Northern Middle Tennessee Workforce Board Inc.

Innovations Committee
January 31, 2023
9:00 A.M.
Click here for Zoom Link
Meeting ID: 844 0848 2209
Passcode: 051553

Telephone Number: +1 312 626 6799

Agenda

Welcome

Call the Meeting to Order

Approval of Minutes

Business Reports:

1. CSP Provider Update
    a. Federal Performance

2. Eligible Training Provider Requests

3. Innovation-Programs and Grants
    a. Justice Involved
    b. Labor Force Participation Rate Pilot Project
    c. Automotive Technician Development Training Program

Members:

Seth Thurman (Chair)

Anne Fugate

Tony Adams

Richie Brandon

Tylesha McCray

Jessica Largen

John Alexander

Greg Jones

Adjourn

Complete zoom link: https://us02web.zoom.us/j/84408482209?pwd=ZS90azBJckY3bnZoV0JjSFpWV1NaZz09

Northern Middle Tennessee Workforce Board Inc.

DRAFT UNTIL APPROVED

Northern Middle Tennessee Workforce Board
Innovation Committee
Meeting Minutes
November 3, 2022, via Zoom 2:00 PM

Members Attending	Members Absent	Staff & Guests Attending
Seth Thurman	Anne Fugate	Marla Rye
Tony Adams	Richie Brandon	Andrea Dillard
Jessica Largen	Tylesha McCray	Ginger Fussell
John Alexander		Meagan Dobbins
Greg Jones		Kim Rye
		Sherry Maynard

The Northern Middle Tennessee Workforce Innovation Committee met via Zoom on November 3, 2022. Attendance was taken, and a quorum was declared. Seth Thurman, committee chair, called the meeting to order.

Seth called for review and approval of the minutes. John Alexander motioned, and Jessica Largen seconded. With no other discussion, the minutes were approved unanimously. He turned the meeting over to Marla Rye who then asked Andrea Dillard to give a service provider update.

Contract Service Provider Update
Andrea Dillard began by giving a brief overview of the first quarter, which ended in September. EDSI exceeded its enrollment goal for the first quarter but has not met its exit goal. The number of required exits has been increased because their caseloads have gotten very large. EDSI continues to have staffing issues but hopes to increase its exits as they fill its open positions. The participants who are exited are positive exits, and they are exceeding their placement wage goal. EDSI has met MPCR, Work Experience, and In-School Youth ratio goals.

Andrea went on to update the committee regarding MAC performance goals. MAC did not meet its enrollment goals. This could be due to losing a career coach, and MAC was not invited to the school system discussion with their transition to work-type programs. MAC is meeting its exit goal, positive placement rate, placement wage, MPCR, and Work Experience. They are not meeting their In-School Youth goal.

Jobs for Tennessee Graduates have already exceeded their enrollment goal. Monroe Harding is almost where they need to be at the end of the first quarter. There are some concerns about Liberty Station. The paperwork and eligibility criteria seem to be an issue. They have lots of community support, but they need to be monitored and decide if their contract needs to be terminated early.

Federal Performance
Meagan Dobbins updated the committee regarding the Federal Reporting Score Card. She mentioned we failed the 4th Quarter after Exit Employment Rate for the 21-22 fiscal year, but we are trending upward and are on track to achieving this goal for the next fiscal year. For the 22-23 fiscal year, we failed the Employment Rate 4th Quarter after exit for the first quarter, but we are passing the second quarter at 90% so far and most likely won't fail.

The Federal Reporting Score Card runs almost two years behind. Since the Employment Rate 2nd Quarter after exit in the previous fiscal year was passing at 90%, it's an indicator that we will pass 4th quarter after exit in the current year.

Meagan also mentioned that this was a negotiation year and that some of the goals with the state were lowered for the current fiscal year. Finally, Megan mentioned that the Measurable Skills Gains is the only performance measure that is tracked in real-time. Quarter 2 Measurable Skills Gains looks like we are currently failing, but more data will be added over the quarter, and it is most likely that this will end with a passing score. She went on to say that Measurable Skills Gains is not an exit-based measure but rather tracking progress that the client is making.

Eligible Training Provider Requests

Andrea Dillard presented the ETPL to the committee. She explained that new providers request to be added to the list or current providers request to add new programs every quarter. This quarter, Trotter Luster Academy is requesting to become a provider. The required steps have been completed. Three new programs are asking to be added by Trotter Academy, and they do result in a credential. TCAT Nashville, APSU, and Volunteer State are requesting new programs be added. Nashville State Community College is requesting to reactivate two programs that were previously removed because there had been no enrollments for a period of time.

Marla mentioned that there are six targeted sector strategies that are in demand in Northern Middle. She questioned the committee about only having programs related to the six sectors or do they want to train participants in other areas. Greg Jones expressed feelings about staying with the six sectors and agreed that there should be further discussion about what sectors should be included on the ETPL and are there other sectors that need to be identified and included. It was expressed that all programs should and do lead to a credential. Tony Adams mentioned that maybe we need to keep the ultimate goal of getting people to work in mind. Andrea stated that for a provider to be added to the list, there must be a bright outlook for that career both locally and nationally. Marla added that some programs are hard to track the end result if the participant chooses to operate as self-employed, but they want to be sure that good programs that will make the participant complete the program, get a job, and be successful are on the ETPL.

Marla recommended that the committee approve the programs as they are presented because they all have a bright outlook and have completed the steps in the process. She also mentioned they could save the conversation about parameters for being on the list for later. Seth Thurman asked for a motion to approve the programs as presented. Greg Jones made the motion. Tony Adams seconded. With no further discussion, the committee voted unanimously to approve the list as presented.

Innovation-Programs and Grants

Next, Marla updated the committee regarding programs and grants. The state of Tennessee is issuing each workforce area up to $80,000, and they have to devise a way to utilize the funding. Current proposals for utilizing the funds will benefit justice-involved individuals. Marla mentioned that Persevere would be attending the next Board meeting. They have a $17M grant through EDA and Good Jobs Challenge to train offenders in IT occupations. Since they are in our area, we should do what we can to work with them and provide funding where needed.

Marla mentioned that there are still Incumbent Worker Training funds that are still available and encouraged committee members to refer any employers who may want to upgrade the skills of their current employees. She mentioned that there is a little bit of money left for apprenticeship start-ups as well.

The USDOL has issued a proposal for a grant to address the shortage of nurses by increasing the number of nursing instructors, frontline nurses, and paraprofessionals. She also mentioned creating an HBCU Partnership with educational partners and healthcare providers to provide services to historically marginalized and underrepresented populations.

Adjourn

With no other questions, Seth Thurman adjourned the meeting.

EDSI 2022 - 2023

Matrix:		Sep 30 (QTR 1)			Dec. 30 (QTR 2)		
		Goal	Actual	%	Goal	Actual	%
Enrollments	A/DW	220	256	116.36%	220	251	114.09%
	Youth	80	87	108.75%	80	70	87.50%
*Exits	A/DW	176	89	50.57%	176	67	38.07%
	Youth	64	56	87.50%	64	27	42.19%
		Goal	Actual	Percent	Goal	Actual	Percent
Positive Exits #	A/DW	150	86	57.49%	150	65	43.3%
	Youth	54	49	90.07%	54	27	50.0%
		Exits	Positive	Percent	Exits	Positive	Percent
**Actual Positive Exit Rate	A/DW	89	86	96.63%	67	65	97.0%
	Youth	56	49	87.50%	27	27	100.0%
		Goal	Actual	Percent	Goal	Actual	Percent
Placement Wage	A/DW	$ 16.00	$ 29.97	187.31%	$ 16.00	$ 19.90	124.4%
	Youth	$ 12.00	$ 16.75	139.58%	$ 12.00	$ 19.06	158.8%
		Goal	Actual	Percent	Goal	Actual	Percent
MPCR:	A/DW	50%	56%	112%	50%	54%	108%
	Youth	50%	57%	114%	50%	48%	96%
Work Experience	Youth	25%	27%	108%	25%	37%	148%
In-School Youth Ratio	Youth	35%	38%	109%	35%	38%	109%

MAC 2022 - 2023

Matrix:		Sep 30 (QTR 7)			Dec. 30 (QTR 8)		
		Goal	Actual	%	Goal	Actual	%
Enrollments	ISY	21	7	33%	22	37	168.18%
	OSY	15	12	80%	15	18	120.00%
Exits							
	Youth	29	35	122%	30	59	196.67%
Positive Exits		Goal	Actual	Percent	Goal	Actual	Percent
	Youth	24	24	100.0%	25	38	152.0%
		Exits	Positive	Percent	Exits	Positive	Percent
**Actual Positive Exit Rate		35	24	68.6%	59	38	64.4%
Placement Wage							
	Youth	$ 12.00	$ 13.86	115.5%	$12.00	$15.70	130.8%
MPCR:							
	Youth	50%	69%	138%	50%	42%	84%
Work Experience	Youth	25%	28%	112%	25%	38%	152%
In-School Youth Ratio	Youth	50%	26%	52%	50%	33%	66%

Contractor	Enrollment Goal	Sept. 30 (QTR 1)	Dec. 30 (QTR 2)	March 31 (QTR 3)	Total	%
Jobs for Tennessee Graduates	24	18	10	--	28	117%
Monroe Harding	26	5	10	2	17	65%
Liberty's Station	23	3	5	--	8	35%

WIOA Federal Reporting Score Card
NORTHERN MIDDLE WORKFORCE BOARD

PY22 WIOA Core Performance Measures	Targets 100%	Targets 90%	Northern Middle Q1	Q2	Q3	Q4
Adult Measures			**PASS**	**EST**	**EST**	
Exiters			433			
Participants Served			1715			
Employment Rate 2nd Quarter after exit	81.5%	73.35%	84.8%	89.6%	89.7%	
Employment Rate 4th Quarter after exit	80.2%	72.18%	73.3%	80.6%	82.5%	
Median Earnings 2nd Quarter after exit	6,900	$ 6,210	$ 7,822	$ 7,962	$ 7,832	
Credential Attainment w/in 4 Quarters after exit	69.0%	62.10%	69.4%	68.6%	67.5%	
Measurable Skills Gains	62.0%	55.80%	66.8%	62.0%	58.8%	
Dislocated Worker			**PASS**			
Exiters			222			
Participants Served			598			
Employment Rate 2nd Quarter after exit	83.0%	74.70%	90.4%	91.0%	91.8%	
Employment Rate 4th Quarter after exit	81.0%	72.90%	84.9%	87.1%	88.5%	
Median Earnings 2nd Quarter after exit	7,900	$ 7,110	$ 10,400	$10,959	$9,364	
Credential Attainment w/in 4 Quarters after exit	65.0%	58.50%	60.5%	63.1%	65.2%	
Measurable Skills Gains	61.2%	55.08%	60.7%	59.6%	52.0%	
Youth			**PASS**			
Exiters			397			
Participants Served			1018			
Employment Rate 2nd Quarter after exit	77.5%	69.75%	87.8%	90.8%	92.7%	
Employment Rate 4th Quarter after exit	76.5%	68.85%	75.7%	79.40%	83.0%	
Median Earnings 2nd Quarter after exit	3,720	$ 3,348	$ 6,287	$ 6,161	$ 5,905	
Credential Attainment w/in 4 Quarters after exit	65.0%	58.50%	62.8%	65.1%	65.8%	
Measurable Skills Gains	54.2%	48.78%	57.8%	52.6%	50.1%	

GREEN-Passing at 100% of Goal

YELLOW-Passing at 90% of goal

Red-Failing at less than 90% of goal

New Programs Requiring Board Approval for addition to the ETPL

Provider Name	Provider Main Address	Program ID	Program Name	CIP Code	Total Cost	Job Outlook	Credential Earned	Projected Wage	Program Length	Sector Strategy
TN Professional Training Institute	Murfreesboro	1010315	Medical Assisting	510801	$3,600.00	Bright Outlook Locally & Nationally	Certificate	$16.97	4 Weeks	Healthcare
Nashville State Community College	Nashville	1010368	Professional in Human Resources ® (PHR ®) Exam Prep with Exam Voucher (Online Self-Paced) PTBUS3002E	521001	$1,842.50	Bright Outlook Locally & Nationally	PHR Professional Human Resources	$21.88	52 Weeks	Human Resources
Tennessee College of Applied Technology at Murfreesboro	Murfreesboro	1010371	Information Technology	119999	$5,697.00	Bright Outlook Locally & Nationally	Infrastructure Management Specialist Diploma	$40.37	1296 Hours	Information Technology
Tennessee College of Applied Technology at Murfreesboro	Murfreesboro	1010369	Automotive Service Technology	470604	$6,283.00	Bright Outlook Locally	Automotive Service Technician Diploma	$19.82	1296 Hours	Transportation & Logistics
Nashville State Community College	Nashville	1010380	Certified AWS Cloud Solutions Architect (Voucher Included) GES3070	110902	$1,995.00	Bright Outlook Locally & Nationally	AWS Certified Solutions Architect	$24.20	3 Months	Information Technology
Nashville State Community College	Nashville	1010383	Medical Assistant	510801	$2,570.00	Bright Outlook Locally & Nationally	NHA Medical Assistant Certification (CCMA)	$16.97	128 Hours	Healthcare
Nashville State Community College	Nashville	1010382	Patient Care Technician	512201	$795.00	Bright Outlook Locally & Nationally	NHA Certified Patient Care Technician Assistant	$14.77	32 Hours	Healthcare
Hussian College - DBA Daymar Clarksville	Clarksville	1010344	Web Design & Development	110103	$55,328.00	Bright Outlook Locally & Nationally	BA/BS Degree	$24.20	32 Months	Information Technology
Hussian College - DBA Daymar Clarksville	Clarksville	1010343	Pharmacy Technician Diploma	510805	$25,141.00	Bright Outlook Locally & Nationally	Certified Pharmacy Technician	$17.46	15 Months	Healthcare
Hussian College - DBA Daymar Clarksville	Clarksville	1010342	Medical Assisting Clinical Diploma	510899	$16,569.00	Bright Outlook Locally & Nationally	Certified Medical Assistant	$16.97	9 Months	Healthcare
Hussian College - DBA Daymar Clarksville	Nashville	1010341	Dental Assisting Diploma	510601	$16,761.00	Bright Outlook Locally & Nationally	Registered Dental Assistant	$18.92	9 Months	Healthcare
Hussian College - DBA Daymar Clarksville	Nashville	1010327	Medical Assisting Clinical Diploma	510899	$16,569.00	Bright Outlook Locally & Nationally	Certified Medical Assistant	$16.97	9 Months	Healthcare

Existing Programs Requiring Board Approval for Cost Increase and Program Extension

Provider Name	Provider Main Address	Program ID	Program Name	CIP Code	Total Cost	Job Outlook	Credential Earned		Program Length	Sector Strategy	Cost Increase
Austin Peay State University	Clarksville	99818	Project Management Professional Exam Prep Boot Camp	529999	$3,552.00	Bright Outlook Locally & Nationally	Project Management Professional (PMP) Certification	$37.06	1 Week	Information Technology	Increase of $1,200 or 51%

Former Programs Requiring Board Approval for ETPL Addition

Provider Name	Provider Main Address	Program ID	Program Name	CIP Code	Total Cost	Job Outlook	Credential Earned		Program Length	Sector Strategy	Notes
Nashville State Community College	Nashville	1009186	Medical Billing and Coding (Vouchers Included) (GES1014)	510713	$2,995.00	Bright Outlook Locally & Nationally	CPC, CCA, or CBCS	$22.58	128 Hours	Healthcare	Originally removed due to no WIOA enrollment in two years

Northern Middle Tennessee Workforce Board Inc.

MEMORANDUM

TO: **Mr. Steve Playl, Assistant Administrator**

FROM: **Marla W. Rye, Executive Director**

CC: **Mr. Bob Rial, CLEO**

DATE: **November 8, 2022**

RE: **Justice-Involved Funding Request 2023**

In response to the State Workforce Development Board Memorandum entitled Justice-Involved Individual Grants, the Northern Middle Workforce Board, through our career service provider, EDSI is proposing to provide re-entry services to transitioning and recent inmates in the Northern Middle Workforce Area.

The funding request is from December 1, 2022 to June 30, 2023 and aligns with the State's Strategic Workforce Development Plan to serve justice-involved individuals.

Northern Middle is requesting an additional $80,000.

f you have any questions regarding this funding request, please feel free to call me at 931.905.3500.

DocuSigned by:
Bob Rial
B1D42316DE2F418...

Mayor Bob Rial, CLEO

DocuSigned by:
Marla Rye
36EC42C53292484...

