

Using Data and Information to Align Economic and Workforce Development in the Construction Sector



Nevada Governor's Office of
ECONOMIC DEVELOPMENT

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Nevada's Economic Development Sectors

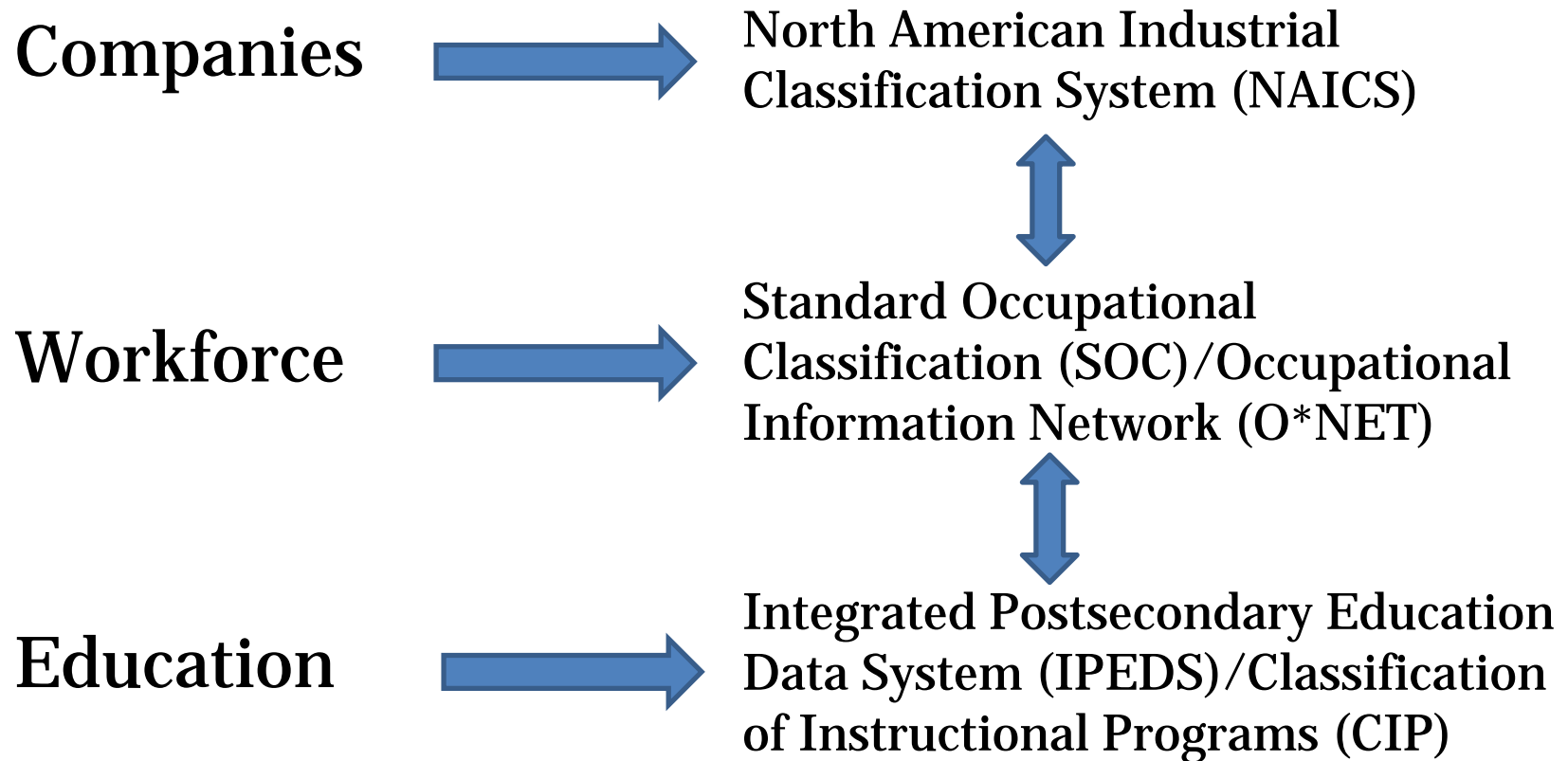
Sector	Number of Jobs	Percent of All Nevada Jobs	Average Annual Wage*	Jobs Multiplier	Location Quotient	Percent above or below National Concentration
Aerospace and Defense	13,110	1.0%	\$96,207	2.04	0.67	-33%
Business Information Technology Ecosystems	59,367	4.5%	\$55,949	2.11	0.67	-33%
Construction	77,131	5.9%	\$62,520	1.58	1.27	27%
Health and Medical Services	106,222	8.1%	\$65,123	1.81	0.66	-34%
Manufacturing and Logistics	116,631	8.9%	\$69,497	2.68	0.59	-41%
Natural Resources	49,052	3.8%	\$76,333	2.69	0.63	-37%
Mining	14,028	1.1%	\$107,221	2.29	2.35	135%
Tourism, Gaming, and Entertainment	408,856	31.3%	\$37,047	1.82	2.45	145%

*The average earnings per worker in the region. Includes wages, salaries, supplements (additional employee benefits), and proprietor income.

