Somerset County EV Study

Powering Ahead for Somerset County

County Fleet Electrification Transition Plan

Prepared for:
Somerset County
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Acronyms

ADA	Americans with Disabilities Act
BEV	Battery Electric Vehicles
BTW	Behind the Wheel
BUILD	Better Utilizing Investments to Leverage Development
CCIA	Clean Communities Investment Accelerator
CDL	Commercial Driver's License
CFI	Charging and Fueling Infrastructure
CFTP	County Fleet Transition Plan
COS	County of Somerset
DAS	Disadvantaged Communities
DCFC	Direct Current Fast Charging
DERA	Diesel Emissions Reduction Act
EMP	Energy Master Plan
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
HVAC	Heating, Ventilation and Air Conditioning
ICE	Internal Combustion Engine
MPO	Metropolitan Planning Organizations
MVC	Motor Vehicle Commission
NCIF	National Clean Investment Fund
NEVI	National Electric Vehicle Infrastructure
NJBPU	New Jersey Board of Public Utilities
NJDEP	New Jersey Department of Environmental Protection
NJEDA	New Jersey Economic Development Authority
NJ ZIP	New Jersey Zero-Emission Incentive Program
OEM	Original Equipment Manufacturer
O&M	Operations and Maintenance
PCAP	Priority Climate Action Plan
PM	Preventive Maintenance
PPE	Personal Protective Equipment
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
SUV	Sports Utility Vehicle
TIGER	Transportation Investing Generating Economic Recovery
USDOT	United States Department of Transportation
WSP	WSP USA Inc.
ZEV	Zero-Emission Vehicle

INTRODUCTION

Project Background

As a model for New Jersey's electric vehicle (EV) adoption, Somerset County has committed to reducing carbon emissions through its 2018 EV Readiness Plan and 2021 Climate Change Policy Statement. As part of this broader electrification effort, the County is working to transition its large and diverse County fleet to zero-emission alternatives.

In 2025, Somerset County contracted WSP USA Inc. (WSP) to provide technical services for the development of a Somerset County Electric Vehicle (EV) Charging and Suitability Analysis (Somerset EV Study). The scope of work includes developing a County Fleet Electrification Transition Plan (Transition Plan), identifying secondary EV charging corridors and evaluating county-owned properties for publicly accessible EV charging infrastructure. This study will establish a comprehensive understanding of market conditions and best practices for transitioning both the County fleet and installing EV charging infrastructure, ultimately supporting actionable and context-sensitive implementation strategies.

Purpose of the Fleet Electrification Transition Plan

This document presents the County Fleet Electrification Transition Plan for Somerset County, strategizing the shift of county-owned and -operated internal combustion engine (ICE) vehicles to zero-emission vehicles (ZEVs). The scope and methodology of the County Fleet Electrification Transition Plan include an assessment of market-available technology, analysis of the county's existing vehicle fleet and particular uses, infrastructure assessment, workforce analysis, and lifecycle-cost evaluation. It details underlying assumptions, including vehicle range estimates, charging rates and requirements, funding availability, while providing technical and strategic recommendations, such as electric vehicle alternatives, charging infrastructure installation details and locations, County fleet management software, training needs assessment, and funding opportunities. The Transition Plan is organized into seven primary sections:

1. **Introduction**: Overview of the project background, ZEV transition plan purpose, data collection methodology and sources.
2. **Market Study**: Overview of existing ZEV technology and market conditions.
3. **Existing Conditions:** Overview of Somerset County's existing fleet and operations, facility and infrastructure, and workforce composition.
4. **County Fleet and Operations**: Overview of Somerset County's fleet and operations transition feasibility, recommendations, and emission calculations.
5. **Facility and Infrastructure**: Overview of upgrades to facility infrastructure and potential incorporation of new charging infrastructure and associated power needs.

6. **Workforce Development and Training:** Overview of existing staffing, training needs, and strategic recommendations for potential collaborators to support the training plan.
7. **Funding Analysis:** Overview of costs associated with the recommended EV County fleet transition, facility and infrastructure upgrades, and potential sources of financial support.

The Transition Plan is one element of Somerset County's ongoing Electric Vehicle Charging and Suitability Analysis. Alongside the development of the Transition Plan, the analysis also aims to identify secondary EV charging corridors (regional or state-designated highways, state routes, and tourist pathways that support interstate charging corridors) and charging locations on County-owned sites.

Data Collection Approach

Data used in the analysis for County fleet, operations, facility, workforce development, and funding analyses in the County Fleet Transition Plan was collected through various pathways.

The current County vehicle fleet inventory was provided in the County Vehicle Schedule. Vehicle details from the schedule include make, model, model year, vehicle type, and department of operation and ownership. This data was supplemented with vehicle use cases, defined as the typical function or purpose for which each vehicle is used (for example, administrative travel, police needs, and road maintenance), along with parking availability provided by the Vehicle Maintenance Division and Public Works Department.

Workforce development data was collected through coordination with the Transportation and Vehicle Maintenance Divisions. Job descriptions, qualifications, employee distribution, and general training requirements were collected and compared with those for equivalent roles in an EV fleet.

MARKET STUDY

Somerset County's fleet transition planning process requires an assessment of existing and emerging technologies in the United States that meet Somerset County's operational needs. Gathered through insights from WSP's ZEV fleet and infrastructure experts, with input from Somerset County staff, this section summarizes market conditions and availability for:

- Light- and medium-duty electric vehicles
- Heavy-duty vehicles and electric alternatives to other county-owned equipment
- Level 2 and Level 3 EV Chargers

The electric vehicle market is evolving quickly, driven by rapid technological advances. As battery-electric vehicles and charging infrastructure become more commonly adopted by the municipalities within the NJTPA's region, the County should evaluate both current trends and future developments in this space. This section provides an overview of the EV fleet market as it relates to the diverse services and operational needs of Somerset County.

Existing Fleet Options

This study primarily examines Battery-Electric Vehicles (BEVs) as a replacement for internal combustion engine (ICE) vehicles in the fleet. BEVs utilize on-board batteries to store and distribute energy, powering both the electric motor and other systems. Unlike ICE vehicles, BEVs produce zero tailpipe emissions, making them an ideal choice for reducing noise and air quality impacts.

Light- and Medium-Duty Vehicles

As the market demand primarily focuses on consumer vehicles, there is an increasing number of light- and medium-duty BEV options available for everyday passenger use. Sedans, SUVs, and passenger vans remain the most widely available BEV classes, with most Original Equipment Manufacturers (OEMs) offering at least one vehicle. There is also a growing market and adoption trend for full-size pickup trucks (Ford F-150 equivalent). While mid-size pickup models are limited in electric alternative availability, they are expected to enter the US market by 2027 due to growing demand. There are currently no updates for heavy-duty pickup applications.

While current options for all-electric cutaways remain largely limited to ICE platforms retrofitted with electric systems by third-party manufacturers, a few OEMs, such as GreenPower, offer electric cutaway vehicles with specialized chassis and platforms. Their EV Star passenger van and cab & chassis models provide comparable function and passenger capacity as needed by the County.

Table 1 summarizes light- and medium-duty BEVs available on the market, including those built on dedicated EV platforms, retrofitted EVs, and upfitted EVs.

- **Dedicated EV platforms** – Vehicles that are designed by the original manufacturer to be electric, rather than adapted from an ICE design.
- **Retrofitted electric vehicles** – Previously, ICE vehicles that were converted to electric propulsion by replacing the ICE components (engine, fuel system, exhaust, etc.) with electric components (motor, battery, charging system, etc.)
- **Upfitted electric vehicles** – Factory-built electric vehicles that have been modified after production to perform a specific function, such as delivery, heavy maintenance, or transportation.

Table 1: Light- & Medium-Duty Battery Electric Vehicles Market Availability

Vehicle Class	Example	Type	Manufacturer(s)	Advertised Range (Miles)	Average Base Price	Battery (kwh)
Sedan	 Tesla Model S	Dedicated Platform	Audi, Nissan, Fiat, Mazda, Hyundai, Tesla, Polestar, Dodge, Volkswagen, BMW, Genesis, Lucid	114-516	$30,000 - $65,000	33-118
SUV/MPV	 Tesla Model Y	Dedicated Platform	Acura, Audi, BMW, Cadillac, Chevrolet, Fisker, Ford, Genesis, GMC, Honda, Hyundai, Kia, Lexus, Nissan, Rivian, Polestar, Subaru, Tesla, Toyota, Vinfast, Volkswagen, Volvo	181-381	$39,590 - $100,000	58-212
Van	 Mullen One Cargo Van	Dedicated Platform	Ford, Mullen, Rivian, Ram, GMC, Freightliner, Mercedes-Benz, EVTV, GM, Blue Arc	140-273	$68,900- $277,000	42-226
	 Ford E-Transit Van	Upfit	Ford, Forest River Van, MobilityTrans*, Sunset Vans	116-273		50-75
	 Retrofitted RAM 350 (by Sunset vans)	Retrofit	US Hybrid, Sunset Vans, Driverge, EVgine	60-210		43-180

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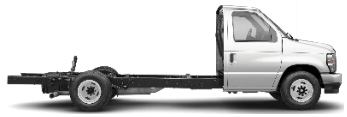
Vehicle Class	Example	Type	Manufacturer(s)	Advertised Range (Miles)	Average Base Price	Battery (kwh)
Pick-up Truck	 Rivian R1T Pickup Truck	Dedicated Platform	Ford, Chevrolet, GMC, Rivian, RAM,	240-320	$50,000 - $87,090	98-131
Cutaway (Vehicle built on a truck-based chassis)	 Ford E-Transit Cutaway	Dedicated Platform	GreenPower, Ford	150	$45,000-$313,000	118
	 Retrofitted Ford E450 (by Optimal)	Retrofit	Phoenix, Optimal, Endera, Motiv	105-150		94-156

Source: WSP, OEM, CalAct Pricing, California Clean Truck and Bus Voucher incentive Project
**Distributed via Model1 & Creative Bus Sales*

Retrofits are an affordable option for existing vehicles that are not nearing the end of their useful life. There is a growing number of companies (such as EVgine and PhoenixEV) that offer traditional ICE-to-BEV conversion services for a wide range of vehicle types. However, these services should consider the impact on OEM warranty coverage.

