

# ***America's Construction Industry: Identifying and Addressing Workforce Challenges***

## **Complete List of Solutions Identified at the Construction Industry Workforce Solutions Forum**

### **Image and Outreach to the Public**

1. Make people issue a corporate goal and get employees to identify the issues within your company. Then implement a plan to address the issues
2. Use employees as the speakers at any meetings/talks/etc to other audiences, talking up the positives. It will reinforce it to them as well
3. Involve workers in the formal programs that help change the image of the construction industry to youth-parents-educators
4. Use "real workers" (not actors) in the ad campaigns, to reinforce the pride in their jobs (have their friends and family see them as local "celebrities")
5. Salary incentives scales for increased language skills, communication skills, employability skills with internal and professional recognition
6. Provide skill training that results in direct pay outcomes for laborers - pay for skills with certificates outside of the established apprenticeship programs
7. Associations and unions (national and/or local) join forces and develop a "prize" program educating employers and employees on the importance of the industry to the economy and the importance of the role-play opportunities for advancement, etc.
8. Campaign locally delivered at the company
9. Create a long term program to increase professional image
10. Implement best practices of effective employee relations programs within your company
11. Train; reward those trained and the supervisor who value training
12. Do something; don't wait for silver bullet
13. Be sure to clearly communicate training/apprentice opportunities to your workforce and create a clearly communicated career ladder for laborers, operators and professionals
14. Develop a series of posters emphasizing heroes or famous people or events from or related to the construction industry (architect who conceived the Empire State Building, Thomas Edison, opening of the Chesapeake Bay Bridge)
15. Encourage image reform through tax credits, i.e. lower your tax bill if you contribute to industry image improvements
16. Grass is greener
17. Lack career paths
18. Lack of knowledge of career paths
19. Language barrier
20. Youth References
21. Lack of sense of ownership of current company

22. Not paid enough
23. Under appreciated
24. Employer loyalty
25. Create a national campaign by construction associations to improve the low-tech and glamour issues
26. The changing image of construction:
  - i. Audience: Graduate School, College, High School
  - ii. Multi-media
    - CD ROM
    - Streaming Video
    - TV Show/ Video
  - iii. The construction professional
    - National spokesperson- someone young people can identify with
    - Showcase intelligent, articulate men and women that are successful in today's construction industry
  - iv. Declining system
    - MTV
    - Schools
    - Youth troops
    - TV Special
27. Target marketing strategy (national and local)
  - i. Grade school kids- introducing the industry through hands on tool kits, e.g. hammers, etc.
  - ii. High school kids- marketing to non college bound career options, pay and benefits and honorable careers
  - iii. Support by a media campaign that brings respect to a career
28. Business provide job shadow opportunities for students so they can see what kind of work is really involved in this particular vocation. Exposure will help students connect work with learning in the classroom (why need math or English skills)
29. Provide summer job opportunities- weekend jobs, part-time jobs, etc. - where possible to older teens/young adults
30. Have an image building campaign targeting different youth demographics
31. Multi-million dollar integrated communications/ advertising/ marketing campaign aimed at educating youth about the benefits of and value of career in construction industry. This would include-
  - National/ regional/ local Internet advertising
  - Development of fact sheets, brochures, etc with key information about industry
  - Development of Internet portals
  - Construction career days/fairs
32. Media campaign that provides an industry overview in such a way as to show snippets of careers/jobs in construction. Most students/kids are never exposed to construction from the perspective of the carpenter,

- electrician, bricklayer, etc. Ads running would start to plant the seed of the industry as a whole
33. Provide role models in schools that can articulate the career path they followed to reach a higher level management position-explaining their experience, their pay, their exposure to types of work and the “rewards” received along that career path
  34. Education of teachers regarding the realities of the industry
  35. Place more emphasis during career days
  36. Get industry to be more involved in K-12 education
  37. Give teachers (target them) summer job opportunities in the industry (that won’t kill them)
  38. Visit high schools, community organizations and present information on the company and industry to increase awareness and better image
  39. Make interactive computer game where you “build” a structure
  40. Publish and distribute books (that are easy to read and understand) about the contributions of the construction industry to American society, culture, quality of life, as a way to improve image
  41. Develop an educational series on Discovery (PBS, et al.) on the history and historical importance of the construction industry (i.e. Great Wall, Pyramids, Empire State Building.) Equate the training (apprenticeship) to that of a residing program/internship. This would educate and help allocate the construction “myths” by parents/educators
  42. Create internal program for apprenticeship and/or coop/internship opportunities
  43. Creation of TV reality show similar to “American Idol” – “Construction Idol” showcase the skills of workers in the industry
  44. More reality shows along the lines of “Monster House”...mixing outlandishness with real life- emphasizing the creativeness in construction
  45. DOL to help fund reality T.V. show that focuses on the positive impact/image of construction
  46. “Construction Survivor”-TV Show (not sure what that would look like)
  47. Time lapse presentation showing building coming form empty lot to completion, spotlighting construction workers performing different tasks in fast motion with “We Built This City” or similar type of music ending with “Construction - We Build America” or slogan of that type
  48. Work with existing youth organizations to educate/engage youth, e.g.- Boys and Girls Clubs, Boy/Girl Scouts, Youth Corp
  49. “See the World” Campaign - advertise the realm of possibilities related to job locations given the seasonal nature and benefits of construction jobs
  50. Develop flashy/quick-cut promotional video showing construction crew building a concert venue, skateboarding park, amusement park, sports stadium or other site where youth would spend time themselves. Include some of their heroes in the video shown enjoying or using the resulting site
  51. Advertising campaign showing “before and after” lifestyles

