
Bay: **12,000 Jobs**	**Bay:** **317,000 Jobs**
California: **63,000 Jobs**	**California:** **1,430,000 Jobs**
Low LQ, 0.5, High Earnings	Average LQ, 1.0-1.2,< Average Earnings

Cluster Analysis

Contraction, except Sacramento's Traded cluster

TRADED CLUSTER, 2006-2016	NON-TRADED CLUSTER, 2006-2016
Sacramento: **+ 1,105 Jobs, + 46%**	**Sacramento:** **-27,520 Jobs, -22%**
Bay: **-663 Jobs, - 5%**	**Bay:** **-27,031 Jobs, - 8%**
California: **-4,331 Jobs, -6%**	**California:** **-263,092 Jobs, -16%**

Using the Data for Planning and Engagement

Cluster	Subcluster	Occupations in subcluster w/ severe gap	Occupations in subcluster w/ moderate gap	Occupations in subcluster w/slight gap
Nontraded (Continued)	General Contractors (Continued)		47-2042 Floor Layers, Except Carpet, Wood, and Hard Tiles	
			47-2044 Tile and Marble Setters	
			47-2051 Cement Masons and Concrete Finishers	
			47-2141 Painters, Construction and Maintenance	
			47-2152 Plumbers, Pipefitters, and Steamfitters	
	Real Estate Services	11-9141 Property, Real Estate, and Community Association Managers	51-8021 Stationary Engineers and Boiler Operators	47-4011 Construction and Building Inspectors
		13-2021 Appraisers and Assessors of Real Estate		
		41-9021 Real Estate Brokers		
		41-9022 Real Estate Sales Agents		
	Water and Sewer Line Construction	47-2151 Pipelayers	47-2031 Carpenters	51-4121 Welders, Cutters, Solderers, and Brazers
		47-5021 Earth Drillers, Except Oil and Gas	47-2061 Construction Laborers	47-2051 Cement Masons and Concrete Finishers
			11-9021 Construction Managers	47-2152 Plumbers, Pipefitters, and Steamfitters
			13-1051 Cost Estimators	
			47-1011 First-Line Supervisors of Construction Trades and Extraction Workers	
			49-3042 Mobile Heavy Equipment Mechanics, Except Engines	
			53-7032 Excavating and Loading Machine and Dragline Operators	

APPENDIX B: CLUSTER BUSINESSES

Construction Products

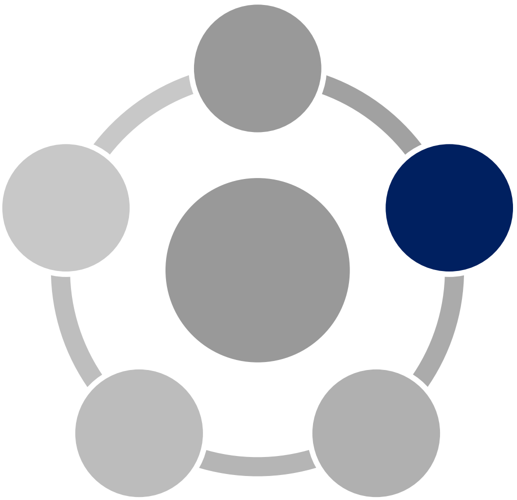
Company Name	Number of Employees	Sales Volume	City
Ames Fire & Waterworks	220	$26,029,000	Woodland
Us Pipe Fabrication	144	$11,358,000	Olivehurst
Thrifty Supply Co Inc	105	$7,953,000	Sacramento
Gladding Mcbean LLC	101	$ -	Lincoln
Lawson Mechanical Contractors	100	$11,831,000	Sacramento
Chart Inc	82	$10,577,000	Sacramento
Anderson's Sierra Pipe Co	40	$4,732,000	Auburn
Specialty Products Design	39	$3,076,000	Rancho Cordova
R & J Wholesale Co Inc	24	$2,726,000	Rancho Cordova
Galt Pipe Co	22	$2,602,000	Galt
Pacific Corrugated Pipe Co	20	$2,366,000	Sacramento
Upstream Engineering	15	$1,183,000	Sacramento
Milwaukee Valve Co	14	$1,656,000	Placerville
T W Smith Co	12	$908,000	Sacramento
Ferguson Plumbing Supply	2	$454,000	Sacramento

Water, Sewage and Other Systems

Company Name	Number of Employees	Sales Volume	City
El Dorado Irrigation District	420	$55,230,000	Placerville
South Tahoe Pubc Utility Dist	336	$29,456,000	South Lake Tahoe
Placer County Water Agency	300	$39,450,000	Auburn
Sacramento Suburban Water Dist	195	$17,095,000	Sacramento
Tahoe City Public Utility Dist	150	$13,150,000	Tahoe City
County of Sacramento	140	$18,410,000	Sacramento
San Juan Water District	138	$12,098,000	Granite Bay
El Dorado Water & Shower Svc	120	$15,780,000	Placerville
Roseville Water Dept	120	$15,780,000	Roseville
Rancho Murieta Community Svc	90	$11,835,000	Rancho Murieta
Watereuse California	90	$ -	Sacramento
Taylor Made Water Systems Inc	90	$ -	Sacramento
North Tahoe Pubc Utility Dist	84	$11,046,000	Tahoe Vista
Rancho Murieta Community Svc	78	$10,257,000	Rancho Murieta
Fair Oaks Water District	70	$9,205,000	Fair Oaks
South Placer Mun Utility Dist	66	$5,786,000	Rocklin
Elk Grove Water Svc	60	$7,890,000	Elk Grove