Heavy-Duty Vehicles and Other Equipment

The all-electric heavy-duty vehicle market is transitioning from early adoption to mainstream consideration. Most major truck OEMs now offer EV products, including some vocational trucks. These vocational trucks are commercial vehicles designed primarily to perform a specific job in addition to transportation. Examples of vocational trucks include, but are not limited to, refuse and recycling trucks, snowplows, utility service trucks, and emergency response vehicles.

In recent years, major construction equipment manufacturers have also begun introducing all-electric vehicles into their fleet offerings. 2023 and 2024 saw the first all-electric skid steer loader from Bobcat[1], and a backhoe loader from CASE Construction[2] introduced to the US market, respectively. Despite these new offerings on the market, range limitations, charging time, and higher costs remain barriers to mainstream private adoption. For public fleets, as is the case with the County, these challenges may be less restrictive, particularly for straight-truck applications with limited vocational needs. This trend indicates that the near future will continue to bring demand-driven market innovation that may satisfy the County's existing heavy-duty vehicle use cases.

[1] Bobcat Unveils World's First All-Electric Skid-Steer Loader & New Autonomous Concept Machine - Bobcat Company
[2] CASE Leads Electric-Powered Evolution, Releases Industry's First Electric Backhoe Loader | CASE

Table 2: Heavy-Duty Battery Electric Vehicles Market Availability

Vehicle Class	Make & Model(s)	Advertised Range (Miles)	Average Base Price	GVWR(lbs)	Battery (kwh)
Refuse Truck	Mack Trucks LR Electric, McNeilus Volterra, Peterbilt 520EV, Heil RevAMP eASL	80-120 miles	Not Available	66,000	375-665[3]
Patrol Vehicle	Chevrolet Blazer	286 miles	Not Available	6,945	102
Fire Truck	Pierce Volterra, Rosenbauer RTX		Not Available	42,000	155-246
Backhoe Loader	CASE 580EV	4-8 hrs*	Not Available	19,947	72.7
Excavator	Volvo ECR18/25 CASE CX15EV/ CX25EV, Bobcat E10e/E19e	5 hrs*	$230,000	23,589	264
Wheel Loader	Volvo L20/L25/ L120, CASE 12EV	4-6 hrs*	$131,373 for lower end	10,802-46,297	40-282
Skid Steer Loader	Bobcat T7X, First Green Elise	6 hrs*	Not Available	12,590	72.6
Asphalt Compactor	Volvo DD25	4 hrs*	Not Available	2,676	20

Source: WSP, OEM, New York Truck Voucher Incentive Program

Charging Infrastructure

EV charging technologies are essential for enabling Somerset County's transition to an electric fleet. While not as diverse in function and features as electric vehicles, electric vehicle supply equipment (EVSE) is available from many manufacturers in varying models for the County. It is essential to carefully consider each charger model's cost, features, charging output, and other capabilities.

Level 1 chargers are nozzle cords that connect to standard 120V outlets and offer basic charging capabilities, providing 3-5 miles of range per hour for sedan vehicles. Level 1 chargers provide low power output and typically require minimal to no electrical upgrades. Vehicles can use this charging type with access to a standard outlet. Somerset County could consider adding outlets for overnight charging near parking areas as part of future site work or renovations. The primary drawback is the long charging time, which generally necessitates

[3] The Heil RevAMP eASL is a fully electric automated side loader, featuring a 46 kWh independent battery pack that operates the packing and lift arm functions without drawing energy from the chassis.

a dedicated (non-shared) outlet. In addition, there is currently no widely available capability to monitor usage, unlike Level 2 and Level 3 chargers.

Level 2 chargers operate at 240V AC power, similar to large household appliances or 208V, delivering power outputs between 3.3 kW and 19.2 kW. These are ideal for overnight charging vehicles with smaller batteries, balancing charging speed and energy efficiency. Their slower, steadier charging process helps maintain battery health, making Level 2 chargers a cost-effective option for vehicles with smaller batteries, longer downtime, or limited daily mileage. There is a diverse range of providers in the market, including BTC Power and ChargePoint. It's important to note that the pricing of these chargers can vary significantly based on the OEM and the specific features of each model. For most of Somerset County's electric vehicle fleet operations, Level 2 chargers are generally sufficient.

Level 3 chargers, or Direct Current Fast Chargers (DCFC), provide significantly higher power output, between 30 kW and 350 kW, at an operating voltage of 480V AC power. They can charge a passenger vehicle substantially in less than an hour, making them suitable for fleets with high usage and limited charging time. While Level 3 chargers can help keep operations running smoothly and minimize downtime, they come with higher installation and operating costs and may impact battery health due to the nature of rapid charging.

Smaller battery capacities generally reduce vehicle range and may limit performance under high-demand conditions (e.g., weight, weather), which can require more frequent charging and tighter route planning. In a countywide context, these constraints could limit operational coverage or flexibility for longer or dispersed trips unless supported by strategically located charging infrastructure or deployment of higher-range vehicles for certain uses.

Table 3 presents a selection of Level 2 and Level 3 DC Fast Chargers aligned with Somerset County's operational needs, and public charging capacity associated with Task 5 of the larger EV study. Note that this represents a preliminary selection rather than an exhaustive inventory of all market-available chargers. Selecting chargers with appropriate charge rates is essential to ensure they meet the operational demands, specific charging capabilities, and constraints of the County's electric vehicle fleet.

Table 3: Market Available Level 2 and Level 3 Chargers

Type	OEM	Model	Max Output (kW)	Min Dispenser Power (kW)	Max Cabinet Dispenser Ratio
Level 2	ABB	Terra AC Wallbox	19	NA*	1:1
	Autel	MaxiCharger AC	12	NA*	1:2
	Blink	Series 8	19	NA*	1:2

	BTC Power	AC Charger	19	NA*	1:1
	ChargePoint	CPF50	12	NA*	1:2
	Delta	AC Max	11-22	NA*	1:1
	Flo	CoRe+ Max	19	NA*	1:2
	Nuvve	Power Port	19	NA*	1:1
Level 3	ABB	Terra/HVC	90-350	50-90	1:2
	Autel	MaxiCharger DC	40-240	40-60	1:2
	BTC	Gen4/Split System	180-360	90	1:2 to 1:4
	ChargePoint	Express	62.5	62.5	1:1
	Freewire	DC Boost Charger	150	75	1:2
	Heliox	Flex 180	180	60	1:3
	Kempower	Various Models	50-600	25-50	1:2 to 1:12
	PE	Various Models	30-1440	30-60	1:1 to 1:24
	TPG	DCFC	30-180	30-90	1:1 to 1:2

Source: WSP and Charger OEMs
**Minimum dispenser power depends on whether the chargers can charge concurrently or only sequentially*

Despite the forward momentum, fleet operators executing transition plans are facing internal and external challenges largely driven by the high upfront cost of ZEVs and infrastructure, a shrinking pool of OEMs, domestic policy, and political volatility.

While the County's passenger vehicles (i.e., sedans, vans, SUVs) benefit from long periods of downtime, allowing for extended charging opportunities, the feasibility of transitioning the County's heavy-duty and vocational vehicles to EVs will be limited by the charging capacity of available batteries in the market. These vehicle types require sufficient range to complete daily functions without frequent mid-service charging. This requirement may pose a challenge, especially when operating under extreme weather conditions.

However, ongoing advancements in battery technology are expected to lower costs and make electric vehicles more financially viable for operators, with battery capacity projected to improve by at least 5 percent annually over the next decade[4]. At the same time, established OEMs continue to expand product availability into new market segments and work to commoditize

[4] Heineke, Kersten, Philipp Kampshoff and Timo Möller. "The Trends Transforming Mobility, Electric Vehicles, Autonomous Driving, and Micromobility." mckinsey.com, 12 March 2024, www.mckinsey.com/industries/automotive-and-assembly/our-insights/spotlight-on-mobility-trends.

batteries. This offers the benefit of improved performance, reduced costs, and access to existing repair and support infrastructure.