52. Produce and distribute national salary survey for youth with real, accurate information about potential earnings in construction industry. It would be distributed to schools nationally
53. Work with community guidance counselors/career counselors to stress the importance of our industry/company
54. Develop web-based (high-tech) training programs specific to construction crafts
55. Construct regional/community sociological approach to image by engaging multiple community partners and entities in a "building social capital" initiative that involves cultural, educational, religious, business, industry, government towards using the construction industry to improve their community or region
56. By interrelating museums/arts with churches, housing partnerships/Habitat for Humanity with high schools and community college construction students
57. Dirty
58. Unsafe
59. Low Tech
60. Want parent's lifestyle
61. Different ethnicities and genders
62. Low paying/benefits
63. Low education
64. No career path (dead end)
65. No glamour
66. Part-time
67. Transit
68. Unstable work
69. Not respectable
70. Seasonal
71. Employers not loyal
72. Include representatives of ethnic, gender and cultural diversity in advertising and media while distributing in non-traditional settings, i.e. churches, daycares, employment offices, neighborhood grocery stores, libraries
73. Piggy-back to media campaign for youth - targeting successful women/ veterans/ people of color/ people with disabilities in the construction industry
74. Any marketing for any population/demographic must consist of diverse/realistic spokesperson/actor/actress
75. Intensely market within workforce centers and other sources of non-traditional workers, e.g. minority community based organizations (CBOs), women's centers. Eliminate barriers
76. Create a campaign that will emphasize
  - Wages and benefits
  - Training and retraining
  - Career growth

77. Ask local workforce boards and one-stops to help educate dislocated workers from declining industries about opportunities in construction industry, emphasizing strength/durability of industry and opportunities to retrain for jobs that have a future, that aren't going to disappear
78. Ask current non-traditional employees to identify others. Give referral bonuses and then hire even if they are not the "most" qualified
79. Available funding for "scholarships" for those wanting to get into construction training programs
80. Create a national media campaign targeting women offering information on our industry and encourage them to get involved
81. Media kit for placement at appropriate agencies (VA)
82. Include training options, compensation expectations
83. Gender bias- women harassment
84. No relocation for women
85. Strength
86. Lack of role models
87. Same as youth issue/perception
88. Perception of lack of childcare
89. Lack of transportation
90. Necessary tools, clothing
91. Lack of funding for an individual to receive training
92. Lack of flexibility
93. Hours/shifts (work rules)
94. Don't feel welcome
95. Scared about not fitting in
96. Quota filler
97. Fractured/union and non-union
98. Work culture
99. Think you have to start young  
Educate parents on apprenticeship opportunities vs. college opportunities during career nights and career days for kids
100. Develop "career fairs" at schools where parents attend with students to see/talk to construction professionals who can articulate why their job(s) are great. Or have career nights with a panel of construction workers who talk about their job(s) with students and parents
101. Through school "career day" arrange for "jobsite tour" of local "landmark," i.e. a ballpark, large hotel or factory
102. "Career night" at schools hosted by successful members in the industry. All levels - laborers, craftsmen, management, owners - enlighten and excite them about the wide range of career possibilities available to their children
103. Media pack with compensation norms, career "tree" showing numerous paths
104. Tie the media into personality profiles that are construction prone
105. These first go to schools that are not overly college prone

106. Highlight labor market earnings and career ladders and distribute this information through national conferences, professional publications, local/state career composites that are used in college fairs, individual and group counseling and parent evenings
107. Provide printed and video information on the “Real Industry”
108. Showcase successful construction people and their lifestyles
109. Successful parents have kids who are in construction
110. Son/daughter can be an important part of society without a college degree
111. Graduation ceremony from A&T schools- with caps and gowns and diplomas. Shows achievements and skill developments
112. Construction associations develop awards and recognition programs for counselors who highlight construction as a worthwhile career
113. Expand or create a “Construction Academy” in high schools so that there’s more structure as to what a student studies or does; it’s a “national” program so that across the U.S. construction companies could recognize what the student has completed and there is value to the company that the student has as a result of completing the “academy” (involves a national curriculum)
114. Target schools and PTAs that have a history of not sending kids to colleges
115. Remove the “incentives” (whatever they may be) of measuring schools’ worth based on the number of students that enter college
116. Develop curriculum and get education established to endorse continuing education credits for expanded knowledge of the industry
117. Create a career/personality, learning style standardized instrument, available via hard copy for group interactions as well as computer-based to identify transferable skills and attributes related to the construction industry
118. Require job shadowing of them so that they can have a better grasp of the jobs that offer pay incentives and all the details about it
119. Tours of construction companies’ offices and jobsites with presentations on opportunities
120. Provide summer education and employment opportunities for educators/counselors
121. Create a formal “Educator/Counselor” job shadow program that funds their absence from school so they can spend a day or a week on the job with construction workers to experience/see a variety of construction jobs and what skills are necessary. This would allow educators to get real world examples to infuse into their curriculum
122. Establish networking opportunities with educators/guidance counselors
123. Touch on the role the industry has played in the growth of the nation
124. Build awareness of the number of national leaders that have come from the industry
125. Commit to a non college board curriculum

