U.S. Department of Transportation
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THE UNIVERSITY OF MEMPHIS
Southeast Transportation Workforce Center

Job Priorities and Needs Report
Phase 2: Southeast Region

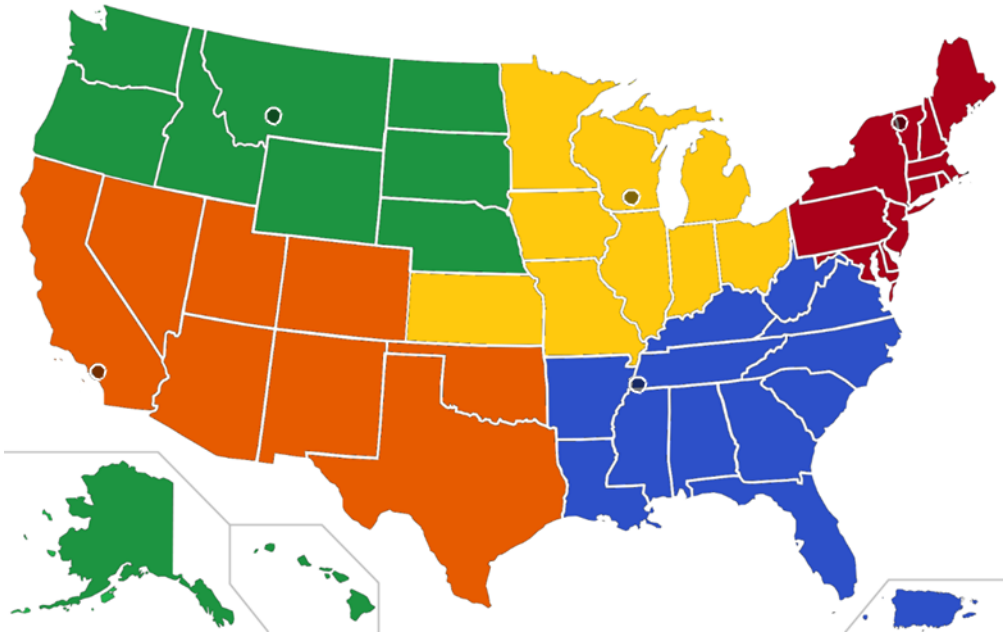

Table of Contents

I. Introduction and Overview

The U.S. Federal Highway Administration (FHWA) established five centers throughout the United States to lead and coordinate transportation workforce development efforts across the country's major geographic regions (i.e., Northeast, Southeast, Midwest, West, and Southwest regions). The mission of these Regional Transportation Workforce Development Centers is to address region specific priorities while working together to coordinate a national network capable of achieving workforce-related objectives that impact the country as a whole. Nationwide challenges in workforce development that were the impetus for this work include demographic changes (multi-generational workforce, large-scale retirements), barriers to career awareness and recruitment, and advances in technology that are changing occupational requirements. In addition to the broad workforce mission undertaken by all of the regional centers, the Southeast Transportation Workforce Center (SETWC) places increased emphasis on its focus areas:

- Women in transportation
- Freight (including distribution and logistics)
- Military transition to the transportation workforce

The initial **Southeast Region Job Needs and Priorities Phase I Report** identifies region-specific needs both in terms of key transportation careers and employee skill development. Findings were developed for the twelve states and one commonwealth region which includes: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia, and Puerto Rico. Completed in November, 2015, the Phase 1 Report outlines transportation infrastructure and current industry trends within each state/commonwealth in the Southeast Region, provides analysis of regional priority job occupations based upon existing Bureau of Labor Statistics (BLS) data, industry publications and stakeholder feedback, and summarizes in detail the projections, education or training requirements, and unique skillsets needed for successful employment in these occupations. This Phase 2 Job Priorities and Needs Reports further develops the findings included in Phase I by identifying specific programs and partnerships SETWC will execute to address workforce priorities based on regional characteristics, SETWC focus areas, and high-demand occupations.

Regional Characteristics

A unique feature of the region is the heavy influence of the aerospace or aviation industry as well as distribution and logistics. Eleven of the thirteen states/commonwealth in the region identify the aerospace and logistics sectors as key drivers of the economy. The regions' infrastructure also supports a strong distribution and logistics sector, with all modes represented in the region, and most within all states. The Southeast encompasses 28% of the nation's bridges (including 25% of structurally deficient and 31% of functionally obsolete), more than 25% of US track miles, 11 of the top water ports by tonnage, and the nation's busiest airports (in terms of both passenger boardings and total cargo throughput). The expansive coastline and port operations as well as extensive US interstate system and railroad infrastructure within the region set the stage for growth in intermodal operations. With freight volumes expected to increase significantly

(along with intermodal interactions), this trend will create a lasting need for increased workers in the freight transportation arena.

The SETWC's focus areas of women in transportation, freight, and military transition to the workforce are well aligned with the region's industry presence. With the significant freight operations within the entire Southeast Region, this focus area is clearly one of extreme relevance for SETWC. The majority of industry stakeholders are either directly or tangentially related to freight operations, and there is strong interest in improving the ability to attract and retain workers in these jobs. Women are underrepresented in transportation occupations in general, but even more so in freight-related jobs and professions. The significant presence of military installations in the Southeast Region (including Air Force and Naval installations) provides the opportunity to leverage relationships to create a clear pipeline for military/veterans to enter the civilian workforce. Transportation occupations are well suited to these potential employees' skillsets, as the bulk of military jobs are transportation-related. These connections need to be made readily apparent for potential workers and pathways into certification programs and institutions of higher education need to be well aligned for easier transitions to occur.

Priority Occupations

Bureau of Labor Statistics (BLS) data was analyzed for all transportation related occupations within the Southeast region in Phase I to determine which occupations had the highest demand and projected growth. These occupations and projections are outlined in **Table 1**.

Table 1. SETWC Priority Occupations: Growth Projections

SOC Code	SOC Occupation Title	Southeast Percent Change 2012-2022	National Percent Change 2012-2022 [b]
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	30.4%	6.0%
53-3021	Bus drivers, transit and intercity	15.5	9.8
49-3031	Bus and Truck Mechanics, Diesel Engine Specialists	10.1	8.6
17-2051	Civil Engineers	21.4	16.8
11-3021	Computer and information systems managers	9.5	15.3
53-1031	First-line supervisors of transportation and material-moving machine and vehicle operators	10.9	8.6
53-3032	Heavy and Tractor-Trailer Truck Drivers	13.8	11.3
53-7062	Laborers and freight, stock, and material movers, hand	12.7	11.0
13-1081	Logisticians	26.1	21.9
15-1142	Network and Computer Systems Administrators	17.2	11.7
47-2073	Operating Engineers and Other Construction Equipment Operation	16.9	18.9
15-2031	Operations Research Analysts	24.7	26.6

Sources. BLS Employment Data (www.bls.gov/oes/current/oes_nat.htm) and BLS Long Term Projections (www.projectionscentral.com/Projections/LongTerm).

Phase 2 Overview

In an effort to lay the groundwork for addressing key issues in the Southeast's transportation pipeline and creating a sustainable transportation ecosystem that encompasses regional priorities, SETWC developed three action plans. These plans reflect stakeholder input from a variety of efforts, and target workforce issues across the pipeline. These action plans are focused on the following:

- Action Plan 1: Transportation Magnet School Blueprint
- Action Plan 2: Women in Transportation: Career Retraining, Re-entry, and Transition
- Action Plan 3: Choosing Transportation: Collaboration Across the Pipeline

The remainder of this report will address methodology, identification of workforce development programs to address priority occupation skill needs, and detailed action plans.