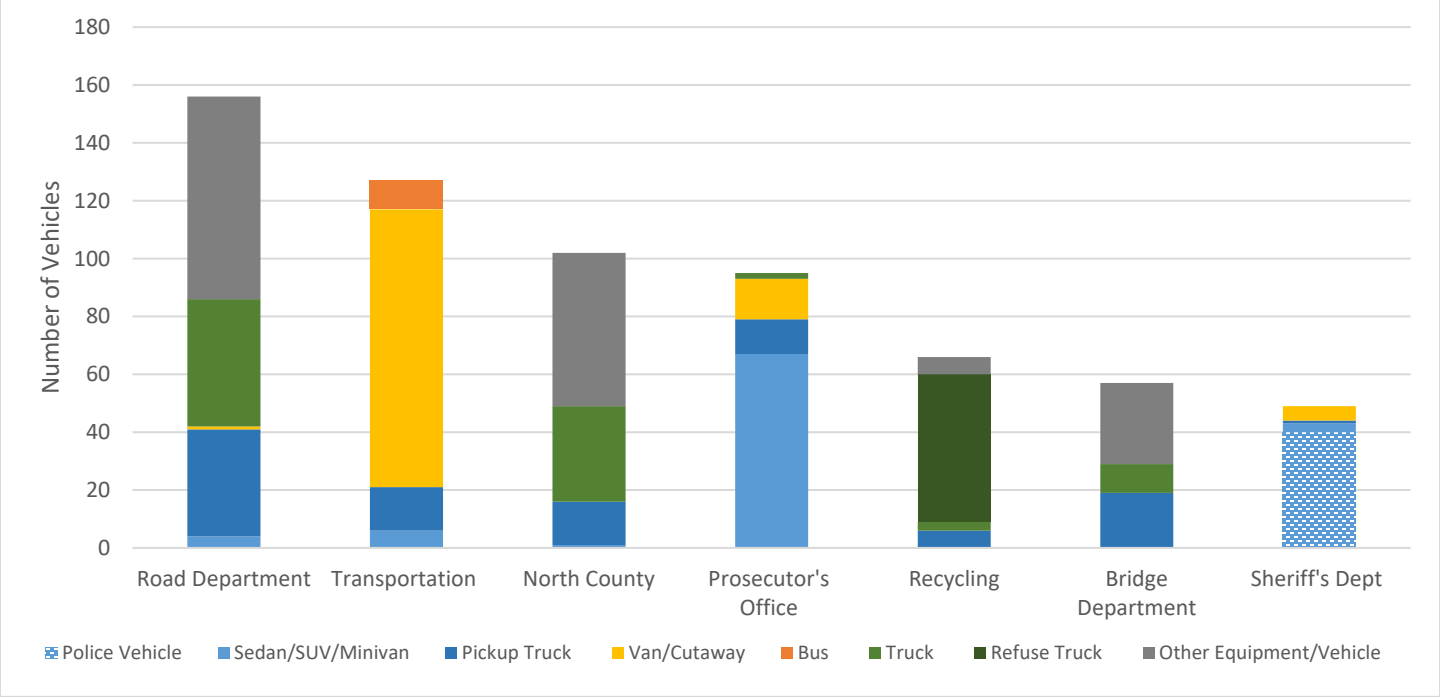
CURRENT COUNTY FLEET PROFILE

County Fleet Composition

As of early 2026, the County operates a fleet of 872 vehicles across 39 departments. The most common vehicle types within the County fleet are sedans/SUVs/minivans (204), other equipment (163), heavy-duty trucks (136), light-/medium-duty pickup trucks (129), vans (71), and cutaways (63). A cutaway is a type of vehicle chassis that consists of a front cab (driver area) with the rear portion "cut away," leaving an open frame that can be customized with different bodies

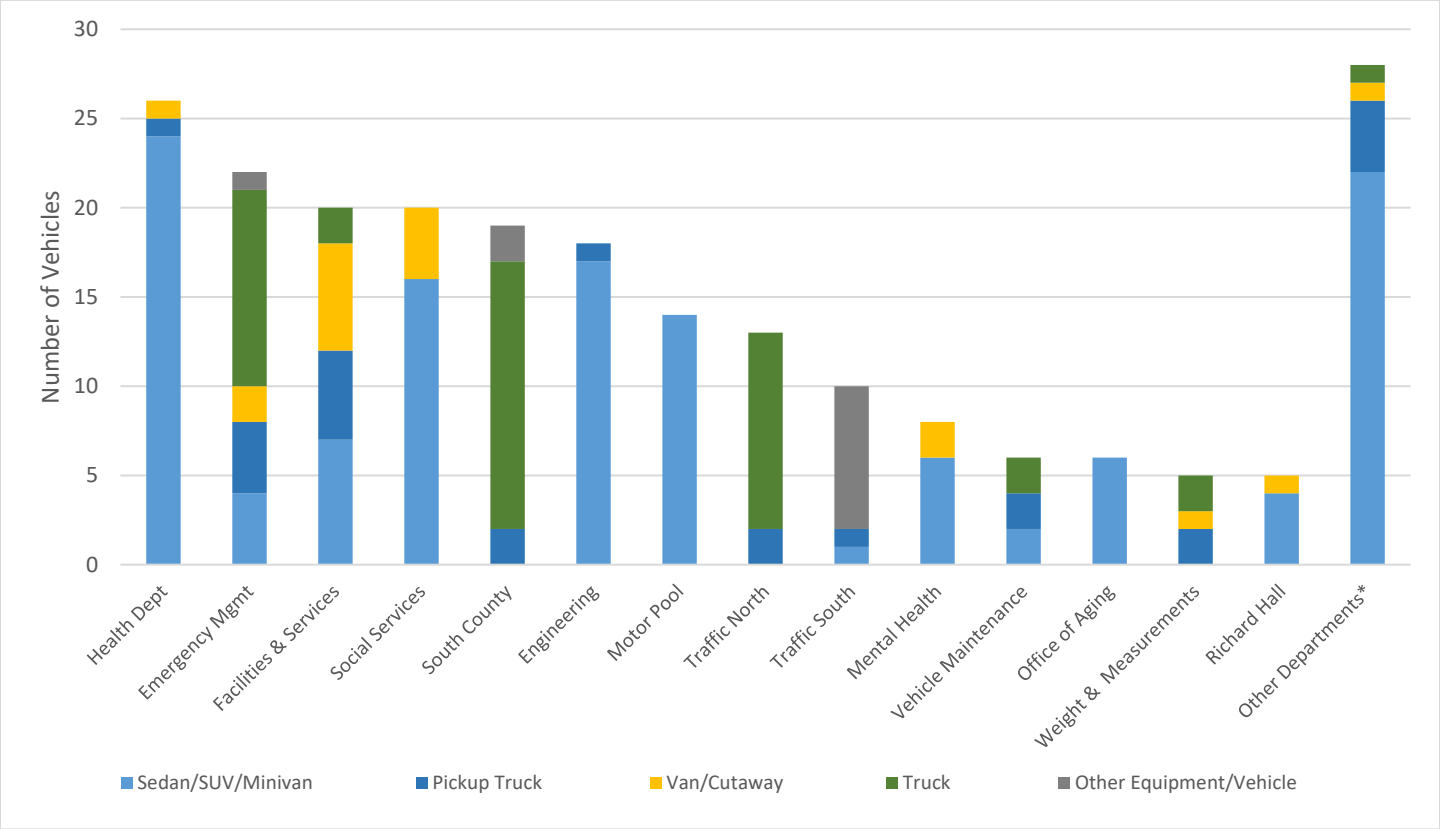
Vehicle types can be further broken down by vehicle use, which may vary widely between individual vehicles. For example, heavy-duty trucks include hook lifts, street sweepers, dump trucks, and tractors, amongst other vocational trucks. Figure 1 and Figure 2 summarize Somerset County's existing vehicle fleet. Departments with larger fleets exhibit a more diverse mix of vehicle types, including higher shares of trucks, vans, cutaways, buses, and other equipment. In contrast, departments with smaller fleets are primarily composed of light-duty vehicles such as sedans, SUVs, minivans, and pickup trucks.

Figure 1: Somerset County Vehicle Fleet by Department (>30 Vehicles)



Source: Somerset County, February 2025 (Some departmental figures reflect December 2025 & February 2026 updates)
Other Equipment = Backhoe Loaders, Excavators, Loaders, Tractors, Utility Vehicles, Boats

Figure 2: Somerset County Vehicle Fleet by Department (<30 Vehicles)



Source: Somerset County, February 2025 (Some departmental figures reflect December 2025 and February 2026 updates)
**Other Departments = 4-H, County Extension Services, County Surrogate, Court Administrator, Economic Development Department, ESTA, Fire Academy, Human Services, MIS, Peapack Barn, Planning Board, Probation, Public Health & Safety, Soil Conservation, Solid Waste, and Youth Services*
Other Equipment = Backhoe Loaders, Excavators, Loaders, Tractors, Utility Vehicles, Boats

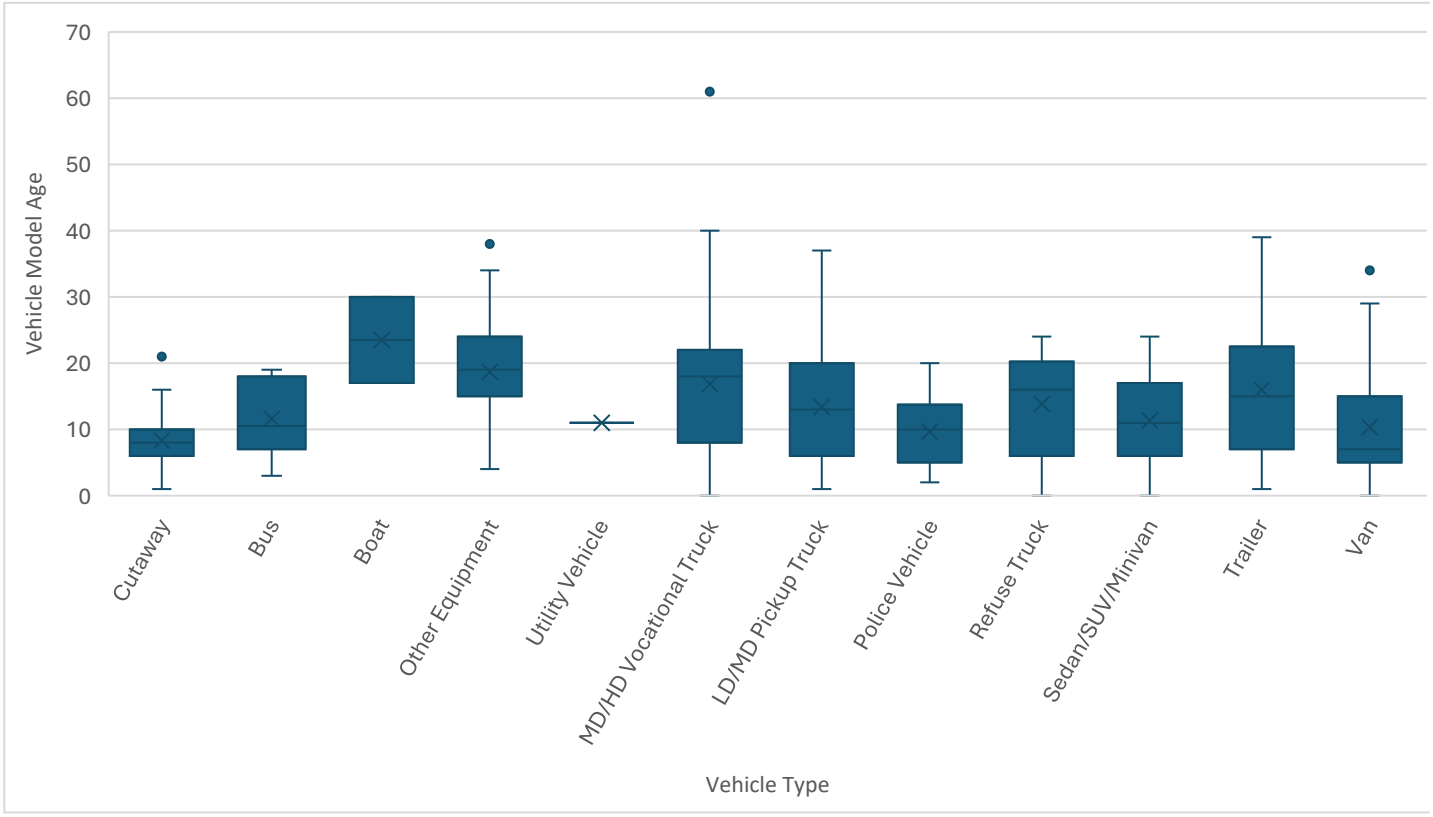
The Road Department operates the largest fleet, dominated by pickup trucks, heavy-duty trucks, and other specialized equipment required for roadway and infrastructure maintenance. This is followed by the Transportation Division, whose fleet is largely composed of cutaways for passenger transportation services. The North County Garage also maintains a sizable fleet with a vehicle composition similar to that of the Road Department. The Recycling Department maintains a smaller but specialized fleet, with a majority of its vehicles consisting of refuse trucks.