Strategic Location Drivers

- Availability of a Qualified Workforce
- Competitive Cost Environment
 - Labor, Utilities, Real Estate, Transportation, Taxes
- Favorable Logistics/Accessibility
 - Air, Highway, Rail, Port
- Favorable Business Environment
 - Taxes, Incentives, Permitting
- Quality of place
 - Ability to recruit/relocate key workforce

The Economic and Workforce Information and Data Pipeline



Tying Economic and Workforce Development Together

Identifying high demand occupations

- Employment Projections
- Burning Glass Technologies
- Target Sector approach
- Job Openings
- Brookings STEM Score

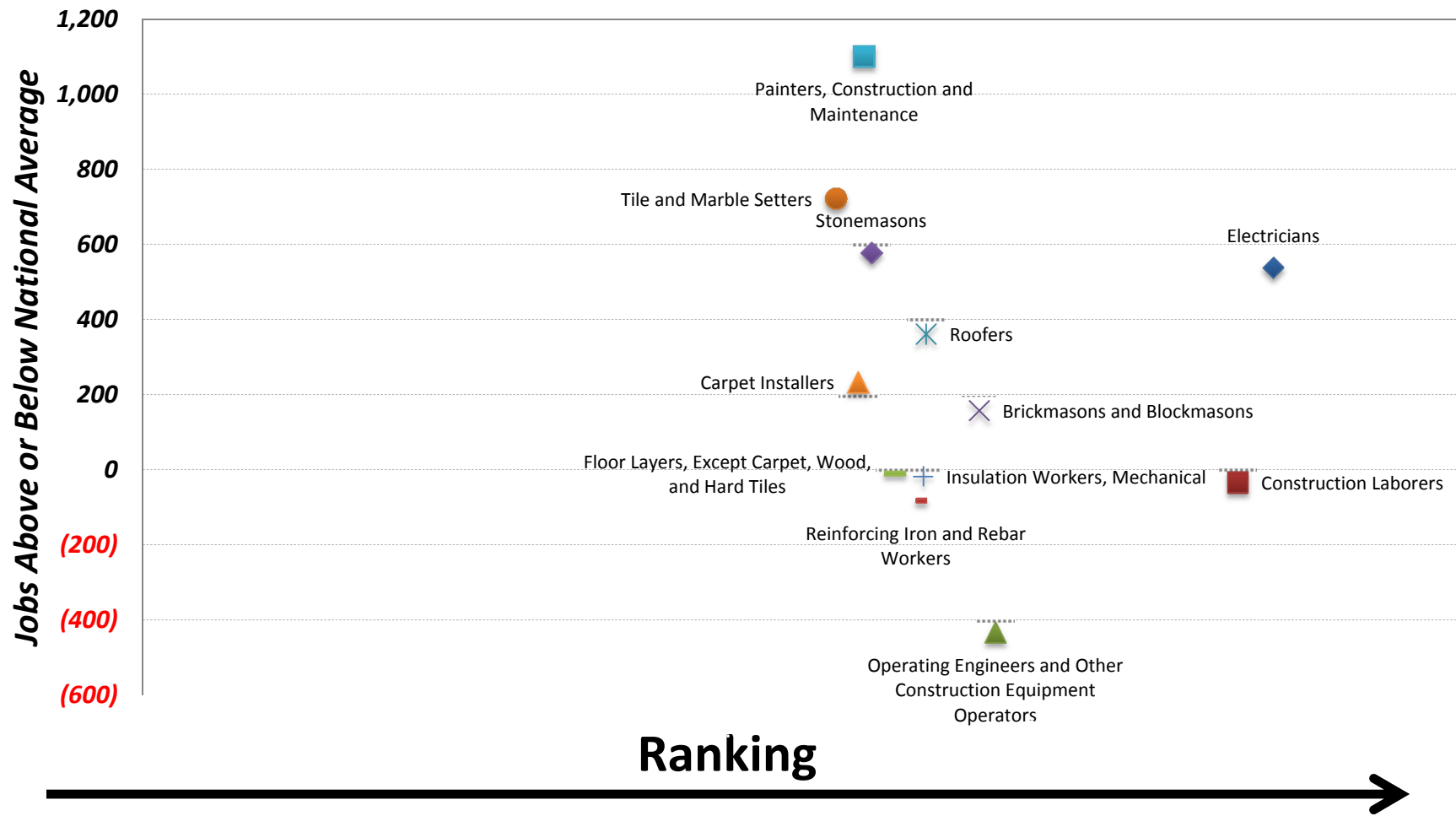
Top 20 High Demand Construction Occupation Groups