126. Create incentives for educators that are successful in transitioning students into the industry as a career path
127. Prepare and distribute to guidance counselors around the country an interactive CD-ROM showing that construction is a highly desirable, high-tech and good wage industry
128. Advertising campaign to persuade parents to persuade their children to go into the construction industry
129. Many owners of sports teams have made their money in construction - PBS type commercials where they talk about their success (BUILD A WINNER-OWN A FRANCHISE- DON'T BE A LOSER)
130. Ask local community organizations to invite construction company owners, construction workers, construction project managers, trade union reps and other industry spokespersons to speak at their meetings
131. Targeted organizations could include Chamber of Commerce, Rotary Club, PTA's, social clubs, and other adult groups that meet regularly. Speakers should emphasize variety of jobs available, career ladders, pay and benefits, etc.
132. Visit local community organizations and PTAs to educate parents about our industry. Talk about career/internship opportunities for their children
133. Educating parents about the value of a long-term career for kids. Transition your child out of your house
134. Women in construction advertising (i.e. newspaper stories, TV/radio) will help with sexual harassment concerns
135. Partner with parents and teacher associations and public school systems on development of materials to dispel myths/perceptions about careers in construction
136. Not an alternative
137. Significance
138. Training is not viewed as equal to community college or college
139. Viewed as a "less than" academic division
140. Lack of understanding
  - o Development
  - o Functions
  - o Career paths
  - o Skill sets
  - o Diversity of skills
  - o Occupations
141. Education system measures college placement
142. Lack of business involvement
143. Images
  - o Laborers
  - o Craftsmen
  - o Professionals
144. Unprofessional
145. Unsafe (youth reference)
146. Bridge class/blue collar stereotypes

- 147. Low tech
- 148. Kids have to go to college (not equal to college)
- 149. Peer perception
- 150. Negative motivator
- 151. Lack of understanding the significance
- 152. Not a consideration instead of college (alternative)
- 153. Don't want daughters to go into construction - sexual harassment concerns

**Skill Development and Education and Training Capacity: Entry Level and Incumbent Workers**

- 154. Link employers more closely with training providers, i.e. community colleges, who offer construction training
- 155. Employer/educators - customized training/education to encourage provision of needed credentials and skills
- 156. Increase public support/contributions to apprenticeship training funds
- 157. Build capacity/knowledge of W/F development system, TANF, One-stops, etc. to promote, assess, and refer candidates to apprenticeship programs
- 158. Fund capital investment (matching funds) to equipment facilities to provide technical upgrade training for incumbent workers
- 159. NAHB endows chairs at colleges (universities) specifically focusing on residential construction management
- 160. Investment (seed money) to write a model curriculum for construction fundamentals that is jointly developed (industry/education)
- 161. Tie apprenticeship and associate degree post secondary education/training -- i.e. dual credit. Enable apprenticeship training to count as: TANF work requirement, college credit, community college credit
- 162. Where there is a quality problem, create an accreditation/certification process to set and enforce standards
- 163. Establish equitable access to training for demographic groups, regional areas or other underserved groups
- 164. Establish formal linkages between public W/F systems (CC, WIA, Job Corp, Vocation to Apprenticeship Training programs)
- 165. Customize to demand a short term specific skills training or traditional curriculum
- 166. Where there is a capacity problem, create an industry spokesgroup to lobby with legislators for more capacity
- 167. Regional Economic Project
  - Divide state into 9 different economies
  - Identify growth trends very specifically
 Labor agency, WIA, Apprenticeship Division, employment training panel (incumbent worker), community colleges and K-12 (ROP) and even Prison Training



- Work out capacity in top X member of growth industry  
 Secretary of Labor, State Chancellor and Superintendent of public instruction lead system to regional
168. Three-way partnership (facilities/equipment/curriculum/personnel) to build complete infrastructure to deliver open-access partnership with military to train for specific trades skills
  169. Marketing campaign to create convenience of benefits of construction as a career to increase enrollment
  170. Establish tech high school as track to community college positions or pre-apprenticeships
  171. Ongoing industry advisory campaign for specific trade workers for constant input on needs as well as employment once course is complete
  172. Partnership with community colleges and equipment manufacturers to create specific trade/skill training programs
  173. Capability - could be handled through the Internet
  174. LVB's partner and develop C/M e-learning opportunities for and donate them to C/M schools, 2+4 year colleges to increase capacity and provide capability for needs
  175. Web-based assessment and access to training to improve availability and regional imbalance
  176. Create a vocational "trade" program based on geographic criteria. More programs such as "youth based" with a broader base of knowledge - provide more opportunities for enrollment. Align with high schools- public/private schools - to get an idea of how these students are geared more toward vocational vs. academic training
  177. Link high schools and community colleges who offer construction education/training so there is continuity
  178. Provide sensitivity training to encourage working with non-traditional workers
  179. Add effective management of (including hiring, retention, advancement) non-traditional labor force into performance management reviews and advances
  180. Require applied language component to management training
  181. Work with a select group of builders (any size) to develop a matrix of required leadership competencies and assist developing on-line courses
  182. Develop a bonus system on federal jobs for meeting certain criteria, i.e. bi-lingual project managers
  183. Partner with and incent employers to create management skills training
  184. DVD programs - take home, self paced, and then short classes
  185. Conduct regular training to support productive integration of non-traditional pool
  186. Conduct environmental scan and establish goals and plans to recruit, train, hire, support, mentor, retain and advance non traditional labor force, included in annual and strategic plans