Marla W. Rye, Executive Director

523 Madison Street, Suite A | Clarksville, TN 37040|
Phone: (931) 551-9110| Fax: (931) 551-9026| nm-wb.com

Northern Middle Workforce Board
Justice-Involved Individuals (JIIs) Grant Proposal

The Northern Middle Workforce Board respectfully submits the following proposal to serve Justice-Involved Individuals in the region.

Term of Service: December 1, 2022 to June 30, 2023

Demographics:
Tennessee currently has just under 50,000 incarcerated people or justice-involved individuals (JIIs) in its county jails and state prisons. Ninety-five percent (95%) of these individuals will be released to re-enter society. There are 70,000 individuals on probation or parole, and one in three Tennesseans have a criminal record and identify as justice involved. Men with criminal records account for about 34% of all nonworking men ages 25 to 54. Ex-offenders are individuals with prior involvement in the criminal justice system and require assistance overcoming barriers to employment created by their criminal records. Targeting Sumner and Robertson County in the Northern Middle Workforce Region, the September 2022 Tennessee Jail Summary Report indicates over 1,000 individuals currently incarcerated in the two counties.

JAIL SUMMARY REPORT as of September 30, 2022 - one day snapshot

FACILITY	TDOC Backup	Local Felons	Other Conv. Felons***	Federal & Others	Conv. Misd.	Pre-trial Felony	Pre-trial Misd.	Total Jail Pop.	Total Beds**	Vacant Beds	Percent Capacity	% TDOC Felons	% Local Felons	% Conv. Misd.	% Pre-trial Felony	% Pre-trial Misd.	% Total Pre-trial Detain.	Cert.*
Robertson	162	15	0	0	57	91	39	364	584	220	62.3%	44.5%	4.1%	15.7%	25.0%	10.7%	35.7%	C
Sumner	92	59	0	0	139	337	78	705	956	251	73.7%	13.0%	8.4%	19.7%	47.8%	11.1%	68.9%	C

According to Stacker.com, the demographics of Tennessee offenders are:

- White imprisonment rate per 100,000: 296 (#22 highest among all states)
- Black imprisonment rate per 100,000: 989 (#41 highest among all states)
--- Black to white ratio: 3.3
- Hispanic imprisonment rate per 100,000: 163 (#40 highest among all states)
--- Hispanic to white ratio: 0.6

[Incarceration rates demographics in Tennessee | Stacker]

According to EMSI, the property and violent crime rates in the Northern Middle Workforce Area outpace the National average, indicating more JIIs in the area. Every year the Sumner County jail has approximately 13,240 bookings with a daily average of 662 inmates. Inmates in the jail range from low-level misdemeanor offenders to those being held and awaiting trial for violent crimes.

Your area has 6.16 violent crimes per 1,000 people. The national rate is 3.62 per 1,000 people.

Your area has 23.36 property crimes per 1,000 people. The national rate is 17.91 per 1,000 people.

The Northern Middle Workforce Board will support the Tennessee Department of Labor and Workforce Development's Reentry program to address barriers that JIIs have to reenter society. Specifically, we will assist an offender's transition from multiple entry points whether it be from incarceration inside a prison, jail, or juvenile facility or probation and parole into life as a productive citizen in Northern Middle Tennessee communities. The American Job Center partners in Northern Middle have existing relationships with many facilities and programs that serve justice-involved individuals, including Adult Education.

Services Proposed:

1. **Education and Training:** The Northern Middle Workforce Board is proposing to support the talent-development pipeline in advanced manufacturing and logistics by offering Industrial Readiness Training (IRT) through Volunteer State Community College. Specifically, Northern Middle will coordinate classes for justice-involved individuals including local jails and probation programs.

Tentative training details include:

- **Timing** | 2-week program including Course Sessions as follows:
- Day 1: Welcome, Norms, Work Ethics and Business Culture
- Day 2: GLUB Box - SMT Volume 7 – Basic Components
- Day 3: Communication Skills and Emotional Intelligence
- Day 4: SMT Volume 8 - Machine Adjustment Fundamentals
- Day 5: OSHA 10 (part one)
- Day 6: Building Relationships (DISC) and Teamwork
- Day 7: WorkKeys Curriculum and SMT mechanical post-tests
- Day 8: Lean Manufacturing and OJT training fundamentals
- Day 9: NCRC post-exam –OSHA 10 (part two)
- Day 10: OSHA 7005 Warehousing and Storage

- **Participants**: Northern Middle will identify up to 20 individuals to attend the IRT classes.

- **Curriculum**: This interactive course is designed to prepare students for entry level positions as operators and maintenance technicians in industry and manufacturing. Training will include topics related to technical and interpersonal knowledge and skills which have been identified by local industry leaders as critical to long term employee success.

- **Deliverable**: Participants will receive a certificate from Nashville State Community College, along with an OSHA 10 card. Upon completion, staff will coordinate with local manufacturers for job placement.

- **Cost:** $12,000 per class with a maximum of 10 JII per training session. Northern Middle and Upper Cumberland will each offer two sessions with a potential of serving 40 individuals at a cost of $48,000 or $1,200 per potential trainees.

2. **On-the-job Training:** In an effort to increase employment outcomes, On-the-job training opportunities will be arranged for 14 JIIs. Training will be limited to not more than 300 hours at 50% of the actual wage up to $18.00 per hour.

3. **Adult Education:** Individuals enrolled in training will receive basic remediation services through Vol State Community College's Adult Education program, if needed. Participants will be evaluated during IRT training and arrangements will be made to provide additional instruction as needed.

4. **Justice-Involved Job Fair:** The Northern Middle Workforce Board will coordinate a Justice-Involved job fair in late spring of 2023. Marketing efforts to include social media will be coordinated.

Enrollment Goals:

Category	Goal
Total Enrollment	20
Demographics	65% Minority*
IRT Training	20
OJT	14
Job Fairs	50

*Target

Partnering Agencies: All partners in the Northern Middle American Job Center will be invited to participate in the proposal including: Title I service providers, EDSI; Title II adult education, Vol State & NICE; Title III, Wagner Peyser, Tennessee Department of Labor; Title IV, vocational education, Tennessee Department of Vocational Education. In addition, staff will coordinate with local jails and prison systems, probations and parole, re-entry programs and other vested partners.

Required Partners: Per the grant funding notice, the Northern Middle Workforce Board will collaborate with the Sumner County Sherriff's Office per the attached letter of support. In addition, the Board will work with a host of employers such as IWT to place JIIs into work-based learning activities. Volunteer State Community College is a primary partner in the grant, they will coordinate the adult education and training aspects of the grant.

Budget:

Training:	**Unit**	**Total**
Industrial Readiness Training	$12,500 per class (Up to 10)	25,000
OSHA 10	$210 each	4,200
OSHA 7005	$195 each	3,900
OJT	300 Hours X $9.00 X 14 JIIs	37,800
Supplies	For Job Fairs	1,100
Administration	10%	8,000
Total		80,000

Volunteer State Community College (VSCC) serves as the Adult Education provider for Sumner County. VSCC would like the opportunity to submit the following training proposal for funding under the Northern Middle Tennessee Workforce Board's Justice-Involved Individual Grant.

The training will target Justice-Involved Individuals in Sumner and Robertson Counties. The training will consist of Industrial Readiness Training (IRT) certification as well as OSHA-10 and OSHA 7005 certifications. The training will prepare individuals to fill in-demand manufacturing and logistical entry-level jobs in Sumner and Robertson Counties. VSCC and the LWDB will work together to connect participants to employers upon re-entry and utilize the Work Opportunity Tax Credit program to incentivize employers in addition to On-the-Job Training opportunities.

Course Title	Contact Hours	Number of Participants	Course Cost Per Class	*Estimated Book Cost
Industrial Readiness Training (IRT) includes the following :	24	10	$1,250 per student; $12,500 per class	NA
• IRT Welcome, Norms, Work Ethics and Business Culture • • IRT Measurement, Tools and GLUB Box • • IRT Effective Communication • • IRT Basic Machines				

• • IRT Emotional Intelligence • • IRT Teamwork with Lego's and Desert Survival • • NCRC WorkKeys Assessments • • IRT SMT Trainer (mechanical aptitude) • • DiSC Assessment or OJT with Tegu Blocks				
OSHA 10	10	10	$2,100 per cohort, includes OSHA cards	
OSHA 7500 Public Warehousing and Storage	30	10	$1,950 per cohort, includes OSHA cards.	
Total Estimated Cost			$16,550.00	

2 Cohorts of 10 students: $33,100

STATE OF TENNESSEE

SONNY WEATHERFORD **(615) 452-2616**

SHERIFF

Date: November 8, 2022

RE: Justice Involved Individuals Grant

To Whom It May Concern,

I am writing to voice my support, and that of the Sheriff Roy "Sonny" Weatherford administration, for the Northern Middle Tennessee Workforce Board's Justice Involved Individual Grant. This has long been a goal of corrections professionals and sheriffs at the local level.

Having an esteemed group such as the local community colleges and other stakeholders, investing time and energy into this program will be critical to the success of the program. Adding support from the Sumner County Sheriff's Office and local law enforcement will serve to enhance the outcomes even further.

I can think of very few populations who could benefit more than local justice involved families and inmates as they prepare for re-entry into our community and become our neighbors once again.

Sincerely,

Jerry L. Scott

Jerry Scott, JA

PS. If you have any questions or need any more information, please reach out to me via email or at 615-335-1985

StampTech Fasteners™

Wednesday, November 9, 2022

To whom it may concern,

Illinois Tool Works Inc. (NYSE: ITW) is a global Fortune 200 diversified manufacturing company that delivers specialized expertise, innovative thinking, and value-added products to meet critical customer needs in a variety of industries. ITW, with approximately 14.1 billion dollars in global revenues, operates 7 major segments with businesses in 57 countries that employ approximately 45,000 women and men. These talented individuals, many of whom have specialized engineering or scientific expertise, contribute to our global leadership in innovation. We are proud of our broad portfolio of more than 16,000 active patents.

The ITW StampTech Fastener ™ Division serves the major OEMs and Tier suppliers in the North American automotive market. The division supplies stamped metal fasteners and engineered fastener assemblies that leverage our deep-draw stamping technologies. The annual revenue for the division is approximately $160M. Locations include Gallatin, TN, Lexington, KY & Naugatuck, CT.

ITW StampTech Fasteners™ Gallatin location often partners with Vol State on work based learning and other workforce placement activities. Our organization would sincerely benefit from the proposed industrial readiness training program that Vol State and the Local Workforce Board is proposing in relation to training and connecting Justice Involved Individuals to employment in our area. ITW StampTech Fasteners™ is interested in partnering with Vol State and the local workforce board to potentially interview non-felon offenders that are justice involved and complete the proposed training. We are confident that this type of program will be successful at reducing recidivism in our county, as well increasing economic prosperity for our local businesses and families. We are sincerely looking forward to the opportunity.

Sincerely,

Bailey Peterson, Human Resource Generalist

Sales Office:
100 Kirts Blvd., Troy, MI 48084

Manufacturing Locations:
850 Steam Plant Rd., Gallatin, TN 37066
2001 Buck Lane, Lexington, KY 40511
29 Rado Drive, Naugatuck, CT 06770

stamptechfasteners.com

Northern Middle Tennessee Workforce Board Inc.

Labor Force Participation Rate
Pilot Project

BACKGROUND

The Northern Middle Workforce Board operates under the Workforce Innovation and Opportunity Act (WIOA) funding through the American Job Center (AJC) System in 13 middle Tennessee counties. Since COVID, the numbers of individuals taking advantage of AJC services has significantly declined. In addition, WIOA services for individuals and businesses have struggled to meet minimum performance measurements. The Board has been proactive and monitored career service providers and even terminated contracts of non-performing service providers. While this is a prudent concept, it isn't a long term solution. Not only are there a very limited number of companies providing CSP services, the ramp up time and requirements for new CSP's is substantial. Additionally, changing providers along with COVID and an outstanding market for employees has wreaked havoc on AJC staffing. This has created a void of institutional and programmatic knowledge in the American Job Centers in Northern Middle.

On April 6, 2022, the Northern Middle Workforce Board conducted a strategic planning session to discuss the deficiencies in the current operating structure. The outcome of the meeting resulted in six strategic objectives. The Board believes this pilot will address three of the goals surrounding program services and delivery:

1. **Innovate Service Delivery**
2. **Revolutionize Recruiting and Outreach Strategies/Meet people where they are**
3. **Increase Employer Engagement and Participation**

While participating in the regional WIOA convening at Montgomery Bell State Park, Commissioner Thomas encouraged local Boards to think outside the box to solve workforce issues. With unemployment rates at all-time lows, employers are struggling to meet workforce needs. Because of this, the Tennessee Department Labor has prioritized the Labor Force Participation Rate (LFPR) as a key objective. Specifically, the goal is to increase the LFPR by 2% in Tennessee.

While Northern Middle is considered the workforce engine of Tennessee, the LFPR is significantly lower than the state and national averages in four counties. The LFPR in Humphreys, Montgomery, Houston and Stewart counties range from 46.6% to 54.4% against a state average of 58.8%. See chart to right and Attachment A for a full analysis.

Northern Middle Workforce Board Labor Force Participation Summary December 2022	
Area	**Labor Force Participation Rate**
Rutherford	71.4%
Trousdale	71.3%
Davidson	70.8%
Williamson	70.0%
Wilson	69.0%
Sumner	68.6%
Cheatham	66.0%
Robertson	65.8%
Dickson	62.0%
US	61.9%
TN	58.8%
Humphreys	54.4%
Montgomery	53.6%
Houston	46.7%
Stewart	46.6%

In addition to the LFPR, the unemployment rates among the western counties in the Northern Middle Workforce area are the highest in the region. As expected, the nine counties with the highest LFPR have the lowest unemployment rates, all in the 2% range.

Labor Force Estimates Release: 1:30PM CT on 12/22/2022

Labor Force Estimates - LWDA

	Labor Force	Employed	Unemployed	Rate	Rate	Change
Northern Middle TN	1,123,266	1,092,823	30,443	2.7	2.8	-0.1
Cheatham	22,299	21,739	560	2.5	2.6	-0.1
Davidson	407,570	396,742	10,828	2.7	2.8	-0.1
Dickson	27,618	26,808	810	2.9	2.9	0.0
Houston	3,141	3,002	139	4.4	4.3	0.1
Humphreys	8,374	8,096	278	3.3	3.6	-0.3
Montgomery	86,233	83,112	3,121	3.6	3.8	-0.2
Robertson	38,814	37,757	1,057	2.7	2.8	-0.1
Rutherford	193,284	188,265	5,019	2.6	2.7	-0.1
Stewart	5,238	5,038	200	3.8	3.8	0.0
Sumner	107,421	104,583	2,838	2.6	2.8	-0.2
Trousdale	5,665	5,498	167	2.9	2.8	0.1
Williamson	136,580	133,230	3,350	2.5	2.4	0.1
Wilson	81,029	78,953	2,076	2.6	2.6	0.0

PLAN

In order to achieve the Tennessee Department of Labor and Workforce Development's goal of increasing the LFPR by 2%, the Northern Middle Board is proposing to establish a pilot project in conjunction with the local mayors in the four below-average LFPR counties of Houston, Humphreys, Montgomery and Stewart. A need for drastic service delivery change is required to meet the needs of business and industry across all sectors and to align to our strategic plan.

OPERATIONAL STRUCTURE

In the Work-First pilot, the Northern Middle Workforce Board would segregate operations in the four county area to focus on putting people to work. The Board would work through our current career service provider, EDSI to provide the staffing for the project. However, the Board staff would be thoroughly engrained in the operation of the innovative model. Strategic partners for the success of the pilot will be the local county mayors. The Board staff requests permission to strategically cross the operational firewall in order to coordinate and facilitate this uniquely innovative project, in a cooperative spirit with the local governments of the four counties. To mitigate risk and maintain the integrity intended by having an operational firewall, a partnership with the Upper Cumberland Workforce Board will be utilized for procurement and oversight of the One Stop Operator (OSO). The Upper Cumberland Workforce Agency would be the lead contracting agency for the multi-region OSO and invoice the Northern Middle Board for their portion of the overall costs. Having an OSO managed regionally would solidify the firewall between the Northern Middle Board, the OSO and the LWDA's Career Service Providers.

Employers in the six identified industry sectors in Northern Middle are needing employees immediately. The sectors are: Advanced manufacturing, healthcare, education, logistics, construction and information technology. An integral component of the pilot, employers in these sectors will be targeted

first to partner in the project by providing job opportunities to area residents. Other industry sectors may fill gaps should the need arise.