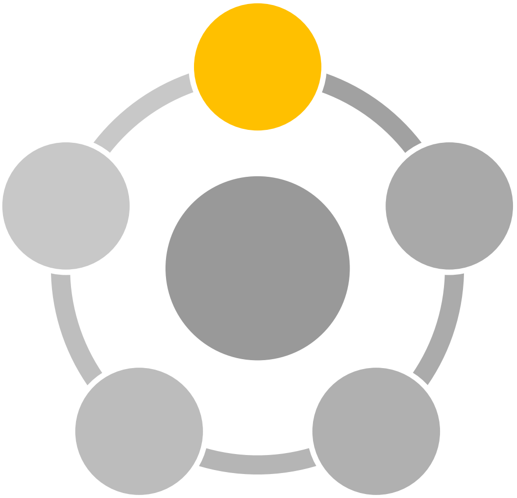
Key Traded Subclusters, Sacramento Region

Water, Sewage, and Other Systems



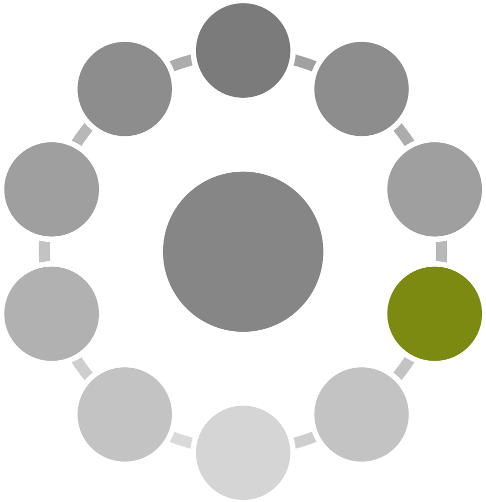
- Added 750 Jobs (06-16), 90% of all subcluster additions statewide
- Location Quotient 2.8
- $84,000 Average annual earnings, 62% increase over 2006
- Pipelayers are major occupational pressure point
- Large employers: El Dorado Irrigation District, South Tahoe Public Utility District, Placer County Water Agency, Sacramento Suburban Water District

Key Traded Subclusters, Sacramento Region
Construction



- Added 500 Jobs (06-16)
- Location Quotient 0.45
- $88,000 Average annual salary, 7% increase over 2006
- Electrical Power-Line Installers and Repairers; Equipment Operators represent acute occupational shortfall
- Power and Communication Line and Related Structures, SMUD

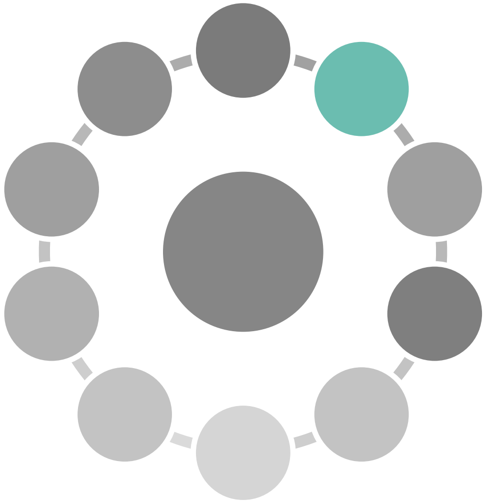
Key Non-Traded Subclusters, Sacramento Region
Specialty Contractors



- Employment > 50,000; -22%, -14,000 Jobs (06-16)
- Growth in all regions since 2011 with Bay rebounding best
- Location Quotient 1.26
- $59,000 Average annual salary, 8% increase over 2006
- NUMEROUS OCCUPATIONS represent acute shortfall
- Plumbing, HVAC, Framing Contractors (5x concentration)
- Top Employers: Villara Building Systems, Barnum & Celillo Electrical, Airco Mechanical

Key Non-Traded Subclusters, Sacramento Region

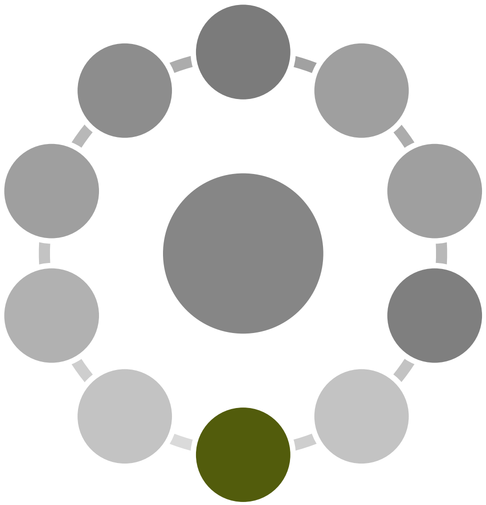
General Contractors



- **Employment ~17,000; -24%, -5,000 Jobs (06-16)**
- **Location Quotient 1.30**
- **$60,000 Average annual salary, -9% reduction from 2006**
- **Carpenters, Laborers, CM, Estimators, Foremen + Many Others represent acute occupational shortfall**
- **New Multifamily Construction, New Single Family Construction, Residential Remodeling….**
- **Top Employers: Premier Pools and Spas, SD Deacon Corp., Granite Construction, Dennis Blazona Construction**