Typical Entry Level Education/On-The-Job Training

Bachelor's degree
Associate's degree/Postsecondary non-degree award
High school diploma/Postsecondary non-degree award with OJT
High school diploma/Less than high school with OJT

Occupation Group Description	Consensus Rank	2016 Jobs	Jobs Above or Below National Average	Median Hourly Earnings	
Construction Trades Workers	1	41,365	8,312	\$22.26	←
Other Installation, Maintenance, and Repair Occupations	2	5,203	402	\$22.82	←
Helpers, Construction Trades	3	1,980	(183)	\$14.66	
Business Operations Specialists	4	2,056	(877)	\$27.40	←
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	5	905	(103)	\$25.12	←
Other Construction and Related Workers	6	764	(58)	\$24.33	
Material Moving Workers	7	959	(80)	\$13.12	
Material Recording, Scheduling, Dispatching, and Distributing Workers	8	538	40	\$15.10	
Top Executives	9	2,102	(160)	\$42.62	
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	10	389	(4)	\$22.77	
Secretaries and Administrative Assistants	11	1,728	(928)	\$18.76	
Motor Vehicle Operators	12	1,126	157	\$16.35	
Financial Clerks	13	1,555	(95)	\$16.49	
Other Management Occupations	14	2,604	225	\$37.29	
Engineers	15	359	(439)	\$40.73	
Information and Record Clerks	16	502	29	\$14.65	
Drafters, Engineering Technicians, and Mapping Technicians	17	361	(108)	\$27.29	
Supervisors of Installation, Maintenance, and Repair Workers	18	382	(94)	\$33.65	
Assemblers and Fabricators	19	196	(225)	\$12.48	
Supervisors of Production Workers	20	77	(78)	\$27.55	

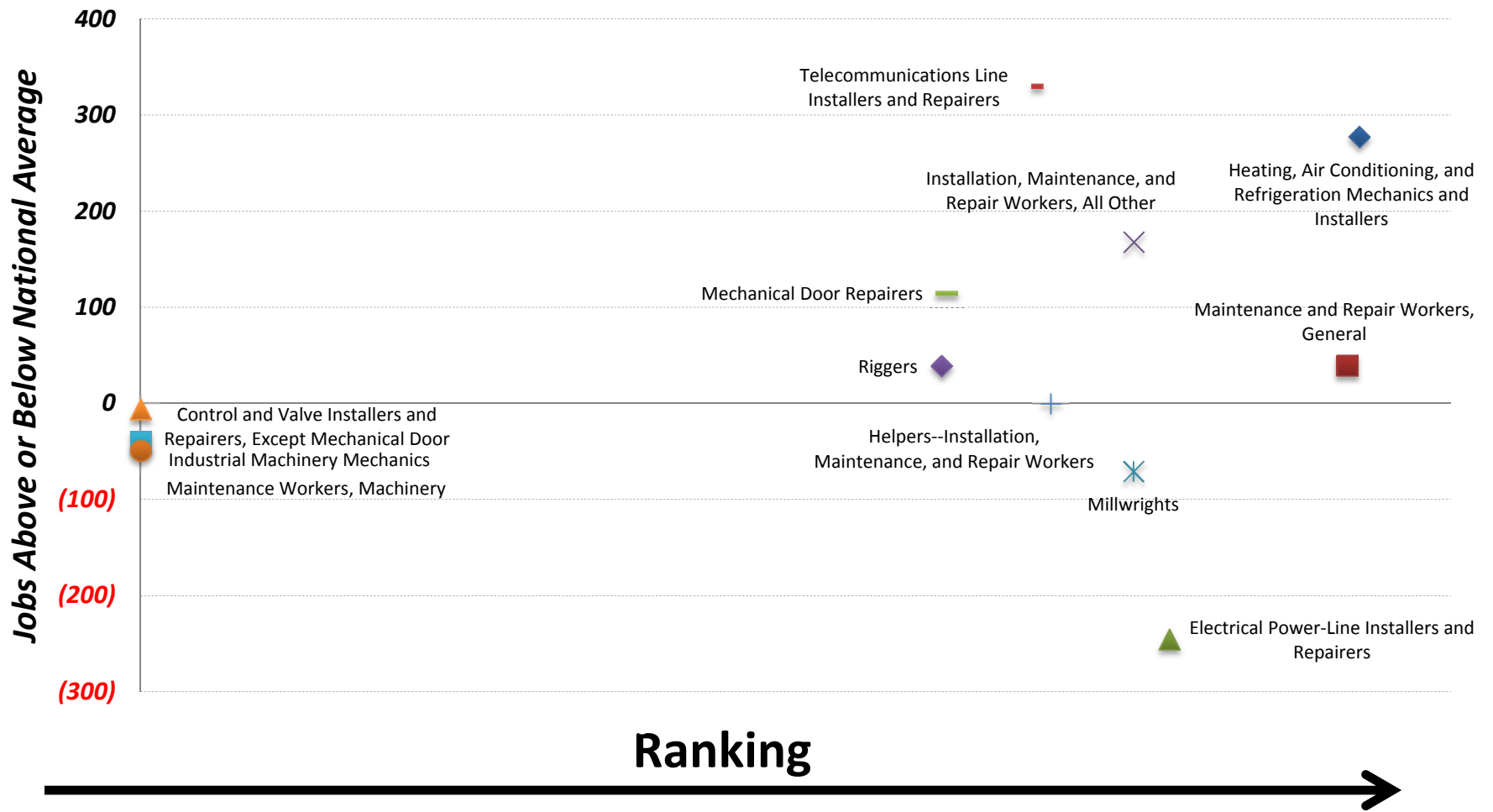
Drilling Down into the Detail: Construction Trades Workers