II. Phase 2 Methodology

The methodology for this Phase 2 Report was developed to ensure regional data and stakeholder input were incorporated to effectively and efficiently address workforce needs through identification of action items that were both feasible to undertake and likely to provide significant impact. A number of methods were used to engage stakeholders and collect data for the Phase 2 Report as outlined below:

- Repeated engagement of diverse stakeholders through professional organizations and other meetings
- Comprehensive literature review and resource gathering
- Outreach to Steering Committee members for review of Phase I and potential action plans
- Stakeholder focus groups, surveys and interviews
- Development of Workforce Action Plans

Each task is outlined in more detail within this section preceding an in depth explanation of the proposed Southeast region Action Items.

Stakeholder Meetings

The SETWC began conducting stakeholder meetings in February of 2015 to inform the Phase I and 2 job needs and priority identification tasks. The approach included presentations and workshops with professional organization membership at established venues and stakeholder meetings organized by SETWC for in-person or online/conference call discussions. As of July 2016, SETWC staff conducted 44 meetings that engaged over 2100 stakeholders from the education (K-12, technical school and community college, university), public, and private sectors. These stakeholders include representatives of all Southeast Region states and the commonwealth of Puerto Rico. Of the 44 meetings, 20 included education, 31 included private

sector, and 29 included public sector stakeholders. Twenty-three meetings were conducted as part of professional organization monthly or annual meetings (primarily engineering, STEM, distribution and logistics, human resources, and workforce organizations), and the remaining 21 meetings were organized by SETWC to broaden participation and target agencies or companies specifically related to SETWC focus areas.

Results of these discussions included several reoccurring themes, regardless of stakeholder type:

1. Concern regarding the pipeline of workers with impending retirements and low numbers of workers entering the transportation workforce;
2. Lack of diversity, particularly of women in many transportation occupations;
3. Concern that education and industry efforts were not well aligned for producing a career-ready transportation workforce;
4. The need for more workers with STEM skillsets for occupations across the spectrum of education and training requirements (certificate, 2-year, 4-year and beyond).

These discussions also highlighted specific interest in distribution and logistics and operations related occupations, primarily due to the heavy influence of the freight industry on the region.

Literature Review

A comprehensive literature review related to the Center's three focus areas of women in transportation, freight and logistics, and military transition to the transportation workforce was performed as part of the Phase 2 effort. Furthermore, resources were reviewed related to the priority occupations identified in the Southeast Region to aid in the overall formulation of the proposed Action Plans. In conjunction with the literature review, a review of the Southeast Region Transportation Workforce Program Compendium developed by SETWC was also included. This compendium, found at memphis.edu/setwc in the form of a search portal, provides the end user with the ability to filter workforce programs in terms of location (state), industry focus area, and target audience. Each state within the Southeast region is represented in the search portal. After the initial location filter, users are presented with the option to choose up to twelve focus areas depending on interests. Theses focus areas include: Automotive Technology, Aviation/Aerospace, Logistics/Supply Chain, Maritime, Rail, Transit, Trucking, Pipeline, Engineering, Transportation Planning, Transportation Policy, and Bicycle and Pedestrian/Non-motorized. Further filtering of the results takes place when the user chooses a target audience (K-12 Students, K-12 Teachers, Technical Training or Certification, Community College, Four-Year College/University, or Professional Continuing Education). The compendium was an invaluable tool for analyzing the current programs available to stakeholders across the region and identifying workforce program gaps.

Women in Transportation

The United States Department of Labor highlighted the significant underrepresentation of women in transportation occupations in an analysis of 2014 labor data. According to this report, only 2.6% of women in the workforce are in the transportation field and transportation was identified as "one of the four industries with the smallest percentage of total employed women" (United States Department of Labor, 2015). Analyzing this trend from another perspective,

women make up nearly 50 percent of the American workforce, but only 2 to 20 percent of transportation occupations (United States Department of Labor, 2015) with an average across all transportation occupations of 13 percent (Asia-Pacific Economic Cooperation, 2015). Even more concerning, women occupy 39% of management positions across all occupations, but only 6.7 to 21 percent of managers in transportation occupations (Bureau of Labor Statistics, U.S. Department of Labor, 2016). These trends are disheartening given the limited pipeline of transportation workers, impending large-scale retirements of Baby Boomers (Cronin, et al., 2012), (Cronin, Anderson, Heinen, Cronin, Fien-Helfman, & Venner, 2011), (Council of University Transportation Centers, 2012), (Transportation Research Board of the National Academies, 2003), and the fact that non-traditional occupations offer women salaries that may be as much as 30% higher than those for jobs traditionally held by women (Wider Opportunities for Women).

Some of the barriers and challenges that women face include lack of awareness of career opportunities, misperceptions about the field, workplace culture and 'sense of fit', lack of family support, access to transportation, and being less likely to advance to senior-level positions (U.S. Department of Transportation, 2015), (American Association of University Women, 2013), (Ivey & Palazolo, Girls Experiencing Engineering: Evolution and Impact of a Single-Gender Outreach Program, 2011), (Ivey, Golias, Palazolo, & Thomas, 2013), (McKinsey & Company, 2015). For example, an AAUW report on women in engineering and computer science found that *"... female engineering students were less likely than their male counterparts to feel a strong sense of fit with the idea of "being an engineer" as early as their first year of college. This more tenuous sense of fit with the professional role of an engineer was found to be associated with a greater likelihood of leaving the field…Changing the environment in college and the workplace appears to be a prerequisite for fully integrating women into these fields."* (American Association of University Women, 2013). Another study conducted through a partnership by Lean In and McKensey & Company found that at the corporate level across a broad range of occupations, women are underrepresented in leadership positions due to gaps in ambition, uneven playing fields, low priority for gender diversity, and access to comparable sponsor networks (McKinsey & Company, 2015).

It is important to improve diversity in the transportation workforce not only because of the opportunity to increase the pipeline of transportation workers, but also to provide diverse perspectives for developing the most innovative solutions to the increasingly complex and often global challenges faced in the transportation industry. In fact, research also indicates that organizations that employ more women and have greater representation of women in leadership positions reap economic benefits (Asia-Pacific Economic Cooperation, 2015), (Hunt, Layton, & Prince, 2015). McKinsey & Company found that corporations that have a more gender-diverse workforce are 15% more likely to outperform their competitors (Hunt, Layton, & Prince, 2015).

Most recently, a comprehensive report released in 2015 by the Asia-Pacific Economic Cooperation outlined a data framework and set of best practices to increase representation of women in transportation. The report is organized around five pillars: education, entry into sector, retention, leadership, and access. It underscores the need for data-driven decisions and challenges stakeholders to work collaboratively to improve outcomes for women in

transportation. The APEC working group will be undertaking economy-based pilot activities from 2016-2019 to further refine strategies with evidence of impact.

Freight

The freight and logistics industry includes a variety of occupations from skilled labor to high-level STEM jobs requiring advanced degrees. In the Southeast Region, these occupations are very important to state economies and are in high demand. Three of the five top states in the US in terms of concentrations of distribution and logistics jobs are located in the Southeast (Arkansas, Kentucky, and Tennessee) (Bureau of Labor Statistics, U.S. Department of Labor, 2016). The increasing demand for truck drivers and the significant driver shortage is an issue that has received significant attention (U.S. Department of Education, 2015). According to the American Transportation Research Institute (Short, 2014), from 1994 to 2013, the number of US employees in truck driving grew by 21%. This information might seem promising at first but this increase was primarily for 55-64 year old employees (126%). There was a -48% change in driving employees for ages 25-34 (Short, 2014). This underscores the significant issues faced for ensuring an adequate supply of drivers in the workforce.