PROPOSAL

Northern Middle Board staff have utilized tools from the Tennessee Department of Labor's LFPR Analysis to identify that approximately 3,192 individuals will need to be placed into employment to raise the LFPR by 2% in the targeted counties. A staff intensive approach will be coordinated between the Title I Career Advisors and the Title III Wagner Peyser Staff. For this to work, the Board staff will provide directions to the front line staff and a cultural shift must be made to focus on employment and Work-First. This model cannot be done without the cooperation and full partnership of Title III.

The One Stop Operator (OSO), who will not be directly employed or contracted by the Northern Middle Board, will provide the firewall for oversight and compliance. The Northern Middle Workforce Area will extend its contract with current career service providers to interact directly with participants and job seekers.

In Montgomery, Houston, Humphreys and Stewart counties Educational Data Systems Inc. (EDSI) will hire additional direct case management staff to specifically deliver Adult and Dislocated Workers for Work-First opportunities, including on-the-job training and support services. Individual training account activities will take a back seat in this concept. State Wagner Peyser staff will coordinate efforts for job seekers, especially those not eligible for Title I.

Within the four-targeted counties, the goal will be to raise the Labor Force Participation Rate (LFPR) through direct interaction with local and regional employers. The plan calls for each county mayor to announce the Work-First project and direct all job seekers to visit their local AJC to participate. In addition, employers will be asked to partner with the AJC to hire qualified job seekers. The key is to build momentum to increase the job seeker pool of applicants by touting good jobs available within the local communities. In effect, the AJC will become a placement agency.

Focus will be on-the-job-training with specific businesses, adding support services as required for successful placement. A pool of "job seekers or temporary personnel" will be developed to serve industry sectors. Staff through marketing efforts (already approved by the NM Board) will use social media to attract talent as well as deliver staffing services to business and industry within the commuting area of these four counties. The staff in the American Job Centers will increase the LFPR and be able to move the 'needle' of performance across the NM workforce area by focusing on Work-First.

Support services, including transportation and childcare will be a critical component to the plan. Vans would be rented to provide transportation to and from work to alleviate commuting issues for those experiencing barriers to employment. The Northern Middle Board staff will coordinate transportation services with various providers. The Montgomery County Economic Development Board has procured a new childcare facility that will provide care for 600 children in the local industrial park. Employees in the industrial park will be given priority enrollment.

Northern Middle Board staff will provide technical assistance to guide this Pilot Project. The staff will be the point of contact and guide the project throughout its entirety to ensure success from lessons learned throughout the project.

TIMELINE AND EXEMPTIONS

In order to provide adequate time to implement and measure success, the pilot is planned for 24 month. As this is projected to be a very labor intensive project, the Minimum Participant Cost Rate (MPCR) for the Northern Middle Workforce Area would need to be temporarily suspended for the duration of the project. Please note that direct participant expenditures will still occur in the form of on-the-job training and support services. However, recruitment, case management and business liaisons will be the most critical component of the plan. The pilot would take effect July 1, 2023 and extend to June 30, 2025.

FUNDING

No additional WIOA funding will be required to conduct this pilot. A philosophy change from a training organization to a staffing or labor exchange model will require additional staffing to manage the caseload of job seekers. It is anticipated that staffing for the counties will double from 6.5 to 12 individuals including board program staffing. Current spending in the four counties equates to approximately $800,000. The pilot will require an additional $200,000, which can be allocated from fund balance or carry over set-aside.

RECOMENDATION

Approval of the pilot project which consists of:

1. Regional OSO procurement by Upper Cumberland Workforce Board to support regionalism and firewall for the Northern Middle Board.
2. Extension of EDSI and MACs Career Service Provider contracts for 1 year through 6/30/24, with the option to extend one more year through 6/30/25 with satisfactory performance.
3. Change in service delivery design in the four target counties.
4. Request exemption on Minimum Participant Cost Rate.

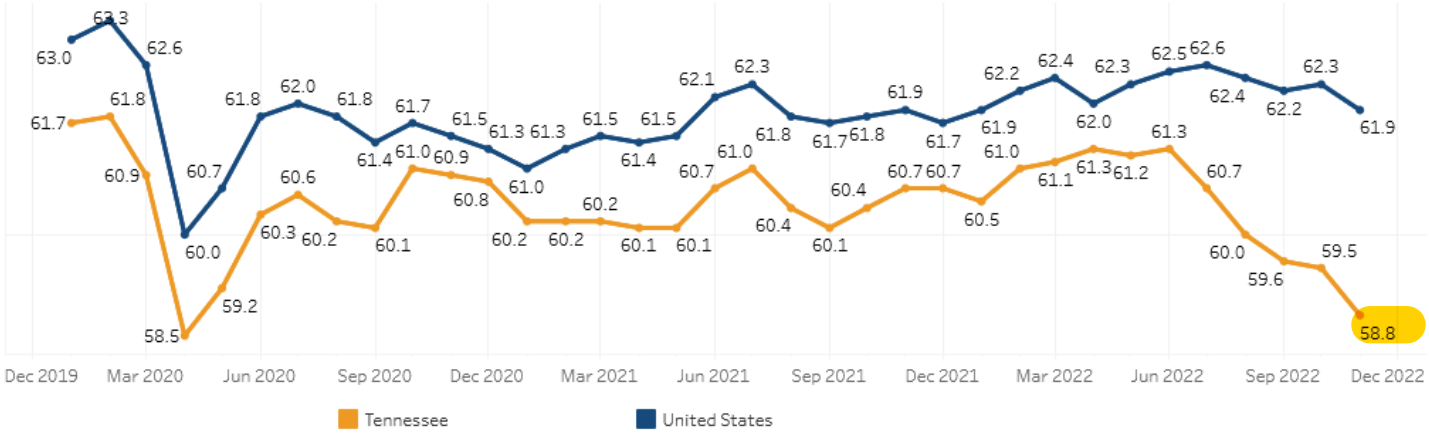
Should the Northern Middle Board's Executive Committee approve this recommendation, the final step would be submission to the Tennessee Department of Labor and Workforce Development for approval to implement.

Area

Tennessee

LFPR Comparison

Labor Force Participation Rate (LFPR) Comparison of State and National Rate

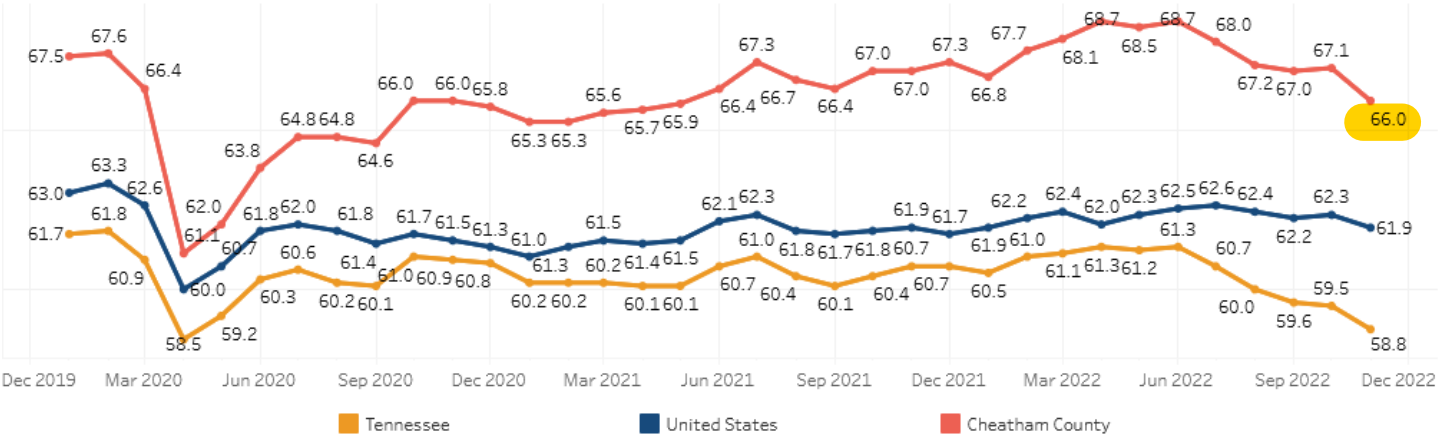


Area

Cheatham County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Cheatham County in Comparison with State and National Rate

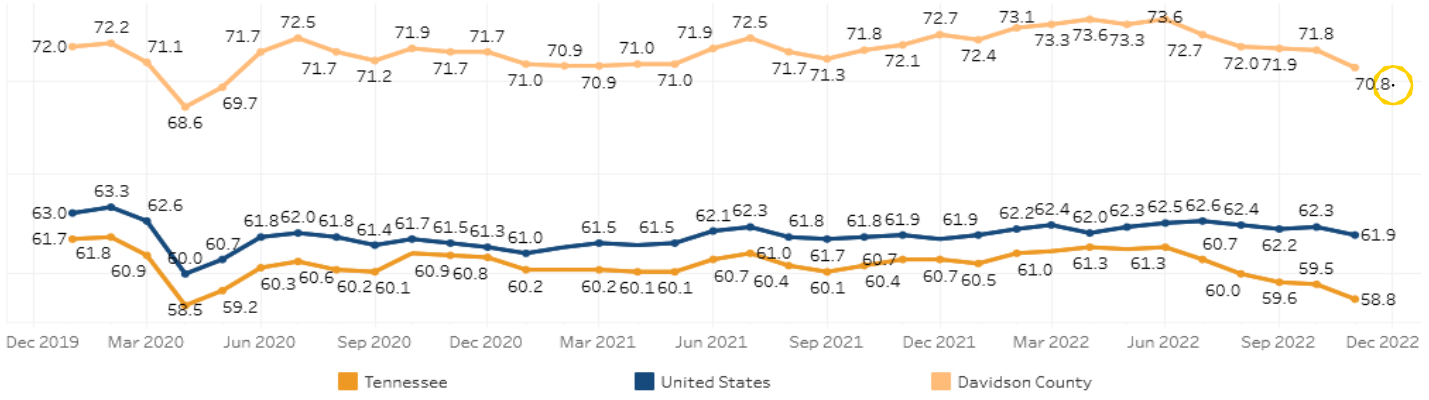


Area

Davidson County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Davidson County in Comparison with State and National Rate

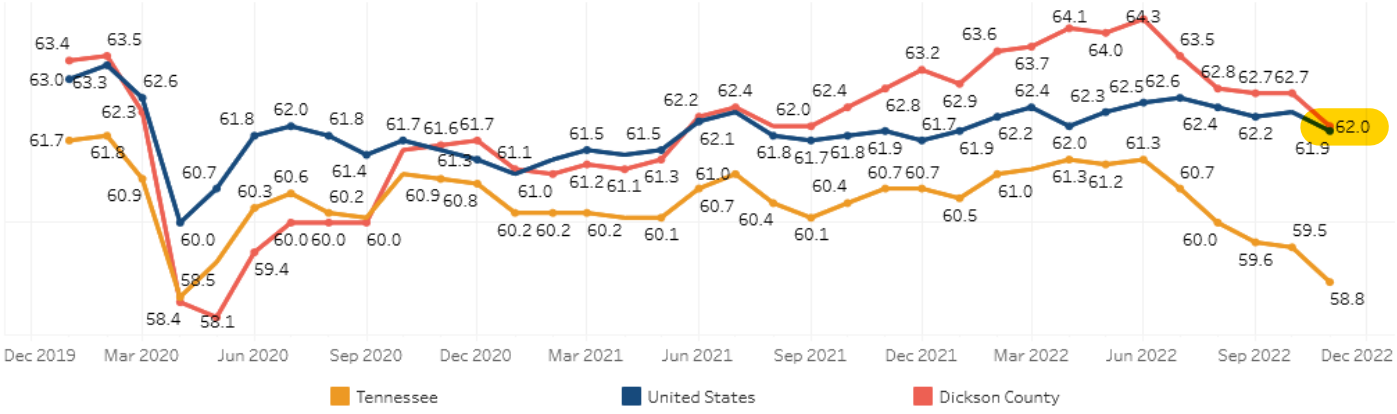


Area

Dickson County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Dickson County in Comparison with State and National Rate



Area

Humphreys County

LFPR Comparison

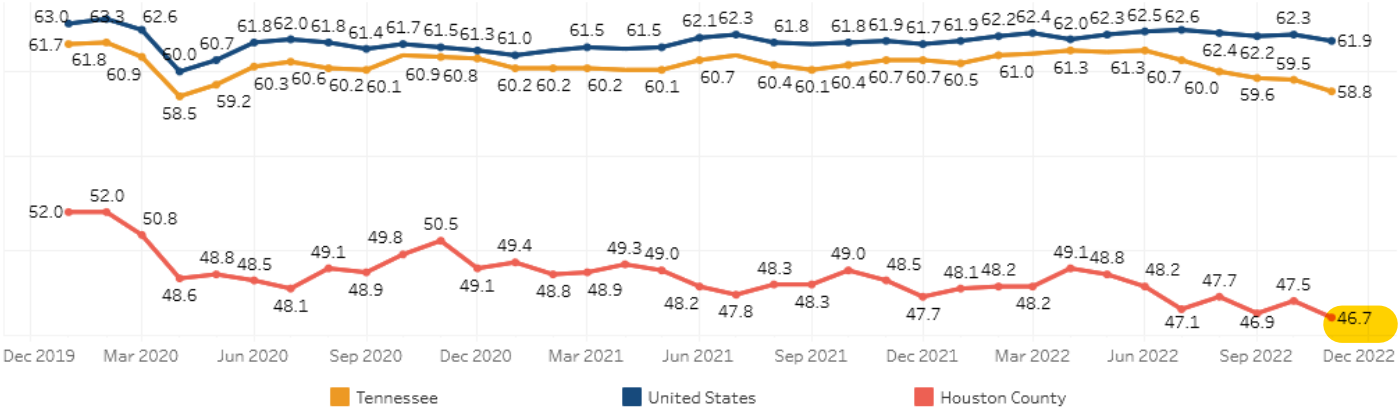
Labor Force Participation Rate (LFPR) of Humphreys County in Comparison with State and National Rate

Area

Houston County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Houston County in Comparison with State and National Rate

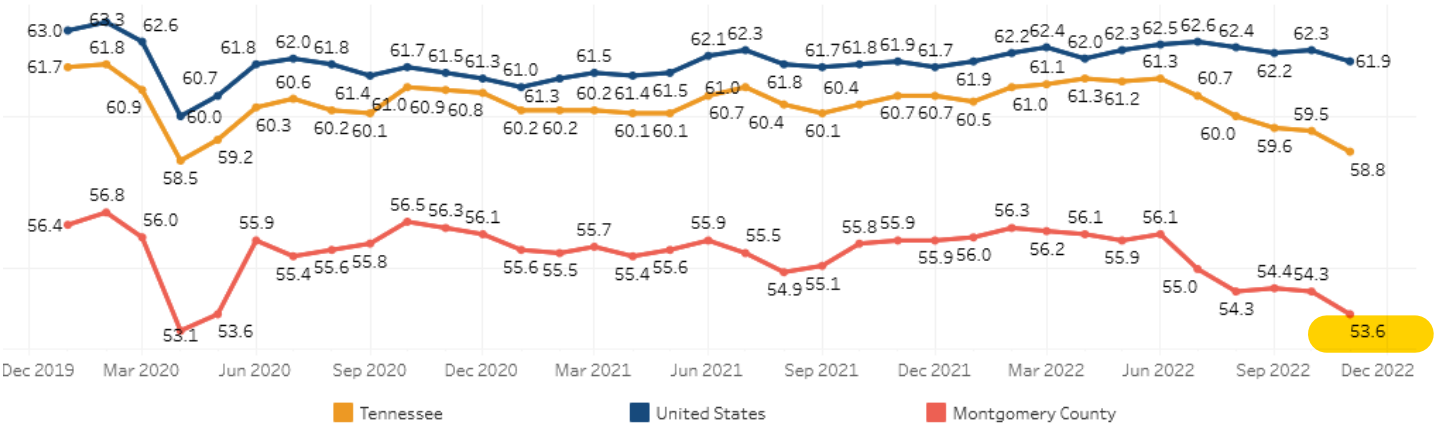


Area

Montgomery County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Montgomery County in Comparison with State and National Rate