187. Cultural awareness and diversity and training are essential skills to be fully functional in today's society and should be a part of all training curriculum
188. Provide incentives to workers in underrepresented groups to pursue management training
189. Continuing education requirements include contemporary H.R. issues as well as L/M topics
190. HBI and industry partners develop a minimum set of courses with descriptions for high schools, trade schools, and 2+4 year schools. Let schools worry about accreditation
191. Public workforce investment system needs to address basic English literacy training for immigrant workers
192. Subsidize entry-level wages with continued unemployment wages for a probationary period. Probationary training must include "on the job" training
193. Enhance vocational training option for high school students
194. Enhance vocational training option for community colleges
195. Develop wage/skill subsets based on basic skill requirements that are "protected" from discrimination, i.e. bona fide job skills
196. Incentive wage/hours for entry level
197. Basic skills
  - Obstacle course
  - Shop classes in high schools or community colleges
  - Intern on construction projects
  - Interact in job fairs
  - Tool demonstration by manufacturing representatives
  - Formal job descriptions that include qualifications
  - Assessment test
198. Immigrant labor must have basic -
  - English language training
  - Basic math literacy- basic arithmetic
  - Work ethic- understanding to
    - Arrive at work on time
    - Call supervisor when sick and can't come to work
    - Listen to instructions
199. High schools can/should address math, literacy and perhaps work ethic issues
200. From non-traditional populations (immigrant/women/TANF) assess-
  - Customized classroom training from menu
  - Trades math/language
  - Common skills/conflict resolution
  - Vocational English
  - Life skills
  - Technical/ equipment/ tools
201. Help focus and separate these generic complaints into construction proficiencies and competencies, i.e. lack of background in construction.

They don't know what construction is about so they quit. That it is a physically demanding activity done in varying weather conditions, so retention is the issue. Inexperience can cause them to cross into a union and non union work place

202. Enroll in employability skills, i.e. assessment of skill level to determine aptitude, deficiencies, worker traits, remediation if reading, math skills and very low physical evaluation. Customized training to include on-the-job and classroom training. Mentoring by industry representative. Shadowing to learn what happens on the worksite. Language - enroll in ESL (English as a Second Language)
203. Internship/on-the job-training component. 1 week in class or workshop/1 week Q/T. 12 week program. Certified competencies
204. Develop a computer/web based program that assesses aptitude and develops basic and advanced skills required for various construction trades
  - Game would-
    - Build a project
    - Allow players to interact
    - Could be used as a teaching aid
205. Pre-apprenticeship assessment
  - Reading - language, math
  - Measurement
  - Drug/alcohol awareness
  - Exposure to work in industry
206. Exposure to workplace
  - Discussion for non-traditional issues
  - Project assignments with others (build something basic alone, then with others)
207. Develop a pre-apprenticeship/pre-employment curriculum that provides a brand-based introduction to anyone who expresses an interest in construction trades to prepare them to get into the industry. This would include-
  - Logic and critical thinking
  - Language skills
  - Math skills
  - Writing skills
  - Hand/eye coordination
  - Mechanical aptitude
  - And provide "prescriptive" solutions to address deficiencies
208. Introduction to and exposure in (hands-on) general trades-related fundamental skills, i.e.-
  - Precision measuring
  - Reading blue prints
  - Using hand tools
  - Safety

209. A brand based overview of construction trades to build an understanding of the industry, the work environment and the expectations of an employee across a range of different trades
210. Team/group skills
211. Soft skills/support services to prepare someone to be a good candidate to enter the industry
212. Demand-driven pre-apprenticeship training that is partnership lead/supported/funded
  - Developer/contractors/labor
  - Population-based CBO
  - W/F, public education system
  - ⇒ Has assessment and screening process to identify best potential candidates
  - ⇒ Has curriculum that is delivered to mimic industry conditions
  - ⇒ Incorporates supportive service (wrap-around social support) during and post training
  - ⇒ Linkage to “current available opportunities” for “direct placement” upon successful completion
  - ⇒ Provides comprehensive follow-up support, mentorship in structured way
213. Develop or administer a behavioral measurement
214. Assess technical aptitude and want - does the person have the desire for the work
215. Create an environment which puts the individual in a “real world environment”
216. Create an assessment device (test, written, and manual) to determine -
  - Is construction an appropriate career fit
  - Areas where remedial training/education is required
217. Federal government consider creating a “workforce development” sector encouraging representatives of all appropriate agencies/departments - i.e. HND, Justice, Education, Labor, etc.
218. Web-based community and conferencing and linkages. DOL acting as ombudsman, distribute communications via Internet and trade journals on programs, activities, etc
219. Incentives from founders to encourage collaborations at local/regional level
220. Design a seamless career pathway from entry-level through apprenticeship to life-long career growth, jointly developed and implemented by education and labor
221. Internet analysis:
  - i. Key in situation
  - ii. Identifiers
  - iii. Loading calculations
  - iv. List out stakeholders with contact information
222. Develop direct link between jobs and job seekers