Freight occupations face the same challenges as other transportation occupations in terms of attracting employees due to lack of awareness or issues related to misperceptions. The occupations are also plagued with retention problems, particularly for skilled labor and technical occupations. These companies and organizations may also be less likely to use recruiting strategies that appeal to younger workers (PwC, 2012). Another challenge is employee skillsets, which are not necessarily related to academic capabilities. According to the Association for Career and Technical Education, "college and career readiness is not based on academic skills alone. Technical and employability skills are vital, too—and all three are lacking, according to industry," (Association for Career and Technical Education, 2013). Strategies for increasing numbers of qualified workers attracted and retained in freight and related occupations must include a variety of interventions across the pipeline, and will require collaboration between education and public and private sector stakeholders (PwC, 2012), (Cecere, 2013).

Military/Veteran Transition to Transportation Workforce

Veterans face many challenges when transitioning to civilian life and the civilian workforce. These challenges can come in a variety of forms. According to a study conducted by Prudential, 69% of veterans said that finding a job is their greatest challenge when transitioning to civilian life (Prudential, 2012). Many military veterans view translating military skills to civilian work as a roadblock when looking for a job. Sixty percent of the veterans in the survey acknowledge the challenge of relating their military experience to skills that interest civilian employers. Additionally, 46% of veterans feel as if they are at a disadvantage to people who have been in the civilian workforce longer, and 43% think they lack the education necessary to join the workforce (Prudential, 2012). Many veterans feel that their military service in itself is respected by employers (71%), however only 51% believe that their skills and training are appreciated by employers (Prudential, 2012).

These are unfortunate misunderstandings that must be overcome to increase the pipeline of veterans entering the transportation industry, in particular because of how well aligned many

military occupations are to those in the transportation sector. According to the Bureau of Labor Statistics, 13% of enlisted military personnel and 20% of military officer jobs are in transportation occupations (Bureau of Labor Statistics, U.S. Department of Labor, 2015). However, more than 47% of enlisted personnel and 42% of officer occupations overlap into transportation when engineering, technical, construction, vehicle maintenance, and operations jobs are included (Bureau of Labor Statistics, U.S. Department of Labor, 2015). As of 2014, only 10.2% of veterans from all service periods were employed in the transportation industry (Bureau of Labor Statistics, U.S. Department of Labor, 2015), demonstrating the significant room for growth and the need for strategies to increase awareness and better define transition pathways into transportation for veterans.

Southeast Region Workforce Programs

A thorough web search for transportation-related training and education programs in the Southeast Region was conducted between January 2015 and January 2016. The search uncovered 1756 related programs across all 12 states and the commonwealth of Puerto Rico. Of these 212 are focused on K-12, 735 on career or technical training, 335 at the community college level, 416 at the university level, and 58 are for further development of professionals. The total number of training and education programs organized by state is provided in Table 2.

Table 2. Training Programs by State

State/Commonwealth	Number of Programs
Alabama	127
Arkansas	132
Florida	207
Georgia	182
Kentucky	101
Louisiana	79
Mississippi	129
North Carolina	283
Puerto Rico	66
South Carolina	64
Tennessee	157
Virginia	129
West Virginia	100
Total	1756

Source. SETWC Compendium (http://www.memphis.edu/setwc/search_portal/index.php)

When reviewed by priority occupation cluster (STEM, supply chain and logistics, technical occupations, skilled labor) and the specific occupations identified within each, programs were found for all states addressing each of these priority areas. **Table 3** presents the identified priority occupations grouped by occupational category.

For the priority STEM occupations (139 directly related programs), the bulk of the programs addressed either K-12 or university level education (99 programs), although there were also

programs both within the technical and professional development areas that were identified. The supply chain and logistics priority occupations were supported with training and education programs (192 total) predominantly at the technical or certification levels (143 programs), although there were also several university-level and K-12 programs. Training programs for priority technical occupations were identified across the continuum (336 total), though programs were concentrated and the technical and community college levels (305 programs). Laborer training was only found at the technical and certification level (36 directly related programs), which was expected, although increased awareness at the K-12 level may help to address workforce shortages.

Table 3. SETWC Priority Occupations

STEM Occupations	Supply Chain and Logistics Occupations	Technical Occupations	Skilled Labor
▪ Computer and information systems managers ▪ Civil engineers ▪ Network and Computer Systems Administrators	▪ Logisticians Operations ▪ Research Analysts ▪ Laborers and freight, stock, and material movers, hand	▪ Bus and truck mechanics and diesel engine specialists ▪ Bus drivers, transit and intercity ▪ Heavy and tractor-trailer drivers ▪ Operating engineers and other construction equipment operators ▪ Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	▪ First-line supervisors of transportation and material-moving machine and vehicle operators

Source. Job Priorities and Needs Report Phase 1: Southeast Region (http://www.memphis.edu/setwc/job_needs_and_priorities_report/index.php).

With a wide variety of training programs, career readiness tracks, and educational institutions throughout the Southeast region, it seems as though attracting workers to the transportation field would be an easy endeavor, however, based on BLS data and stakeholder feedback the problem is more complicated than simply offering more resources and requires careful consideration of other regional needs. One additional observation to note is the difficulty SETWC staff faced in finding information for some of the programs contained within the compendium. It seems that providing the 'one-stop' portal through SETWC will be a valuable resource for connecting prospective workers to information about training and education within the region. However, the challenges of raising awareness of the portal itself and keeping it updated with current program details are significant.

Steering Committee Outreach

The Steering Committee for SETWC was formed in early 2015 and meets quarterly by conference call. The committee was asked to review the Phase I report and provide feedback, particularly related to the identification of priority occupations and potential action plans for the first quarter meeting of 2016. The primary feedback from the committee underscored the importance of addressing diversity issues (particularly related to gender gaps), demographic shifts in the workforce, and general challenges faced in making sure employees stay abreast of industry trends and technology. **Table 4** provides information regarding the makeup of the SETWC steering committee.

Table 4. SETWC Steering Committee Members					
Name	**Title**	**Organization**	**Sector**	**State**	**Coverage**
Jeff Banton	President	Atlantic Intermodal Services	Private	SC	SC, GA, NC, FL, VA
Adrianna Clark	Director, Southeast Region	USDOT/OSDBU	Public	FL	AL, PR
Emily Elliott	HR and Training Director	VDOT	Public	VA	
Doug Freeze	Assistant Director of Workforce Development	Northwest Mississippi Community College	Edu.	MS	
Pam Kordenbrock	Division Administrator	FHWA-TN Division	Public	TN	
Tyra Redus	Executive Director, Office for Civil Rights & Small Business Development	Kentucky Transportation Cabinet	Public	KY	
Steve Strength	Program Manager	Louisiana LTAP Center	Public	LA	
Rod Turochy	Associate Professor	Auburn University	Edu.	AL	
Bruce Lambert	Executive Director	Institute for Trade and Transportation Studies	Public	LA	AR, FL, GA, KY, LA, MS, VA, WV
Tyson A. Graves, PE	Senior Traffic Engineer	MS Consultants, Inc.	Private	NC	

Stakeholder Focus Groups, Surveys, and Interviews

A key approach in gathering additional resources necessary in aiding the drafting of the SETWC's action plan was the use of targeted focus groups, surveys, and interviews. Focus groups were conducted related to women in transportation and military transition to the transportation workforce in March of 2015 as part of the Choosing Transportation Summit. Each group was comprised of 5-10 stakeholders from education, public and private sectors and the

groups were specifically convened to identify primary barriers and potential action items to address these issues.