Key Non-Traded Subclusters, Sacramento Region

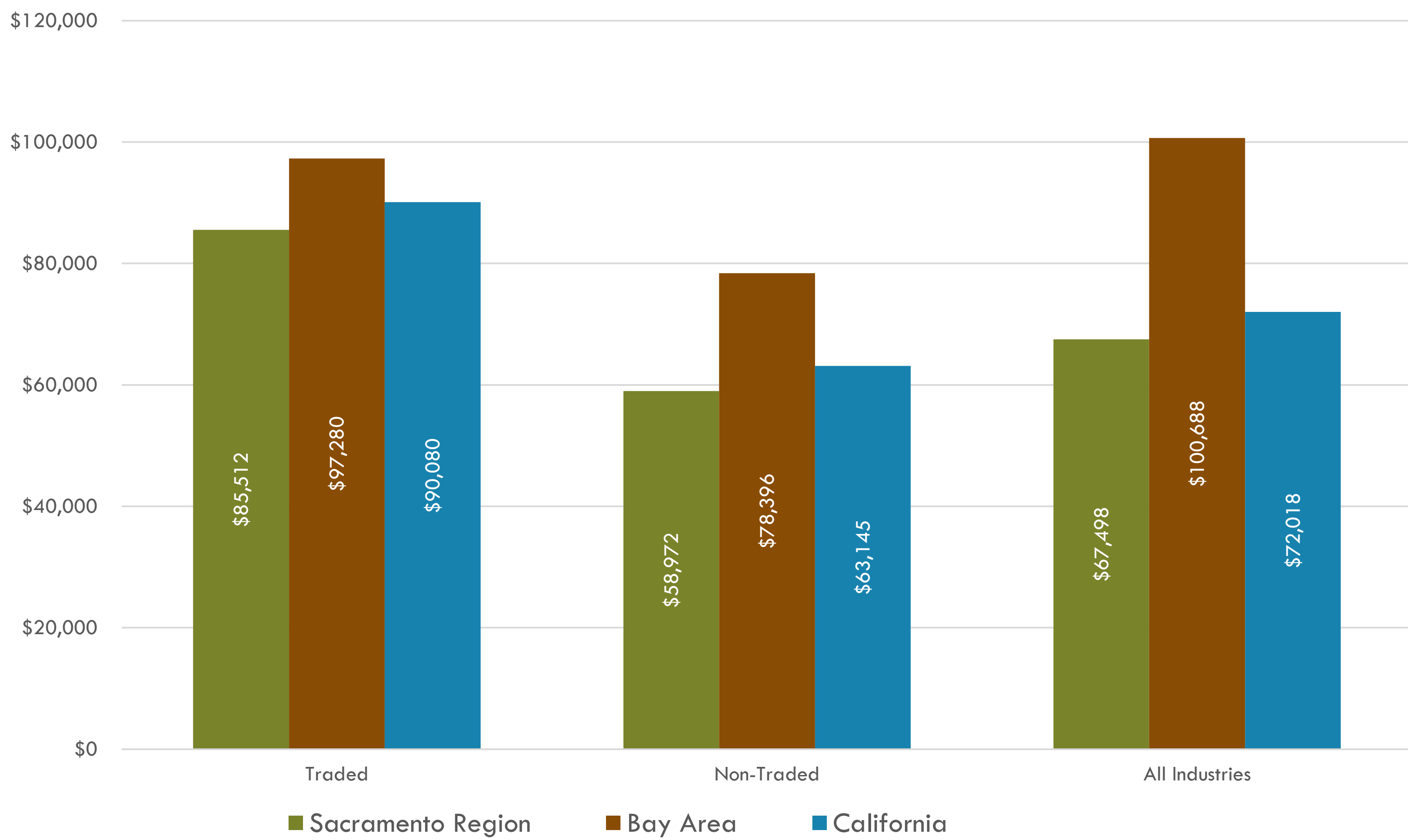
Water and Sewer Line Construction



- **Employment ~1,700; + 1%, 20 Jobs (06-16)**
- **Location Quotient 1.26**
- **$85,000 Average annual salary, +10% from 2006**
- **Pipelayers, Earth Drillers, + Many Other Occupations represent acute occupational shortfall**
- **Top Employers: Eaton Drilling, Cascade Drilling, Diamond Well Drilling (most with < 20 employees)**

Avg. Annual Earnings Comparison

Sacramento vs, CA, Bay...... Sacramento vs. itself?



Cluster Economic Impacts

Traded, Non-Traded

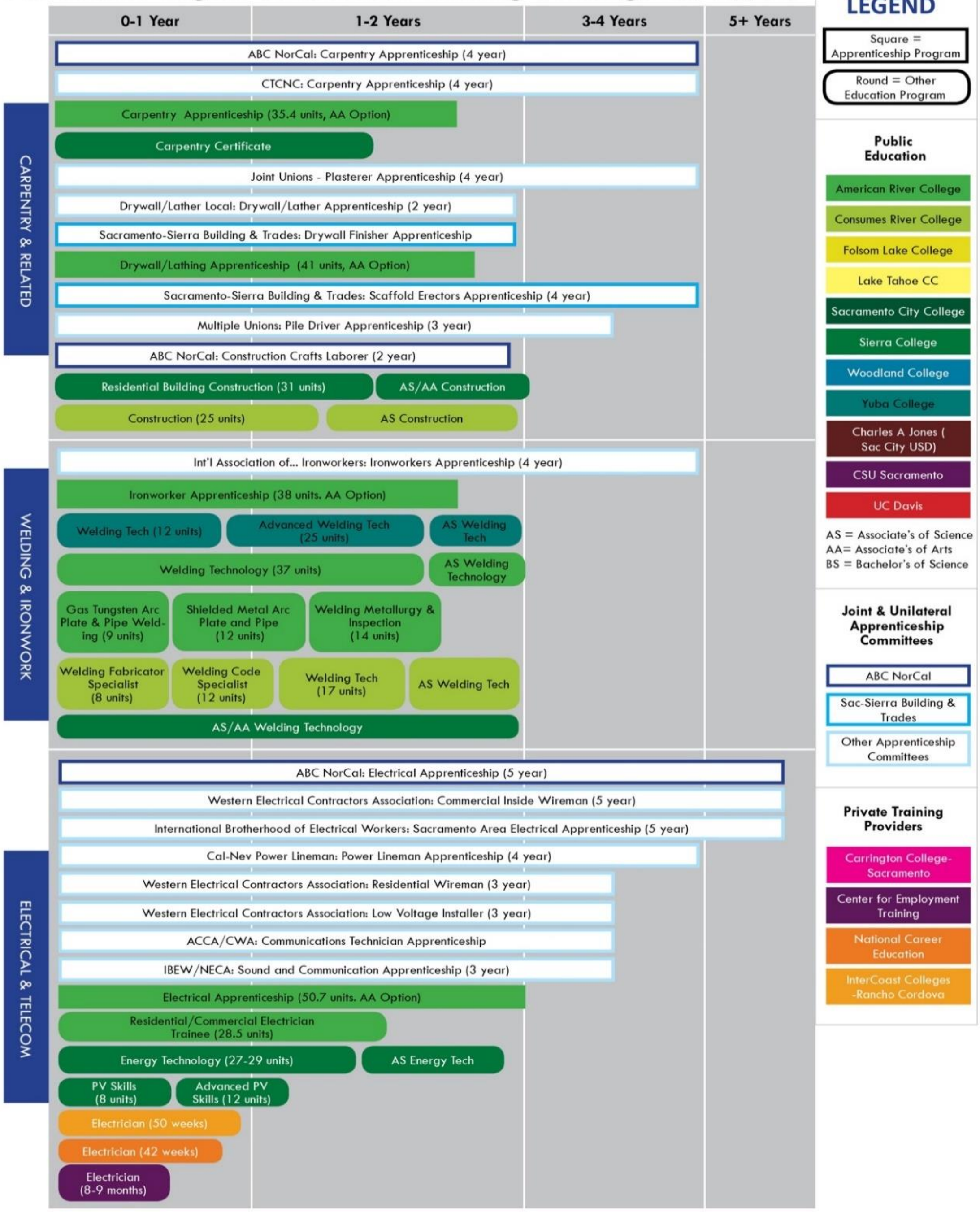
Direct Impacts: expenditures within the cluster (jobs, output, income)
Indirect Impacts: suppliers' expenditures (jobs, output, income)
Induced Impacts: household spending by cluster employees (jobs, output, income)