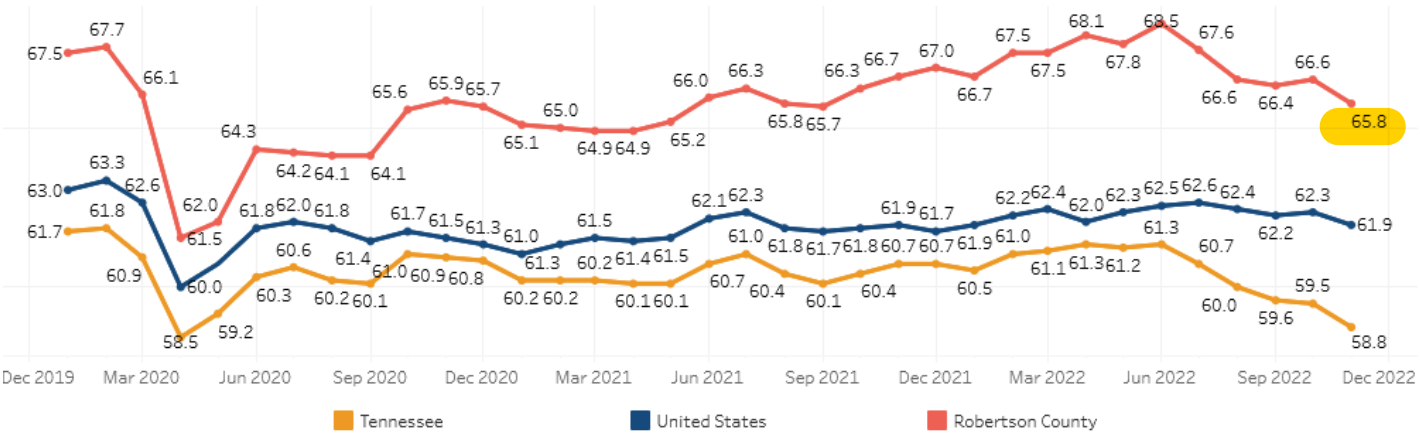


Area

Robertson County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Robertson County in Comparison with State and National Rate

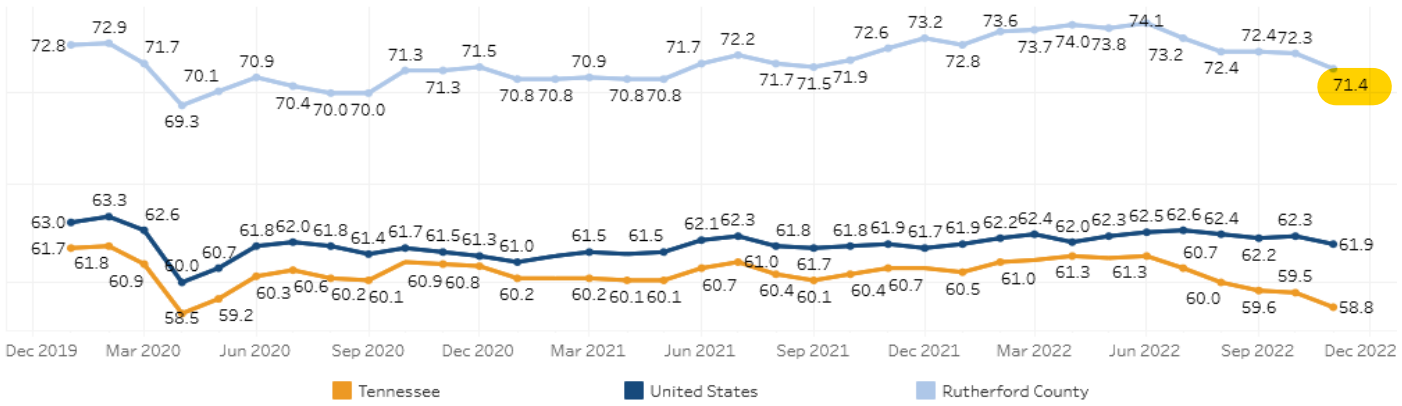


Area

Rutherford County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Rutherford County in Comparison with State and National Rate

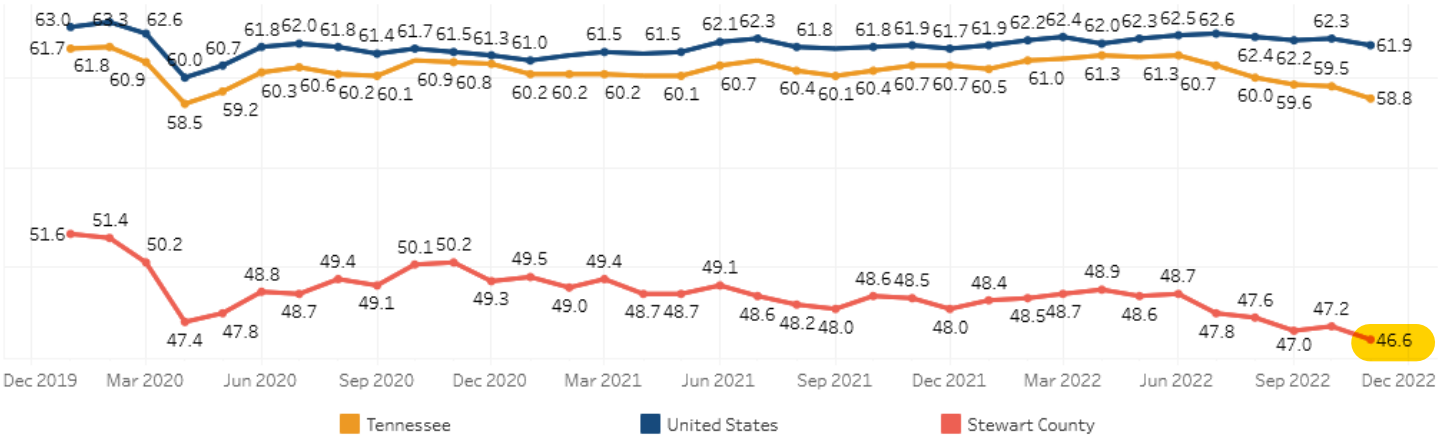


Area

Stewart County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Stewart County in Comparison with State and National Rate

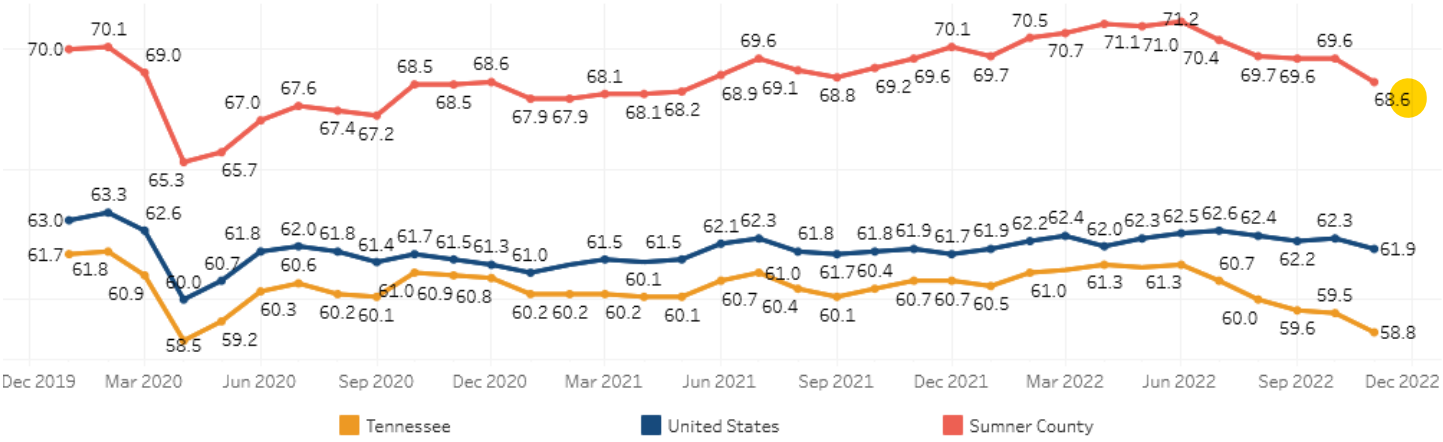


Area

Sumner County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Sumner County in Comparison with State and National Rate

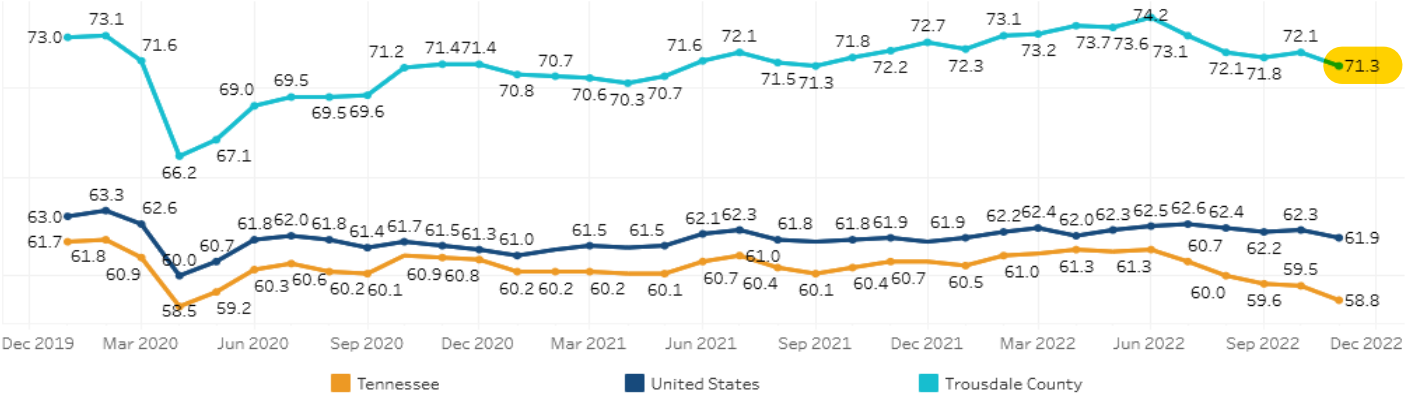


Area

Trousdale County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Trousdale County in Comparison with State and National Rate

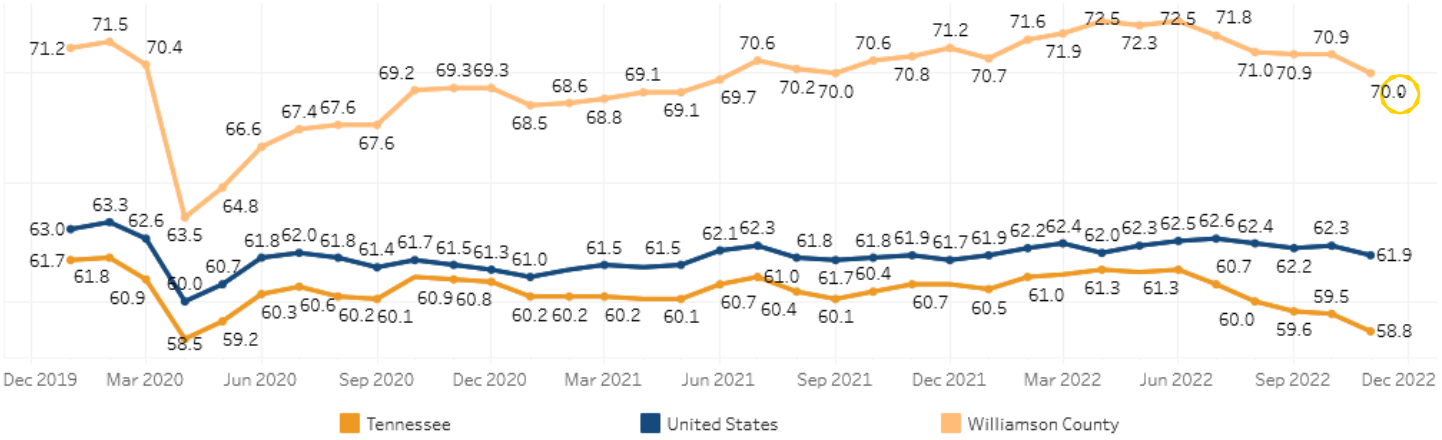


Area

Williamson County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Williamson County in Comparison with State and National Rate

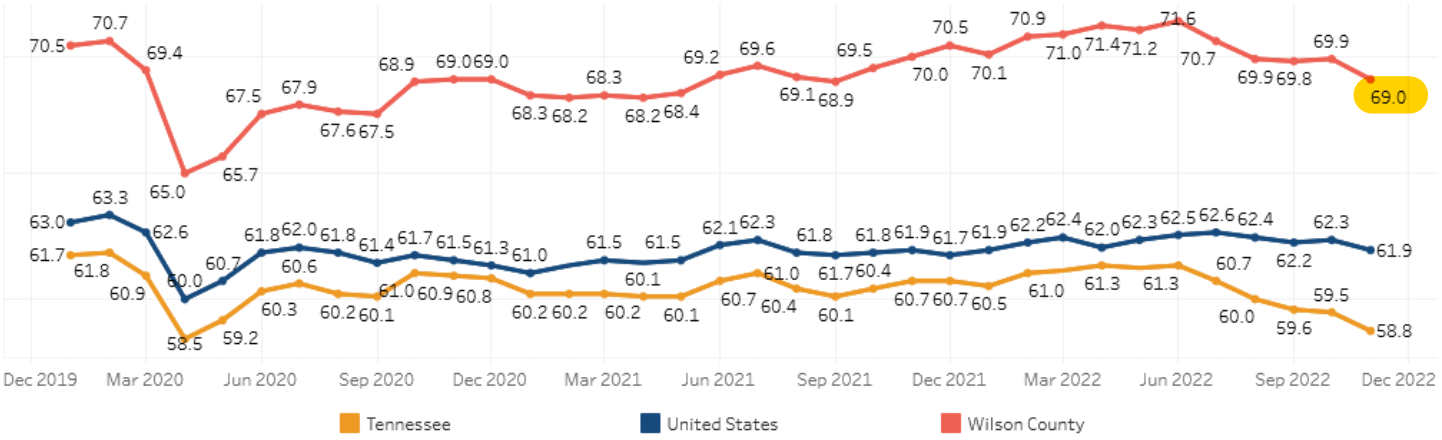


Area

Wilson County

LFPR Comparison

Labor Force Participation Rate (LFPR) of Wilson County in Comparison with State and National Rate



NORTHERN MIDDLE WORKFORCE BOARD

PROPOSAL TO FUND

AUTOMOTIVE TECHNICIAN DEVELOPMENT TRAINING

Tennessee has experienced significant economic growth in the automotive industry throughout Middle Tennessee. From Nissan to General Motors a wide variety of tier 1, 2, 3 suppliers have also relocated in this area. With the arrival of Blue Oval City, the electric vehicle-manufacturing suppliers have exploded and more are on their way across the Interstate 65, 24 and 40 corridor. Advanced manufacturing, especially in the electronic vehicle and battery component sectors has increased exponentially. Recently LG Chem announced their EV battery plant with over a billion-dollar investment, being built in Montgomery County. Hankook's Atlas BX and DAEJIN are but two plants producing EV parts for future automotive production. Tennessee is rapidly becoming the Detroit of the south. Thus, a surge for automotive technicians has created a significant shortfall in the labor pipeline.

Automotive Technicians are skilled at five different levels with increasing knowledge and skills at each level. Current education opportunities to enter this industry field is through the Tennessee College of Applied Technology (TCAT) automotive course, which graduates an individual as a Level 1 Technician (oil changes, brakes, tires, batteries, etc.). To become a higher level Technician and increase their skill sets the Technician must progress through a series of mandatory training and certifications. It takes approximately 1-1.5 years for a Technician to reach a Level 2. Technicians can only attend in person classes if they have completed 30 on line courses and receive necessary certifications. Ford also requires 11 additional special interest classes to receive a Level 2 certification. This compounds the time required to reach the Level 2 goal. A Level 1 Technician currently works on all required on line courses on their overtime and many are self-taught.

The purpose of this funding request is to increase the numbers of certified Technician 2 personnel across the automotive industry in middle Tennessee by establishing an **Automotive Technician Development Training (ATDT)** program offered through the Tennessee College of Applied Technology in Clarksville. This industry led initiative will take Level 1 Technicians and speed their progress to Level 2 Technicians. This innovative program will increase skill sets and employee wages at automotive dealerships across middle Tennessee, as well as other automotive shops. Accelerating Technician repair capabilities aligns with the increase in local production of the same vehicles to include specialized EV cars and trucks.