Drilling Down into the Detail: Construction Trades Workers

Occupation Description	Consensus Rank	Jobs	Median Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level Education	Typical On-The-Job Training
Electricians	4	5,260	\$27.04	538	High school diploma or equivalent	Apprenticeship
Construction Laborers	6	7,096	\$17.82	(34)	No formal educational credential	Short-term on-the-job training
Operating Engineers and Other Construction Equipment Operators	46	1,647	\$25.97	(433)	High school diploma or equivalent	Moderate-term on-the-job training
Brickmasons and Blockmasons	49	743	\$25.24	157	High school diploma or equivalent	Apprenticeship
Roofers	57	1,413	\$19.15	362	No formal educational credential	Moderate-term on-the-job training
Insulation Workers, Mechanical	59	253	\$26.94	(18)	High school diploma or equivalent	Apprenticeship
Reinforcing Iron and Rebar Workers	62	104	\$30.69	(82)	High school diploma or equivalent	Apprenticeship
Floor Layers, Except Carpet, Wood, and Hard Tiles	65	82	\$21.81	(11)	No formal educational credential	Moderate-term on-the-job training
Stonemasons	66	678	\$15.60	578	High school diploma or equivalent	Apprenticeship
Painters, Construction and Maintenance	67	2,734	\$21.25	1,101	No formal educational credential	Moderate-term on-the-job training
Carpet Installers	70	434	\$20.01	234	No formal educational credential	Short-term on-the-job training
Tile and Marble Setters	74	1,031	\$18.06	721	No formal educational credential	Long-term on-the-job training