Overall, Combined Economic Impacts:

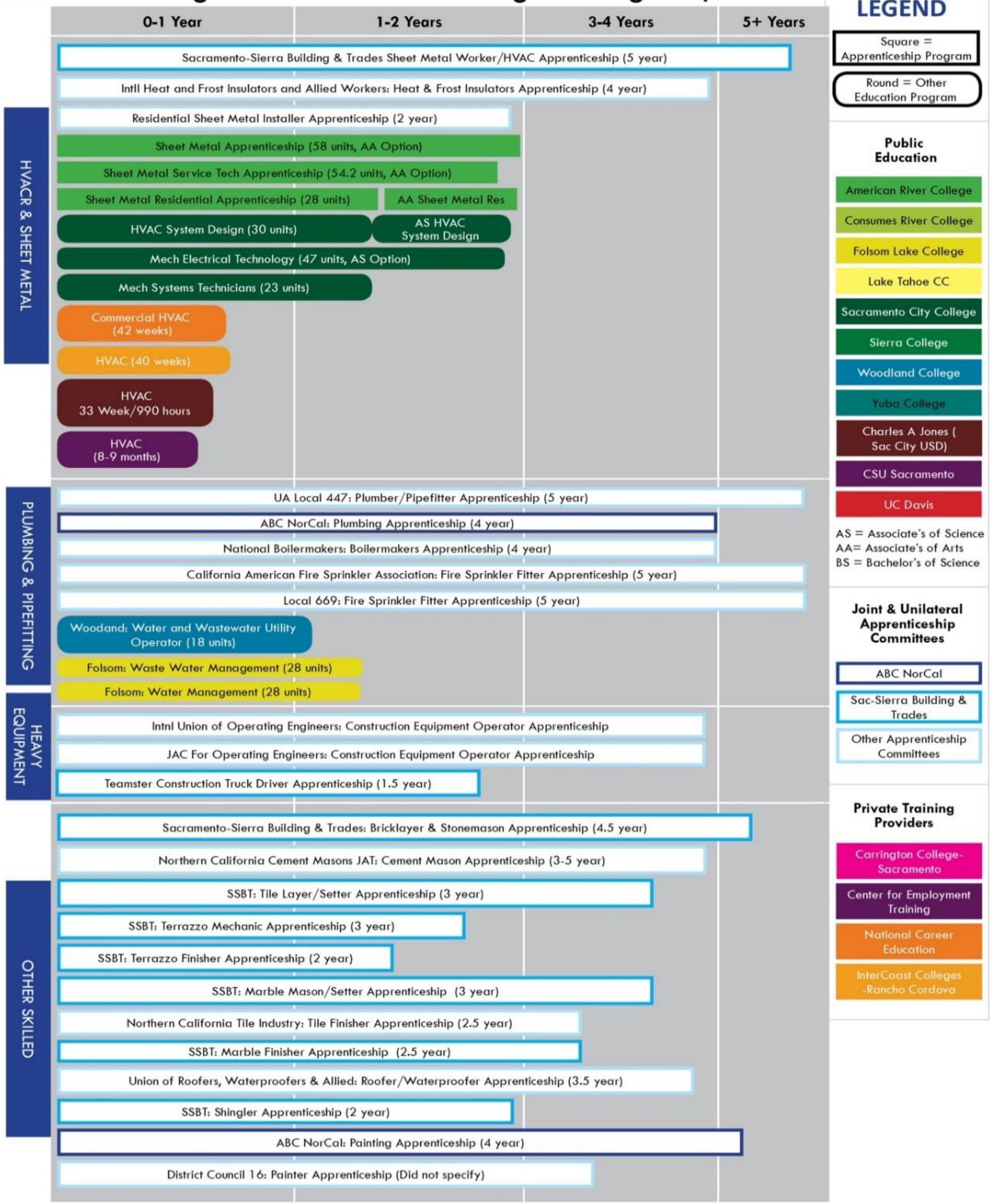
- $34.8 Billion Output
- 221,300 Jobs
- $17.4 billion labor income

For every job created by the construction cluster in the Sacramento region, 1.2 jobs are created elsewhere in the economy