Women in Transportation Focus Group

One group of stakeholders focused on the challenge of attracting women to transportation. This group reported that one key accelerator could be developing a national resource that outlines overall employment data, baseline metrics, the economic case for diversity, and progress toward diversity goals. The availability of such a framework would create a great deal of value for individual companies and provide them with a resource for identifying best practices, developing metrics for measuring success, and creating a coherent strategy for increasing the number of women in the transportation profession. Other key barriers identified in this session included a lack of diverse training and educational programs and a lack of communication and training regarding various opportunities within transportation. Some examples of programs that should be promoted broadly to increase the number of women in transportation include:

- USDOT Women in Transportation Initiative,
- International APEC Women in Transportation (www.dot.gov/APECWomen),
- Transportation YOU (www.transportationyou.org), and,
- www.fastforwardtransportation.com.

A second group of stakeholders focused on populations seeking career retraining/reentry. This group identified a lack of collaboration as the major challenge facing this population in the transportation sector. More specifically, there are many barriers that education and industry need to work through in order to truly make a difference. A dedicated support system throughout the reentry process that provides resources for help with resume writing, the hiring process, job readiness, work/life balance, the first 90 days on the job, and finally long-term support will be essential to creating a pathway to success. A good example of these practices at work is the program Go Wyoming that helps women with children on welfare find suitable jobs. In an effort to create these types of partnerships and programs to help overcome the challenges faced by women reentering the transportation sector the group recommended focus on funding community efforts, contacting career leaders, having industry provide "ride alongs" and site visits to potential professionals, and developing an image outreach team to show women that the transportation industry has much to offer. They also suggested establishing best practices through collaboration to develop programs that assist women in job readiness and development and ensure continued success in the career field is essential.

Military Focus Group

This group reported that one of the major challenges faced by military members and veterans is the difficulty transferring their unique skill sets to the public and private sectors. Though many skills developed through military experience such as discipline, structure, and a willingness to get the job done are desirable to any sector, some military members have a difficult time selling themselves to future employers and transitioning from military to civilian jobs. Some suggested solutions include the development of resources to:

- Enhance interview skills and résumé development.
- Improve soft skills including written and verbal communication.
- Provide information that clearly shows links between military service and transportation industry jobs and elucidates potential career pathways.

SETWC Stakeholder Survey

In order to work with and assist stakeholders in addressing their workforce development needs, SETWC developed and distributed surveys to solicit additional information regarding the specific issues each stakeholder may face. The purpose was to provide a venue that allowed stakeholders to have an input regarding ways in which SETWC could best improve workforce development outcomes. An individual survey was developed for both the education sector and the industry/public sectors and was distributed via email from March to May 2016.

The survey developed for the education sector contained five questions, and it was sent to 892 recipients in the education sector. The following results were determined from the 26 responses to the survey. **Table 5** outlines the survey questions and response options.

The initial question asked stakeholders to rate three challenges on a scale of 1 to 5 (1 being insignificant and 5 being very significant) for their transportation education or training programs. The three challenges listed were: student skill gaps, recruitment/retention of students to programs, lack of alignment between training/education/credentialing programs and industry. Of the three options, the majority of stakeholders chose recruitment/retention of students to programs as the most significant challenge.

Table 5. SETWC Educational Survey Questions			
Educational Stakeholder Questions			
How significant are the following challenges for your transportation education or training programs? (Please rate 1-5 with 1 being insignificant, 5 being very significant)	If skills gaps are a significant challenge for your organization, is this due to (check all that apply):	If recruitment/retention of students is a significant issue for your organization, is this due to (check all that apply):	If alignment with industry is a significant challenge for your program, is this due to (check all that apply):
Response Options			
1. Student skills gaps 2. Recruitment/retention of students to programs 3. Lack of alignment between training/education/credentialing programs and industry	1. Students lack necessary science, engineering, or math competency 2. Students lack necessary technological skills 3. Students lack necessary soft skills 4. Other (free response)	1. Lack of interest in transportation industry/careers 2. Lack of awareness of training/education pathways for transportation careers 3. Lack of awareness of career opportunities in the transportation industry 4. Misperceptions about jobs/careers in the industry 5. Concerns about workplace culture 6. Concerns about lack of diversity in transportation workforce 7. Concerns about workplace environment (non-standard or long hours, field work requirements, etc.) 8. Concerns about earning potential 9. Difficulty mastering skills/content needed to progress through training/education program 10. Other (free response)	1. Limited interest of industry in engaging with my faculty/students 2. Limited interest of industry in providing input to curriculum 3. Lack of relationships with relevant local industry 4. Lack of interest from my faculty in aligning curriculum with industry needs 5. Other (free response)

Subsequent questions asked stakeholders to identify the reason for each challenge from a provided list. If student skills gap is a significant challenge for stakeholders, the most frequently identified reason is because students lack the necessary soft skills. If recruitment/retention of students is a significant issue, misperceptions about jobs/careers in the industry were found to be the main reason. Finally, if lack of alignment between training/education/credentialing programs and industry is a significant challenged faced by stakeholders, it is due to both perceived limited interest of industry in engaging with faculty/students and lack of interest from faculty in aligning curriculum with industry needs.

The survey developed for the industry/public sector followed the same format, and this survey was sent to 1,454 recipients in the industry/public sector. The questions were very similar to the education survey, although tailored specifically to employers, and are provided in the Appendix to this report. The following results were determined from the 63 responses to the survey.

Like the education sector survey, an initial question required stakeholders to rate three workforce challenges on a scale of 1 to 5 for their organization. The three challenges listed were: employee skill gaps, recruitment of employees, and retention of employees. Of the three options, the majority of stakeholders selected recruitment of employees as the most significant challenge faced.

Subsequent questions asked stakeholders to identify the reason for each challenge from a provided list. If employee skills gap is a significant challenge for stakeholders, the most frequently identified reason is due to the lack of qualified or credentialed candidates. If recruitment of employees is a significant issue, then the majority of responses indicated that this is due to misperceptions about jobs/careers in the transportation industry. If the third challenge, retention of employees, is a significant issue for stakeholders, respondents indicated it is most likely due to the face that employee expectations are different from actual experience or there are concerns about career advancement opportunities.

Both education and industry/public sector surveys' final question asked if the stakeholder would be willing to share additional insight through a short phone interview. Additional details regarding workforce challenges and action plans the regional center could undertake were gathered through a series of 37 phone interviews that were conducted in May-June 2016. **Table 6** provides the five questions asked to each educational sector interviewee. The questions asked of public/private sector stakeholders were similar and are detailed in the Appendix to this report. **Table 7** provides a list of interviewees who provided information to aid in creating a clear picture of stakeholder engagement. Some of the participants were solicited from outside the region to provide input on specific areas of expertise related to focus areas or priority occupations.

Table 6. SETWC Educational Sector Interview Questions				
Educational Stakeholder Questions				
Do you know of any unique or particularly successful programs in our region that are associated with the priority occupations list? Example programs not in our region?	Do these jobs reflect priorities of regional employers of your students? Are there any other jobs that you believe are a priority for our region and should be on the list? Why?	In our initial survey we asked you to point out challenges your programs face. We broke the challenges down into student skills gaps, recruitment & retention of students, and lack of alignment between training, education, and credentialing programs and industry needs. Can you elaborate further on the challenges that your program faces?	What is the best web resource that our Regional Center could provide education stakeholders such as yourself to better assist you in addressing the challenges you mentioned above.	What are the top 2-3 action items that you think SETWC should undertake in our next two years?