The Prosecutor's Office fleet is primarily composed of sedans, SUVs, and minivans. While the department would have the largest fleet if all assigned vehicles in the database were included, only a portion of these vehicles are regularly parked at the County's facility. Based on prior discussions with the County and in the absence of detailed parking data, it was assumed that

approximately 50 percent of passenger vehicles are typically parked at the County location and are therefore included in this analysis, while the remaining vehicles are taken home and excluded.

As the County does not maintain a centralized vehicle condition database, the condition of the County fleet is reflected in the age of its vehicles. Vehicles with older model ages are assumed to be in a worse state of repair than vehicles with newer model ages. These older model vehicles make better candidates for replacement with EVs, as they are close to or beyond their useful life benchmarks.

Figure 3: Vehicle Model Age Distribution by Vehicle Types



Source: Somerset County, February 2025 (Some departmental figures reflect December updates)

As shown in Figure 3, the County's refuse trucks consist of model year vehicles within the last nine years (with the exception of a few outliers) and are assumed to be in a state of relatively good repair. As a result, refuse trucks have been assigned a lower priority in transitioning to electric vehicles. Additionally, there are fewer options for refuse trucks, and the cost of electrifying them is estimated to be significantly higher than for other vehicle types. By comparison, pickup trucks and medium- and heavy-duty trucks are better candidates for replacement because they are

generally older vehicles. While the chart above shows general trends within current vehicle type categories, the analysis for fleet transition prioritization is calculated on a vehicle-by-vehicle basis. Details regarding transition prioritization methodology and assumptions are provided in the Vehicle Types Section of this plan.

Vehicle Use Patterns

Most county vehicles are assumed to operate during standard weekday work hours (8 a.m. to 5 p.m.). However, certain departments, such as the Sheriff's Office, Roads & Bridges, Emergency Services, and Transportation, have vehicles with extended or variable duty cycles.

For the Sheriff's Office and emergency response units, vehicles must remain available 24/7. If electrified, these vehicles must always maintain a high state of charge. Other non-standard-use departments may operate outside typical work hours but are generally assumed still to have at least eight hours of daily downtime. This variability in downtime can support efficient charger planning by staggering charging loads based on each fleet's available downtime.

Because detailed usage data (monthly miles or hours) is unavailable, industry-standard average usage assumptions are applied in the subsequent fleet transition tasks. Specific use cases per vehicle are also unavailable; however, several specialized vehicles are known, including pursuit-rated police SUVs, fire trucks, ambulances, and various heavy-duty equipment such as paint trucks, boom trucks, yard tractors, refuse trucks, dump trucks, hook-lift trucks, street sweepers, sewer cleaners, and bucket trucks.

Table 4 summarizes the assumed monthly usage per vehicle for each vehicle type.

Table 4: Assumed Monthly Usage per Vehicle

Vehicle Type	Average Usage Monthly	Unit
Backhoe/Loader and Excavator	90	Hours
Boat	13	Hours
Chippers/Stump Grinders	40	Hours
Bus	3750	Miles
Heavy Duty Refuse Truck	3000*	Miles
Medium/Heavy Duty Truck	1375	Miles
Pickup Truck	950	Miles
Full Size Van / Cutaway	2000	Miles
Loader	60 - 70	Hours
Sedan/SUV/Minivan (including Police Vehicles)	1033	Miles
Paving Equipment	15	Hours
Utility Vehicle	135	Hours

Source: EPA MOVES, NREL AFLEET
** Based on Somerset County's usage*

Parking Facilities

As a provider of a range of public services, the County owns and operates a wide variety of facilities. Facilities vary in size, operational function, departmental use, office-to-parking ratio, land use, power supply, public accessibility, and other qualities that affect the facility's feasibility of transitioning to a ZEV-compatible facility.

The county parking facility with the highest vehicle concentration is at the South County Garage and Emergency Management complex, which supports fleet vehicles from Roads & Bridges, Emergency Management (including the Fire Academy and the Emergency Services Training Academy), as well as South County and Traffic Operations (Table 5).

The second largest concentration of fleet vehicles is located at the Bernie Field Parking Garage. This facility supports fleets for departments based in both the County Complex area and the nearby Courthouse, Prosecutor's Office, and Public Health buildings. The County Complex, located across from the Courthouse, houses the Sheriff's Department, Facilities & Services Department, Department of Engineering & Planning, and several additional operations. Due to limited on-site parking capacity at the Courthouse complex, departments located there utilize the Bernie Field Parking Garage to accommodate their fleet vehicles.

The Finderne Public Works Facility in Bridgewater houses all Transportation Division buses, cutaways, and vans. The North County Garage supports Public Works fleet operations, including vehicles assigned to the Traffic Department. The Social Services Buildings in Somerville similarly support multiple departments, including Health, Office of Aging, Weights & Measures, and Youth Services. Other facilities tend to house fleets dedicated to specific departments. It is important to note that Somerset County does not own the Social Services and 4-H Buildings.

Table 5: Assumed Parking Locations

Building Name	Municipality	Number of Vehicles	Percent
South County Garage / Emergency Management/Services	**Hillsborough Township**	**266**	**30**
Bernie Field Parking Garage*	**Somerville Borough**	**211**	**25**
County Complex	*Somerville Borough*	*110*	*13*
Court House / Prosecutor's Office / Public Health	*Somerville Borough*	*101*	*12*
Finderne Public Works Facility	**Bridgewater Township**	**133**	**15**
North County Garage	**Bridgewater Township**	**115**	**13**
Recycling Center / Solid Waste	**Bridgewater Township**	**67**	**7**
Human Services Building	**Somerville Borough**	**50**	**6**
Social Services Main Building	**Somerville Borough**	**20**	**2**
4-H / Soil Conservation Building	**Bridgewater Township**	**5**	**1**
Richard Hall	**Bridgewater Township**	**5**	**1**
Total		**872**	**100**

Source: Somerset County, February 2025 (Some departmental figures reflect December 2025 and February 2026 updates)
**Bernie Field Parking Garage houses department fleets that are located at both the County Complex and Court House / Prosecutor's Office / Public Health locations*

FLEET AND OPERATIONS

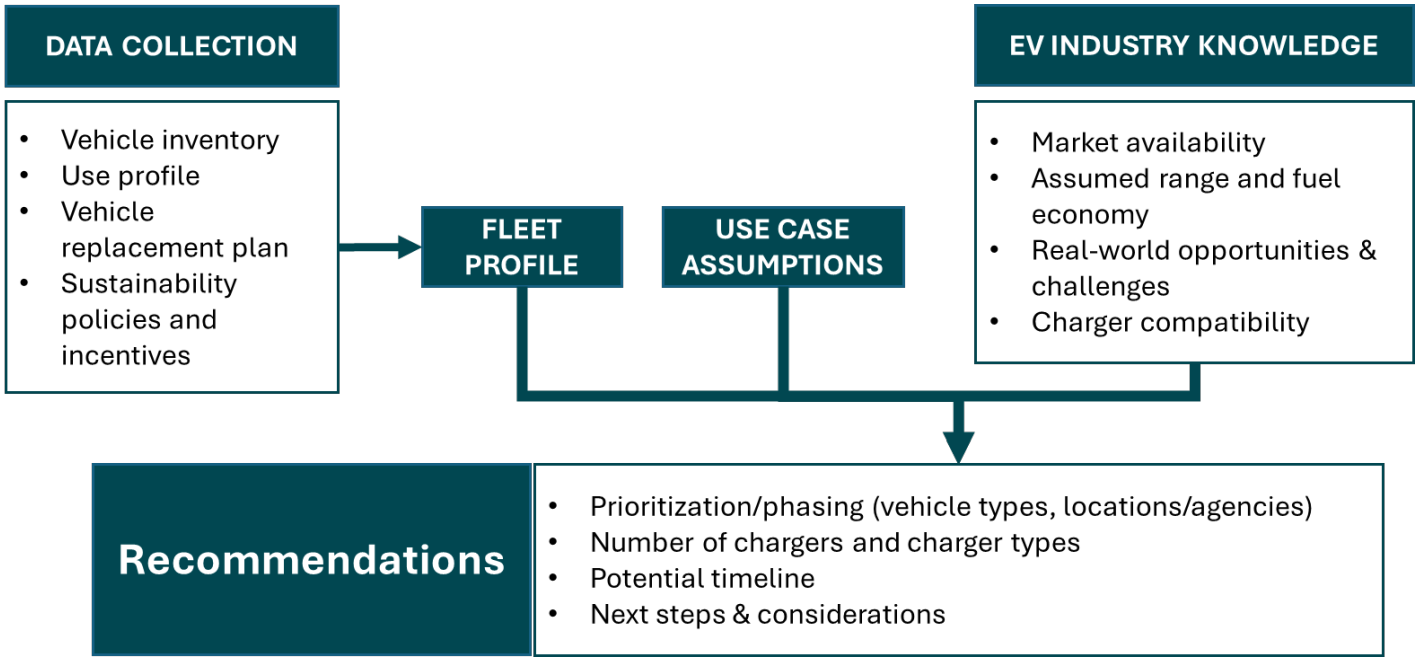
Developing a phased and comprehensive transition plan requires careful consideration of fleet technology readiness and operational feasibility. ZEV technology remains in an early stage of market development, creating constraints related to driving range, capital cost, and the limited availability of certain vehicle classes. As a result, initial phases of the transition should focus on vehicle types that demonstrate higher technological maturity and commercial availability.