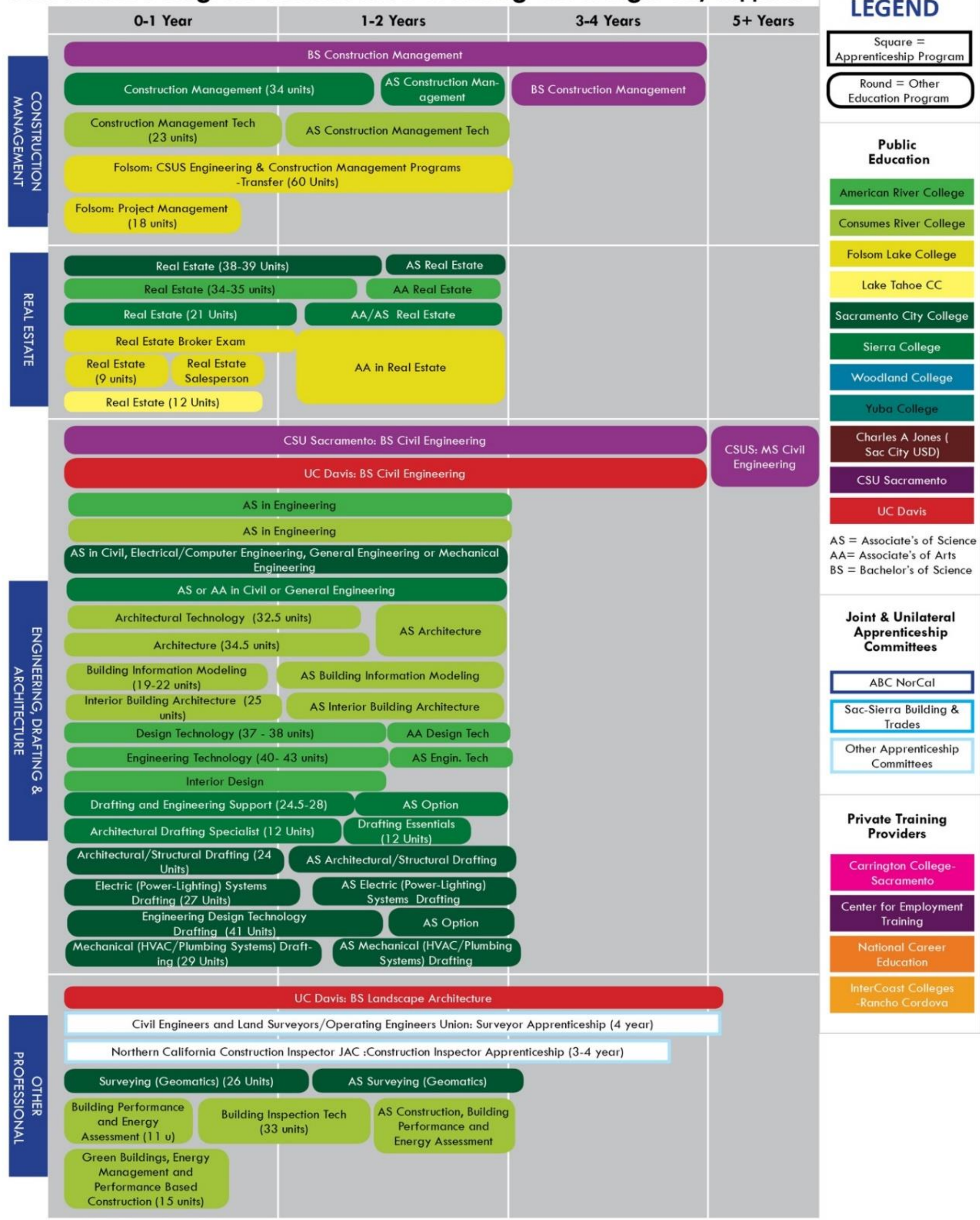
Sacramento Region Construction Training Offerings: Key Supports