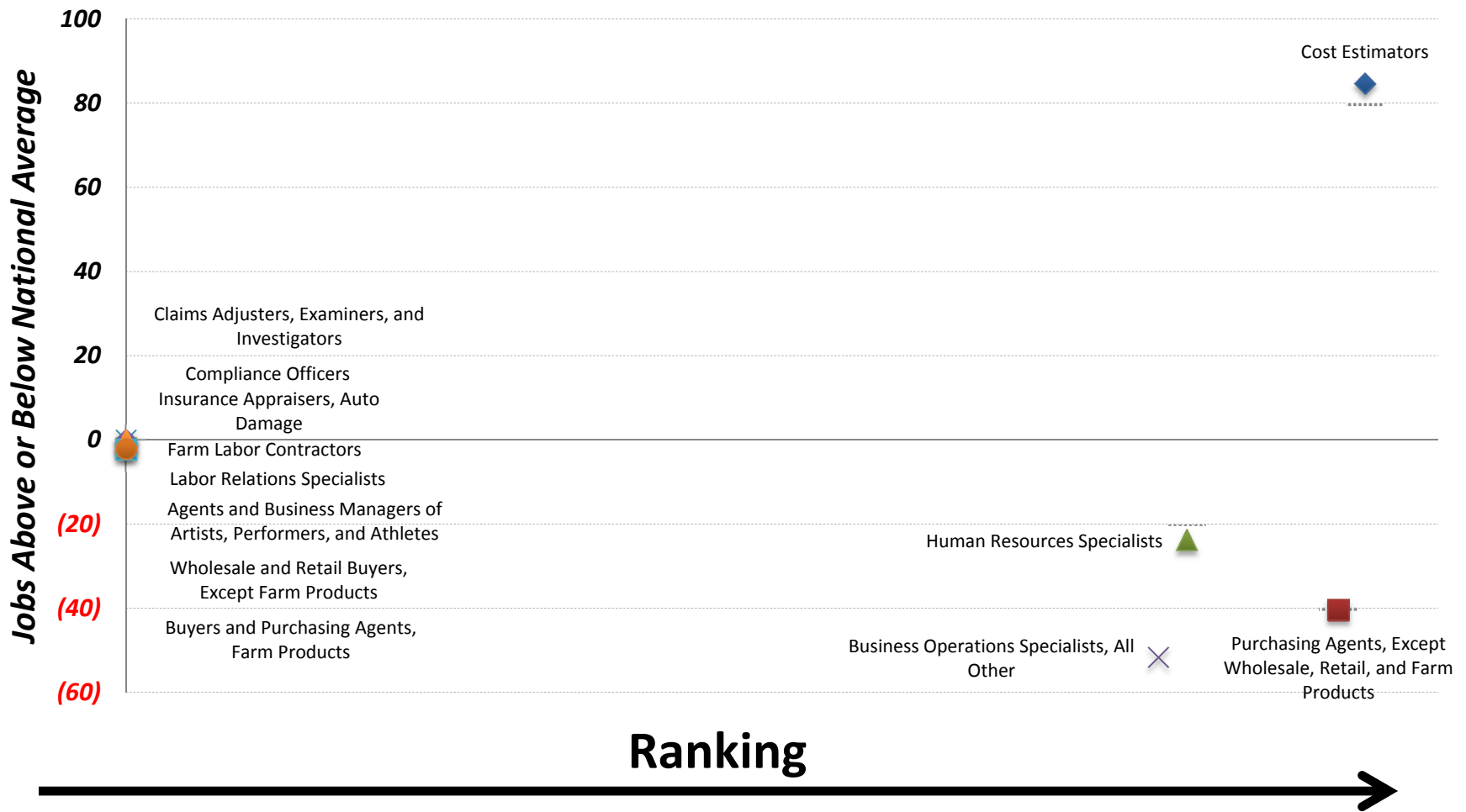
Drilling Down into the Detail: Other Installation, Maintenance, and Repair Occupations



Drilling Down into the Detail: Other Installation, Maintenance, and Repair Occupations

Occupation Description	Consensus Rank	Jobs	Median Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level Education	Typical On-The-Job Training
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	7	2,362	\$27.21	277	Postsecondary nondegree award	Long-term on-the-job training
Maintenance and Repair Workers, General	9	415	\$21.82	39	High school diploma or equivalent	Long-term on-the-job training
Electrical Power-Line Installers and Repairers	34	174	\$37.47	(246)	High school diploma or equivalent	Long-term on-the-job training
Installation, Maintenance, and Repair Workers, All Other	42	373	\$23.95	168	High school diploma or equivalent	Moderate-term on-the-job training
Millwrights	43	156	\$23.87	(71)	High school diploma or equivalent	Apprenticeship
Helpers--Installation, Maintenance, and Repair Workers	51	301	\$14.55	(0)	High school diploma or equivalent	Short-term on-the-job training
Telecommunications Line Installers and Repairers	53	939	\$22.93	330	High school diploma or equivalent	Long-term on-the-job training
Mechanical Door Repairers	69	260	\$19.00	115	High school diploma or equivalent	Moderate-term on-the-job training
Riggers	71	124	\$23.65	39	High school diploma or equivalent	Short-term on-the-job training
Industrial Machinery Mechanics	104	44	\$27.44	(39)	High school diploma or equivalent	Long-term on-the-job training
Maintenance Workers, Machinery	104	10	\$25.09	(6)	High school diploma or equivalent	Moderate-term on-the-job training
Control and Valve Installers and Repairers, Except Mechanical Door	104	13	\$29.18	(49)	High school diploma or equivalent	Moderate-term on-the-job training