Table 7: SETWC Stakeholder Survey & Interviewees Respondents			
Respondent	**Affiliation**	**State**	**Sector**
Sheryl Rehberg	CareerSource North Florida	FL	Public - Local
Camille Diggs	FedEx	TN	Public - Federal
John Hodge	FXF	TN	Industry
Emily Elliott	Virginia Department of Transportation	VA	Public - State
Mike Brugge	Parsons Corporation	TN	Industry
Matt Herms	AHS, LLC	OH	Industry
David Utley	State of Tennessee	TN	Public - State
Nancy Roberts	Medical Education & Research Institute	TN	Public - Non-Profit
Tabitha Cavaness	TDOT	TN	Public - State
Randy Gayler	NW Georgia Regional Commission	GA	Public - Local
Rick Mason	Virginia Department of Transportation (VDOT)	VA	Public - State
Rodger Aitken	Naval Facilities Engineering Command PWD Mid-South	TN	Public - Federal
Bobbi Wells	FedEx Express	TN	Industry
Pamela McCarley	Consultant	TN	Industry
Alvin H. Pearson	(MATA) Memphis Area Transit Authority	TN	Public - Federal
Matt Slutz	MSM Solutions	TN	Industry
Matt Keyser	FedEx Corporation	TN	Industry
Glenn Story	Hub Group Trucking	TN	Industry
Edward Peachey	Careersource Tampa Bay	FL	Public - Local
Steve Puryear	Consultant	MS	Industry
Rebecca Rogers	IMC Global Solutions	TN	Industry
Mary Leah Coco	LA DOTD	LA	Public Sector- State
Jonathan Smith	Gresham, Smith, & Partners	TN	Industry
Eleanor Thomas	Trezevant Career & Technology Center	TN	Education - Technical College
Dianne Clark	Northwest LA Technical College	LA	Education - Technical College
Mike Knodler	UMass Amherst	MA	Education - University
Rachel Allen	Tennessee Department of Education	TN	Education - K-12
Mary Trice	University of Memphis	TN	Education - University
Joe Giles	Coahoma Community College	MS	Education - Community College
Ernest Darby	Cabell County Career and Technology Center	WV	Education - Community College
Brian Chambers	Greenville Technical College	SC	Education - Technical College
Gary Price	Emerald Coast Technical College	FL	Education - Technical College
Chad Miller	USM	MS	Education - University
John Collura	UMass Amherst	MA	Education - University

Development of SETWC Workforce Action Plans

The information garnered through stakeholder meetings, literature review, the regional workforce program compendium, focus groups, surveys, and interviews provided the framework from which the Action Plans were developed for the Southeast Region. These plans were selected to best:

- Address challenges identified by most stakeholders,
- Provide an opportunity for regional impact, and to
- Be feasible for SETWC to undertake with partners within the next 2-3 years.

An outline of the three Action Plans for the Southeast Region is provided in **Table 8**.

Table 8. Southeast Region Action Plans

PROGRAM	Priority Occupations	Continuum Stage
Action Plan 1: Transportation Magnet School Blueprint	▪ Aircraft Structure, Surfaces, Rigging, and Systems Assemblers ▪ Bus and Truck Mechanics, Diesel Engine Specialists ▪ Civil Engineers ▪ Computer and Information Systems ▪ Logisticians	▪ High school
Action Plan 2: Women in Transportation: Career Retraining, Re-entry, and Transition	▪ All	▪ High school students ▪ College and university students ▪ Public sector professionals ▪ Private sector professionals
Action Plan 3: Choosing Transportation: Collaboration Across the Pipeline	▪ All	▪ High school students ▪ College and university students ▪ Public sector professionals ▪ Private sector professionals

III. Identification of Potential Workforce Development Programs to Address Regional Needs

The key theme for the SETWC Action Plans will be to develop productive collaborations to move the needle with respect to developing a right-sized and career-ready regional transportation workforce. Three existing programs in the Southeast Region that will serve as models or points of leverage are the South Carolina Highway Construction/Transportation Workforce Task Group, the West TN STEM Hub and its regional and national networks of TSIN and STEMX,

and the Garrett A. Morgan Technology & Transportation Education Program Clearinghouse. These programs are described briefly in this section.

The South Carolina Highway Construction/Transportation Workforce Task Group was established in 2014 after industry stakeholders realized there was a dire need to focus on recruiting, hiring, training, and retaining a skilled labor force to build South Carolina's roads and bridges. The following entities came together to focus on the workforce effort: South Carolina Asphalt Pavement Association (SCAPA), Carolinas Association of General Contractors, South Carolina Trucking Association, Mining Association of South Carolina, HR representatives from SCAPA member companies, representatives from all of the technical colleges in the South Carolina Technical College System, reps from the South Carolina Department of Employment and Workforce (SCDEW), the South Carolina Department of Social Services, the South Carolina Department of Corrections, the South Carolina Department of Probation, Parole, and Pardon Services, Operation Palmetto Employment (veterans group), and Upstate Warrior Solution (veterans group). Going forward, the South Carolina Asphalt Pavement Association, the Carolinas Association of General Contractors, and the Mining Association plan to meet in late August 2016 and determine how to best market and educate South Carolinians about the numerous job opportunities available in the heavy highway construction industry. Their goal is to develop marketing materials to distribute to the communities, schools, and employment agencies across the state of South Carolina promoting the opportunities in their industry.

The West TN STEM Hub was founded in 2012 through a grant awarded to the University of Memphis via a unique public-private partnership between the Tennessee Department of Education and Battelle. The West Tennessee STEM Hub (WTSH) project is comprehensive and designed to improve regional students' preparation for and interest in STEM majors and careers through initiatives targeting students, teachers, and the community as a whole. The key strategy for this project is a collaborative approach of K-12, higher education, industry, government, and community partnerships guiding the work and ensuring diverse stakeholder needs are considered. The WTSH project champions a 'STEM for All' approach and the concept of STEM extending beyond the traditional content areas into a new way of teaching and learning. The project demonstrates the importance and effectiveness of a collaborative approach to STEM education, with an active steering committee of over 50 members (still participating two years after grant funding ended), and has impacted over 1,000 West TN Students and more than 500 West TN teachers through providing authentic, real-world project experiences, professional development workshops, pathways for students of all abilities, and a truly transformative approach to STEM teaching and learning through engagement of stakeholders along the cradle to career continuum. The network structure within the state through the Tennessee STEM Innovation Network and the national extension of STEM-X provide the infrastructure for broad dissemination.

The Garrett A. Morgan Technology & Transportation Education Program Clearinghouse (http://www.gamttep.com) is an initiative to catalog and provide access to a variety of K-12 resources. The purpose of this program sponsored by the U.S. Department of Transportation Federal Highway Administration Universities and Grants Programs is to 'improve the preparation of students, particularly women and minorities, in science, technology, engineering and mathematics (STEM) through curriculum development and other activities related to transportation.' It will serve as a Hub for K-12 STEM transportation education and will serve as

a point of leverage for government, academia and public and private sector partners to showcase transportation careers through engaging activities.

These models and resources will be used to shape Action Plan strategies, including leveraging the structure of the National Network for the Transportation Workforce in a similar fashion to that of TSIN and STEM-X, to disseminate Action Plan outcomes so that the greatest possible impact can be achieved. A complete description of each Action Plan item is provided in Section V.