TCAT class attendance for Level 1 Technicians has fallen and thus the overall pipeline of Technicians that are qualified as a Level 2 or 3 have been reduced, resulting in an enormous need for highly skilled technicians across middle Tennessee. Wages are:

Level 1	Basic	$10-14/hour	Plus commission
Level 2	Tech 2	$15/hour	Plus commission
Level 3	Expert	$20/hour	Plus commission
Level 4	Master	$25 / hour	Plus commission
Level 5	Senior Master	$33/ hour	Plus commission

The **Automotive Technician Development Training (ATDT)** course, recognized by automotive dealerships and other automotive OEM's, provides accelerated training for Technicians via classroom lecture and lab, in-dealership and apprentice training with guaranteed work hours upon completion. Attendees will be Level 2 certified with a focus on Diagnostics, Transmission repair, and OEM certifications through a 16 week accelerated night course to be main shop ready upon completion. This course will be delivered through a specialized ATDT course by the local TCAT. Taking this ATDT course will cut Level 2 attainment by as much as 75%.

The Tennessee Department of Labor and Workforce Development (TDLWD) Occupational Outlook for Automotive Service Technicians and Mechanics is very good within the Middle Tennessee Region with annual openings of 725. Specifically in Northern Middle, there are currently 192 Automotive Technician openings. In addition, over 1,700 TDLWD open positions fall into the Installation Maintenance and Repair category of which encompasses Automotive Technician skill sets in Northern Middle. Some of these positions also encompass Green Occupations with the increase of Electric Vehicles as well as Certified Clean Idle vehicles. Median typical wages are $46,641 with the majority of employment in Automotive Dealerships such as Ford within the Northern Middle Region's 13 counties, which includes Davidson County/Nashville. The most pointed statistic is there are only 24 candidates for 192 job openings in Northern Middle.

Jobs and Candidates Available

This section shows the number of job openings advertised online, as well as potential candidates in the workforce system in Northern Middle TN, TN for Automotive Service Technicians and Mechanics and for the related occupational group of Installation, Maintenance, and Repair Occupations on January 24, 2023 (Jobs De-duplication Level 2)

Occupation	Job Openings	Candidates	Candidates per Job
Automotive Service Technicians and Mechanics	192	24	0.13
Installation, Maintenance, and Repair Occupations	1,793	217	0.12

Job Source: Online advertised jobs data
Candidate Source: Individuals with active résumés in the workforce system.

The Northern Middle Board proposal calls for the Automotive Technician Development Training to offer two classes of Level 2 certification training. The courses will be offered through the Tennessee College of Applied Technology at Clarksville for 10 individuals per class and will cover 16 weeks. Training will begin in the late spring of 2023 and continue through June 30, 2024. Students will be working at individual dealerships as Technician Level 1's while taking courses on line and in person. Seven dealerships have committed to collaborating on the ATDT program including:

Jenkins and Wynne
Two Rivers Ford
Ford of Franklin
Beaman Automotive
Ford of Murfreesboro
Al White Motors
Reddick Brown Ford

At the completion of the course the student will receive, industry recognized Level 2 Certifications as well as wage rate increases. Startup costs for this training will be a $278,696. Demonstrating the success of the pilot, sustainability will rest with the dealerships and automotive suppliers.

This proposal encompasses a public private partnership with the Tennessee College of Applied Technology, the Automotive Technician Development Training program, and the Northern Middle Tennessee Workforce Board. This project is endorsed through letter of support from:

U.S. Representative Mark Green
State Senator Bill Powers
State Representative Jeff Burkhart
Montgomery County Mayor Wes Golden
Clarksville Mayor Joe Pitts

The Northern Middle Tennessee Workforce Board will recruit WIOA eligible participants and seeks to blend statewide funding for individual training as well as incumbent worker training. The goal of this program to increase the number of skilled Level 2 Automotive Technicians across the workforce area and will be requesting $278,696 to train 20 technicians in two cohorts during 2023-24.

Attachments:

A. Budget Request

B. ATDT Curriculum Outline

C. Letters of Support

Attachment A:

Northern Middle Workforce Board Automotive Technician Developoment Training				
Line Item	**Students**	**Hours**	**Cost**	**Total**
Tuition	10	144	95.00	13,680.00
Certifications	10		150.00	1,500.00
Support-Tool Kit	10		6,000.00	60,000.00
Support-Uniforms, work boots, safety glasses	10		400.00	4,000.00
Speakers and Off-site learning (Blue Oval or Lousiville)			2,500.00	2,500.00
Administration				8,168.00
Total Cost Per class	10		8,984.80	89,848.00
Equipment (3 Trainers)		3	33,000.00	99,000.00
Total Cost (1 Class)	10		18,884.80	188,848.00
Class 1				89,848.00
Class 2				89,848.00
Training Equipments				99,000.00
Total Cost (2 Classes)	20		13,934.80	278,696.00

ATDT
AUTOMOTIVE TECHNICIAN DEVELOPMENT TRAINING

MISSION

To provide an accelerated education and career path to Technicians via classroom lecture and lab, in-dealership and apprentice training with guaranteed work hours upon completion.

PURPOSE

At the end of the course- the Tech will be Level 2 Certified with the focus on Diagnosis, Electrical, Scan Tools, Basic Engine Repair, Transmission Repair, OEM Certifications, and more through a 16-week night course to be Main Shop ready upon completion as a special industry class at TCAT.

The Tech will receive a toolbox with startup tools or stipend towards special tools at Graduation.

Open to Civilian and Military.

THE WHY

On average, it takes a Tech 1 year -1.5 years to go from Level 1 to Level 2 with the necessary online courses and certifications. Through this ATDT school, not only will the Tech have accelerated learning, but will also complete the online courses and obtain the necessary certifications. A Tech is not eligible to go to in-person OEM special classroom training until all the online classes are completed and passed. Example: at Ford, the first in-person classroom Special Interest Class a Tech can attend (and obtain Certification) is Electrical. Before the Tech is eligible, he/she must take and pass 30 online classes. With Ford, there are 11 Special Interest Classes. The Tech's rank is dependent on the in-person classroom Special Interest Classes/Certifications. ATDT's mission is to bridge the gap from L1 to L2 so that Techs can obtain the education and certifications at an accelerated pace so they can be eligible for the Special Interest Classes.

Today, there is an enormous need for Main Shop ready (highly skilled) technicians. However, the amount of people going the vo-tech rout continues to decrease over time. The pipeline is drying up. The accelerated education is vital for the automotive industry.

The ATDT curriculum coincides with the online training.

16 WEEK COURSE

12 weeks of in-classroom and lab courses (12 Chapters)

4 weeks of in-dealership training

ESTIMATED WAGE SCALE Level 1 – Level 5

LEVEL BREAKDOWN for 2022

Level 1- Basic Skill: oil change, tire rotation, brakes, tires, batteries. **WAGE:** $10-14 / hour + commission

Level 2- ATDT School- working at a Dealership in order to enter Apprentice program- Accelerated Training –need to test out and be accepted- need prior Mechanical training- will take OEM courses online (4 months) aka: Main Shop Apprentice **WAGE:** $15 / hr + commission

On average, it takes a Tech 1 year -1.5 years to go from Level 1 to Level 2 with the necessary online courses and certifications. Through this school, not only will the Tech have accelerated learning, but will also complete the online courses and obtain the necessary certifications. A Tech is not eligible to go to in-person OEM special classroom training until all the online classes are completed and passed. Example: at Ford, the first in-person classroom Special Interest Class a Tech can attend (and obtain Certification) is Electrical. Before the Tech is eligible, he/she must take and pass 30 online classes. With Ford, there are 11 Special Interest Classes. The Tech's rank is dependent on the in-person classroom Special Interest Classes/Certifications. ATDT's mission is to bridge the gap from L1 to L2 so that Techs can obtain the education and certifications at an accelerated pace so that can be eligible for the Special Interest Classes. There is an enormous need for Main Shop ready (highly skilled) technicians. However, the amount of people going the vo-tech rout continues to decrease over time. The pipeline is drying up. The accelerated education is vital for the automotive industry.

The ATDT curriculum coincides with the online training.

Without ATDT, the Tech works on all the required online classes overtime and most of it is self-taught. This takes up to 1.5 years. The way the pipeline is drying up- the automotive industry doesn't have time for this gap. Vehicles are miniature computers and are extremely technical. We need highly skilled Techs now.

Level 3- Expert- special training per OEM (in Dealership) **WAGE:** $20 / hour (this position is generally strictly commission)

Level 4- Master- special training per OEM (in Dealership) **WAGE:** $25 / hour (this position is generally strictly commission)

Level 5- Senior Master- special training per OEM (in Dealership) **WAGE:** $33+ / hour (this position is generally strictly commission)

Automotive Course Layout

1. Introduction to Course

2. Diagnostic Equipment and Tools Ch.6

3. Automotive Engine Designs and Diagnosis Ch.9

4. General Electrical System Diagnostics and Service Ch.16

5. Batteries; Theory, Diagnosis, and Service Ch.17

6. Detailed Diagnosis and Sensors Ch. 25

7. Ignition System Diagnosis and Service Ch. 27

8. Fuel Injection System Diagnosis and Service Ch. 31

9. Emission Control Diagnostic and Service Ch. 34

10. Restraint System; Theory, Diagnosis, and Service Ch. 48

11. Antilock Brake, Traction Control, and Stability Control Systems Ch. 53

12. Air-Conditioning Diagnosis and Service Ch.55

ENGINE REPAIR
ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
AST/MAST 1.A.1	Complete work order to include customer information, vehicle identifying information, customer concern, related service history, cause, and correction. (P-1)
MAST 1.A.9	Identify service precaution related to service of the internal combustion engine of a hybrid vehicle. (P-2)
AST/MAST 1.D.3	Inspect, replace, and/or adjust drive belts, tensioners, and pulleys; check pulley and belt alignment. (P-1)
AST/MAST 1.D.4	Inspect and test coolant; drain and recover coolant; flush and refill cooling system; use proper fluid type per manufacturer specification; bleed air as required. (P-1)
AST/MAST 1.D.10	Perform engine oil and filter change; use proper fluid type per manufacturer specification; reset maintenance reminder as required. (P-1)
MAST 2.A.2	Research applicable vehicle and service information, including fluid type, vehicle service history, service precautions, and technical service bulletins. (P-1)
MAST 2.A.4	Check fluid level in a transmission or a transaxle equipped with a dipstick. (P-1)
AST/MAST 3.A.2	Research applicable vehicle and service information, including fluid type, vehicle service history, service precautions, and technical service bulletins. (P-1)
AST/MAST 4.A.1	Research applicable vehicle and service information, vehicle service history, service precautions, and technical service bulletins. (P-1)
MAST 4.A.2	Identify and interpret suspension and steering system concerns; determine needed action. (P-1)
MAST 4.B.9	Determine proper power steering fluid type; inspect fluid level and condition. (P-1)
AST/MAST 5.A.1	Identify and interpret brake system concerns; determine needed action. (P-1)
AST/MAST 5.A.2	Research applicable vehicle and service information, including fluid type, vehicle service history, service precautions, and technical service bulletins. (P-1)
AST/MAST 5.B.9	Select, handle, store, and fill brake fluids to proper level; use proper fluid type per manufacturer specification. (P-1)
AST/MAST 6.A.1	Research applicable vehicle and service information, vehicle service history, service precautions, and technical service bulletins. (P-1)
AST/MAST 6.D.3	Inspect, adjust, or replace generator (alternator) drivebelts; check pulleys and tensioners for wear; check pulley and belt alignment. (P-1)
AST/MAST 6.F.3	Reset maintenance indicators as required. (P-1)
AST/MAST 7.A.2	Research vehicle service information, including refrigerant/oil type, vehicle service history, service precautions, and technical service bulletins. (P-1)
AST/MAST 7.B.1	Inspect, remove, and/or replace A/C compressor drivebelts, pulleys, and tensioners; visually inspect A/C components for signs of leaks; determine needed action. (P-1)
AST/MAST 8.A.2	Research applicable vehicle and service information, vehicle service history, service precautions, and technical service bulletins. (P-1)

MAST 8.D.5	Inspect, service, or replace air filters, filter housings, and intake duct work. (P-1)
MAST 1.A.2	Research applicable vehicle and service information, such as internal engine operation, vehicle service history, service precautions, and technical service bulletins. (P-1)
MLR 1.B.2	Identify components of the cylinder head and valve train. (P-1)
AST/MAST 1.D.9	Perform oil pressure test; determine needed action. (P-1)
AST/MAST 8.A.3	Diagnose abnormal engine noises or vibration concerns; determine needed action. (P-3)
AST/MAST 8.A.4	Diagnose the cause of excessive oil consumption, coolant consumption, unusual exhaust color, odor, and sound; determine needed action. (P-2)
AST/MAST 8.A.5	Perform engine absolute manifold pressure test (vacuum/boost); determine needed action. (P-1)
AST/MAST 8.A.6	Perform cylinder power balance test; determine needed action. (P-2)
AST/MAST 8.A.7	Perform cylinder cranking and running compression tests; determine needed action. (P-1)
AST/MAST 8.A.8	Perform cylinder leakage test; determine needed action. (P-1)
AST/MAST 1.A.8	Inspect, remove, and replace engine mounts. (P-2)
MAST 1.C.1	Remove, inspect, or replace crankshaft vibration damper (harmonic balancer). (P-1)
MAST 1.C.2	Disassemble engine block; clean and prepare components for inspection and reassembly. (P-1)
MAST 1.B.12	Inspect valve lifters; determine needed action. (P-2)
MAST 1.B.13	Inspect and/or measure camshaft for runout; journal wear and lobe wear. (P-3)
MAST 1.B.14	Inspect camshaft bearing surface for wear, damage, out-of-round, and alignment; determine needed action. (P-3)
MAST 1.C.3	Inspect engine block for visible cracks, passage condition, core and gallery plug condition, and surface warpage; determine needed action. (P-2)
MAST 1.C.4	Inspect and measure cylinder walls/sleeves for damage, wear, and ridge; determine needed action. (P-2)
MAST 1.C.5	Deglaze and clean cylinder walls. (P-2)
MAST 1.C.6	Inspect and measure camshaft bearing surface for wear, damage, out-of-round, and alignment; determine needed action. (P-3)
MAST 1.C.7	Inspect crankshaft for straightness, journal damage, keyway damage, thrust flange and sealing surface condition, and visual surface cracks; check oil passage condition; measure end play and journal wear; check crankshaft position sensor reluctor ring (where applicable); determine needed action. (P-1)

MAST 1.C.8	Inspect main and connecting rod bearings for damage and wear; determine needed action. (P-2)
MAST 1.C.9	Identify piston and bearing wear patterns that indicate connecting rod alignment and main bearing bore problems; determine needed action. (P-3)
MAST 1.C.10	Inspect and measure piston skirts and ring lands; determine needed action. (P-2)
MAST 1.C.11	Determine piston-to-bore clearance. (P-2)
MAST 1.C.12	Inspect, measure, and install piston rings. (P-2)
MAST 1.C.13	Inspect auxiliary shaft(s)(balance, intermediate, idler, counterbalance or silencer); inspect shaft(s) and support bearings for damage and wear; determine needed action; reinstall and time. (P-2)
AST/MAST 1.B.2	Clean and visually inspect a cylinder head for cracks; check gasket surface areas for warpage and surface finish; check passage condition. (P-1)
AST/MAST 1.B.3	Inspect pushrods, rocker arms, rocker arm pivots and shafts for wear, bending, cracks, looseness, and blocked oil passages (orifices); determine needed action. (P-2)
MAST 1.B.7	Inspect valve springs for squareness and free height comparison; determine needed action. (P-3)
MAST 1.B.8	Replace valve stem seals on an assembled engine; inspect valve spring retainers, locks/keepers, and valve lock/keeper grooves; determine needed action. (P-3)
MAST 1.B.9	Inspect valve guides for wear; check valve stem-to-guide clearance; determine needed action. (P-3)
MAST 1.B.10	Inspect valves and valve seats; determine needed action. (P-3)
MAST 1.B.11	Check valve spring assembled height and valve stem height; determine needed action. (P-3)
AST/MAST 1.A.5	Install engine covers using gaskets, seals, and sealers as required. (P-1)
AST/MAST 1.A.6	Verify engine mechanical timing. (P-1)
MAST 1.A.10	Remove and reinstall engine on a newer vehicle equipped with OBD; reconnect all attaching components and restore the vehicle to running condition. (P-3)
AST/MAST 1.B.1	Remove cylinder head; inspect gasket condition; install cylinder head and gasket; tighten according to manufacturer's specifications and procedures. (P-1)
AST/MAST 1.B.4	Adjust valves (mechanical or hydraulic lifters). (P-1)
AST/MAST 1.B.5	Inspect and replace camshaft and drivebelt/chain; includes checking drive gear wear and backlash, endplay, sprocket and chain wear, overhead cam drive sprocket(s), drivebelt(s), belt tension, tensioners, camshaft reluctor ring/tone-wheel, and valve timing components; verify correct camshaft timing. (P-1)
AST/MAST 1.B.6	Establish camshaft position sensor indexing. (P-1)
MAST 1.C.14	Assemble engine block. (P-1)