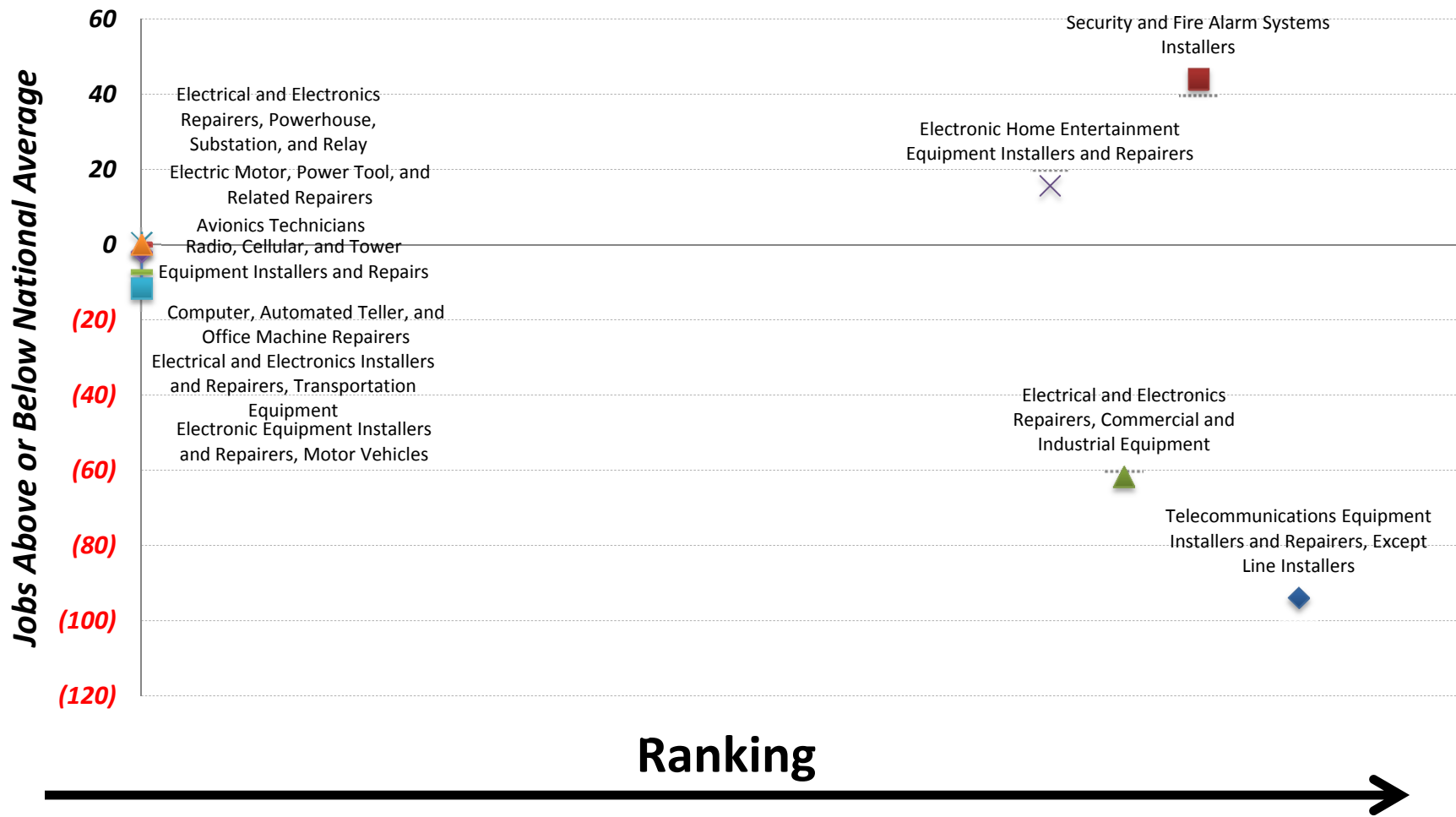
Drilling Down into the Detail: Business Operations Specialists



Drilling Down into the Detail: Business Operations Specialists

Occupation Description	Consensus Rank	Jobs	Median Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level Education	Typical On-The-Job Training
Cost Estimators	5	1,602	\$26.71	85	Bachelor's degree	None
Purchasing Agents, Except Wholesale, Retail, and Farm Products	8	186	\$25.28	(40)	Bachelor's degree	Long-term on-the-job training
Human Resources Specialists	25	54	\$24.21	(24)	Bachelor's degree	None
Business Operations Specialists, All Other	33	138	\$27.66	(52)	Bachelor's degree	None
Agents and Business Managers of Artists, Performers, and Athletes	104	0	\$34.66	0	Bachelor's degree	None
Buyers and Purchasing Agents, Farm Products	104	0	\$28.77	0	Bachelor's degree	Long-term on-the-job training
Wholesale and Retail Buyers, Except Farm Products	104	5	\$21.76	(0)	Bachelor's degree	Long-term on-the-job training
Claims Adjusters, Examiners, and Investigators	104	0	\$31.01	0	High school diploma or equivalent	Long-term on-the-job training
Insurance Appraisers, Auto Damage	104	0	\$27.81	0	Postsecondary nondegree award	Moderate-term on-the-job training
Compliance Officers	104	14	\$28.83	(2)	Bachelor's degree	Moderate-term on-the-job training
Farm Labor Contractors	104	0	\$19.24	0	No formal educational credential	Short-term on-the-job training
Labor Relations Specialists	104	5	\$25.32	(2)	Bachelor's degree	None