Sacramento Region Construction Training Offerings: Staple Trades

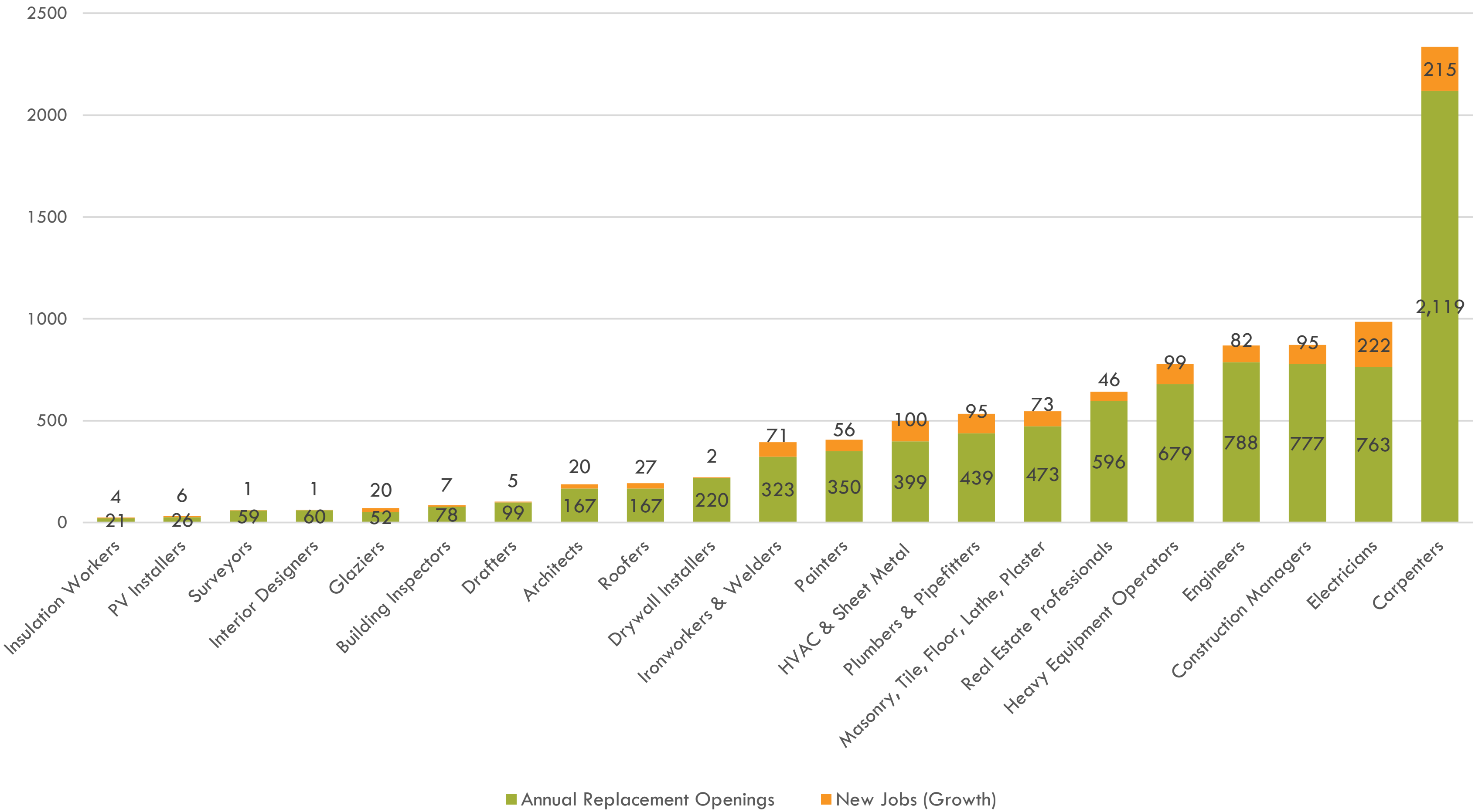


Sacramento Region Construction Training Offerings: Key Supports



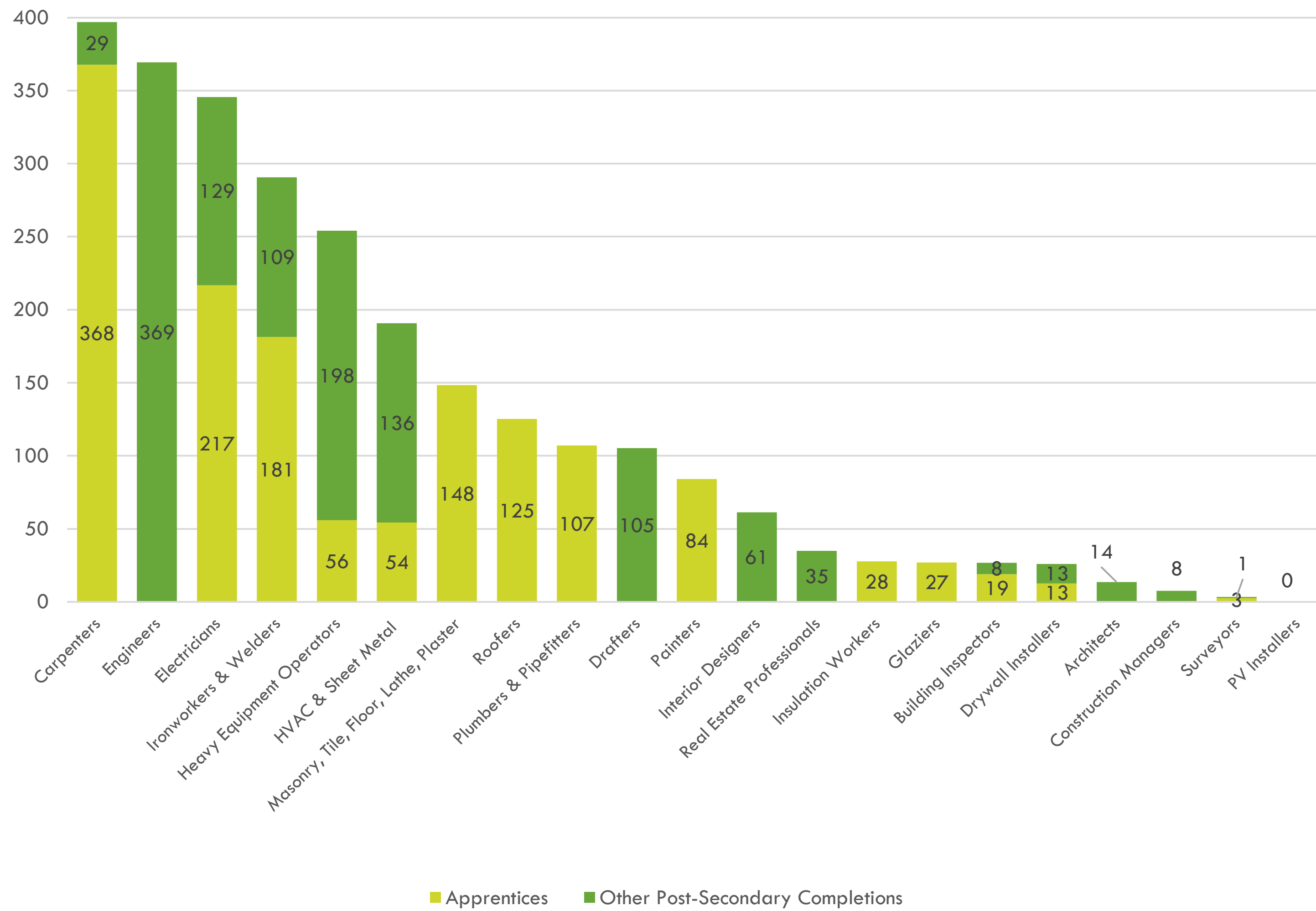
Annual Openings by Category

New and Replacement Jobs (2016-2021)