Infrastructure requirements further influence the sequencing of fleet replacement. Because many ZEVs require overnight charging, grouping transition feasibility by parking location is essential. This approach allows vehicles stationed at the same facility to share charging assets where practical, thereby reducing overall infrastructure investment and improving operational efficiency.

The following sections will outline the vehicle categories recommended for early transition, the prioritized facility locations for infrastructure deployment, and the associated charging strategies. In addition, the plan will identify the departments best positioned for initial adoption and provide estimated emissions reductions expected from the shift to ZEV technologies. The results of the fleet and operational feasibility analysis also inform several subsequent planning considerations, including facility and electrical infrastructure upgrade requirements, the anticipated transition

timeline, and projected workforce needs. Figure 4 summarizes the analysis methodology used throughout this section.

Figure 4: Fleet and Operation Prioritization Methodology



Source: WSP

Vehicle Types

Market conditions show significant variation in the maturity and availability of ZEV technologies across different vehicle classes. In general, smaller and lighter-duty vehicles have more established ZEV options, while larger vehicles remain constrained by availability, range, cost, and charging requirements. The recommended transition priorities are organized into tiers based on technology readiness, operational feasibility, and infrastructure needs.

- **Tier 1: Most Feasible for Early Transition**

  Tier 1 includes electric sedans, SUVs, and light-duty utility vehicles. These vehicle types are widely available and can meet most standard daily mileage requirements. While capital costs remain higher than those of internal combustion engine (ICE) vehicles, their operational performance is comparable for routine duty cycles, and their operations and maintenance costs are typically lower. Tier 1 vehicles are compatible with Level 2 AC charging, enabling overnight charging at relatively low infrastructure cost. These factors make Tier 1 the lowest-risk and highest-benefit category for initial adoption.

- **Tier 2: Feasible for Early Transition with Operational Considerations**

  Tier 2 encompasses buses, full-size pickup trucks (F-150 equivalent), cargo/passenger vans (Ford Transit equivalent), and pursuit-rated police vehicles. Availability in these segments continues to expand, and real-world performance improvements have strengthened their suitability for average-duty use. However, limitations persist for high-demand scenarios such as cold-weather operations or heavy towing due to battery capacity/range constraints. Considering that detailed vehicle-level usage data is limited, discretionary assessment by fleet managers is recommended, particularly for critical-function assets. It is important to note that patrol vehicles used by the Sheriff's Department may be suitable for earlier electrification if operational needs can be met by non–pursuit-rated electric SUVs, which are more readily available in the market.

  To account for the operational nuances among different vehicle types, an intermediate tier—Tier 2b—has been designated for assets that are not direct equivalents to Tier 2a vehicles but may feasibly be replaced by them in certain contexts. This includes small and mid-size pickup trucks as well as large shuttle buses. These vehicle types may serve similar functional roles or share overlapping operational profiles, making them suitable candidates for transition following the core Tier 2 categories.

- **Tiers 3–6: Mid- to Long-Term Transition Candidates**
  Vehicle types classified under Tiers 3 through 6 face more significant challenges, including limited ZEV availability, insufficient range for operational demands, or higher charging power requirements. Because these constraints reduce near-term feasibility, transitions for these tiers should be considered only after substantial market advancement or when operational conditions permit.

In summary, **early-stage transition** efforts should focus on **Tier 1, Tier 2a, and Tier 2b** vehicles, which represent the most technologically ready and operationally practical categories for ZEV deployment. As ZEV technologies mature and operational data improve, Tiers 3–6 can be revisited to support longer-term fleet decarbonization. Detailed descriptions of each tier and associated constraints are provided in Table 6.

Table 6: Prioritization Tier by Vehicle Types

Prioritization Tier	Description	Vehicle Types
1	Vehicles are available and widely adopted	Sedan, SUV, Utility Vehicle, Minivan
2a	Vehicles available from limited OEMs; increasing adoption, but with challenges.	Bus, Full Size Pickup Truck, LD Cargo/Passenger Van, Pursuit Rated Police Vehicles
2b	No direct zero-emission replacements currently exist, but the operational use cases are similar enough that substitution with a Tier 2 vehicle is considered feasible.	Small/Mid-Size Pickup Truck, MD/HD Shuttle Bus (Larger than cutaways)
3	Only available in small numbers or pilot programs, with adoption restricted to niche applications.	Truck Tractor, MD/HD Vocational Trucks
4	Limited availability through third-party retrofitters, with unproven performance and limited warranty or maintenance support.	Cutaway, MD/HD Delivery Van
5	Emerging technology. Very limited to no availability, or unsuitable duty cycles. More models have been announced and are expected to enter the market within the next five years.	Refuse Truck, Backhoe/Loader, Boat, Compact Loaders, Specialized MD Trucks
6	No foreseeable commercial options in the near term	Heavy-Duty Pickup Trucks, Chippers/Stump Grinders, Excavators, Specialized HD Trucks, Large Loaders, Pavers

Source: WSP

Prioritized Parking Locations

Electrification infrastructure is inherently site specific and capital intensive. Unlike vehicles, which can be procured incrementally, charging infrastructure requires upfront investment in electrical service upgrades, distribution equipment, civil works, and permitting. The County will obtain any and all necessary permits. As a result, the sequence in which locations are electrified has a material impact on overall program cost, infrastructure utilization, and long-term scalability.

Thus, a comprehensive location-based prioritization approach ensures that infrastructure investments are aligned with locations that can support meaningful near-term deployment of prioritized vehicle types, which also provides a pathway for future expansion as additional vehicle classes become electrifiable.

Building on the previously established vehicle type prioritization tiers, vehicle parking location data were used to translate vehicle-level readiness into a location-based electrification strategy.

This step recognizes that while electrification feasibility is determined by technology availability and operational suitability, implementation is ultimately constrained and enabled by where vehicles are parked and charged.

Table 7 summarizes the prioritization criteria and considerations for the existing County fleet parking locations. Tiers 5 and 6 are excluded due to very limited market availability and operational feasibility.

Table 7: Parking Locations Prioritization Criteria

Priority Level	Criteria	Considerations
Priority 1	Tier 1 vehicles make up > 80% of the vehicles parked	• Highest readiness for near-term electrification due to the maturity of zero-emission technologies • Minimal operational disruption and relatively low infrastructure power requirements
Priority 2	Tier 1, 2a, and 2b vehicles make up > 90% of the vehicles parked	• High concentration of electrifiable vehicle types supports efficient and scalable infrastructure investment • Potentially longer electrification timeline than Priority 1 locations to ensure market maturity and operational suitability • May require a mix of Level 2 AC chargers and Level 3 DC chargers, unlike in the Priority 1 locations (more complexity).
Priority 3	Tier 1 to 4 vehicles make up >75% of the vehicles parked	• Mid-term electrification potential with higher technical complexity and greater uncertainty due to the limited availability of some vehicle types. • More substantial electrical upgrades are likely required to accommodate larger and higher-power vehicle classes. • Small-scale pilot deployments for Tier 3 and Tier 4 vehicles may be feasible; however, full-scale electrification is likely challenging in the near term due to technology limitations.
Priority 4	Tier 1 to 4 vehicles make up <75% of the vehicles parked	• Long-term electrification opportunities with significant technical and market barriers in the near term. • Electrification pathways remain uncertain and should be reassessed as market conditions and technology readiness evolve • Near-term electrification of limited Tier 1 or Tier 2 vehicles on-site (e.g., passenger cars/pickup trucks/vans) may be considered only if infrastructure upgrades are minimal and chargers can be shared efficiently.

Source: WSP

Figure 5 presents parking locations categorized by priority level, while Figure 6 provides a breakdown of vehicle prioritization tiers by parking location.

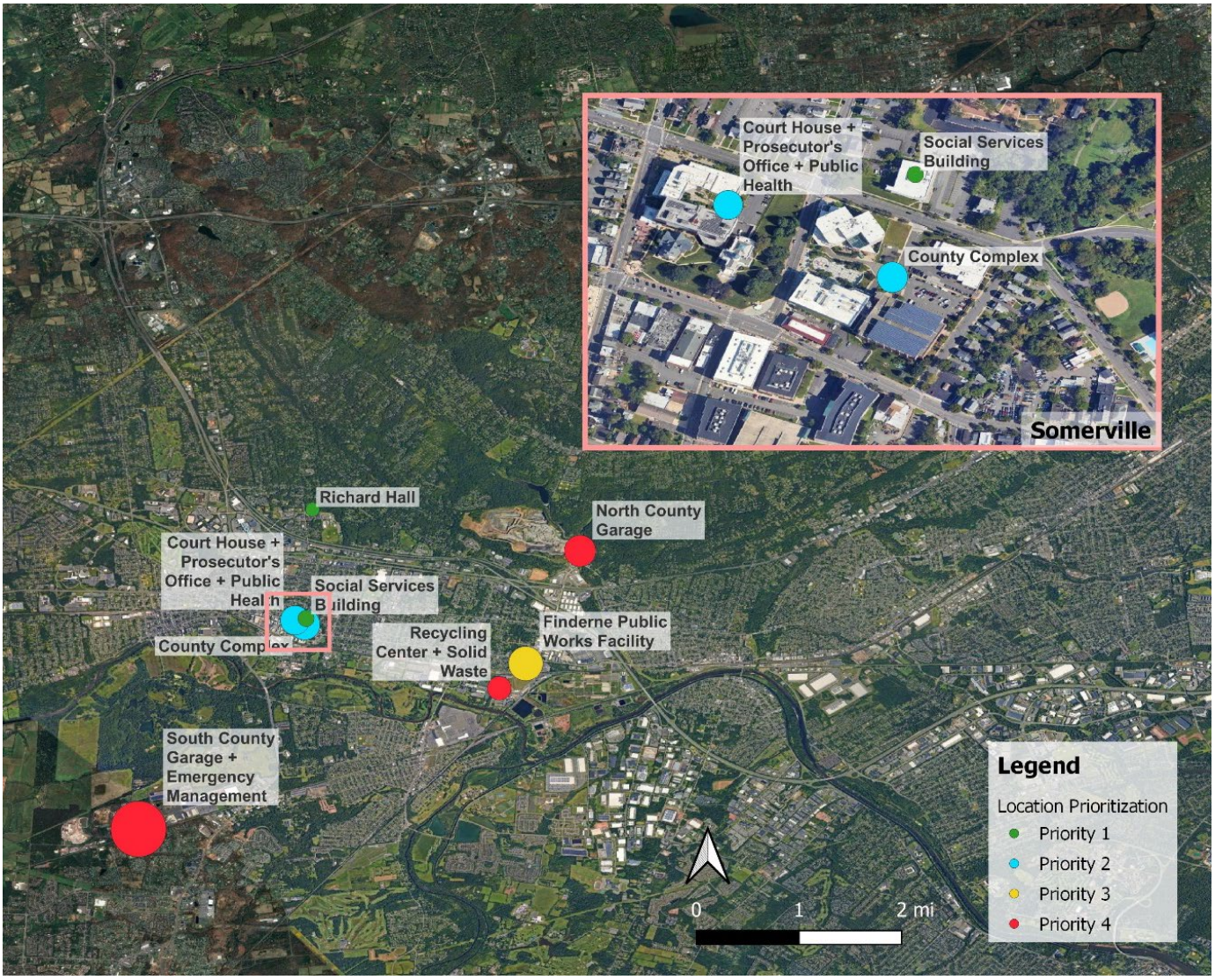
The Social Services Building and Richard Hall are classified as Priority 1 locations due to the high concentration of Tier 1 vehicles, primarily passenger cars. The dominance of passenger vehicles at these sites supports near-term electrification with minimal infrastructure complexity and high expected charger utilization.