IV. Role of the Regional Center in Assisting Stakeholders across the Workforce Continuum

The Southeast Transportation Workforce Center is one of five regional centers that comprise the National Network for the Transportation Workforce. The mission of SETWC is to coordinate existing regionally based programs, plans, and processes and to strategically create partnerships to ensure that students and persons seeking workforce reentry, career transition, or career advancement are aware of opportunities, required education, skills, training, and ladders to success within the regional transportation workforce. As such, the role of SETWC will be to coordinate partnerships and facilitate activities for each of the three identified Action Plans. The anticipated partners for each Action Plan are outlined in **Table 9**.

Table 9. Potential Partners for Southeast Region Action Plans

Program	Partners
Action Plan 1: Transportation Magnet School Blueprint	▪ **Shelby County Schools** ▪ AutoZone ▪ City of Memphis – Engineering ▪ Commercial Advisors ▪ Cummins MidSouth ▪ FedEx Express ▪ Garret Morgan Clearinghouse project leadership ▪ Greater Memphis Alliance for a Competitive Workforce ▪ Greater Memphis Chamber of Commerce ▪ Institute of Transportation Engineers – TN Section (Memphis) ▪ JMAC Logistics ▪ Memphis Area Transit Authority ▪ Memphis Public Libraries ▪ Organization of Black Aerospace Professionals ▪ Peer Power ▪ People First ▪ Re Trans ▪ Tennessee College of Applied Technology ▪ Tennessee Department of Transportation ▪ Vaco Logistics ▪ Workforce Investment Board- Memphis
Action Plan 2: Women in Transportation:	▪ Big Brothers Big Sisters of the MidSouth

Career Retraining, Re-entry, and Transition	▪ Boys and Girls Club Technical Training Center – Memphis ▪ Carrier ▪ CN ▪ Frito Lay, Inc. ▪ Girls Inc. ▪ Peer Power ▪ US Army Corps of Engineers ▪ USDOT and the APEC Transportation Working Group ▪ Vaco Logistics ▪ Women's Foundation for a Greater Memphis ▪ Women in Trucking ▪ WTS – TN ▪ WTS International
Action Plan 3: Choosing Transportation: Collaboration Across the Pipeline	▪ AHS, LLC ▪ Butler Snow ▪ CN ▪ CI^2 Aviation ▪ Cornerstone Logistics ▪ FedEx Express ▪ FedEx Freight ▪ Intermodal Cartage Companies ▪ JB Hunt ▪ Journal of Commerce ▪ Mallory Alexander ▪ Memphis Area Transit Authority ▪ Peer Power ▪ Schneider National ▪ South Carolina Highway Construction/Transportation Workforce Task Group ▪ SSR, Inc. ▪ Tennessee Department of Transportation ▪ Tuskegee University ▪ Virginia Department of Transportation ▪ USDOT Southeast Region Office of Small and Disadvantaged Business Utilization ▪ Women's Foundation for a Greater Memphis ▪ Women in Trucking ▪ WTS International ▪ University of Memphis Veterans Resource Center ▪ University of Southern Mississippi ▪ US Army Corps of Engineers – Memphis District ▪ Vaco Logistics ▪ Virginia DOT

The ultimate goal is that the Action Plan efforts will engage regional partners and move the region toward developing a right-sized, career-ready transportation workforce in the Southeast Region.

V. Action Plans to Address Identified Skill Needs

Synergy across the continuum of the transportation workforce pipeline, as depicted in **Figure 1**, is needed to create an effective strategy for addressing challenges described in the Phase 1 assessment, as well as, issues uncovered during the stakeholder outreach portion of Phase 2. In order to establish a strategic approach to explaining each Action Plan in detail to potential partners in the region, each Action Plan will be broken down into the data fields described within **Table 10**. While the Action Plans are focused on regional stakeholder priorities, they were designed in a manner that allows for transference across regions to other levels, such as, local or national. **Tables 11-13** outline the three primary Action Plans for the Southeast Region.

Figure 1. Transportation Workforce Continuum.

Table 10. Overview of Data Fields Included in Strategic Action Plans (Adapted from NCHRP Report 693)	
Data Field Name	**Description**
Section 1: Overview of Strategic Recommendation	
Recommendation Title	▪ Short descriptive label for strategic recommendation.
Recommendation Highlights	▪ Bulleted overview of key points of interest from full Strategic Action plan.
Description	▪ Provides broad overview of proposed recommendation.
Rationale for Recommendation	▪ Provides a rationale for the recommendation based on stakeholder input.
Section 2: Target Audiences	
Relevant Priority Jobs	▪ List of priority occupation types identified in the Phase 1 Job Needs & Priorities report.
Primary Pipeline Focus	▪ Indicates the type of effort being described (e.g., recruitment, retention).
Target Audience	▪ Lists targeted beneficiaries of action plan implementation.

Section 3: Implementation Plan	
Action Lead(s) and Partnerships	▪ Identifies the key person(s) within the Center and Center partners who are accountable for developing and managing the appropriate action plan, including carrying out the specific implementation steps and stakeholders with whom to coordinate.
Steps to Implement	▪ Presents the key steps that should be followed, in order to successfully implement the plan.
Estimated Time to Implement	▪ Provides an estimate of how long it will take to develop and implement.
Funding Needed	▪ Identifies funding needs and sources
Section 4: Communication Plan	
Communication/Outreach Strategies	▪ Describes communication and outreach strategies that will help ensure successful implementation.
Process for Obtaining Buy-In	▪ Describes the critical steps and processes that will assist key partners to champion the plan.
Section 5: Useful Resources	
Useful resources to successfully implement and sustain practice	▪ Identifies the internal and external resources that will assist in implementing or sustaining the plan including groups or stakeholders that will need to be involved.
Section 6: Example of Effective Programs	
Example(s) of Existing Effective Program	▪ Provides bulleted examples of related programs that have been successfully implemented and practiced in a transportation organization.
Section 7: Impact	
Positive Outcomes of the Practice	▪ Describes anticipated results of the practice with full adherence to the implementation steps. The impact information may include findings from research studies and/or anecdotal evidence from implementing agencies.
Section 8: Challenges to Implementation	
Potential Challenges	▪ Provides bulleted list of potential challenges that should be considered and possible ways to overcome challenges.

Source. (Cronin, et al., 2012).

Action Plan 1: Transportation Magnet School Blueprint

Table 11. Action Plan 1: Transportation Magnet School Blueprint	
Data Field Name	**Description**
Section 1: Overview of Strategic Recommendation	
Recommendation Title	Transportation Magnet School Blueprint
Recommendation Highlights	▪ Pilot project implementation in Memphis, TN within Shelby County Schools ▪ Development of a best practice and guidance document for implementing a transportation-STEM focused high school through collaborative partnerships ▪ Identification of strategies effective for increasing high school students' interest in transportation careers
Description	Shelby County Schools (SCS), SETWC, and numerous industry and community partners will work together to develop an innovative and truly collaborative approach to preparing students for transportation careers by developing a transportation magnet school, known as Transportation STEM (T-STEM) within the city of Memphis. The partners have selected the T-STEM theme as a response to local and regional need for a strong transportation/STEM workforce as Memphis's status as "America's Distribution Center" is recognized as a driver in all segments of the Memphis economy. The T-STEM project is designed to significantly revise student enrollment and academic programming in Memphis's East High School, a Title I school with high minority group isolation (94% African American) despite its location in a socioeconomically and racially diverse neighborhood at the center of SCS's service area. The program will prepare students to enter jobs or certification programs or to pursue advanced degrees in transportation immediately following high school. Additionally, a focus of the program will be to help students understand opportunities along the ladders of success, and to recognize the importance and value of workers across this continuum. The diverse team of partners will influence all aspects of the program design including curriculum, pedagogy, and career extensions and exploration. SETWC will facilitate partner engagement and will develop a best practice document and toolkit that can be used by other communities to replicate the program. SETWC will also conduct research to identify strategies that are effective for increasing students' interest in transportation careers.
Rationale for Recommendation	▪ As recruitment to transportation education or training programs and careers was identified as a top priority of both education and public/private sector stakeholders, this recommendation will address the pipeline problem at the level of recruitment- both to jobs immediately following high school as well as higher education in transportation.