MAST 8.A.11	Verify correct camshaft timing including engines equipped with variable valve timing systems (VVT). (P-1)
AST/MAST 1.A.4	Inspect engine assembly for fuel, oil, coolant, and other leaks; determine necessary action. (P-1)
AST/MAST 1.D.1	Perform cooling system pressure and dye tests to identify leaks; check coolant condition and level; inspect and test radiator, pressure cap, coolant recovery tank, and heater core and galley plugs; determine necessary action. (P-1)
AST/MAST 1.D.2	Identify causes of engine overheating. (P-1)
AST/MAST 1.D.4	Inspect and test coolant; drain and recover coolant; flush and refill cooling system; use proper fluid type per manufacturer specification; bleed air as required. (P-1)
AST/MAST 1.D.5	Inspect, remove, and replace water pump. (P-2)
AST/MAST 1.D.6	Remove and replace radiator. (P-2)
AST/MAST 1.D.7	Remove, inspect, and replace thermostat and gasket/seal. (P-1)
MAST 1.D.8	Inspect and test fan(s) (electrical or mechanical), fan clutch , fan shroud, and air dams. (P-1)
AST/MAST 1.D.11	Inspect auxiliary coolers; determine needed action. (P-3)
AST/MAST 1.D.12	Inspect, test, and replace oil temperature and pressure switches and sensors. (P-2)
MAST 1.D.13	Inspect oil pump gears or rotors, housing, pressure relief devices, and pump drive; perform necessary action. (P-2)
MAST 7.C.1	Inspect engine cooling and heater systems hoses; perform necessary action. (P-1)
AST/MAST 8.A.10	Verify engine operating temperature; determine needed action. (P-1)

ELECTRICAL/ELECTRONIC SYSTEMS
ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
MLR/AST/ MAST 6.A.2	Demonstrate knowledge of electrical/electronic series, parallel, and series-parallel circuits using principles of electricity (Ohm's Law). (P-1)
AST/MAS T 6.A.3	Demonstrate proper use of a digital multimeter (DMM) when measuring source voltage, voltage drop (including grounds), current flow and resistance. (P-1)
AST/MAS T 6.A.4	Demonstrate knowledge of the causes and effects from shorts, grounds, opens, and resistance problems in electrical/electronic circuits. (P-1)
AST/MAS T 6.A.5	Demonstrate proper use of a test light on an electrical circuit. (P-1)
AST/MAS T 6.A.6	Use fused jumper wires to check operation of electrical circuits. (P-1)
AST/MAS T 6.A.7	Use wiring diagrams during the diagnosis (troubleshooting) of electrical/electronic circuit problems. (P-1)
AST/MAS T 6.A.9	Inspect and test fusible links, circuit breakers, and fuses; determine necessary action. (P-1)
AST/MAS T 6.A.10	Inspect, test, repair, and/or replace components, connectors, terminals, harnesses, and wiring in electrical/electronic systems (including solder repairs); determine needed action. (P-1)
MAST 6.A.11	Check electrical/electronic circuit waveforms; interpret readings and determine needed repairs. (P-2)
MLR/AST/ MAST 6.B.3	Maintain or restore electronic memory functions. (P-1)
MAST 6.A.8	Identify electrical/electronic modules, security systems, radios, and other accessories that require reinitialization or code entry after reconnecting vehicle battery. (P-1)
AST/MAS T 6.A.8	Diagnose the cause(s) of excessive key-off battery drain (parasitic draw); determine needed action. (P-1)
MLR/AST/ MAST 6.B.2	Perform battery state-of-charge test; determine necessary action. (P-1)
AST/MAS T 6.B.2	Confirm proper battery capacity for vehicle application; perform battery capacity and load test; determine necessary action. (P-1)
MLR/AST/ MAST 6.B.3	Maintain or restore electronic memory functions. (P-1)
MLR/AST/ MAST 6.B.4	Inspect and clean battery; fill battery cells; check battery cables, connectors, clamps, and hold-downs. (P-1)

MLR/AST/MAST 6.B.5	Perform slow/fast battery charge according to manufacturer's recommendations. (P-1)
MLR/AST/MAST 6.B.6	Jump-start vehicle using jumper cables and a booster battery or an auxiliary power supply. (P-1)
MLR/AST/MAST 6.C.1	Perform starter current draw test; determine necessary action. (P-1)
MLR/AST/MAST 6.C.2	Perform starter circuit voltage drop test; determine necessary action. (P-1)
MLR/AST/MAST 6.C.3	Inspect and test starter relays and solenoids; determine necessary action. (P-2)
MLR/AST/MAST 6.C.4	Remove and install starter in a vehicle. (P-1)
MLR/AST/MAST 6.C.5	Inspect and test switches, connectors, and wires of starter control circuits; determine necessary action. (P-2)
MLR/AST/MAST 6.C.6	Differentiate between electrical and engine mechanical problems that cause a slow-crank or a no-crank condition. (P-2)
MLR/AST/MAST 6.D.1	Perform charging system output test; determine necessary action. (P-1)
AST/MAST 6.D.2	Diagnose (troubleshoot) charging system for causes of undercharge, no-charge, or overcharge conditions. (P-1)
AST/MAST 6.D.4	Remove, inspect, and re-install generator (alternator). (P-1)
AST/MAST 6.D.5	Perform charging circuit voltage drop tests; determine necessary action. (P-1)
AST/MAST 6.E.1	Diagnose (troubleshoot) the causes of brighter-than-normal, intermittent, dim, or no light operation; determine needed action. (P-1)
AST/MAST 6.E.2	Inspect interior and exterior lamps and sockets including headlights and auxiliary lights (fog lights/driving lights); replace as needed. (P-1)
AST/MAST 6.E.3	Aim headlights. (P-2)
AST/MAST 6.E.4	Identify system voltage and safety precautions associated with high-intensity discharge headlights. (P-2)
AST/MAST 1.A.3	Verify operation of the instrument panel engine warning indicators. (P-1)

AST/MAST 1.6.F.1	Inspect and test gauges and gauge sending units for causes of abnormal gauge readings; determine needed action. (P-2)
AST/MAST 6.F.2	Diagnose (troubleshoot) the causes of incorrect operation of warning devices and other driver information systems; determine needed action. (P-2)
MAST 6.A.12	Repair data bus wiring harness. (P-1)
MAST 6.G.5	Diagnose body electronic systems circuits using a scan tool; check for module communication errors (data bus systems); determine needed action. (P-3)
AST/MAST 6.G.6	Describe the process for software transfer, software updates, or reprogramming of electronic modules. (P-3)
MAST 6.G.1	Describe operation of comfort and convenience accessories and related circuits (such as: power window, power seats, pedal height, power locks, trunk locks, remote start, moon roof, sun roof, sun shade, remote keyless entry, voice activation, steering wheel controls, back-up camera, park assist, cruise control, and auto-dimming headlamps); determine needed repairs. (P-3)
MAST 6.G.2	Diagnose operation of security/anti-theft systems and related circuits (such as: theft deterrent, door locks, remote keyless entry, remote start, and starter/fuel disable); determine needed repairs. (P-3)
AST/MAST 6.G.3	Describe operation of entertainment and related circuits (such as: radio, DVD, remote CD changer, navigation, amplifiers, speakers, antennas, and voice-activated accessories); determine needed repairs. (P-3)
MAST 6.G.4	Diagnose operation of safety systems and related circuits (such as: horn, airbags, seatbelt pretensioners, occupancy classification, wipers, washers, speed control/collision avoidance, heads-up display, park assist, and back-up camera); determine needed repairs. (P-3)

ENGINE PERFORMANCE
ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
AST/MAST 8.A.1	Identify and interpret engine performance concerns; determine needed action. (P-1)
AST/MAST 8.A.9	Diagnose engine mechanical, electrical, electronic, fuel, and ignition concerns; determine needed action. (P-2)
MLR/AST/MAST 8.B.1	Retrive and record diagnostic trouble codes (DTC), OBD monitor status, and freeze frame data; clear codes when applicable
AST/MAST 8.B.2	Access and use service information to perform step-by-step (troubleshooting) diagnosis. (P-1)
MAST 8.B.5	Diagnose the causes of emmissions or driveability concerns with stored or active diagnostic trouble codes (DTC); obtain, graph, and interpret scan tool data. (P-1)
AST/MAST 8.B.2	Access and use service information to perform step-by-step (troubleshooting) diagnosis. (P-1)
MAST 8.B.3	Perform active steps of actuators using a scan tool; determine needed action. (P-1)
MAST 8.B.5	Diagnose the causes of emissions or driveability concerns with stored or active diagnostic trouble codes (DTC); obtain, graph, and interpret scan tool data. (P-1)
MAST 8.B.6	Diagnose emissions or driveability concerns without stored diagnostic trouble codes; determine needed action. (P-1)
MAST 8.B.7	Inspect and test computerized engine control system sensors, powertrain/engine control module (PCM/ECM), actuators, and circuits using a graphing multimeter (GMM)/digital storage oscilloscope(DSO); perform necessary action. (P-2)
MAST 8.B.8	Diagnose driveability and emissions problems resulting from malfunctions of interrelated systems (cruise control, security alarms, suspension controls, traction controls, HVAC, automatic transmissions, non-OEM installed accessories, or similar systems); determine needed action. (P-2)
AST/MAST 8.A.2	Identify ignition systems. (P-1)
AST/MAST 8.C.1	Diagnose (troubleshoot) ignition system related problems such as no-starting, hard starting, engine misfire, poor driveability, spark knock, power loss, poor mileage, and emissions concerns; determine needed action. (P-2)
AST/MAST 8.C.2	Inspect and test crankshaft and camshaft position sensors; determine needed action. (P-1)
AST/MAST 8.C.3	Inspect, test, and/or replace ignition control module, powertrain/engine control module; reprogram as necessary. (P-3)

AST/MAST 8.C.4	Remove and replace spark plugs; inspect secondary ignition components for wear and damage. (P-1)
MAST 8.D.12	Check and refill diesel exhaust fluid (DEF). (P-2)
MAST 8.D.1	Diagnose (troubleshoot) hot or cold no-starting, hard starting, poor driveability, incorrect idle speed, poor idle, flooding, hesitation, surging, engine misfire, power loss, stalling, poor mileage, dieseling, and emissions problems; determine needed action. (P-2)
MAST 8.D.2	Check fuel for contaminants; determine needed action. (P-2)
MAST 8.D.3	Inspect and test fuel test fuel pump(s) and pump control system for pressure, regulation, and volume; determine needed action. (P-1)
MAST 8.D.4	Replace fuel filter(s) where applicable (P-2)
AST/MAST 8.D.1	EFI visual inspection
MAST 8.D.7	Inspect, test, and/or replace fuel injectors. (P-2)
MAST 8.D.8	Verify idle control operation. (P-1)
MAST 8.D.6	Inspect throttle body, air induction system, intake manifold and gaskets for vacuum leaks and/or unmetered air. (P-2)
MAST 8.D.9	Inspect integrity of the exhaust manifold, exhaust pipes, muffler(s), catalytic converter(s), resonator(s), tail pipe(s), and heat shields; determine necessary action. (P-1)
AST 8.D.9	Perform exhaust system back-pressure test; determine needed action.(P-2)
MAST 8.D.10	Inspect condition of exhaust system hangers, brackets, clamps, and heat shields; determine necessary action. (P-1)
MAST 8.D.13	Test operation of turbocharger/supercharger systems; determine needed action. (P-2)
AST/MAST 8.A.2	Identifying installed emission control devices
AST/MAST 8.B.4	Describe the use of the OBD monitors for repair verification. (P-1)
MAST 8.E.2	Inspect, test, and service positive crankcase ventilation (PVC) filter/breater cap, valve, tubes, orifices, and hoses; perform necessary action. (P-2)
AST 8.D.10	Perform exhaust system back-pressure test; determine needed action. (P-2)
MAST 8.D.11	Perform exhaust system back-pressure test; determine needed action. (P-2)
AST/MAST 8.E.1	Diagnose oil leaks, emissions, and driveability concerns caused by the positive crankcase ventilation (PCV) system; determine needed action. (P-3)
MAST 8.E.3	Diagnose emissions and driveability concerns caused by the exhaust gas recirculation (EGR) system; inspect, test, service and/or replace electrical/electronic sensors, controls, wiring, tubing, exhaust passages, vacuum/pressure controls, filters, and hoses of exhaust gas recirculation (EGR) systems; determine needed action. (P-2)

MAST 8.E.4	Diagnose emissions and driveability concerns caused by the secondary air injection system; inspect, test, repair, and/or replace electrical/electronically-operated components and circuits of secondary air injection systems; determine needed action. (P-2)
MAST 8.E.5	Diagnose emissions and driveability concerns caused by the evaporative emissions control (EVAP) system; determine needed action. (P-1)
MAST 8.E.6	Diagnose emission and driveability concerns caused by catalytic converter system; determine needed action. (P-1)
AST/MAST 8.E.7	Interpret diagnostic trouble codes(DTC) and scan tool related to the emissions control systems; determine needed action. (P-2)
MLR/AST/MAST 5.G.2	Describe the operation of a regenerative braking system. (P-3)
AST/MAST 6.B.7	Identify safety precautions for high-voltage systems on electric, hybrid-electric, and diesel vehicles. (P-2)
MLR/AST/MAST 6.B.9	Identify hybrid vehicle auxiliary (12V) battery service, repair, and test procedures. (P-2)
AST/MAST 6.C.7	Demonstrate knowledge of an automatic idle-stop/start stop-system. (P-3)

AUTOMATIC TRANSMISSION
ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
AST/MAST 2.A.11	Diagnose electronic transmission/transaxle control systems using appropriate test equipment and service information. (P-2)
MAST 2.B.3	Inspect, test, adjust, repair, or replace electrical/electronic components and circuits including computers, solenoids, sensors, relays, terminals, connectors, switches, and harnesses. (P-1)
AST/MAST 2.C.4	Describe the operational characteristics of a continuously variable transmission (CVT). (P-3)
AST/MAST 2.C.5	Describe the operational characteristics of a hybrid vehicle drivetrain). (P-3)
AST/MAST 2.A.1	Identify and interpret transmission/transaxle concern, differentiate between engine performance and transmission/transaxle concerns; determine needed action. (P-1)
AST/MAST 2.A.2	Research applicable vehicle and service information, including fluid type, vehicle service history, service precautions, and technical service bulletins. (P-1)
AST/MAST 2.A.3	Diagnose fluid loss and condition concerns; determine needed action. (P-1)
MAST 2.A.5	Check fluid level in a transmission or a transaxle not equipped with a dipstick. (P-1)
MAST 2.A.6	Perform pressure tests(including transmissions/tranaxles equipped with electronic pressure control); determine needed action. (P-1)
MAST 2.A.7	Diagnose noise and vibration concerns; determine needed action. (P-2)
MAST 2.A.8	Perform stall test; determine needed action. (P-2)
MAST 2.A.9	Perform lock-up converter system tests: determine needed action. (P-3)
MAST 2.A.10	Diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven, and held member(power flow) principles. (P-1)
MAST 2.A.12	Diagnose pressure concerns in a transmission using hydraulic principles (Pascal's Law). (P-2)
AST/MAST 2.B.1	Inspect, adjust, and/or replace external manual valve shift linkage, transmission range sensor/switch, and park/neutral position switch. (P-1)
AST/MAST 2.B.2	Inspect for leakage at external seals, gaskets, and bushings. (P-1)
AST/MAST 2.B.3	Inspect, test, adjust, repair, or replace electrical/electronic components and circuits including computers, solenoids, sensors, relays, terminals, connectors, switches, and harnesses. (P-1)