The Courthouse, Prosecutor's Office, Public Health Complex and County Complex buildings are classified as Priority 2 locations. These sites maintain a high share of Tier 1 vehicles, while also accommodating Tier 2a and Tier 2b vehicles such as pickup trucks, vans, and police vehicles. Although electrification at these locations may require higher power capacity and a phased implementation approach, the overall County fleet composition supports efficient and scalable infrastructure investments.

The Finderne Facility is classified as Priority 3 due to its high proportion of cutaway vehicles. Currently, electric cutaways are offered primarily by newer OEMs or retrofit providers, and available real-time performance data, particularly in winter conditions, is limited. For this reason, it is recommended that electrification at this facility be deferred to allow additional technology development and the availability of more real-world performance data.

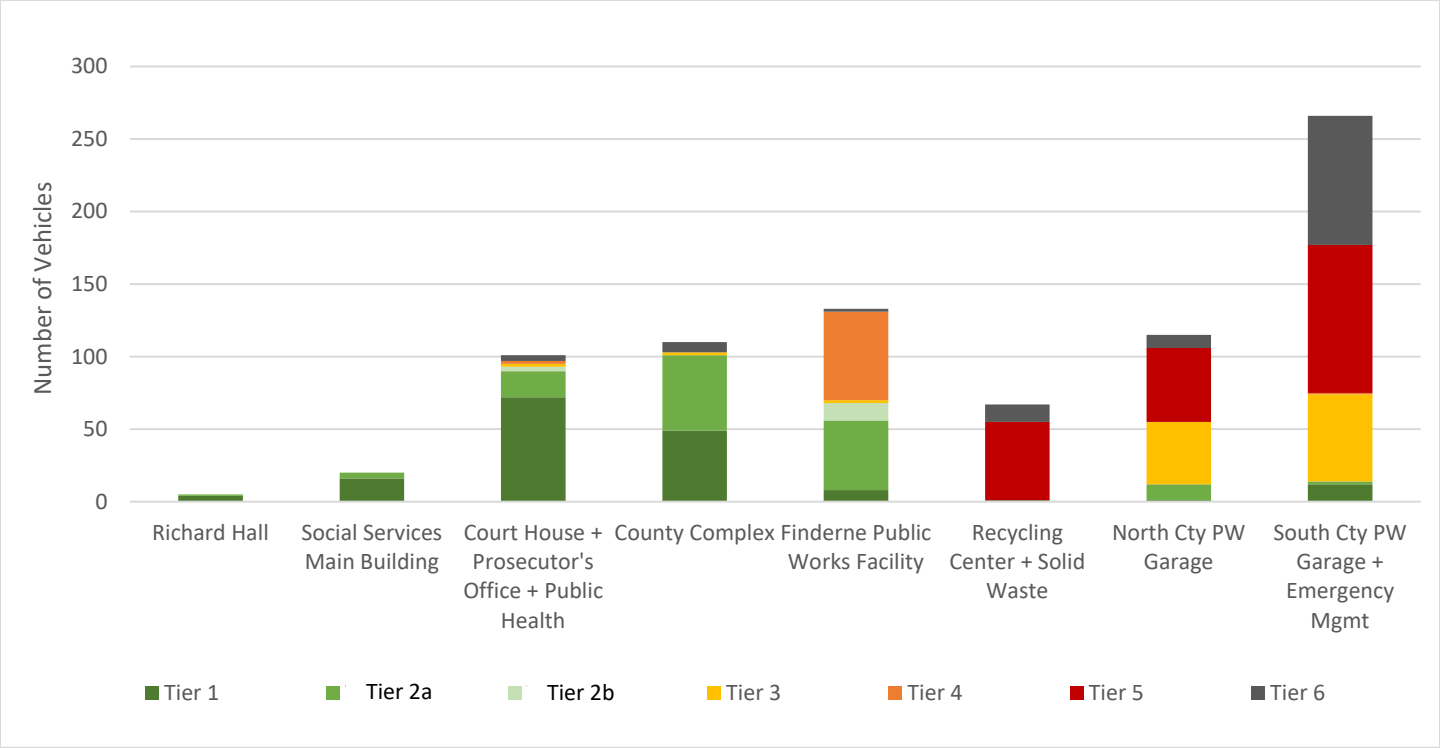
The Recycling Center and Solid Waste facility is categorized as a Priority 4 location. Most vehicles parked at this site are refuse trucks, which travel approximately 100 miles per day, exceeding the practical range of most commercially available electric refuse truck models, especially under harsh operating conditions. The North County and South County Garages are also classified as Priority 4 locations. These facilities primarily house heavy-duty road equipment with limited or no commercially available electric counterparts. Given the significant technical and market barriers associated with these vehicle types, near-term electrification at these locations is not currently feasible and should be revisited as vehicle technologies mature.

Figure 5: Parking Locations Prioritization



Source: WSP

Figure 6: Vehicle Tiers by Parking Locations



Source: WSP

It is important to note that even in lower-priority locations, there may be only a limited number of Tier 1 or Tier 2 vehicles that are technically feasible for near-term electrification. However, electrifying a small subset of vehicles may not be cost-effective, and infrastructure investments may risk becoming underutilized or stranded. Thus, electrification at lower-priority locations should be evaluated on a case-by-case basis and pursued only where infrastructure can be shared efficiently, utility upgrades are minimal, and investments align with longer transition plans.

4-H / Soil Conservation Building and Human Services Building are excluded from the prioritization analysis because neither is owned by the County.

Absent a comprehensive location prioritization framework, electrification efforts may proceed on a vehicle-by-vehicle or ad hoc basis. However, it could result in several inefficiencies:

- **Low infrastructure utilization,** where charging assets are installed to support a small number of vehicles at sites dominated by non-electrifiable equipment.
- **High cost per electrified vehicle,** as fixed electrical and construction costs are spread across limited vehicle counts.
- **Stranded or underutilized assets,** particularly at sites where the remaining County fleet is not expected to transition to zero-emission technologies in the foreseeable future.

- **Reduced scalability,** as early infrastructure investments may not be sized or designed to support future County fleet transitions.

Charging Strategy

Based on the assumed daily vehicle usage summarized in Table 4 and the vehicle types assigned to each facility, rule-of-thumb charger installation ratios were developed to size the charging infrastructure relative to the County fleet needs. These guidelines, summarized in Table 9, also outline recommended charger power levels for each vehicle category.

Most light-duty fleet vehicles are assumed to have at least eight hours per day available for charging. Under these conditions, Level 2 chargers at 11.5 kW are sufficient, and a single charger cabinet at this rating can typically serve two to three vehicles. Vehicles with higher energy demand, such as cutaways and police units, still qualify for Level 2 charging but require higher-power units of approximately 19.2 kW. One cutaway generally requires a dedicated charger, while police vehicles can share a high-power Level 2 charger at a ratio of roughly three vehicles per charger, assuming four hours of available charge time per day.

For medium- and heavy-duty assets, including trucks, buses, and heavy equipment, Level 3 DC fast charging is required due to larger battery capacities. Vehicles with moderate use can be supported by dedicated 60 kW chargers, while large transit buses and refuse trucks may need 90 kW DC fast chargers to meet operational requirements.

Sites with police, emergency services, or high vehicle counts should also include Level 3 contingency chargers to support resiliency and minimize operational downtime.

Table 8: Proposed Charger Assumptions

Function	Type	Recommended Power	Rules
Regular Charging	Level 2 AC Charger	11.5 kW	• Regular LD vehicles: 1 charger for 2 to 3 vehicles
		19.2 kW	• Transit Cutaways: 1 charger for 1 cutaway • Police vehicles: 1 charger for 3 police vehicles
	Level 3 DC Fast Charging	60 kW	• Regular MD/HD vehicles: 1 charger for 3 vehicles
		90 kW	• Transit Bus & Refuse Trucks: 1 charger for 1 vehicle
Contingency Charging	Level 3 DC Fast Charging	60 kW or 90 kW	• Contingency charging: support charging for approximately 20% of the daily service needs • For sites with police vehicles and emergency vehicles, and sites with more than 50 vehicles

Source: WSP
LD = Light Duty | MD = Medium Duty | HD = Heavy Duty

While Level 1 charging can support very low-use vehicles with extended dwell times, it is not included in charger-sizing assumptions due to its limited charging speed, lack of network

management, and the need for dedicated outlets, which together limit its effectiveness and scalability for County fleet operations (see Charging Infrastructure Section).