Section 2: Target Audiences	
Relevant Priority Jobs	▪ Aircraft Structure, Surfaces, Rigging, and Systems Assemblers ▪ Bus and Truck Mechanics, Diesel Engine Specialists ▪ Civil Engineers ▪ Computer and Information Systems ▪ Logisticians
Primary Pipeline Focus	▪ Recruitment
Target Audience	▪ High school students
Section 3: Implementation Plan	
Action Lead(s) and Partnerships	▪ Dr. Stephanie Ivey, Director of SETWC and Meredith Powers, Associate Director of Communications and Public Sector Coordinator will facilitate partnerships and lead the working group and professional development team for this project. SCS personnel will be the overall lead for the pilot implementation.
Steps to Implement	▪ Planning for the 2017-18 AY will begin in October 2016 upon notification of Magnet Grant application status ▪ Assemble education, industry, and community partners to form working group and advisory council ▪ Develop program structure for Years 1-4 ▪ Develop curriculum for Year 1 (freshman) ▪ Conduct professional development for Year 1 ▪ Implement Year 1 and develop curriculum for Year 2 ▪ Conduct professional development for Year 2 ▪ Implement Year 2 and develop curriculum for Year 3 ▪ Conduct professional development for Year 3 ▪ Implement Year 3 and develop curriculum for Year 4 ▪ Conduct professional development for Year 4 ▪ Implement Year 4 ▪ Conduct evaluation (continuously) to determine effective strategies ▪ Develop magnet school blueprint and best practice report
Estimated Time to Implement	▪ 5 years (Planning will be conducted in 2016-17, Year 1 implementation in 2017-18 with magnet school freshmen, and an additional grade will be added each subsequent year)
Funding Needed	▪ SCS and SETWC have applied for a Magnet School grant from the US Department of Education, however; SCS has committed to developing this program at a reduced level (slower pace for adding program tracks) if the grant is not awarded.
Section 4: Communication Plan	
Communication/Outreach Strategies	▪ SETWC staff will communicate with potential partners to engage them in the action plan. ▪ Project status will be highlighted regularly in SETWC newsletters to all stakeholders (education, public, private sectors) ▪ Results will be disseminated through professional organization presentations, publications, and through the NNTW

Process for Obtaining Buy-In	▪ Most of the potential partners have already provided a letter of commitment for this project. For the partners to be meaningfully engaged, it is essential that each be provided an opportunity for input and meaningful participation and that early evidence of success is communicated effectively and throughout the project.
Section 5: Useful Resources	
Useful resources to successfully implement and sustain practice	▪ The Garret Morgan Clearinghouse and Transportationcareers.org will be reviewed to develop initial concepts for academy curriculum.
Section 6: Example of Effective Programs	
Example(s) of Existing Effective Program	▪ TransSTEM Academy at Cardozo High School in Washington, DC
Section 7: Impact	
Positive Outcomes of the Practice	▪ It is anticipated that this Action Plan will lead to a model for development of similar effective programs in other communities in the Southeast Region or across the nation. The Blueprint will provide a step-by-step guidance document and best practice summary for others interested in developing a similar program.
Section 8: Challenges to Implementation	
Potential Challenges	▪ Costs in implementing a new high school structure ▪ Initial recruitment of students ▪ Maintaining meaningful engagement of partners for the entire project period

Action Plan 2: Women in Transportation - Career Retraining, Re-entry, and Transition

Table 12. Action Plan 2: Women in Transportation – Career Retraining, Re-entry, and Transition	
Data Field Name	**Description**
Section 1: Overview of Strategic Recommendation	
Recommendation Title	Women in Transportation – Career Retraining, Re-entry, and Transition
Recommendation Highlights	▪ Engagement of leaders from the transportation arena as well as workforce boards and women's organizations to address barriers for women entering transportation ▪ Identification of strategies effective for increasing participation of women in transportation careers, particularly those seeing second careers through a data-driven decision process ▪ Development of resources to remove barriers to entry for women
Description	Women are significantly underrepresented in numerous transportation occupations, and this lack of women is particularly prevalent at the highest levels of organizational leadership. SETWC has engaged partners from a variety of organizations in discussions of barriers and challenges to women entering, remaining, and advancing in transportation careers. This action plan will focus on establishing a clear set of initiatives to overcome these obstacles and increase representation of women at all levels of the industry, but particularly for women seeking career retraining, re-entry, or transition from military occupations. The APEC Women in Transportation Data Framework will be used as the starting point and scaffold for developing new products and programs to address gender gaps in transportation. The results may include training modules, best practice guidelines, innovative recruiting materials, and leveraging existing programs to create expanded opportunities for reaching and engaging women in transportation related training initiatives.
Rationale for Recommendation	▪ All stakeholders participating in the feedback process for this study indicated increasing representation of women in transportation was a high priority.
Section 2: Target Audiences	
Relevant Priority Jobs	▪ All, but particularly those in STEM , supply chain, and technical occupations
Primary Pipeline Focus	▪ Recruitment
Target Audience	▪ Women seeking career retraining/re-entry ▪ Military veterans

Section 3: Implementation Plan	
Action Lead(s) and Partnerships	▪ Dr. Stephanie Ivey, Director of SETWC and Meredith Powers, Associate Director of Communications and Public Sector Coordinator will facilitate partnerships and initiate working group. Specific tasks and outcomes leads will be determined once Action Plan is underway and partners are engaged.
Steps to Implement	▪ Assemble leadership team for plan ▪ Invite working group members ▪ Conduct initial discussion amongst team members ▪ Identify short-term and long-term tasks to be included in Action Plan along with goals and anticipated outcomes ▪ Assign task leads and initiate projects in sub-teams ▪ Conduct quarterly check-in meetings to monitor progress towards goals ▪ Finalize projects and disseminate results
Estimated Time to Implement	▪ 2 years with short-term tasks completed at the end of Year 1
Funding Needed	▪ In-kind from team members (time)
Section 4: Communication Plan	
Communication/Outreach Strategies	▪ SETWC staff will communicate with potential partners to engage them in the action plan. ▪ Project status will be highlighted regularly in SETWC newsletters to all stakeholders (education, public, private sectors) ▪ Results will be disseminated through professional organization presentations, publications, and through the NNTW
Process for Obtaining Buy-In	▪ Engaging a dynamic and committed group of leaders ▪ Setting achievable yet meaningful goals for partnership ▪ Demonstration of effectiveness from Year 1 efforts
Section 5: Useful Resources	
Useful resources to successfully implement and sustain practice	▪ APEC Women in Transportation Data Framework and Best Practice Report (http://www.nathaninc.com/resources/apec-women-transportation-data-framework-and-best-practices-report) ▪ SETWC Choosing Transportation 2015 Summit Summary
Section 6: Example of Effective Programs	
Example(s) of Existing Effective Program	▪ Best practice examples in APEC report
Section 7: Impact	
Positive Outcomes of the Practice	▪ It is expected that this action plan will result in improved outcomes for inclusion of women in transportation, particularly for those seeking career reentry and military transition.
Section 8: Challenges to Implementation	
Potential Challenges	▪ Identifying low-cost opportunities for impact ▪ Maintaining meaningful engagement of partners for the entire project period