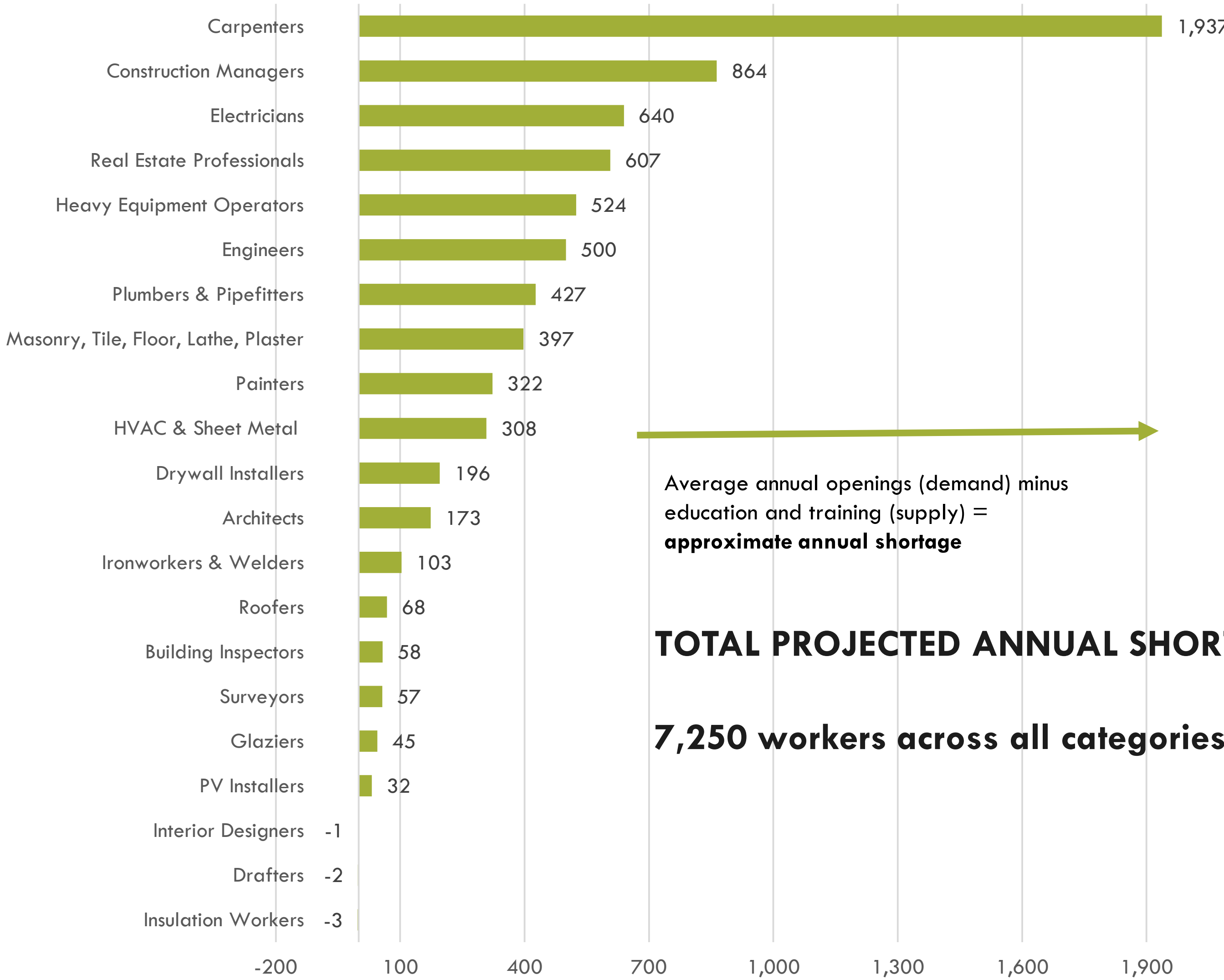
Annual Average Supply of Workers

By Type of Education-Training (2014-2016)



Projected Annual Workforce Gap

Demand – Supply (2016-2021)



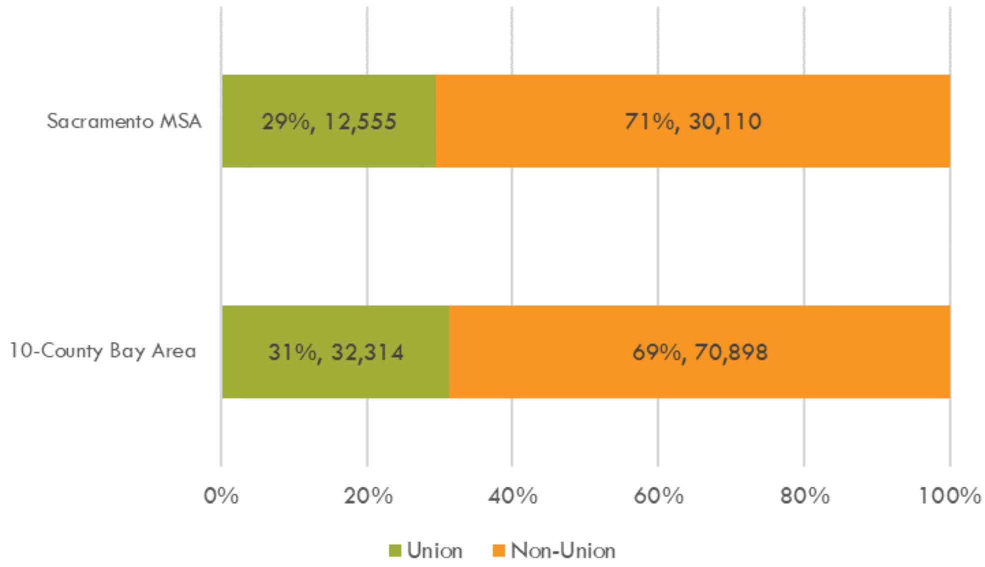
Average annual openings (demand) minus education and training (supply) = **approximate annual shortage**