Drilling Down into the Detail: Electrical and Electronic Equipment Mechanics, Installers, and Repairers



Drilling Down into the Detail: Electrical and Electronic Equipment Mechanics, Installers, and Repairers

Occupation Description	Consensus Rank	Jobs	Median Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level Education	Typical On-The-Job Training
Telecommunications Equipment Installers and Repairers, Except Line Security and Fire Alarm Systems Installers	15	442	\$31.90	(94)	Postsecondary nondegree award	Moderate-term on-the-job training
Electrical and Electronics Repairers, Commercial and Industrial Equipment Electronic Home Entertainment Equipment Installers and Repairers	29	245	\$20.85	44	High school diploma or equivalent	Moderate-term on-the-job training
Computer, Automated Teller, and Office Machine Repairers	44	50	\$29.87	(62)	Postsecondary nondegree award	Long-term on-the-job training
Radio, Cellular, and Tower Equipment Installers and Repairs	52	116	\$22.58	16	Postsecondary nondegree award	Short-term on-the-job training
Avionics Technicians	104	5	\$17.94	1	Some college, no degree	Short-term on-the-job training
Electric Motor, Power Tool, and Related Repairers	104	22	\$26.51	(7)	Associate's degree	Moderate-term on-the-job training
Electrical and Electronics Installers and Repairers, Transportation	104	0	\$26.19	0	Associate's degree	None
Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	104	13	\$20.88	(7)	Postsecondary nondegree award	Long-term on-the-job training
Electronic Equipment Installers and Repairers, Motor Vehicles	104	5	\$30.49	(2)	Postsecondary nondegree award	Long-term on-the-job training
	104	5	\$39.98	(11)	Postsecondary nondegree award	Long-term on-the-job training
	104	0	\$15.33	0	Postsecondary nondegree award	Short-term on-the-job training

Top 25 High Demand Occupations in the Construction Sector by Consensus Rank

Description	Consensus Rank	2016 Jobs	Median Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level Education	Typical On-The-Job Training
First-Line Supervisors of Mechanics, Installers, and Repairers	1	382	\$33.65	(94)	High school diploma or equivalent	None
Civil Engineers	2	193	\$40.23	(62)	Bachelor's degree	None
General and Operations Managers	3	1,974	\$40.00	(63)	Bachelor's degree	None
Electricians	4	5,260	\$27.04	538	High school diploma or equivalent	Apprenticeship
Cost Estimators	5	1,602	\$26.71	85	Bachelor's degree	None
Construction Laborers	6	7,096	\$17.82	(34)	No formal educational credential	Short-term on-the-job training
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	7	2,362	\$27.21	277	Postsecondary nondegree award	Long-term on-the-job training
Purchasing Agents, Except Wholesale, Retail, and Farm Products	8	186	\$25.28	(40)	Bachelor's degree	Long-term on-the-job training
Maintenance and Repair Workers, General	9	415	\$21.82	39	High school diploma or equivalent	Long-term on-the-job training
First-Line Supervisors of Production and Operating Workers	10	77	\$27.55	(78)	High school diploma or equivalent	None
Sales Representatives, Wholesale and Manufacturing, Except Parts and Accessories Sales	11	517	\$26.97	(222)	High school diploma or equivalent	Moderate-term on-the-job training
Accountants and Auditors	12	353	\$27.27	(114)	Bachelor's degree	None
First-Line Supervisors of Office and Administrative Support Workers	13	309	\$21.94	(58)	High school diploma or equivalent	None
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	14	1,560	\$17.21	(758)	High school diploma or equivalent	Short-term on-the-job training
Telecommunications Equipment Installers and Repairers	15	442	\$31.90	(94)	Postsecondary nondegree award	Moderate-term on-the-job training
Production, Planning, and Expediting Clerks	16	73	\$19.38	(52)	High school diploma or equivalent	Moderate-term on-the-job training
Bus and Truck Mechanics and Diesel Engine Specialists	17	84	\$26.09	(29)	High school diploma or equivalent	Long-term on-the-job training
Heavy and Tractor-Trailer Truck Drivers	18	868	\$22.41	(353)	Postsecondary nondegree award	Short-term on-the-job training
Mobile Heavy Equipment Mechanics, Except Engines	19	252	\$29.68	102	High school diploma or equivalent	Long-term on-the-job training
Sales Managers	20	52	\$41.99	6	Bachelor's degree	None
Retail Salespersons	21	115	\$11.12	24	No formal educational credential	Short-term on-the-job training
Laborers and Freight, Stock, and Material Movers, Hand	22	520	\$12.79	14	No formal educational credential	Short-term on-the-job training
Financial Managers	23	157	\$41.59	2	Bachelor's degree	None
Chief Executives	24	128	\$76.54	(56)	Bachelor's degree	None
Human Resources Specialists	25	54	\$24.21	(24)	Bachelor's degree	None