- 223. Create a sector-based agency within federal department to coordinate information sharing
- 224. Recognize productive partnership areas
- 225. Create a construction industry taskforce/committee to tie all the stakeholders together
- 226. Partnership and information sharing among key stakeholders - advising council to include major partners, newsletters and e-mails

### **Skill Development and Education and Training Capacity: Youth**

- 227. Collaborate with labor groups—union and non-union—to support apprenticeship programs at local/state levels, especially in under-resourced areas. Support needed includes: staffing/instructors, administration, financial, equipment, supplies
- 228. Develop adhered system within school (building blocks) that ensures students learn math, reading, communication skills—if they don't get it, have a vehicle that will help them—not push them aside
- 229. Partnerships between local industry and secondary schools. Adopt a School — industry investment would mean future recruitment—market construction trades
- 230. Develop school/employer partnerships that allow students to develop/use skills (internships and after-school programs)
- 231. Network with associations to provide capacity and education. Donations, equipment, and teachers
- 232. Educate teachers and guidance counselors on what is available in the construction field without getting a college degree (having a local company mentor)
- 233. Industry professionals partner with secondary schools to provide experience and/or material to enhance the class
- 234. Businesses need to partner with local I.S.D. with a competence test (reading/math) that reflect the skills needed
- 235. Require more basic math and reading skills in the early years—4<sup>th</sup> grade, and require testing/passing to move on
- 236. Basic skill competencies should be emphasized to students—“Work Keys”. Assessments or similar testing for: critical thinking, computation, communication, technology literacy, self-assessment, personal accountability
- 237. Involve educators and administrators in trade-sponsored externships
- 238. Must capture their interests. Why this is important. Develop summer construction camp for kids. In the camp, stress through activities the importance of these skills—how they pay off for them
- 239. Funding to develop national advertising programs for public education — targeting parents and children
- 240. Develop a national marketing plan to emphasize the need for skilled tradesmen — money, quality, safety, jobs, etc.

241. More communication: from employers to schools, parents, regarding what careers are available and at what skill levels.
242. Through a collaborative effort, labor & management must adapt training and training methods to “tomorrow’s” generation of youth
243. Educate legislature as to the importance of a student being able to take trade and industrial classes where technical skills are introduced and taught
244. Employer-based ESL classes, with curriculum developed or enhanced and provided by the specific specialty construction associations/groups to meet the changing workforce demographics
245. Develop a strong linkage with Juvenile Justice programs to provide a real “second chance” via mentoring from the industry, paid through workforce/justice/educational systems
246. Support career days (elementary schools)—focus on examples of how math, reading, and communication play a part in any career path. Then give specific examples to the construction industry
247. Career days — focus on skill needs
248. Enhanced career assessments in early teen years
249. Teachers and counselors—competency and training in the subject rather than “teaching skills”
250. FCWA - Future Construction Workers of America - mentoring in high schools, volunteerism similar to FTA, FHA, 4H, etc.
251. Guidance counseling to give practical education focus, partner with associations. Educate counselors of the skill necessary
252. Creative partnerships between trade unions, contractors, high schools, and community colleges to graduate high school seniors with their 1<sup>st</sup> year of apprenticeship completed
253. Group mentoring programs/activities: math, reading, and preparation for the job market
254. Develop a strong tie-in with Habitat to promote “quality” building techniques—tie student participation to high school service hours (this might change the youth pool)
255. Utilize existing successful programs (i.e. tech prep)
256. Develop school competitions that use the skills (math, reading, communication) from construction slant. Ruler-square feet-depth-length. Students must present findings before judges
257. “Build-A-School”—programs to emphasize the skills to the area youth population. Allow planning, work experience, creating ownership via school construction
258. Define from the demand side (employers) exactly the level of “skill” required for entry; both the “soft” as well as “technical” skills
259. Give students a chance to highlight skills learned through healthy competition (like football)
260. Sell! Sell! Sell! We have a great story, we need to communicate it
261. Soft skills: understanding proper dress, conduct, manners, etc. Partner with local business community