It is important to note that the duty cycles used in this analysis rely on industry-standard assumptions that may differ from Somerset County's actual vehicle use. While these assumptions are suitable for planning-level estimates, charger sizing should be refined during detailed design once real-world usage data is verified. If vehicles drive less than the industry average, there may be more opportunities for sharing, reducing the total number of chargers needed, particularly at locations with larger vehicles.

Table 9 provides a summary of the estimated charger requirements for each parking location.

Table 9 : Proposed Number of Chargers

Facility Name	Facility Priority	# of Vehicles	# of Chargers[5]		
			Level 2	L3 DC Charger - Regular	Recommended Contingency Chargers*
Social Services Building	1	20	10 (11.5 kW)	N/A	N/A
Richard Hall	1	5	3 (11.5 kW)	N/A	N/A
County Complex	2	110	34 (11.5 kW) 14 (19.2 kW)	1 (60 kW)	2 (60 kW)
Court House / Prosecutor's Office / Public Health	2	101	50 (11.5 kW)	1 (60 kW)	2 (60 kW)
Finderne Public Works Facility	3	133	122 (19.2 kW)	12 (90 kW)	5 (90 kW)
North County Garage	4	115	6 (11.5 kW)	32 (60 kW)	7 (60 kW)
Recycling Center / Solid Waste	4	67	5 (11.5 kW)	58 (90 kW)	12 (90 kW)
South County Garage / Emergency Management	4	266	40 (11.5 kW)	55 (60 kW)	14 (60 kW)

Source: WSP
** Contingency charging: support charging for approximately 20 percent of the daily service needs*

[5] Estimated charger quantities are based on vehicle type, assumed daily usage, available charging dwell time at each facility, and the ability to share chargers among vehicles with similar operational profiles. Industry-average daily usage was assumed. Only vehicles regularly parked at County facilities were included. Final charger quantities should be refined during detailed design based on verified fleet usage and parking patterns.

Prioritized Departments

In cases where the County prefers to track electrification progress by department rather than by parking location, similar prioritization tiers can be applied based on the vehicles each department owns or operates. Table 10 summarizes the resulting department-level prioritization. While this approach can support internal planning needs, it is recommended that parking location remains the primary basis for determining electrification sequencing. Physical site constraints, such as required facility upgrades, available space, utility capacity, and opportunities for charger sharing, may have a greater impact on electrification feasibility than departmental structure.

Table 10: Prioritization by Department

Priority Tier	County Fleet Size				
	0-3 Vehicles	4-15 Vehicles	16-50 Vehicles	51-100 Vehicles	>100 Vehicles
Priority 1: Tier 1 > 80%	- Planning Board - Probation - MIS - Economic Dev - Court Admin - County Surrogate - State Probation - Solid Waste	- Motor Pool - Richard Hall	- Engineering - Social Services		
Priority 2: Tier 1+2 > 90%	- Public Health & Safety - County Extension Services		- Sheriff's Dept	- Prosecutor's Office	
Priority 3: Tier 1-4 >75%		- Traffic North County	- Facilities & Services - South County Garage		- Transportation
Priority 4: Tier 1-4 <75%	- Fire Academy - Emergency Services Training Academy	- Vehicle Maintenance - Traffic South County	- Emergency Management	- Recycling - Bridge Department	- Road Department - North County Garage

Source: WSP

FACILITY AND INFRASTRUCTURE UPGRADES

Public Service Enterprise Group (PSEG) is the electric utility provider for Richard Hall, Human Services Building, County Complex, Courthouse, Prosecutor's Office, and Public Health facilities. To support new charging infrastructure, coordination with PSEG requires providing them with the addresses and utility account numbers for each facility, and, if necessary, a letter of authorization. In addition, an electric service application or load letter must be completed and submitted to PSEG so they can create a job number to reference each project. PSEG will assign a representative to follow up on projects associated with each job number, review submissions, and evaluate site conditions. It is important to note that some addresses may have multiple account numbers, possibly designated for separate applications. This would be verified as well.

Somerset County supported WSP's initial coordination with PSEG to better understand existing utility infrastructure and each facility's power usage by providing WSP with all items PSEG requested (addresses, account numbers, and a letter of authorization). After sharing these items, along with an existing service form for utility data, PSEG requested a mandatory site meeting. As this meeting had not yet been scheduled, WSP was not able to evaluate, at a high level, whether the existing utility transformer has sufficient capacity or the required voltage service to support the new charging infrastructure as tabulated in Table 10. Therefore, the assumption is to proceed with requesting new designated electric service from PSEG for the new EV charging infrastructure, with a transformer size per the load requirement and a voltage service that meets the chargers' operating voltage.

Further efforts from PSEG will include conducting capacity checks on their infrastructure to determine whether it is feasible to add the anticipated new load to their system. Results from this coordination will include confirmation of new service feeder entrance locations, the location of utility company equipment at the site, timeframes for providing new service, utility upgrades (including rough order-of-magnitude costs), and the reliability of the substation serving the site.

Richard Hall

Existing Conditions

Facility

Richard Hall Mental Health & Wellness Center is a Priority 1 location in Bridgewater that is the most frequently visited county-owned building and is ideal for near-term deployment. It is part of a cluster of county facilities that provide public services, including the Somerset County Library across the street. Additional nearby amenities, such as Vo-Tech, baseball fields, a mall, offices and major roads, make this location a central node for public activity. It is located near an existing charging station, and its proximity to Route US-22 and I-287 makes it ideal for DC fast charging.

Figure 7: Richard Hall Site Entrance

Source: Google Earth

Entry to the site is only from the east on Vogt Drive, and no left-turn lane is permitted from the west. From the entrance of the parking lot, there are four ADA and 48 standard stalls to the left, in front of the original wing of the Richard Hall building. To the right, the parking lot wraps around the building's later addition, with six ADA and 121 standard stalls. Two dumpsters and a shed are located at the back northwest corner.

Figure 8: Richard Hall Aerial View

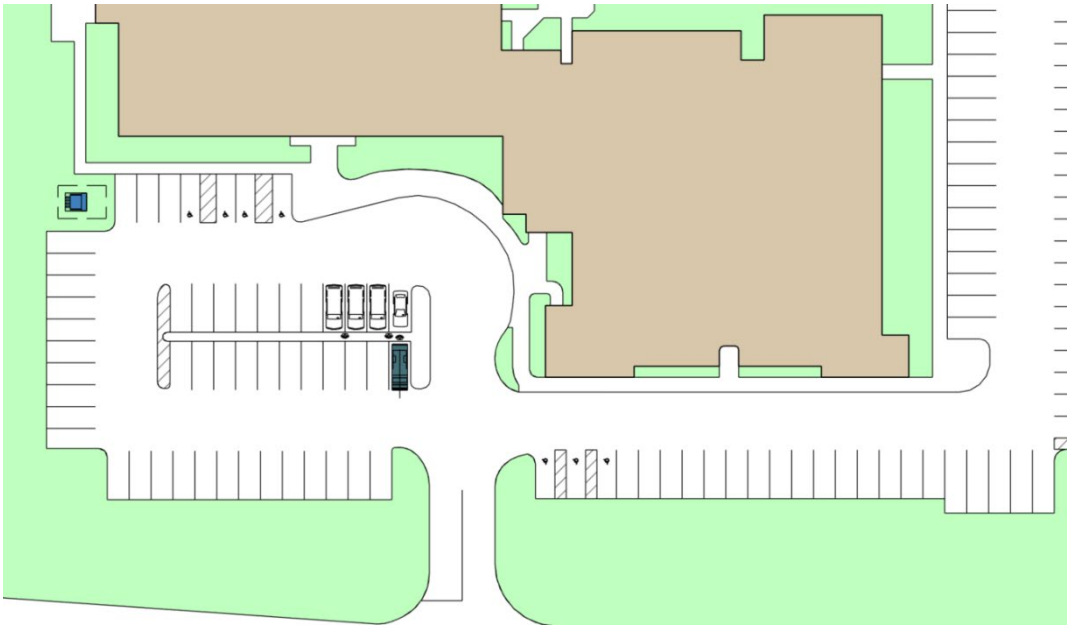
Source: Google Earth

Infrastructure and Utility Upgrades for 100 Percent EVs

Facility Infrastructure

The parking area to the left of the lot entrance is ideal for charging infrastructure to support five vehicles. Figure 9 shows a portion of the island stalls for all five vehicles. It allows for more feasibility of circulation without interference from the existing span of parking spaces wrapping around the building towards the back of the site.

Figure 9: Richard Hall Site Plan



Source: WSP

Electrical Infrastructure and Utility Coordination

The Richard Hall Services Building requires power to charge 5 vehicles. Per Table 10, a quantity of three (3) level 2 chargers (11.5kW/11.5kVA) are used with a total connected load of 304kW/316kVA as shown in Table 11.

Table 11. Estimated Power Requirement of Proposed Charging Infrastructure at Richard Hall

Charger Type	Charger Load	Charger Quantity	Total Connected Load (KW/KVA)
Level 2 Chargers	11.5kW/11.5kVA	3	**34.5kW/34.5kVA**

One (1) new 50kVA utility transformer is recommended to satisfy the new anticipated load on site. The size and location of the new transformer, as well as available capacity to provide additional utility infrastructure, shall be confirmed by PSEG.

Social Services Building

Existing Conditions

Facility

The Social Services Building is a Priority 1 site in Downtown Somerville and a prime location in terms of possible EV demand. It is surrounded by multiple office and business-related areas with direct connection to the secondary corridor. It is located across the street from the Facilities & Services building of the County Complex.

Figure 10: Social Services Building Aerial View

Source: Google Earth

Entry to the site is only from the east on East High Street. At the entrance to the parking lot, five ADA stalls are located to the left, adjacent to the building. There are 106 standard parking stalls that extend toward the back of the building, with a dumpster area at the northwest corner.