TOTAL PROJECTED ANNUAL SHORTAGE:

7,250 workers across all categories

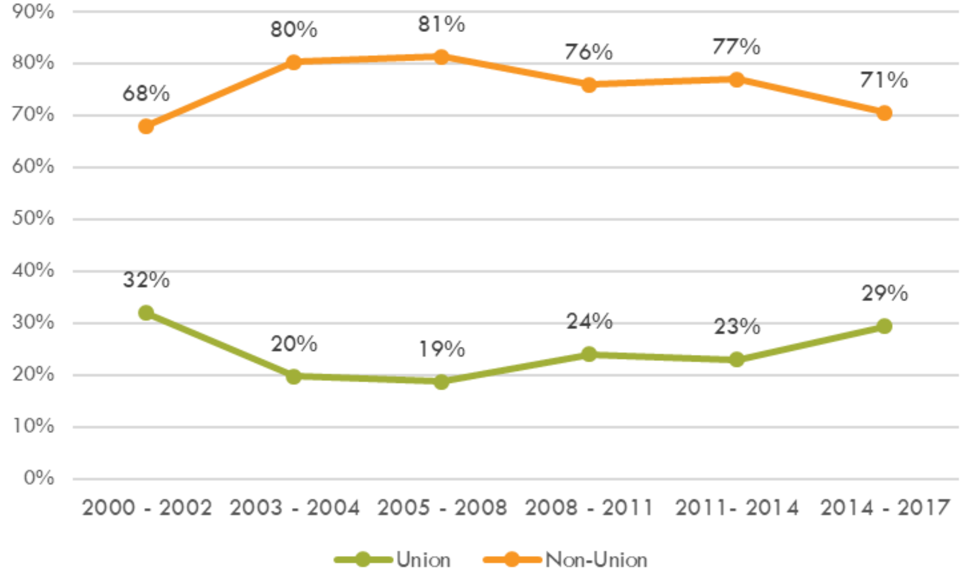
Union Construction Employment

Annual Average, 2000-2017, Available Intervals



2014-2017

Source: Current Population Survey



Source: Current Population Survey

Findings

Market indicators for California illustrate how severe the recession impacted residential investment and the disproportionate impact of non-residential investment in the recovery.

Sacramento region non-traded cluster hard hit, contracting > 20% between 2006 and 2016, higher than California and the Bay region.

Sacramento region has a robust cluster network of suppliers and many exciting projects; housing demand not going away.

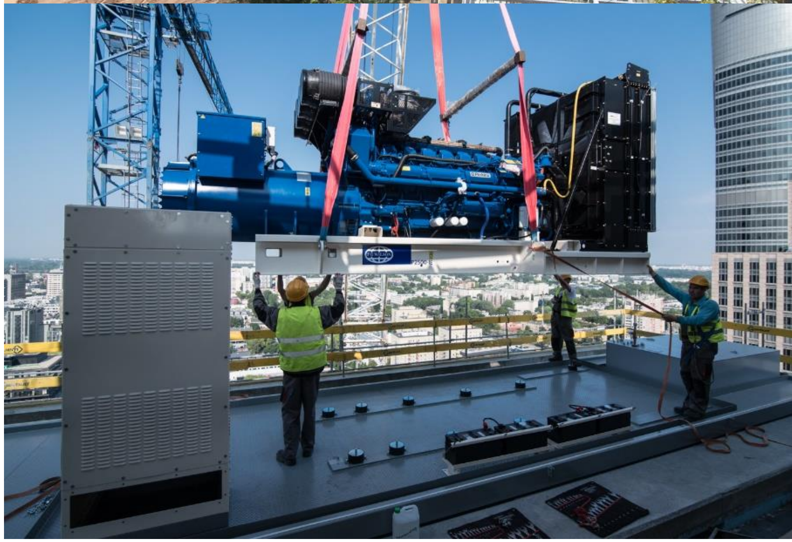
Sacramento region competitive advantage in Water, Sewer, and Irrigation-related activities, Traded and Non-traded

Many bright spots for industries in subclusters that have suffered

Data indicates that the cluster industries may have a wage problem that is contributing to the workforce shortage

Labor shortages are extreme, estimated at more than 7,000 annually pipeline interrupted due to a variety of factors (education disinvestment, recession, perception of the industry)

Regional workforce infrastructure is not well coordinated to be able to meet workforce challenges. Industry not connected to education and training in an ongoing, systematic fashion.



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Recommendations

Focus on creating coordination infrastructure, and agreeing on shared goals in action planning and strategy

Policymakers, workforce and economic development stakeholders should target high-performing and at-risk cluster industries for developing policy and investment strategies.

Link construction workforce development strategies to other policy agendas for increasing building supply. (Workforce-Econ Dev.)

Reinforce and streamline convening capacity and approaches between target industry employers and workforce development stakeholders.

Support off-the-shelf, rapid-deployment workforce tactics to address workforce shortages in the near term; identify slack in the existing system to boost enrollments.

Medium and long-term planning should use cluster methods to develop measurable performance goals for workforce training feedback.

Medium and long-term planning should emphasize pipeline and pathway development.

Planning and development should take the economic cycle into account.

Use education mapping and occupational gap analysis for cluster engagement and partnership development.

Partners

Research Team

- Wen Sun (industry and occupational cluster analysis)
- Fran Doherty (construction industry and market indicators)
- Janine Spadafore Kaiser, Compass Policy Strategies (education asset map, training supply and gap analysis)
- Darrene Hackler, PhD (study design and review)
- Kelley Ring (business list analysis)
- Lauren McSherry (executive interviews, editing)
- Peter Cheng, Applied Development Economics (Impact Analysis)
- Rick Larkey, North State Building Industry Association Foundation (study review)
- Tim Murphy, Builders Exchange (study review)
- Jon Zeh, Sacramento City College Mechanical Electrical Program (MEP)

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