

TRANSIT / HEAVY VEHICLE MAINTENANCE COMPETENCY MODEL

Building Blocks for Middle-skill Vehicle Maintenance Occupations*

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Transportation
Workforce
Institute

* "Middle-skill" transit and heavy vehicle maintenance occupations are those with strong, positive employment and economic-mobility-potential which: (1) require some post-secondary education and/or training but less than a 4-year degree, (2) pay a living wage; (2) have sufficient, current employment opportunities, and (3) are projected to have near-term, future employment opportunities such as Bus and Truck Mechanics, Service Attendants, and Rail Car Repairers.

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- Los Angeles Trade-Technical College's Diesel and Related Technologies Advisory Committee
- American Public Transportation Association's Education and Career Awareness Subcommittee
- Workforce Initiative Now-Los Angeles' Education Workgroup

Additionally, the model was validated through multiple meetings with industry partners and employers.

Background and How to Use the Competency Model

Background Information

Multiple and varied data and competency sources were utilized in the preparation of this framework as referenced below. In addition, several meetings were held with industry experts, incumbent transportation workers, and others to validate the competencies such as those acknowledged above.

How to Use the Competency Framework and Descriptions

- *Audiences.* In developing this framework, we imagined several audiences/uses. (1) Individuals/students to ascertain competencies and eligibility requirements needed to be successful in vehicle maintenance occupations in the transportation industry. (2) Educators/trainers for developing new and/or examining existing workforce development programs/curriculum and instructional materials to meet industry and occupation requirements. (3) Employers/HR professionals for (a) communicating about competencies and eligibility requirements for occupations in the transportation industry, (b) writing job descriptions, (c) and recruitment and hiring--particularly for vehicle maintenance occupations. (4) Assessment professionals to develop assessments for evaluating competency attainment.
- *Competency Model Framework.* A competency model is a collection of competencies that together defines successful performance in a particular industry, work setting, and/or occupation. According to the U.S. Department of Labor, Employment and Training Administrator, “a *competency is the capability to apply a set of related knowledge, skills, and abilities to successfully perform functions or tasks*”. In this model (see page 3), we have organized the competencies into 3 categories or tiers.
 - Tier 1: Common Employability and Industry-wide Competencies. Competencies individuals need to be successful in any occupation within the transportation industry.
 - Tier 2: Vehicle Maintenance Occupation-Specific Competencies. Competencies individuals in vehicle maintenance occupations need to be successful. It is also likely some of these competencies apply to other occupations in the transportation industry. For example, Test-Taking Skills and Electro-Mechanical Calculations, Measurements, and Schematics Skills would also apply to electronics- and electrical-related occupations such as Electronic Communication Technicians.
 - Tier 3: Specialty Competencies. Competencies, although typically required, may be essential in unique circumstances and/or differentiate individuals in vehicle maintenance occupations.

The competency tiers and the numbers/letters for each competency are for reference purposes only. They are intended to facilitate discussion of the model and to make locating corresponding competency descriptions easier. They are not intended to denote any order or importance of the competencies.

- Competency Descriptions. Following the model on page 3, each competency is described in further detail. Each competency is numbered/lettered so that you may easily locate the competency both within the model and corresponding list of competency descriptions.
- Vehicle Maintenance Occupations. For this model, we chose to focus on competencies individuals in vehicle transit and heavy vehicle maintenance occupations must possess. Examples of related occupation titles include: Mechanic, Diesel Mechanic, Diesel Technician, Fleet Mechanic, General Repair Mechanic, Service Technician, Service Attendant, Transit Mechanic, and Truck Mechanic.

Eligibility Requirements

While important but not part of the competency model, included in the Appendix of this document is information on the typical eligibility requirements for working in transit/heavy vehicle maintenance occupations.

Competency Sources

- American Public Transportation Association (June 2010). Rail Vehicles Maintenance Training Standards.
- American Public Transportation Association. National Transit Curriculum.
- Los Angeles Trade-Technical College (2013). Electrification of Transportation Competency Model: Building Blocks for Entry Level Occupations in the Utility and Transportation Industries to Support the “Electrification” of Transportation.
- National Network of Business and Industry Associations (March 2015). Common Employability Skills. A Foundation for Success in the Workplace: The Skills All Employees Need, No Matter Where They Work. Downloaded from http://www.nationalnetwork.org/wp-content/uploads/2015/05/Common_Employability_Skills-03-30-152.pdf
- National Institute for Automotive Service Excellence (ASE) (2017). ASE Study Guides for individual tests A9, F1, L2, L3 and for test series E, H, P, T, and S. Downloaded from <http://www.ase.com/Test-Prep-Training/Study-Guides/Download-the-Guides.aspx>
- National Center for O*NET Development, U.S. Department of Labor, Employment & Training Administration. O*Net Online. Available at <https://www.onetonline.org/>
- Transportation Workforce Institute (July 2017). Transit and Ground Transportation in Los Angeles and Orange Counties, CA.