MLR/AST /MAST 2.B.4	Drain and replace fluid and filter(s); use proper fluid type per manufacturer specification. (P-1)
AST/MAS T 2.B.5	Inspect, replace and align powertrain mounts. (P-2)
AST/MAS T 2.C.1	Remove and reinstall transmission/transaxle and torque converter; inspect engine core plugs, rear cra
AST/MAS T 2.C.2	Inspect, leak test, and flush or replace transmission/transaxle oil cooler, lines, and fittings. (P-1)
AST/MAS T 2.C.3	Inspect converter flex (drive)plate, converter attaching bolts, converter pilot, converter pump drive surfaces, converter end play, and crankshaft pilot bore. (P-2)
MAST 2.C.6	Disassemble, clean, and inspect transmission/transaxle. (P-1)
MAST 2.C.7	Inspect, measure, clean, and replace valve body (includes surfaces, bores, springs, valves, sleeves, retainers, brackets, check valves/balls, screens,spacers, and gaskets). (P-2)
MAST 2.C.8	Inspect servo and accumulator bores, pistons, seals, pins, springs, and retainers; determine needed action. (P-2)
MAST 2.C.9	Assemble transmission/transaxle. (P-2)
MAST 2.C.10	Inspect, measure, and reseal oil pump assembly and components. (P-2)
MAST 2.C.11	Measure transmission/transaxle end play or preload; determine needed action. (P-1)
MAST 2.C.12	Inspect, measure, and replace thrust washers and bearings. (P-2)
MAST 2.C.13	Inspect oil delivery circuits, including seal rings, ring grooves, and sealing surface areas, feed pipes, orifices, and check valves/balls. (P-2)
MAST 2.C.14	Inspect bushings; determine needed action. (P-2)
MAST 2.C.15	Inspect and measure planetary gear assembly components; determine needed action. (P-2)
MAST 2.C.16	Inspect case bores, passages, bushings, vents, and mating surfaces; determine needed action. (P-2)
MAST 2.C.17	Diagnose and inspect transaxle drive, link chains, sprockets, gears, bearings, and bushings; perform necessary action. (P-2)
MAST 2.C.18	Inspect, measure, repair, adjust or replace transaxle final drive components. (P-2)
MAST 2.C.19	Inspect clutch drum, piston, check-balls, springs, retainers, seals, and friction and pressure plates, bands and drums; determine needed action. (P-2)
MAST 2.C.20	Measure clutch pack clearance; determine needed action. (P-1)
MAST 2.C.21	Air test operation of clutch and servo assemblies. (P-1)

MAST 2.C.22	Inspect one-way clutches, races, rollers, sprags, springs, cages, retainers; determine needed action. (P-2)
AST/MAST 3.F.1	Inspect, adjust, and repair shifting controls(mechanical, electrical, and vacuum), bushings, mounts, levers, and brackets. (P-3)
AST/MAST 3.F.2	Inspect locking hubs. (P-3)
AST/MAST 3.F.3	Check for leaks at drive assembly and transfer case seals; check vents; check fluid level; use proper fluid type per manufacturer specification. (P-3)
AST/MAST 3.F.4	Identify concerns related to variations in tire circumference and/or final drive ratios. (P-2)
MAST 3.F.5	Diagnose noise, vibration, and unusual steering concerns; determine needed action. (P-3)
MAST 3.F.6	Diagnose, test, adjust, and/or replace electrical/electronic components of four-wheel drive/all-wheel drive systems. (P-2)
MAST 3.F.7	Disassemble, service, and reassemble transfer case and components. (P-2)

MANUAL TRANSMISSION
ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
AST/MAST 3.B.1	Diagnose clutch noise, binding, slippage, pulsation, and chatter; determine needed action. (P-1)
AST/MAST 3.B.2	Inspect clutch pedal linkage, cables, automatic adjuster mechanisms, brackets, bushings, pivots, and spring; perform necessary action. (P-1)
AST/MAST 3.B.3	Inspect and replace clutch pressure plate assembly, clutch disc, release(throw-out) bearing and linkage, and pilot bearing/bushing (as applicable). (P-1)
AST/MAST 3.B.4	Bleed clutch hydraulic system. (P-1)
AST/MAST 3.B.5	Check and adjust clutch master cylinder fluid level; check for leaks; use proper fluid type per manufacturer specification. (P-1)
AST/MAST 3.B.6	Inspect flywheel and ring gear for wear, cracks, and discoloration; determine needed action. (P-1)
MAST 3.B.7	Measure flywheel runout and crankshaft end play; determine needed action. (P-2)
MAST 3.B.8	Describe the operation and service of a system that uses a dual mass flywheel. (P-3)
AST/MAST 3.C.2	Describe the operational characteristics of an electronically-controlled manual transmission/transaxle. (P-2)
MAST 3.C.3	Diagnose noise concerns through the application of transmission/tranaxle powerflow principles. (P-2)
AST/MAST 3.A.1	Identify and interpret drivetrain concerns; determine needed action. (P-1)
MAST 3.A.3	Check fluid condition; check for leaks; determine needed action. (P-1)
AST/MAST 3.A.4	Drain and refill manual transmission/transaxle and final drive unit; use proper fluid type per manufacturer specification. (P-1)
AST/MAST 3.C.1	Inspect, adjust, and reinstall shift linkages, brackets, bushings, cables, pivots, and levers. (P-2)
MAST 3.C.4	Diagnose hard shifting and jumping out of gear concerns; determine needed action. (P-2)
MAST 3.C.5	Diagnose transaxle final drive assembly noise and vibration concerns; determine needed action. (P-3)
MAST 3.C.6	Disassemble, inspect, clean, and reassemble internal transmission/transaxle components. (P-2)
AST/MAST 3.D.1	Diagnose constant-velocity (CV) joint noise and vibration concerns; determine needed action. (P-1)
MAST 3.D.2	Diagnose universal joint noise and vibration concerns; determine needed action. (P-2)
AST/MAST 3.D.4	Inspect, service, and replace shafts, yokes, boots, and universal/CV joints. (P-1)

AST/MAST 3.D.5	Check shaft balance and phasing; measure shaft runout; measure and adjust driveline andles. (P-2)
MAST 3.E.3	Drain and refill differential housing. (P-1)
MAST 3.E.4	Inspect and replace drive axle wheel studs. (P-1)
AST/MAST 3.E.E1.1	Clean and inspect differential housing; check for leaks; inspect housing vent. (P-1)
AST/MAST 3.E.E1.2	Check and adjust differential case fluid level; use proper fluid type per manufacturer specification. (P-1)
AST/MAST 3.E.E1.3	Drain and refill differential housing; use proper fluid type per manufacturer specification. (P-1)
MAST 3.E.E1.4	Diagnose noise and vibration concerns; determine needed action. (P-2)
MAST 3.E.E1.5	Inspect and replace companion flange and pinion seal; measure companion flange runout. (P-2)
MAST 3.E.E1.6	Inspect ring gear and measure runout; determine needed action. (P-3)
MAST 3.E.E1.7	Remove, inspect, and reinstall drive pinion and ring gear, spacers, sleeves, and bearings. (P-3)
MAST 3.E.E1.8	Measure and adjust drive pinion depth. (P-3)
MAST 3.E.E1.9	Measure and adjust drive pinion bearing preload. (P-3)
MAST 3.E.E1.10	Measure and adjust side bearing preload and ring and pinion gear total backlash and backlash variation on a differential carrier assembly (threaded cup or shim types). (P-3)
MAST 3.E.E1.11	Check ring and pinion tooth contact patterns; perform necessary action. (P-3)
MAST 3.E.E1.12	Disassemble, inspect, measure, and adjust or replace differential pinion gears(spiders), shaft, side gears, side bearings, thrust washers, and case. (P-3)
MAST 3.E.E1.13	Reassemble and reinstall differential case assembly; measure runout; determine needed action. (P-3)
MAST 3.E.E2.1	Diagnose noise, slippage, and chatter concerns; determine needed action. (P-3)
MAST 3.E.E2.2	Measure rotating torque; determine needed action. (P-3)
MAST 3.E.E3.1	Inspect and replace drive axle wheel studs. (P-1)
MAST 3.E.E3.2	Remove and replace drive axle shafts. (P-1)
MAST 3.E.E3.3	Inspect and replace drive axle shaft seals, bearings, and retainers. (P-2)
MAST 3.E.E3.4	Measure drive axle flange runout and shaft endplay; determine needed action. (P-2)

MAST 3.E.E3.5	Diagnose drive axle shafts, bearings, and seals for noise, vibration, and fluid leakage concerns; determine needed action. (P-2)
MAST 5.F.6	Inspect and replace wheel studs. (P-1)
MAST 5.F.8	Inspect and replace wheel studs. (P-1)

HEATING AND AIR CONDITIONING
ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
MAST 7.C.2	Inspect and test heater control valve(s); determine needed action. (P-2)
MAST 7.C.3	Diagnose temperature control problems in the heater/ventilation system; determine PCM to interrupt system operation; determine needed action. (P-2)
MAST 7.C.4	Determine procedure to remove, inspect, and reinstall heater core. (P-2)
AST/MAST 7.D.1	Inspect and test HVAC system blower motors, resistors, switches, relays, wiring, and protection devices; determine needed action. (P-1)
AST/MAST 7.D.3	Diagnose malfunctions in the vacuum, mechanical, and electrical components and controls of the heating , ventilation, and A/C (HVAC) system; determine needed action. (P-2)
MAST 7.D.4	Inspect and test HVAC system control panel assembly; determine needed action. (P-3)
MAST 7.D.5	Inspect and test HVAC system control cables, motors, and linkages; determine needed action. (P-3)
AST/MAST 7.A.1	Identify and interpret heating and air conditioning problems; determine needed action. (P-1)
AST/MAST 7.A.3	Performance test A/C system; identify problems. (P-1)
AST/MAST 7.A.4	Identify abnormal operating noises in the A/C system; determine needed action. (P-2)
AST/MAST 7.A.5	Identify refrigerent type; select and connect proper gauge set; record temperature and pressure readings. (P-1)
AST/MAST 7.A.6	Leak test A/C system; determine needed action. (P-1)
AST/MAST 7.A.7	Inspect condition of refrigerant oil removed from A/C system; determine needed action. (P-2)
AST/MAST 7.A.8	Determine recommended oil and oil capacity for system application. (P-1)
AST/MAST 7.A.9	Using a scan tool, observe and record related HVAC data and trouble codes. (P-3)
AST/MAST 7.B.2	Inspect, test, service or replace A/C compressor clutch components and/or assembly; check compressor clutch air gap; adjust as needed. (P-2)
MAST 7.B.3	Remove, inspect, and reinstall A/C compressor and mountings; determine recommended oil type and quantity. (P-2)
AST/MAST 7.B.4	Identify hybrid vehicle A/C system electrical circuits and the service/safety precautions. (P-2)
MAST 7.B.5	Determine need for an additional A/C system filter; determine needed action. (P-3)

MAST 7.B.6	Remove and inspect A/C system mufflers, hoses, lines,fittings, O-rings, seals, and service valves; determine needed action. (P-2)
MAST 7.B.7	Inspect A/C condenser for airflow restrictions; determine needed action. (P-1)
MAST 7.B.8	Remove, inspect, and replace receiver/drier or accumulator/drier; determine recommended oil type and quanity. (P-2)
AST/MAST 7.B.9	Remove, inspect, and install expansion valve or orifice (expansion) tube. (P-1)
MAST 7.B.10	Inspect evaporator housing water drain; determine needed action. (P-1)
MAST 7.B.11	Diagnose A/C system conditions that cause the protection devices (pressure, thermal, and PCM) to interrupt system operation; determine needed action. (P-2)
MAST 7.B.12	Determine procedure to remove and reinstall evaporator; determine required oil type and quantity. (P-2)
MAST 7.B.13	Remove, inspect, reinstall, and/or replace condenser; determine required oil type and quantity. (P-2)
AST/MAST 7.D.1	Inspect and test HVAC system blower motors, resistors, switches, relays, wiring, and protection devices; determine needed action. (P-1)
MAST 7.D.2	Diagnose HVAC system clutch control systems; determine needed action. (P-2)
AST/MAST 7.D.3	Diagnose malfunctions in the vacuum, mechanical, and electrical components and controls of the heating, ventilation, and A/C (HVAC) system; determine needed action. (P-2)
MAST 7.D.4	Inspect and test HVAC control panel assembly; determine needed action. (P-3)
MAST 7.D.6	Inspect HVAC ducts, doors, hoses, cabin filters, and outlets; determine needed action. (P-1)
AST/MAST 7.D.7	Identify the source of HVAC system odors. (P-2)
AST/MAST 7.D.8	Check operation of automatic or semi-automatic HVAC control systems; determine needed action. (P-2)
AST/MAST 7.E.1	Perform correct use and maintenance of refrigerant handling equipment according to equipment manufacturers's standards. (P-1)
AST/MAST 7.E.2	Identify A/C system refrigerant; test for sealants; recover, evacuate, and charge A/C system; add refrigerant oil as required. (P-1)
AST/MAST 7.E.3	Recycle, label, and store refrigerant. (P-1)

STEERING AND SUSPENSION
ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
AST/MAST 3.D.3	Inspect, remove, and/or replace bearings, hubs, and seals. (P-1)
AST/MAST 4.D.2	Remove, inspect, service and/or replace front and rear wheel bearings. (P-1)
AST/MAST 4.F.1	Inspect tire condition; identify tire wear patterns; check for correct tire size, application(load and speed ratings), and air pressure as listed on the tire information placard/label. (P-1)
AST/MAST 4.F.2	Diagnose wheel/tire vibration, shimmy, and noise; determine needed action. (P-2)
AST/MAST 4.F.3	Rotate tires according to manufacturers's recommendations including vehicles equipped with tire pressure monitoring systems(TPMS). (P-1)
AST/MAST 4.F.4	Measure wheel, tire, axle flange, and hub runout; determine needed action. (P-2)
MAST 4.F.5	Diagnose tire pull problems; determine needed action. (P-1)
AST/MAST 4.F.6	Dismount, inspect, and remount tire on wheel; balance wheel and tire assembly. (P-1)
AST/MAST 4.F.7	Dismount, inspect, and remount tire on wheel equipped with tire pressure monitoring system sensor. (P-1)
MAST 4.F.8	Inspect tire and wheel assembly for air loss; perform necessary action. (P-1)
AST/MAST 4.F.9	Repair tire following vehicle manufacturer approved procedure. (P-1)
AST/MAST 4.F.10	Identify indirect and direct tire pressure monitoring systems(TPMS); calibrate system; verify operation of instrument panel lamps. (P-1)
AST/MAST 4.F.11	Demonstrate knowledge of steps required to remove and replace sensors in a tire pressure monitoring system(TPMS) including relearn procedure. (P-1)
AST/MAST 5.A.4	Install wheel and torque lug nuts. (P-1)
AST/MAST 5.F.1	Diagnose wheel bearing noises, wheel shimmy, and vibration concerns; determine needed action. (P-2)
AST/MAST 5.F.2	Remove, clean, inspect, repack, and install wheel bearings; replace seals; install hub and adjust bearings. (P-2)
AST/MAST 5.F.6	Replace wheel bearing and race. (P-2)
MAST 5.F.7	Remove, reinstall, and/or replace sealed wheel bearing assembly. (P-1)
AST/MAST 4.C.1	Diagnose short and long arm suspension system noises, body sway, and uneven ride height concerns; determine needed action. (P-1)

AST/MAST 4.C.2	Diagnose strut suspension system noises, body sway, and uneven ride height concerns; determine needed action. (P-1)
AST/MAST 4.C.3	Inspect, remove and install upper and lower control arms, bushings, shafts, and rebound bumpers. (P-3)
AST/MAST 4.C.4	Inspect, remove, and/or replace strut rods and bushings. (P-3)
AST/MAST 4.C.5	Inspect, remove, and/or replace upper and/or lower ball joints (with or without wear indicators). (P-2)
AST/MAST 4.C.6	Inspect, remove and install steering knuckle assemblies. (P-3)
AST/MAST 4.C.7	Inspect, remove and install short and long arm suspension system coil springs and spring insulators. (P-3)
AST/MAST 4.C.8	Inspect, remove and install torsion bars and mounts. (P-3)
AST/MAST 4.C.9	Inspect, remove, and/or replace front/rear stabilizer bar (sway bar) bushings, brackets, and links. (P-3)
AST/MAST 4.C.10	Inspect, remove, and/or replace strut cartridge or assembly; inspect mounts and bushings. (P-3)
AST/MAST 4.C.11	Inspect, remove, and/or replace track bar, strut rods/radius arms, and related mounts and bushings. (P-3)
AST/MAST 4.C.12	Inspect rear suspension system leaf springs(s), spring insulators (silencers), shackles, brackets, bushings, center pins/bolts, and mounts. (P-1)
AST/MAST 4.D.1	Inspect, remove, and/or replace shock absorbers; inspect mounts and bushings. (P-1)
AST 4.A.2	Identify and interpret suspension and steering system concerns; determine needed action. (P-2)
AST/MAST 4.B.3	Diagnose steering column noises, looseness, and binding concerns (including tilt mechanisms); determine needed action. (P-2)
AST/MAST 4.B.4	Diagnose power steering gear (non-rack and pinion) binding, uneven turning effort, looseness, hard steering, and noise concerns; determine needed action. (P-2)
AST/MAST 4.B.5	Diagnose power steering gear (rack and pinion) binding, uneven turning effort, looseness, hard steering, and noise concerns; determine needed action. (P-2)
MAST 4.B.6	Inspect steering shaft universal-joint(s), flexible coupling(s), collapsible column, lock cylinder mechanism, and steering wheel; determine needed action. (P-2)
AST/MAST 4.B.7	Remove and replace rack and pinion steering gear; inspect mounting bushings and brackets. (P-2)
AST/MAST 4.B.8	Inspect rack and pinion steering gear inner tie rod ends (sockets) and bellows boots; replace as needed. (P-2)
AST/MAST 4.B.10	Flush, fill, and bleed power steering system; use proper fluid type per manufacturer specification. (P-2)
AST/MAST 4.B.11	Inspect for power steering fluid leakage. (P-1)
AST/MAST 4.B.12	Remove, inspect, replace, and/or adjust power steering pump belt. (P-1)