Action Plan 3: Choosing Transportation: Collaboration Across the Pipeline

Table 13. Action Plan 3: Choosing Transportation – Collaboration Across the Pipeline	
Data Field Name	**Description**
Section 1: Overview of Strategic Recommendation	
Recommendation Title	Choosing Transportation – Collaboration Across the Pipeline
Recommendation Highlights	▪ Engagement of stakeholders across the transportation continuum in discussions regarding workforce challenges and opportunities ▪ Development of a forum for building partnerships to pursue workforce initiatives ▪ Providing a venue for sharing transportation career opportunities and creating networking opportunities between high school and college students and transportation professionals
Description	*Choosing Transportation* is an annual summit hosted by SETWC since its inception to provide a forum for transportation workforce stakeholders to network and discuss workforce issues. The Summit is supported through numerous education, community, and public and private sector partnerships to highlight transportation industry trends, cutting edge research and advances in technology, and workforce initiatives that enhance participation and increase diversity in transportation. The summit includes participation of and networking among individuals across the transportation pipeline (from high school through professional), resulting in sharing of best practices and increased awareness of career pathways and ladders of opportunity in transportation. This action plan will potentially include expansion of the existing summit to multiple locations, web-based extension of summit activities, and the introduction of additional partners to expand impact and continue the conversation and initiatives in multiple settings throughout the year.
Rationale for Recommendation	▪ Because recruitment was the most frequently described challenge for all regional stakeholders, this Action Plan addresses this across the transportation pipeline and provides opportunities for focus on specific occupation categories or underrepresented groups.
Section 2: Target Audiences	
Relevant Priority Jobs	▪ All
Primary Pipeline Focus	▪ Recruitment
Target Audience	▪ High school students ▪ College students ▪ Public sector professionals ▪ Private sector professionals

Section 3: Implementation Plan	
Action Lead(s) and Partnerships	▪ Dr. Stephanie Ivey, Director of SETWC and Meredith Powers, Associate Director of Communications and Public Sector Coordinator organize this summit each year. For 2017, they are assembling a steering committee to provide guidance and ideas for increasing impact and value.
Steps to Implement	▪ Assemble steering committee (August 2016) ▪ Conduct monthly steering committee conference call (beginning in September 2016 and continuing through post-event) ▪ Develop Summit theme and program agenda (September 2016) ▪ Issue 'Save the Date' to regional stakeholders (October 2016) ▪ Issue invitations to speakers (October 2016) ▪ Program planning and logistics (September 2016-February 2017) ▪ Open registration (December 2016) ▪ Advertisement of Summit (December 2016 – February 2017) ▪ Conduct Summit (February/March 2017) ▪ Establish forum for community exchange for participants (March 2017) ▪ Prepare Summit report (March-April 2017) ▪ Release Summit report to stakeholders (May 2017) ▪ Begin planning for next Choosing Transportation Summit (June 2017)
Estimated Time to Implement	▪ 1 year (continual)
Funding Needed	▪ In-kind from steering committee members (time) ▪ Corporate and organizational sponsorships (financial) ▪ Summit registrations (financial)
Section 4: Communication Plan	
Communication/Outreach Strategies	▪ SETWC staff will communicate with potential partners to engage them in the steering committee in August 2016. ▪ A 'Save the Date' email will be sent to regional stakeholders in October 2016 ▪ SETWC and NNTW advertisements via social media, web, email ▪ Results will be disseminated through professional organization presentations, SETWC newsletters, and through the NNTW
Process for Obtaining Buy-In	▪ Engaging a dynamic and committed group of leaders ▪ Establishing appealing theme and program for 2017 Summit ▪ Providing follow-up and establishing a community of practice for attendees
Section 5: Useful Resources	
Useful resources to successfully implement and sustain practice	▪ Choosing Transportation Summit experience and resources developed for 2015-2016 events
Section 6: Example of Effective Programs	
Example(s) of Existing Effective Program	▪ TransportationYou (high school) ▪ Professional organization meetings from transportation and workforce development arenas

Section 7: Impact	
Positive Outcomes of the Practice	▪ This Action Plan is already underway and has proven successful in engaging regional stakeholders in meaningful workforce discussions that lead to recommendations for action and identification of best practice, developing relationships and building partnerships across the transportation workforce continuum, and providing a forum for increasing awareness of transportation career opportunities with high school and college students.
Section 8: Challenges to Implementation	
Potential Challenges	▪ Costs in expanding opportunities for participation ▪ Continued growth in regional participation ▪ Creating programming that is innovative and attractive to all stakeholders

V. Conclusion

The Job Needs and Priorities research effort (Phase I and 2) has provided a framework for developing strategic and coordinated action plans for the Southeast Region that will positively impact the state of the transportation workforce. SETWC is committed to continuing to develop initiatives to address both regional workforce challenges and those related specifically to its focus areas in alignment with its vision and core mission. Additional partners will be added and Action Plans will be formalized as the current teams continue to formulate strategies for creating transformational impact. Action plans may also be added to SETWC's program plan as needed to address regional transportation workforce issues. A strong collaborative partnership approach across the transportation continuum is the cornerstone from which all Action Plans will be built, and it is expected that best practices for meaningful engagement of stakeholders will be a key outcome of all efforts.

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Appendix

SETWC Private and Public Sector Survey Questions			
Private and Public Stakeholder Questions			
How significant are the following workforce challenges for your organization? (Please rate 1-5 with 1 being insignificant, 5 being very significant)	If skills gaps are a significant workforce challenge for your organization, is this due to (check all that apply)	If recruitment of employees is a significant issue for your organization, is this due to (check all that apply)	If retention of employees is a significant issue for your organization, is this due to (check all that apply)
Response Options			
1. Employee skill gaps 2. Recruitment of employees 3. Retention of employees	1. Lack of qualified or credentialed candidates 2. Need for new skill sets in incumbent workforce 3. Lack of education/training/credentialing programs 4. Lack of alignment between education/training programs and industry needs 5. Other (free response)	1. Lack of interest in transportation industry/careers 2. Lack of awareness of career opportunities in the transportation industry 3. Misperceptions about jobs/careers in the industry 4. Concerns about workplace culture 5. Concerns about lack of diversity in transportation workforce 6. Concerns about workplace environment (non-standard or long hours, field work requirements, etc.) 7. Concerns about earning potential 8. Concerns about professional development opportunities 9. Concerns about career advancement opportunities 10. Other (free response)	1. Employees do not have skills necessary to be successful once on the job 2. Disciplinary/behavior issues 3. Employee expectations different from actual experience once on the job 4. Dissatisfaction with workplace culture 5. Dissatisfaction with diversity in workforce 6. Dissatisfaction with workplace environment (non-standard or long hours, field work requirements, etc.) 7. Concerns about earning potential 8. Concerns about professional development opportunities 9. Concerns about career advancement opportunities 10. Competition from other industries/organizations for employees 11. Other (free response)

SETWC Private and Public Sector Interview Questions				
Private and Public Stakeholder Questions				
Do you know of any unique or particularly successful programs in our region that are associated with the priority occupations list? Example programs not in our region?	Do you know of any unique or particularly successful programs in our region that are associated with the priority occupations list? Example programs not in our region?	Do you know of any unique or particularly successful programs in our region that are associated with the priority occupations list? Example programs not in our region?	Do you know of any unique or particularly successful programs in our region that are associated with the priority occupations list? Example programs not in our region?	Do you know of any unique or particularly successful programs in our region that are associated with the priority occupations list? Example programs not in our region?