262. Get “soft skills” assessments implemented in, at least, middle school level. Then educational professionals can “coach” from that base line
263. Develop a delivery - provide a “social skills” curriculum with learning objectives defined as building work ethic, and values (could be based on a 12-step recovery program model)
264. Give teachers a program that will focus on employability skills as well as academic skills. Give them the tools needed to accomplish the task
265. Develop a career mentoring program that is implemented in grade school to promote interest in trade work and self-esteem, responsibility, etc. (work/job shadowing)
266. Mentor connections through early extra-curricular activities (Girl Scouts, church, YWCA, sports)
267. Construction exploration courses within high schools that incorporate paid construction internships to develop skills
268. Show students these skills are necessary and valuable through hands-on activities that show a “real world” application
269. Adopt business measurements for academic proficiency (apparently education has set the bar too low)
270. Communicate front-end needs to educators
271. Make counselors aware of what we need in the construction industry and in the specific trades. We need to “educate the educators” about our industry needs
272. Involve youth in trade-sponsored internships
273. Engaging outreach activities to: public and private schools, religious based organizations, community based organizations
274. Early education on career paths. Accomplishments: proper image, realistic approach to career, and clear understanding of the career
275. Reintroduce the teachings of civics in junior high and high school. Absence of parental role-models
276. Develop a program/class (with local companies) that teaches work ethic, as well as interest in trade work
277. Implement more contextual learning within math courses at high schools
278. Employer curriculum—use faith-based network to expand classes to Saturday/Sunday with parent/child participation. Parents are the 1<sup>st</sup> teachers
279. Career days at local apprentice training facilities. Communicate the skill requirements for entry
280. K-12—more classes, more hours, longer days, add grade 13. Incorporate work into our current academic programs...make time
281. Stop spending those funds (state, local, and federal) among several programs and reintroduce some type of vocational training at the high school level—bring outside talent in to teach this training
282. Fund vocational programs at a level that allows educators to showcase the positive aspects of vocational skills. Even if the student does not enter the field—“life skills” can be used anyway

283. Develop stable/flexible funding stream for apprenticeship/construction preparation programs, such as YouthBuild and others based at nonprofits, high schools, or tech colleges/community colleges
284. Divert WIA youth money to proven vocational programs
285. Issues with WIA One Stops—unresponsive to industry needs, turnover based short term solutions to major social problems, contract providers concerned only with completers not true worker training/education, waste of taxpayer dollars
286. Guidance counselors and teachers need to focus on lifelong goals as opposed to short-term “get out of high school” goal. Inspire the need to think about the future and personal aspirations
287. Give schools “points” for offering trade and industrial classes, to all students. Allowing the expansion of classrooms into labs that are used in training students
288. Schools should have vocational counselors that work along-side guidance counselors
289. Ensure that preparation programs are connected to the industry and are training in the skills (such as employability skills) most needed by industry. For example, creating a model curriculum so folks coming out have the same competencies
290. Encourage legislation (and funding) to dedicate strategically located voc-tech schools or community colleges as “THE” trade schools for specific specialty construction curriculum delivery
291. Career exploration courses should be or become part of the required curriculum with emphasis equivalent to college-prep courses. Including a “work keys” assessment could help steer students to areas in which they can be successful
292. Develop/implement specific programs (e.g. music, sports) that allow students to develop vocational interest. Build capacity within system
293. Offer “trade specific” CEU type in-services to elementary level instructors and counselors on construction careers
294. Offer career development as a requirement course, in early years (4<sup>th</sup>/5<sup>th</sup> grade)
295. If vocational classes are not provided at the schools, have students study and work at a company of their choice (e.g. mechanic, electrician, glazer, etc.)
296. I think the capacity and capability exist. We, the demand side, have not defined our needs clearly enough, or voiced them strongly enough
297. Appropriate staffing of school counselors open to all career choice
298. Provide incentives or educate stakeholders to benefits of cooperation
299. Produce a “This-Old-House” type cable TV show (i.e. House & Garden TV—HGTV) for construction projects
300. Create partnerships of training providers that do joint fundraising to address specific and common issues and share information



301. Industry needs to be involved at the state and national level when coordinating educational opportunities and curriculum for potential employees
302. Explore the use of nationally recognized quality models (i.e. Baldrige, seven sigma) that employ sharing and self-assessment activities toward producing a more prepared worker. This would include the following stakeholders: labor, employers, educators, students, parents
303. Study other foreign country models for apprenticeship programs and education systems...a.k.a. "tracking" careers
304. Work with higher (i.e. A.C.E.) education to develop a curriculum (within graduate political science college degree programs) that is totally devoted to workforce development in a socioeconomic context
305. Trade/contractors/associations partner with private state care systems (e.g. orphanages, detention centers) to develop and implement "adventures in achievement" significance program that embraces skill development and engages students to learn through achievement-significance
306. "Building Trades Bulletin" to all stakeholders - locally (printed matter)
307. Create a reality TV show to educate public about the benefits of the construction industry
308. Better communication must be established to make available resources known - possibly web-based. Connect providers, parents, etc...
309. Development of web-based construction industry career exploration tools with linkages
310. Publicize industry cluster system for education and workforce, broaden and include effectiveness.
311. Create local advisory committees for trade and industrial classes that include business and industry members in the area as well as teachers and parents
312. Implement construction industry workforce committees at state level, county level, that bring together stakeholders to address various workforce issues, including funding, skills development, etc.
313. Education to develop industry advisory curriculum
314. Education system representatives, employer representatives, and worker representatives need to start sharing information
315. Develop a clear and comprehensive career path for the student, include parents to inform/buy-in
316. Establish within school, student government associations, an awareness program that does not depend on school counselors providing information. Let the kids decide for themselves
317. Business leadership convened by elected officials to devise full workforce platform—construction will take priority
318. Provide social activities for stakeholder groups