AST/MAST 4.B.13	Remove and reinstall power steering pump. (P-2)
AST/MAST 4.B.14	Remove and reinstall press-fit power steering pump pulley; check pulley and belt alignment. (P-2)
MAST 4.B.15	Inspect, remove and/or replace power steering hoses and fittings. (P-2)
MAST 4.B.16	Inspect, remove and/or replace pitman arm, relay (centerlink/intermediate) rod, idler arm, mountings, and steering linkage damper. (P-2)
AST/MAST 4.B.17	Inspect, replace, and adjust tie rod ends (sockets), tie rod sleeves, and clamps. (P-1)
MAST 4.B.18	Inspect, test and diagnose electrically-assisted power steering systems (including using a scan tool); determine needed action. (P-2)
MAST 4.B.19	Identify hybrid vehicle power steering system electrical circuits and safety precautions. (P-2)
MAST 4.B.20	Test power steering system pressure; determine needed action. (P-2)
AST/MAST 4.B.1	Disable and enable supplemental restraint system (SRS); verify indicator lamp operation. (P-1)
AST/MAST 4.B.2	Remove and replace steering wheel; center/time supplemental system (SRS) coil (clock spring). (P-1)
AST/MAST 4.E.1	Diagnose vehicle wander, drift, pull, hard steering, bump steer, memory steer, torque steer, and steering return concerns; determine needed action. (P-1)
AST 4.E.2	Perform prealignment inspection; measure vehicle ride height; determine needed action. (P-1)
MAST 4.E.2	Perform prealignment inspection; measure vehicle ride height; perform needed action. (P-1)
AST/MAST 4.E.3	Prepare vehicle for wheel alignment on alignment machine; perform four-wheel alignment by checking and adjusting front and rear wheel caster, camber and toe as required; center steering wheel. (P-1)
AST/MAST 4.E.4	Check toe-out-on-turns (turning radius); determine needed action. (P-2)
AST/MAST 4.E.5	Check SAI (steering axis inclination) and included angle; determine needed action. (P-2)
AST/MAST 4.E.6	Check rear wheel thrust angle; determine needed action. (P-1)
AST/MAST 4.E.7	Check for front wheel setback; determine needed action. (P-2)
AST/MAST 4.E.8	Check front and/or rear cradle (subframe) alignment; determine needed action. (P-3)
AST/MAST 4.E.9	Reset steering angle sensor. (P-2)

BRAKES

ASE TASKS COMPETENCIES

GRADE SCALE 0-5

TASK CODE	TASK
AST/MAST 5.B.1	Diagnose pressure concerns in the brake system using hydraulic principles (Pascal's Law). (P-1)
AST/MAST 5.B.3	Check master cylinder for internal/external leaks and proper operation; determine needed action. (P-1)
AST/MAST 5.B.4	Remove, bench bleed, and reinstall master cylinder. (P-1)
AST/MAST 5.B.6	Inspect brake lines, flexible hoses, and fittings for leaks, dents, kinks, rust, cracks, bulging, wear; check for loose fittings/supports; determine needed action. (P-1)
AST/MAST 5.B.7	Replace brake lines, hoses, fittings, and supports. (P-2)
AST/MAST 5.B.8	Fabricate brake lines using proper material and flaring procedures (double flare and ISO types). (P-2)
AST/MAST 5.B.10	Inspect, test, and/or replace components of brake warning light system. (P-3)
AST/MAST 5.B.11	Identify components of hydraulic brake warning light system. (P-2)
AST/MAST 5.B.12	Bleed and/or flush brake system. (P-1)
AST/MAST 5.B.13	Test brake fluid for contamination. (P-1)
MLR/AST/MAST 5.E.1	Check brake pedal travel with, and without, engine running to verify proper power booster operation. (P-2)
MLR/ASR/MAST 5.E.2	Identify components of the brake power assist system (vacuum and hydraulic); check vacuum supply(manifold or auxiliary pump) to vacuum-type power booster. (P-1)
AST/MAST 5.E.3	Inspect vacuum-type power booster unit for leaks; inspect the check-valve for proper operation; determine needed action. (P-1)
AST/MAST 5.E.4	Inspect and test hydraulically-assisted power brake system for leaks and proper operation; determine needed action. (P-3)
AST/MAST 5.E.5	Measure and adjust master cylinder pushrod length.(P-3)
AST/MAST 5.F.4	Check parking brake operation and parking brake indicator light system operation; determine necessary action. (P-1)
AST/MAST 5.F.5	Check operation of brake stop light system. (P-1)
AST/MAST 5.A.1	Identify and interpret brake system concerns; determine needed action. (P-1)
AST/MAST 5.A.3	Describe procedure for performing a road test to check brake system operation, including an anti-lock brake system (ABS). (P-1)

AST/MAS T 5.B.2	Measure brake pedal height, travel, and free play (as applicable); determine needed action. (P-1)
AST/MAS T 5.B.5	Diagnose poor stopping, pulling or dragging concerns caused by malfunctions in the hydrulic system; determine needed action. (P-1)
AST/MAS T 5.C.1	Diagnose poor stopping, noise, vibration, pulling, grabbing, or pedal pulsation concerns; determine needed action. (P-1)
AST/MAS T 5.C.2	Remove, clean, inspect, and measure brake drum diameter; determine needed action. (P-1)
AST/MAS T 5.C.3	Refinish brake drum and measure final drum diameter; compare with specifications. (P-1)
AST/MAS T 5.C.4	Remove, clean, and inspect, and/or replace brake shoes, springs, pins, clips, levers, adjusters/self-adjusters, other related brake hardware, and backing support plates; lubricate and reassemble. (P-1)
AST/MAS T 5.C.5	Inspect wheel cylinders for leaks and proper operation; remove and replace as needed. (P-2)
AST/MAS T 5.C.6	Pre-adjust brake shoes and parking brake; install brake drums or drum/hub assemblies and wheel bearings; make final checks and adjustments. (P-1)
AST/MAS T 5.F.3	Check parking brake system components for wear, binding, and corrosion; clean, lubricate, adjust and/or replace as needed. (P-1)
AST/MAS T 5.D.1	Diagnose poor stopping, noise, vibration, pulling, grabbing, or pedal pulsation concerns; determine needed action. (P-1)
AST/MAS T 5.D.2	Remove and clean caliper assembly; inspect for leaks and damage/wear to caliper housing; determine needed action. (P-1)
AST/MAS T 5.D.3	Inspect caliper mounting and slides/pins for proper operation, wear, and damage; determine needed action. (P-1)
AST/MAS T 5.D.4	Remove, inspect, and/or replace pads and retaining hardware; determine necessary action. (P-1)
AST/MAS T 5.D.5	Lubricate and reinstall caliper, pads, and related hardware; seat pads and inspect for leaks. (P-1)
AST/MAS T 5.D.6	Clean and inspect rotor and mounting surface; measure rotor thickness, thickness variation, and lateral runout; determine necessary action. (P-1)
AST 5.D.7	Remove and reinstall/replace rotor. (P-1)
AST/MAS T 5.D.8	Refinish rotor on vehicle; measure final rotor thickness and compare with specifications. (P-1)
AST/MAS T 5.D.9	Refinish rotor off vehicle; measure final rotor thickness and compare with specifications. (P-1)
AST/MAS T 5.D.10	Retract and re-adjust caliper piston on an integral parking brake system. (P-2)
AST/MAS T 5.D.11	Check brake pad wear indicator; determine necessary action. (P-1)
AST/MAS T 5.D.12	Describe importance of operating vehicle to burnish/break-in replacement brake pads according to manufacturer's recommendations. (P-1)
MAST 4.D.3	Describe the function of suspension and steering control systems and components, (i.e. active suspension, and stability control). (P-3)

AST/MAST 5.G.1	Identify and inspect electronic brake control system components (ABS,TCS,ESC); determine needed action. (P-1)
MAST 5.G.3	Diagnose poor stopping, wheel lock-up, abnormal pedal feel, unwanted application, and noise concerns associated with the electronic brake control system; determine needed action. (P-2)
MAST 5.G.4	Diagnose electronic brake control system electronic control(s) and components by retrieving diagnostic trouble codes, and/or using recommended test equipment; determine needed action. (P-2)
MAST 5.G.5	Depressurize high-pressure components of an electronic brake control system. (P-2)
MAST 5.G.6	Bleed the electronic brake control system hydrualic circuits. (P-1)
MAST 5.G.7	Test, diagnose, and service electronic brake control system speed sensors (digital and analog), toothed ring (tone wheel), and circuits using a graphing multimeter (GMM)/digital storage oscilloscope (DSO) (includes output signal, resistance, shorts to voltage/ground, and frequency data). (P-2)
MAST 5.G.8	Diagnose electronic brake control system braking concerns caused by vehicle modifications (tire size, curb height, final drive ratio, etc.). (P-1)

MARK E. GREEN, M.D.
7TH DISTRICT, TENNESSEE

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Congress of the United States
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COMMITTEE ON FOREIGN AFFAIRS
RANKING MEMBER OF THE SUBCOMMITTEE ON THE WESTERN HEMISPHERE, CIVILIAN SECURITY, MIGRATION AND INTERNATIONAL ECONOMIC POLICY
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SUBCOMMITTEE ON READINESS

SELECT SUBCOMMITTEE ON THE CORONAVIRUS CRISIS

January 18, 2023

To Whom It May Concern:

I am writing to you today in support of the Automotive Technician Development Training (ATDT) school's grant request.

Automotive technicians keep America running, yet there is a troubling disparity between the supply of these technicians and the demand. Recent estimates suggest that 600,000 automotive technicians will be needed between 2022-2026. 74% of repair shops identify the lack of skilled technicians as an issue for their business, while 73% hope to hire at least one technician in the next year. With the average training for a technician taking well over a year, meeting the current and upcoming demand is limiting the automotive repair industry.

Recognizing this problematic bottleneck, ATDT is making it their mission to provide accelerated education for technicians, including methods ranging from classroom instruction to in-dealership training and apprenticeships. The ATDT program will bridge the gap between Maintenance + Light Repair Technician (Level 1) to Advanced Skilled Technician (Level 2), for which the demand is enormous.

Not only will the ATDT program help the automotive repair industry meet their goals and provide individual students with valuable education and professional experience, but it will also improve the lives of many Montgomery County residents.

On behalf of the residents of Tennessee's Seventh Congressional District, thank you for considering ATDT's grant request. If you have any questions, please do not hesitate to contact my office at (629) 223-6050. My team would be happy to speak with you.

Sincerely,

Mark E. Green, MD
Member of Congress

BILL POWERS

STATE SENATOR
22ND DISTRICT

Tennessee State Senate

NASHVILLE

LEGISLATIVE ADDRESS:
425 5th Avenue North, Suite 772
NASHVILLE, TENNESSEE 37243
PHONE: (615) 741-2374
sen.bill.powers@capitol.tn.gov

January 19, 2023

To Whom It May Concern:

It is my pleasure to write in support of Automotive Technician Development Training's application for grant funding. The benefits this school would bring to our community and the automotive industry as a whole are many. The service school will allow individuals to accomplish their professional goals and receive more hands-on experience.

The requested funding would benefit automotive technicians as well as dealership customers. The accelerated training proposed under this program would also create an influx of highly skilled technicians into the workforce, and the increased salary earned by these skilled workers would help to ensure employee retention. Overall, this school would benefit not only technicians and their employers, but would undoubtedly contribute to Tennessee's thriving workforce.

I fully support Automotive Technician Development Training's request for funding. I am confident that this program will have a significant positive impact throughout our fast-growing community. Should you have any questions for me in regard to this matter, please do not hesitate to contact me at (615) 741-2374.

Sincerely,

Bill Powers

Bill Powers
State Senator
22nd District

LEGISLATIVE OFFICE:
660 CORDELL HULL BLDG.
425 Rep. John Lewis Way N.
NASHVILLE, TENNESSEE 37243

CONTACT:
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(615) 741-6804 (OFFICE)
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House of Representatives
State of Tennessee
NASHVILLE

REPRESENTATIVE JEFF BURKHART

Member, Commerce Committee
Member, Local Government Committee
Member, Transportation Committee
Member, Business & Utilities Subcommittee
Member, Elections & Campaign Finance Subcommittee

January 18, 2023

Commissioner Deniece Thomas
Tennessee Department of Labor &
Workforce Development
220 French Landing Drive
Nashville, TN 37243

Re: AutoTech Development - Service School, Montgomery County, Tennessee

Dear Commissioner Thomas -

It is with great pleasure that I write this letter in support of the proposed accelerated education technical school for Montgomery County, Tennessee. I am thrilled to see our local leaders seeing a need and rising to effectively meet that need.

Unfortunately, the enrollment for traditional vo-tech school is at an all-time low, however, the tremendous need for advance skilled technicians is at an all-time high. Based on studies, this program is vital for the automotive industry to grow and maintain demand. With its 16-week accelerated program, students will graduate with needed skills and with guaranteed work hours, thus creating jobs and thereby boosting our economy. The need for traditional school is changing and technical schools are now playing a vital role. I believe this school can meet many needs of the students and the companies that hire them.

In conclusion, I fully support the efforts of the school as they seek external funding to support this much needed program and I encourage your favorable consideration.

Regards,

Jeff Burkhart

Representative Jeff Burkhart
District 75

Montgomery County Government

Wes Golden
County Mayor

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P.O. Box 368
Clarksville, Tennessee 37041-0368

Phone: (931) 648-5787
Fax: (931) 553-5177
mayorgolden@mcgtn.net

January 19, 2023

Commissioner Deniece Thomas
Tennessee Department of Labor and Workforce Development
220 French Landing Drive
Nashville, TN 37243

Commissioner Thomas:

I am writing to express my support for the Automotive Technician Development Training (ATDT) School being developed here in Montgomery County.

The project is critically important to provide accelerated education and a lucrative career path to the technicians who complete this training. This course will help to fill a real need since 74% of repair shops state they lack skilled technicians and 73% intend to hire at least one technician in the next year. The accelerated education is vital to the automotive industry. I am excited to see how this education course and future employment generated by it will benefit Montgomery County.

If I can be of further assistance do not hesitate to contact me. Thank you for this opportunity to endorse this project.

Sincerely,

Wes Golden
Montgomery County Mayor

CITY OF CLARKSVILLE

MAYOR JOE PITTS

City Hall
One Public Square
Clarksville, TN 37040

OFFICE 931.645.7444
FAX 931.552.7479
joe.pitts@cityofclarksville.com

January 17, 2023

To Whom It May Concern:

I am pleased to offer my highest recommendation of the Automotive Technician Development Training (ATDT) program as described in the application herein.

Without a doubt the need for trained and certified automotive technicians will only grow in the future as the technology designed for vehicles continues to evolve and become an integral part of the automotive systems. This is evidenced by the current demand for certified technicians across all areas of the automotive repair industry. Furthermore, the lack of available technicians to fill existing positions may create a crippling effect on the ability of the consumer to receive timely and accurate repairs, and severely curtail small business growth across our state and nation.

The ATDT is a carefully thought out plan that will accelerate the training program without sacrificing the quality of the learning experience. In partnership with leading automobile dealers, the student will get a generous mix of classroom training and hands-on experience by being placed in a location that will offer supervision by highly skilled and certified technicians.

Another important feature of the program is the plan to incorporate all original equipment manufacturing training, available online, for the certification process. Upon completion of the program the student will be equipped with the knowledge, experience and tools necessary to be placed into a position that will be a financial benefit to the student and the business.

This sixteen week program will have an immediate short and long term impact on the growing demand for automotive technicians. As currently proposed, the industry is leading the initiative which guarantees a student high quality training and career placement opportunities.

This program will be a game changer for the industry and offer life changing opportunities for students who have the aptitude and necessary attitude to be successful in this profession.

Sincerely,

Joe Pitts
Mayor