Top 25 High Demand Construction Occupations Sorted by Jobs Below National Average

Description	Consensus Rank	2016 Jobs	Median Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level Education	Typical On-The-Job Training
Secretaries and Administrative Assistants, Except Leg	14	1,560	\$17.21	(758)	High school diploma or equivalent	Short-term on-the-job training
Plumbers, Pipefitters, and Steamfitters	83	2,595	\$23.43	(566)	High school diploma or equivalent	Apprenticeship
Welders, Cutters, Solderers, and Brazers	85	542	\$19.85	(452)	High school diploma or equivalent	Moderate-term on-the-job training
Operating Engineers and Other Construction Equipmen	46	1,647	\$25.97	(433)	High school diploma or equivalent	Moderate-term on-the-job training
Heavy and Tractor-Trailer Truck Drivers	18	868	\$22.41	(353)	Postsecondary nondegree award	Short-term on-the-job training
Electrical Power-Line Installers and Repairers	34	174	\$37.47	(246)	High school diploma or equivalent	Long-term on-the-job training
Bookkeeping, Accounting, and Auditing Clerks	81	1,245	\$17.52	(246)	Some college, no degree	Moderate-term on-the-job training
Sales Representatives, Wholesale and Manufacturing,	11	517	\$26.97	(222)	High school diploma or equivalent	Moderate-term on-the-job training
Executive Secretaries and Executive Administrative As:	35	168	\$25.35	(180)	High school diploma or equivalent	None
Pipelayers	75	138	\$22.98	(153)	No formal educational credential	Short-term on-the-job training
Roustabouts, Oil and Gas	104	29	\$16.66	(153)	No formal educational credential	Moderate-term on-the-job training
Helpers--Carpenters	56	244	\$14.27	(125)	No formal educational credential	Short-term on-the-job training
Elevator Installers and Repairers	36	56	\$39.00	(122)	High school diploma or equivalent	Apprenticeship
Accountants and Auditors	12	353	\$27.27	(114)	Bachelor's degree	None
Structural Metal Fabricators and Fitters	94	98	\$18.58	(107)	High school diploma or equivalent	Moderate-term on-the-job training
First-Line Supervisors of Mechanics, Installers, and Rej	1	382	\$33.65	(94)	High school diploma or equivalent	None
Telecommunications Equipment Installers and Repairer	15	442	\$31.90	(94)	Postsecondary nondegree award	Moderate-term on-the-job training
Helpers, Construction Trades, All Other	64	75	\$16.33	(85)	No formal educational credential	Short-term on-the-job training
Reinforcing Iron and Rebar Workers	62	104	\$30.69	(82)	High school diploma or equivalent	Apprenticeship
First-Line Supervisors of Production and Operating Wor	10	77	\$27.55	(78)	High school diploma or equivalent	None
Boilermakers	104	47	\$26.96	(75)	High school diploma or equivalent	Apprenticeship
Millwrights	43	156	\$23.87	(71)	High school diploma or equivalent	Apprenticeship
General and Operations Managers	3	1,974	\$40.00	(63)	Bachelor's degree	None
Electrical Engineers	104	28	\$41.52	(62)	Bachelor's degree	None
Civil Engineers	2	193	\$40.23	(62)	Bachelor's degree	None

Questions for Sector Council Members

In your experience:

1. Which of the discussed occupations do you find most difficult to fill?
2. Which of these occupations do you believe will increase in demand because of new and emerging industry trends?
 - Please share your rationale.
3. Do you believe the typical entry education and experience levels identified by the Bureau of Labor Statistics are correct?
 - If not, please share the specific education (i.e., certification program, degree, etc.) and experience you typically look for when sourcing talent within your sector.

Governors Office of Economic Development

Bob Potts

Research Director

775-687-9907

bpotts@diversifynevada.com

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