## Recruiting

319. Positive image of construction as a career throughout the school years
320. Reward children of workers for their math and language grades, with tools, job site visits, and other recognition
321. Create math and science courses geared to construction industry techniques so skills learned are transferable to industry and articulated with community colleges to associate degrees and cert. requirements and apprenticeships
322. Offer programs in high schools that teach basic construction skills that could help land summer and part time jobs with local contractors. Work out arrangement with local contractors to put these kids to work when they can
323. Articulate high school classes with apprenticeship and junior college
  - Related tech math
  - Business math
  - Business communication
  - Geometry
324. Recruiting web sites - have young construction workers explain the opportunities, benefits, and potential wages that are available
325. Show pay rates/scales for trained construction workers in various trades
326. Show growth rates of construction for the next 10 years
327. Show statistics that construction is a growing field offering future job security - 16-17% annual growth (not counting attrition) for next 10 years
328. Promote development and marketing of "games" to introduce youth to the construction industry. Electronic /video games as well as LEGO, Lincoln Logs, Electronic project kits, Erector sets and Tinker Toys. Trade associations could develop Internet-based and CD games about various construction industries/skills. Make them as good as current commercial products. Give them to schools (Internet-based registrations and disks). Associations should sell them as commercial products - partial cost recovery
329. Businesses get involved with high schools/fund contributions to classrooms with equipment and instruction
330. Partner with local high school trades classes. Have various construction companies "adopt" a class. Provide them with jobsite tours, guest speakers and exposure to current young skilled labor mentors
331. Compare annual salaries of tradesperson, foreman, superintendent, project manager, division manager, V.P. EVP and president of construction companies to different professional professions
332. Develop a comprehensive marketing plan that will help the traditional labor pool to understand that the construction industry is a career
333. Advertise on TV and radio promoting the benefits of a career in construction. Show young people with new cars/trucks, nice clothes, etc.
334. Specify and market how required skill sets develop into "career lattices" which relate to "lifelong employment." That is: how you start at X and move to Y to Z and etc. Include wages/salary expectations

335. National advertising program telling of career benefits and opportunities in construction trades. Good wages, advancement, benefits, etc.
336. Organize various construction associations to advertise together at target population areas (rodeos, NASCAR, etc), DOL to provide demographics for ads
337. Establish sponsorship programs to promote career ladders w/c the industry to offer assistance to employees to gain new skills necessary for the company's success
338. Recruit in rural areas and small towns at high schools
339. Use publicly funded workforce system for job listings
340. Partner with different U.S. Armed Forces to recruit already trained personnel as they are relieved of duty
341. Work with military to recruit recent discharges
342. Ex-offender population during incarceration. Training, awareness, and employer match could begin prior to release, thus reducing recidivism. Connecting employer and ex-offender to the workforce development system for available benefits
  - Employer Benefits:
    - Tax incentive
    - Federal Bonding
    - Trained worker
    - Managed worker
  - Ex-Offender Benefits:
    - Money
    - Housing
    - Child support
    - Productive life
    - Recognized citizen
  - Community Benefits:
    - Reduced recidivism
    - Less crime
    - Families off welfare
343. Employers and labor councils should participate in prisons' "pre-release" activities to assess soon-to-be-released inmates' skill sets and recruit them into jobs that include training
344. Start apprenticeship or even pre-apprenticeship programs in prisons, collaborate with state and local public workforce investment system
345. Support construction programs offered by the prison system. Be ready to provide employment after release from prison
346. Recruitment from halfway houses. They have to check in each and every day
347. Individuals with disabilities "employer education"
  - Identify jobs that would be able to support someone with a disability
  - Employer awareness
  - Open to the possibilities

- Have a “DVR”- Division of Vocational Rehabilitation come to work site to conduct a screening
- 348. Offer training in prefabrication or piece work that can be done at contractors’ shop rather than on job site
- 349. Industry develop specific job descriptions that match disabilities to increase pool of potential employees
- 350. Recruitment should not be different for non-traditional and traditional labor pools
- 351. Require government worksites to state clearly which federal convictions will not be allowed on site during constructions, to open greater opportunities for employment of convicted felons at these sites
- 352. Allow more visas throughout borders. This has been very successful. It is known as the government programs “HZ-B” workers. They are allowed eight months of service and have to return home. Then, they come back the following year with full entrustment in your company
- 353. Recruit skilled workers from third world countries
- 354. Industry and INS work for solutions to report legal alien workers for job skill development to reach livable wage level
- 355. Make job alternative to dropout. Paid as understudy
- 356. Communicate positives in view of weaknesses
- 357. Implement construction classes at junior high and high school level
- 358. Adapt cross industries’ competencies, certifications  
i.e.- OSHA, basic measurements, basic employability skills at high school or above level
- 359. Kiosks at
  - Skating Parks
  - Schools
  - Malls
- 360. At fast food joints, highlight a career. Distribute flyers and educational information
- 361. In movies, commercial highlighting of-
  - Careers in construction
  - Pathways
  - Local employers - consortium of employers who participate
- 362. Favorite American past times
  - Baseball parks
  - Tacoma dome
  - Arenas
- 363. Community colleges should go into middle and high schools and show the story about careers in the construction industry with students and parents and guidance counselors
- 364. Partner with local colleges to identify 1<sup>st</sup> and 2<sup>nd</sup> year dropped students. Target these individuals to a construction career expo. Expo should be hands on/visual as well as verbally informative