The Transportation Workforce Institute (TWI)

TWI ensures a well-trained and diverse transportation workforce by collaborating with industry, education, and workforce development partners to create competency- and standards-based curriculum, programs, and services that meet immediate and long-term employer needs while connecting diverse communities and citizens through transportation projects and workforce development efforts. *Visit TWI's website for further information and contact options - twi@lattc.edu.*

Other Transportation Reports and Workforce Development Frameworks

This is one of several reports and workforce development frameworks prepared by TWI examining industries and occupations in the transportation industry nationally and in Los Angeles and Orange Counties, California. All reports and frameworks are available on TWI's website at <http://twi.lattc.edu/reports-publications/>.

TRANSIT / HEAVY VEHICLE MAINTENANCE COMPETENCY MODEL AT A GLANCE

Specialty Competencies	
3.1 Alternative Fuel/Hybrid Vehicles Preventative Maintenance, Diagnosis, Repair 3.1a <i>Alternative-fueled engines (including CNG)</i> 3.1b <i>Light duty hybrid electric vehicles</i> 3.1c <i>Heavy duty hybrid electric vehicles</i>	3.2 Environmental Compliance Knowledge and Skills 3.2a <i>Environmental regulations and programs</i> 3.2b <i>Vehicle and device testing</i> 3.2c <i>Vehicle and device installation and servicing</i>

Vehicle Maintenance Occupation-Specific Competencies					
2.1 Occupational Safety – Unique to Position 2.1a <i>Occupational Safety</i>	2.2 Vehicle Systems Knowledge 2.2a <i>Knowledge of vehicle systems, components, and parts</i>	2.3 Electro-Mechanical Calculations, Measurements, and Schematics Skills 2.3a <i>Calculations</i> 2.3b <i>Measurements</i> 2.3c <i>Schematics</i>	2.4 Light Truck, Med/Hvy Vehicle, Bus, Rail Inspection, Preventative Maintenance, Diagnosis, Repair 2.4a <i>Engines</i> 2.4b <i>Electrical /Electronic system</i> 2.4c <i>Drive system</i> 2.4d <i>Suspension and steering system</i> 2.4e <i>Brake system</i> 2.4f <i>HVAC system</i> 2.4g <i>Auxiliary power system</i> 2.4h <i>Body system and special equipment</i>	2.5 Service Workflow Skills 2.5a <i>Preparing vehicle for service</i> 2.5b <i>Preparing vehicle for return to operation</i>	2.6 Test-taking Skills^A 2.6a <i>Skills to prepare for and pass required tests and exams^A</i>

Common Employability ^{CES} and Industry-wide Competencies			
1.1 Personal Skills^{CES} 1.1a <i>Integrity</i> 1.1b <i>Initiative</i> 1.1c <i>Dependability and reliability</i> 1.1d <i>Adaptability</i> 1.1e <i>Professionalism</i>	1.2 People Skills^{CES} 1.2a <i>Teamwork</i> 1.2b <i>Communication</i> 1.2c <i>Respect</i> 1.2d <i>Customer focus</i>	1.3 Applied Knowledge^{CES} 1.3a <i>Mathematics</i> 1.3b <i>Writing</i> 1.3c <i>Reading</i> 1.3d <i>Science</i> 1.3e <i>Technology</i> 1.3f <i>Critical thinking</i>	1.4 Workplace Skills^{CES} 1.4a <i>Planning and organizing</i> 1.4b <i>Problem solving</i> 1.4c <i>Decision making</i> 1.4d <i>Business fundamentals</i>
1.5 Working with Tools and Technology^{CES} 1.5a <i>Selects, uses, and maintains tools and technology to facilitate work activity</i>	1.6 Realistic View of Industry 1.6a <i>Understands demands and nature of work</i>	1.7 Checking, Examining, and Recording Skills 1.7a <i>Completing forms</i> 1.7b <i>Maintaining records</i>	1.8 General Safety 1.8a <i>General safety</i> 1.8b <i>Personal and facility safety</i>

^{CES} National Network of Business and Industry Associations (NNBIA) Common Employability Skills

^A Additional requirements of some employers or of specific occupations

* We define “middle-skill occupations” as transit and trucking vehicle maintenance occupations with strong, positive employment and economic-mobility-potential which are: (1) occupations that pay a living wage; (2) have sufficient, current employment opportunities, and (3) are projected to have near-term, future employment opportunities such as Bus and Truck Mechanics, Rail Car Repairers, etc.



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COMPETENCY DESCRIPTIONS

Common Employability and Industry-wide Competencies^{CES}

1.1 Personal Skills^{CES}

- 1.1a **Integrity** – Treats others with honesty, fairness, and respect; demonstrates respect for company's time and property; accepts responsibility for one's decisions and actions
- 1.1b **Initiative** – Demonstrates a willingness to work and seek out new work challenges; takes initiative in seeking out new responsibilities and work challenges; increases the variety and scope of one's job; pursues work with energy, drive, and effort to accomplish tasks; establishes and maintains personally challenging, but realistic, goals; strives to exceed standards and expectations
- 1.1c **Dependability and reliability** – Displays responsible behaviors at work; behaves consistently, predictably, and reliably; fulfills obligations, completes assignments, and meets deadlines; follows written and verbal directions; complies with organizations' rules, policies, and procedures; demonstrates regular and punctual attendance
- 1.1d **Adaptability** – Displays the capability to adapt to new, different, or changing requirements; is open to learning and considering new ways of doing things; actively seeks out and carefully considers the merits of new approaches; embraces new approaches when appropriate and discards approaches that are no longer working; effectively changes plans, goals, actions, or priorities to deal with changing situations
- 1.1e **Professionalism** – Maintains a professional demeanor at work; demonstrates self-control by maintaining composure and keeping emotions in check, even in difficult situations; maintains a professional appearance by dressing appropriately for the job and maintaining personal hygiene; uses professional language when speaking with supervisors/college personnel, co-workers, and others; maintains a positive attitude; takes ownership of one's work

1.2 People Skills^{CES}

- 1.2a **Teamwork** – Demonstrates the ability to work effectively with others; establishes a high degree of trust and credibility with others; interacts professionally and respectfully with supervisors and co-workers; develops constructive working relationships and maintains them over time; uses appropriate strategies and solutions for dealing with conflicts and differences to maintain a smooth workflow
- 1.2b **Communication** – Maintains open lines of communication with others; demonstrates sensitivity and empathy; listens to and consider others' viewpoints; recognizes and interprets verbal and nonverbal behavior of others; speaks clearly, in precise language and in a logical, organized, and coherent manner
- 1.2c **Respect** – Works effectively with those who have diverse backgrounds; demonstrates sensitivity and respect for the opinions, perspectives, customs, and individual differences of others; is flexible and open-minded when dealing with a wide range of people; values diversity of approaches and ideas
- 1.2d **Customer focus** – Actively looks for ways to identify market demands and meet customer or client needs; understands and anticipates customer needs; provides personalized service with prompt and efficient responses to meet the requirements, requests, and concerns of customers or clients; is pleasant, courteous, and professional when

dealing with internal and external customers or clients; evaluates customer or client satisfaction