365. Community colleges will host career fairs on campus and have construction company representatives present to talk about career opportunities
366. Community colleges will bring middle and secondary students and their parents to companies to meet with faculty who teach construction industry courses. Faculty will also provide guided talks of facilities and demonstrate the use of equipment
367. Establish engaging problem solving competitions involving construction for youth such as the VICA Skills competitions
368. Work within DOL to adopt policies to encourage greater opportunities for jobs to work part-time, after school, weekends, etc, at ages 15-18 in the construction industry; i.e. the former structured Job Employment Opportunity programs where DOL paid workman's comp. wages for younger youth in summer jobs
369. Use of federal bonding programs to help employer get "safe" with insurance and liability issues related to hiring, interning, apprenticing and otherwise recruiting/training youth for construction jobs
370. "Get the Message Out"- industry brochures telling of job opportunities, benefits and advancement opportunities in construction trades to schools, colleges, universities and trade schools
371. Involve youth in community projects such as habitat for humanity
372. Programs funded to support youth training in concert with public projects at local levels
373. Give out a community award on behalf of your industry to a high school. Let them recognize your interest level
374. Project to build an affordable house at each high school. Developing skills and interest in construction industry
375. Revamping the guidance counselor role
  - Shared emphasis on career direction
    - University or trade
    - Must have parent involvement
    - Is career path focus and job shadowing
376. Public education creates career tracks for non-college bound youth and curriculum to support career tracks
377. Job shadowing by teachers. Let teachers see what is really involved with working in construction
378. School to work strategy
  - Currently: high school to college model
  - Why not: high school to trades
  - Youth then go back and sell their experience
379. Career days - with contractors and associations
  - Demo field days - demo equipment, construction skills, pass out career information
  - Invite high schools, trade schools, and employment agencies
380. Getting youth to local trade show events

381. Organize various construction organizations to participate and expose their areas at job fairs, school functions, etc.
382. Construction workers should promote a positive image to encourage younger people to enter a trade association by participating in trade fairs, etc.
383. Involve construction companies and trade associations in school career days
384. Companies work with student ABC/AGC chapters at various colleges to expose and recruit them to your company. Participate in trade association career fairs across the country
385. Make an "open house" day for youth to shadow someone in company. Eg. - advertise in high schools
386. Hold high school career days for students to become acquainted with the industry
387. Promote "take your child to work" days when youth are brought onto sites by parents to experience first hand the parent's job and also see other parents engage in construction activities
388. Reward workers with presentations at their children's schools - assemblies, classrooms, etc.
389. Establish structured shadowing programs for youth. Females shadow other females. Latino youth shadow other Latinos, blacks shadow blacks, etc.
390. Track companies that have announced lay-offs (public workforce investment systems can help, via "rapid response") and work with those companies to recruit the affected workers prior to their "last day of work" (saves expenditures of unemployment taxes)
391. To compete with college bound traditions high school students develop co-op programs and/or part-time employment that would be tantalizing to college bound students
392. Consider work schedules that can be appealing to college bound students, complementary to local college scheduling - 2 day schedule, 3 day schedules, mornings only, etc.
393. Establish tuition assistance programs or "draw programs" based on length of employment
394. Collaborate with local public workforce investment system (boards) to assess unemployment insurance (UI) recipients and target market. Employers should work with workforce boards to learn how to take advantage of the wealth that's in the UI pool
395. Industry and workforce centers partner for career development and potential employer reprisals
396. Advertise and pay a premium for bilingual ability - especially for superintendent/management personnel
397. Provide money to single parent families for construction training or re-training of female breadwinners; could be identified through W.I.C. or similar programs

398. Target high demand/ high skills construction occupations for females and older workers and provide intensive recruitment and training for these positions, i.e. crane operators, surveyors, heavy equipment operators, Haz Mat drivers and handlers, asphalt techs, non-destructive testing techs, concrete techs, etc.
399. Show women in positive roles in construction industry through trade association marketing
400. Work with non-profits serving immigrants to assess their customers' skill sets and to assist the employers with OJT, especially for limited English speaking people
401. Industry and Adult Ed partner to have ESL classes during traditional work hours (possibly on-site)
402. Some form of support needs to be established for any of the individuals recruited from the non-traditional labor pool. Most construction companies do not have a human resource department or person
403. Work with public retirement systems to identify potential retirees with required skill sets. For example - people coming out of public works , facilities management, departments (state, city, or county)
404. Identify retiring workers with applicable or transferable skills to construction, i.e. banker, accountant, etc.
405. Hold information and recruitment sessions in non-traditional settings such as inner-city schools
406. Industry sponsored "career days" at locations where non-traditional labor pools are located
407. Identify and recruit "empty nest" moms (through college or high school statistics)  
Provide money and/or other incentives for job acceptance and training - possible tuition incentives for their children
408. Establish a comprehensive study to define work site barriers for women. Conduct study in high schools and other appropriate sites
409. Have a corporate career day targeted for the various non-traditional populations.