1.3 Applied Knowledge^{CES}

- 1.3a **Mathematics** – Uses mathematics to solve problems; adds, subtracts, multiplies, and divides whole numbers, fractions, decimals, and percents; converts decimals to fractions; converts fractions to percents; calculates averages, ratios, proportions, and rates; takes measurement of time, temperature, distance, length, width, height, and weight; converts one measurement to another; translates practical problems into useful mathematical expressions
- 1.3b **Writing** – Uses Standard English to clearly communicate thoughts, ideas, and information in written form; prepares written materials that are easy to understand using correct wording; uses correct grammar, spelling, punctuation, and capitalization; writes in a factual tone appropriate to the target audience in multiple formats, creates documents such as business correspondence, reports, and other written information, which may contain technical material, in a logical, organized, and coherent manner
- 1.3c **Reading** – Reads and comprehends work-related instructions and policies, memos, bulletins, notices, letters, policy manuals, and governmental regulations; reads and comprehends documents ranging from simple and straightforward to more complex and detailed; attains meaning and comprehends core ideas from written materials; integrates what is learned from written materials with prior knowledge; applies what is learned from written material to follow instructions and complete specific tasks
- 1.3d **Science** – knows and applies scientific principles and methods to solve problems; understands basic scientific principles; understands the scientific method (i.e., identify problem, collect information, form opinion and draw conclusion); applies basic scientific principles and technology to solve problems and complete tasks
- 1.3e **Technology** – demonstrates IT skills for workplace efficiency and workflow including:
Navigation and file management – understands common computer terminology; uses scroll bars, a mouse, and dialog boxes to work within the computer's operating system; accesses and switches between applications and files of interest; adheres to standard conventions for safeguarding privacy and security
Internet and email – navigates the Internet to find information; opens and configures standard browsers; uses searches, hypertext references, and transfer protocols (enter URLs); sends and retrieves electronic mail (email)
- 1.3f **Critical thinking** – Uses logical thought processes to analyze and draw conclusions; identifies inconsistent or missing information; critically reviews, analyzes, synthesizes, compares and interprets information; draws conclusions from relevant and/or missing information; tests possible hypotheses to ensure the problem is correctly diagnosed and the best solution is found

1.4 Workplace Skills^{CES}

- 1.4a *Planning and organizing* – Plans and prioritizes work to manage time effectively and accomplish assigned tasks; plans and schedules tasks so that work is completed on time; prioritizes various competing tasks; demonstrates effective allocation of time and resources; takes necessary corrective action when projects go off track
- 1.4b *Problem solving* – Demonstrates the ability to apply critical-thinking skills to solve problems by generating, evaluating, and implementing solutions; identifies and defines the problem; communicates the problem to appropriate personnel; generates possible solutions; chooses and implements a solution
- 1.4c *Decision making* – Applies critical thinking skills to solve problems encountered in the workplace; identifies and prioritizes key issues involved to facilitate the decision-making process; anticipates consequences of decisions; involves people appropriately in decisions that may impact them; quickly responds with a back-up plan if a decision goes amiss
- 1.4d *Business fundamentals* – Has fundamental knowledge of the organization and the industry; understands the importance of one's role in the functioning of the company and the potential impact one's performance can have on the success of the organization; recognizes the importance of maintaining privacy and confidentiality of company information, as well as that of customers and co-workers and complies with intellectual property laws

1.5 Working with Tools and Technology^{CES}

- 1.5a *Selects, uses, and maintains tools and technology to facilitate work activity* – identifies, selects, and uses appropriate tools and technological solutions to frequently encountered problems; considers which tools or technological solutions are appropriate for a given job and consistently chooses the best tool or technological solution for the problem at hand; operates tools and equipment in accordance with established operating procedures and

safety standards; seeks out opportunities to improve knowledge of tools and technologies that may assist in streamlining work and improving productivity

1.6 Realistic View of Industry

- 1.6a *Understands demands and nature of work in the industry* – knows the history and business of the industry; knows the governance, financing, and policy of public transportation, understands transportation modes, networks, use, and occupations; is aware of environmental justice issues, knows the work and education requirements, salaries, and work conditions for selected occupations in the industry; understands evolving industry technology and trends; knows transportation (particularly public) management principles including common organizational models, performance measurement, and organized labor

1.7 Checking, Examining, & Recording Skills

- 1.7a *Completing forms* – Selects and completes appropriate forms quickly and completely; attends to and follows through on important information in paperwork
- 1.7b *Maintaining records* – Keeps logs, records, and files that are up-to-date, readily accessible, and stored and disposed of according to policies and procedures

1.8 General Safety

- 1.8a *General safety* – Understands the significance of maintaining a healthful and safe environment and reports any violations/discrepancies to appropriate personnel^{CES}; knows relevant equipment, policies, procedures, and strategies for safe operations and protection of people, data, property, and institutions
- 1.8b *Personal and facility safety* – knows and uses personal protective equipment; knows common hazards and mitigation procedures; knows hazardous substances, regulations, and handling and disposal procedures

Vehicle Maintenance Occupation-Specific Competencies

2.1 Occupational Safety – Unique to Occupation

- 2.1a *Occupational safety* – Knows relevant equipment, policies, procedures, and strategies for safe shop operations and personal safety

2.2 Vehicle Systems Knowledge

- 2.2a *Knowledge of vehicle systems, components, and parts* – including engines and engine mechanical parts; fuel systems; ignition systems; exhaust systems; emissions control systems; transmission (manual and automatic transmission), drive train, brakes, suspension, steering, and wheels; heating, ventilation, and air conditioning (HVAC) systems (truck, cab, transport refrigeration), electrical/electronic systems; battery, charging, and starting systems; other miscellaneous systems

2.3 Electro-Mechanical Calculations, Measurements, and Schematics Skills

- 2.3a *Calculations* – Completes electrical and mechanical calculations such as amps, watts, volts, horsepower, power factor, resistance, efficiency, velocity, torque, arc length, belt or chain pull; calculates Ohm's law; calculates voltage, current, and power for various combinations of delta-wye

connections; solves equations with one unknown variable all applied to electrical and mechanical problems

- 2.3b *Measurements* – Takes measurements of velocity and speed; uses and reports measurements correctly; converts from one measurement to another (e.g., from English to metric)

- 2.3c *Schematics* – reads schematics with an understanding of symbols, scales, keys, and legend--all applied to electrical and mechanical problems

2.4 Light Truck, Medium/Heavy Vehicle, Bus (Transit and School), and Rail Engine Inspection, Maintenance, Diagnosis, and Repair

- 2.4a *Engines* – Knows different types of engines, subcomponents, and parts; disassembles and reassembles different types of engines (gasoline engines, diesel engines, light vehicle diesel engines); performs inspection, maintenance, diagnosis, and repair, and rebuilds/overhauls different types of engines including: general engine performance, cylinder head and valve train, in-chassis engine, engine block, lubrication and cooling systems, ignition system, starting and charging system, fuel system, air induction and exhaust systems (including exhaust after-treatment technologies to comply with state emission standards), emissions control systems, computerized engine

controls, engine brakes, and mechanical and electronic components

- 2.4b Electrical and electronic system** – Knows electrical and electronic system subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of electrical and electronic systems including general electrical/electronic system; battery; starting system; charging system; lighting systems (headlights, daytime running lights, fog lights, parking, clearance, tail lights, dome, stepwell, strobe, and dash lights); gauges and instrument warning devices; auxiliary electric power units; and related vehicle electrical/electronic systems and associated electrical circuits and components
- 2.4c Drive system** – Knows drive system subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of transmission (automatic, manual); clutch; drive shaft and universal joint; and drive axle
- 2.4d Suspension and steering system** – Knows suspension and steering system subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of steering system; suspension (independent front suspensions, Straight/I-Beam axle, rear suspension), frame; 5th wheel systems; and wheel alignment, wheels, tires, and hubs
- 2.4e Brake system** – Knows brake system subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of air brakes; air supply; hydraulic brakes (hydraulic system, mechanical system, power assist units, etc.); wheel bearings; air and hydraulic Antilock Brake Systems (ABS), Automatic Traction Control (ATC), and Electronic Stability Control systems; air supply and service systems; mechanical/foundation brakes and wheel hub; parking brakes
- 2.4f HVAC system** – Knows HVAC system subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of compressor and clutch; evaporator, condenser, and related components; heating and engine cooling systems; heating, ventilation, and air conditioning

operating systems and related controls; evaporator, condenser, and transport refrigeration systems, HVAC electrical/electronic systems; and electronic temperature control system

- 2.4g Auxiliary power system** – Knows auxiliary power system subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of hydraulic systems; pumps; filtration/reservoirs (tanks); hoses, fittings, and connections; control valves; actuators; general system operation; mechanical systems; pneumatic systems
- 2.4h Body system and special equipment** – Knows vehicle body system subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of safety and emergency equipment systems, body and interior maintenance, and installed special equipment

2.5 Service Workflow Skills

- 2.5a Preparing vehicle for service** – Reads and interprets diagnostic test results and performs basic diagnosis of malfunctions, determines probable causes and necessary remedial action; plans work procedures, knows how to use technical charts and manuals; performs acceptance testing and pre-service preparations to newly acquired vehicles
- 2.5b Preparing vehicle for return to operation** – road-tests vehicles, drives vehicle through wash stations and around facilities; parks vehicle; explains problems and repairs to supervisors, fleet managers, and or person(s) requesting service

2.6 Test-Taking Skills^A

- 2.6a Able to pass required tests and exams** – understands test-taking strategies and has knowledge of topics and applications necessary to pass tests/exams for entry level and incumbent positions and industry-recognized certifications and/or compliance requirements

Specialty Competencies

3.1 Alternative Fuel and Hybrid Engines Preventative Maintenance, Diagnosis, Repair

- 3.1a Alternative-fueled engines (including CNG)** – Knows common alternative fuel engines, subcomponents, and parts; disassembles and reassembles different types of alternative fuel engines
- 3.1b Light duty hybrid electric vehicles** – Knows light duty hybrid electric vehicle systems subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of battery system, internal combustion engine, drive systems, power electronics, and hybrid supporting systems
- 3.1c Heavy duty hybrid electric vehicles** – Knows heavy duty hybrid electric vehicle systems subcomponents and parts; performs inspection, preventative maintenance, diagnosis, and repair of battery system, internal combustion engine,

drive systems, power electronics, onboard generator, and hybrid supporting systems

3.2 Environmental Compliance Knowledge and Skills

- 3.2a Environmental regulations and programs** – Knows federal and state environmental regulations and programs; complies with regulations to minimize diesel particulates and NOx emissions
- 3.2b Vehicle and device testing** – Knows and correctly administers required or recommended vehicle and device test(s) (such as, for example, the SAEJ1667 opacity test in California)
- 3.2c Vehicle and device installation and serving** – Knows and correctly services engines and exhaust after treatment devices so they meet compliance standards

APPENDIX: Typical Eligibility Requirements

The following are the typical eligibility requirements for working in transit/heavy vehicle maintenance occupations. Prior work experience and education requirements are also typical for these positions but vary greatly by employers and therefore, have not been included here.

Typical Eligibility Requirements – Vehicle Maintenance Occupations						
ER1. Physical ER1.a <u>Lifting capacity</u> ER1.b <u>Stooping, crawling, squatting</u> ER1.c <u>Working in small/confined spaces</u> ER1.d <u>Walking and Standing</u> ER1.f <u>Agility</u> ER1.g <u>Eyesight</u> ^A	ER2. Age ER2.a 18+ ER2.b Age necessary for license requirements	ER3. Driver's License ER3.a <u>Valid driver's license and record</u> <ul style="list-style-type: none"> • Class A license^A • Class B license^A • Class C license^A • Specialty endorsements^A 	ER4. Working Conditions ER4.a <u>Work non-traditional schedule</u> ER4.b <u>Work outdoors</u>	ER5. Legal Record^A ER4.c <u>Varies^A</u>	ER6. Safety-Sensitive^A ER6.a <u>Varies^A</u>	ER7. Tools^A ER7.a <u>Varies^A</u>

^A Additional requirements of some employers or of specific occupations

ER1. Physical

ER1.a Lifting capacity (50 lbs) – Has physical capacity to lift 50 lbs above head (some employers may have higher weight capacity requirements^A)

ER1.b Stooping, crawling, squatting – Has physical capacity to stoop, crawl, squat, and maneuver on hands and knees

ER1.c Working in small/confined spaces – Has capacity to work and maneuver in small and confined spaces

ER1.d Walking and standing – Has physical capacity to walk 5 to 7 miles per day and stand for extended periods of time

ER1.f Agility – Able to climb ladders (no fear of heights)

ER1.g Eyesight – Able to pass color/vision test^A, usually required for Rail Vehicle Maintenance Technician/Rail Car Repairer positions

ER2. Age

ER2.a Age – At least 18 years of age and be of age to have required driver's license(s)

ER3. Driver's License

ER3.a Driver's license, driving record – Possesses valid driver's license with an acceptable driving record (some employers may require a valid Class A, and/or Class B, Class C, Commercial license; and/or may require specialty endorsements such as passenger, tank, hazardous material, or doubles/triples endorsements^A)

ER4. Working Conditions

ER4.a Work non-traditional schedule – Willingness/availability to work various shifts on weekdays, weekends, evenings, and holidays and must be able to respond to emergencies 24 hours a day, 7 days per week

ER4.b Work outdoors – responds to road failure situations which occur outdoors

ER5. Legal Record^A

ER5.a Legal record – *Varies by employer* (some employers do not have any legal eligibility requirements, others may require no historical (except expungements) or pending legal record, others may require a legal record with no expungements^A)

ER6. Safety Sensitive^A

ER6.a Drug and alcohol free – When employed by employers/occupations considered "safety-sensitive" which are subject to drug and alcohol testing, including random testing, under Federal Transportation Administration (FTA) drug and alcohol regulations^A

ER7. Tools^A

ER7.a Tools – Has own tools when employed by some employers and/or occupations with this as a requirement^A