Figure 11: Social Services Building Site Entrance

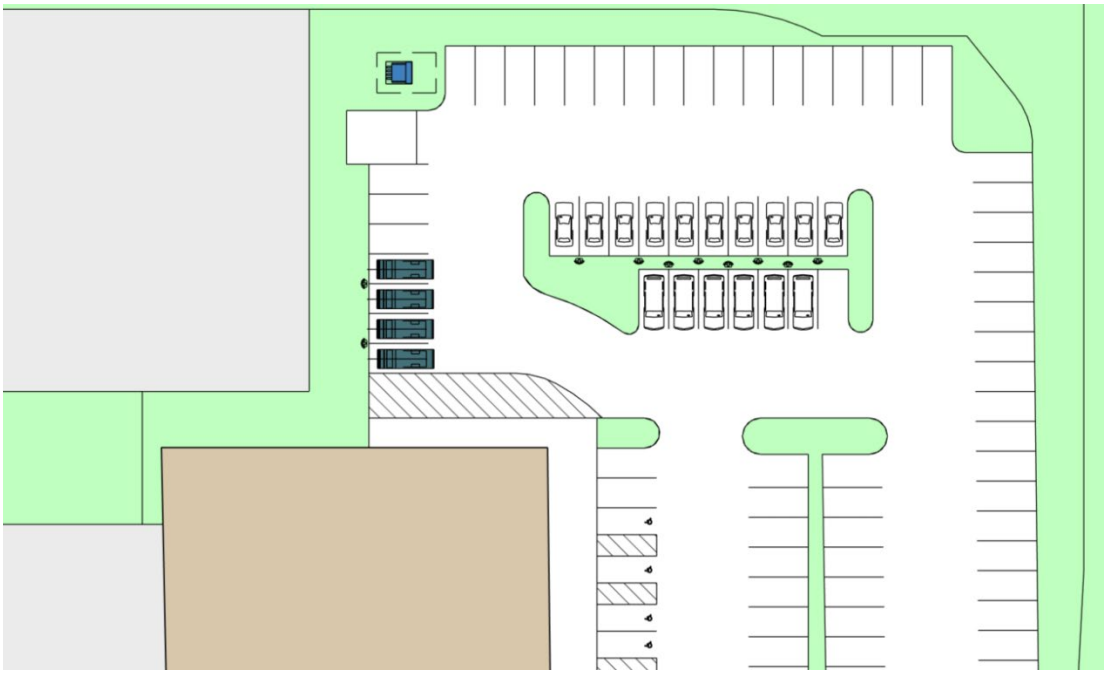
Source: Google Earth

Infrastructure and Utility Upgrades for 100 Percent EVs

Facility Infrastructure

The back of the parking lot is ideal for charging infrastructure to support 20 vehicles. Figure 12 shows the use of the parking island and a portion of the parking stalls north of the building to accommodate all 20 vehicles. It allows for wider space with feasible circulation through the lot without interference of the narrower existing span of parking spaces around the front of the site.

Figure 12: Social Services Building Overhead View



Source: WSP

Electrical Infrastructure and Utility Coordination

The Social Services Building requires power to charge 20 vehicles. Per Table 10, a quantity of 10 level 2 chargers (11.5kW/11.5kVA) is used, with a total connected load of 115kW/115kVA, as shown in Table 12.

Table 12. Estimated Power Requirement of Proposed Charging Infrastructure at Social Services Building

Charger Type	Charger Load	Charger Quantity	Total Connected Load (KW/KVA)
Level 2 Chargers	11.5kW/11.5kVA	10	**115kW/115kVA**

One (1) new 150kVA utility transformer is recommended to satisfy the new anticipated load on site. The size and location of the new transformer, as well as available capacity to provide additional utility infrastructure, shall be confirmed by PSEG.

County Complex

Existing Conditions

Facility

County Complex is a Priority 2 site in Somerville consisting of the County Administration Building, Bernie Field Parking Garage and Facilities & Services Building. It is a prime location in terms of possible EV demand, containing existing EV parking on site. It is surrounded by multiple office- and business-related areas with direct connection to the secondary corridor. The site is access-controlled, currently supporting fleets from the Sheriff's Department, Facilities & Services, Engineering, the Planning Board, and several additional operations. The public parking garage offers many available parking spaces with good sidewalk access, and the downtown location is conveniently connected to Main Street.

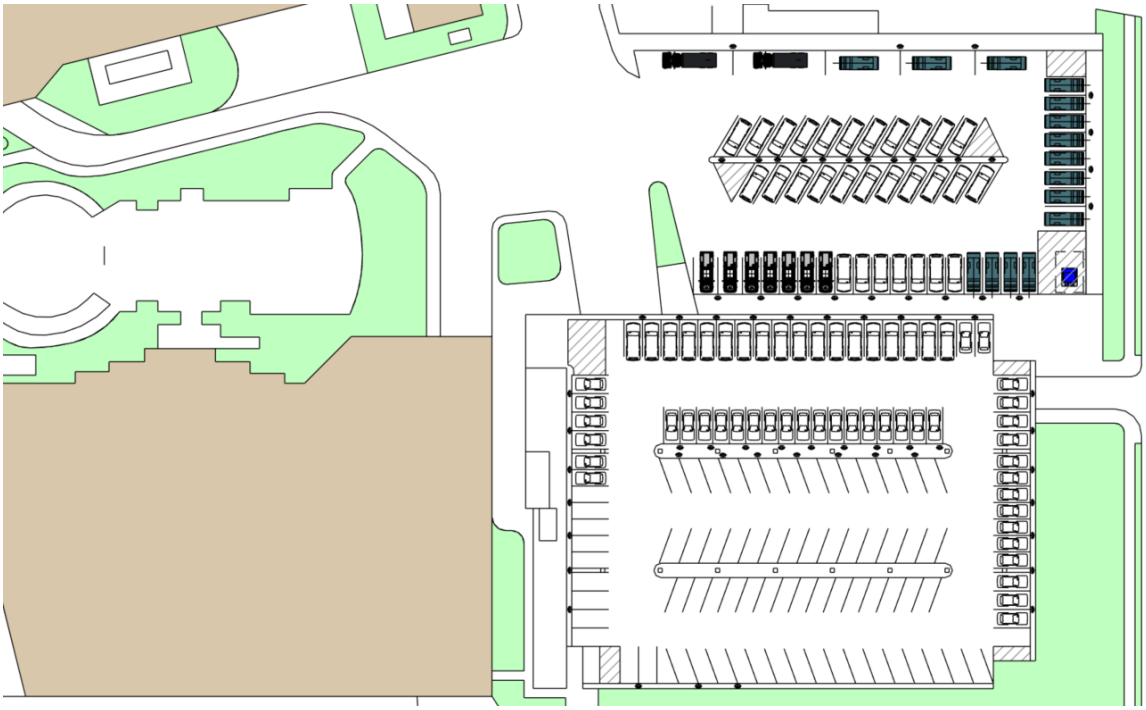
Figure 13: County Complex Aerial View

Source: Google Earth

Entry into the central site comes from the west on East High Street. The guard booth is located at the center of the site, before entering the Bernie Field parking lot. The lot has five ADA and 40 standard parking stalls, with vehicles regularly stationed along the northern end curb. The Bernie Field Parking Garage entrance is on Mechanic Street, and also from the central lane of the complex. The Facilities & Services building has a small parking lot outside of the building, containing 19 parking spaces, five of which are for parallel parking. Gated entrances are from Mechanic Street and from the central lane of the complex. The County Administration Building

utilizes the parking garage, and the Somerset County Jail also connects to the core area to use the same parking facility. The County Complex is a strong candidate for near-term electrification, but the key challenges of the complex are the police vehicles and heavy-duty pickups used by Facilities & Services.

Figure 14: County Complex Site View



Source: WSP

Infrastructure and Utility Upgrades for 100 Percent EVs

Facility Infrastructure

It will be challenging to accommodate parking stalls and charging infrastructure to support 110 vehicles with the existing conditions; however, implementation can be phased with a smaller initial installation. Figure 15 shows the use of both the Contractor's Lot outside of the Bernie Field Parking Garage and the top floor of the garage to accommodate all 110 vehicles with charging infrastructure. This allows for maintaining an efficient amount of public parking at the parking garage, while also providing the recommended opportunity for public charging.

Figure 15: County Complex Aerial View

Source: Google Earth

Electrical Infrastructure and Utility Coordination

The County Complex Facility requires power to charge 110 vehicles. Per Table 10, a quantity of 48 level 2 chargers (11.5kW/11.5kVA and 19.2kW/19.2kVA) and three (3) DC Fast Chargers (60kW/66.4kVA) are used. With a total of 51 charging stations, the total connected load is 839.8kW/859kVA, as shown in Table 13.

Table 13. Estimated Power Requirement of Proposed Charging Infrastructure at County Complex

Charger Type	Charger Load	Charger Quantity	Total Connected Load (KW/KVA)
Level 2 Chargers	11.5kW/11.5kVA	34	391kW/391kVA
Level 2 Chargers	19.2kW/19.2kVA	14	268.8kW/268.8kVA
DC Fast Chargers	60kW/66.4kVA	3	180kW/199.2kVA
Combined Connected Load			**839.8kW/859kVA**

One (1) new 900kVA (480/277V, 3-phase) utility transformer is recommended to satisfy the new anticipated load on site. The size and location of the new transformer, as well as available capacity to provide additional utility infrastructure, shall be confirmed by PSEG.

Court House / Prosecutor's Office / Public Health

Existing Conditions

Facility

The Court House, Prosecutor's Office and Public Health site is a Priority 2 site in Somerville and is a prime location in terms of possible EV demand. It is surrounded by multiple office- and business-related areas with direct connection to the secondary corridor. The site is access-controlled, currently supporting County fleets from the Prosecutor's Office, Public Health & Safety, and Probation. The Bernie Field Parking Garage is also used for site parking.

Figure 16: Court House Aerial View

Source: Google Earth

Entry into the site comes from the west on East High Street. The parking lot is gated with a guard booth, which is located directly as you turn into the driveway. The lot has two ADA spaces, one oversized vehicle and 37 standard parking stalls.

Figure 17: Court House Site Entrance

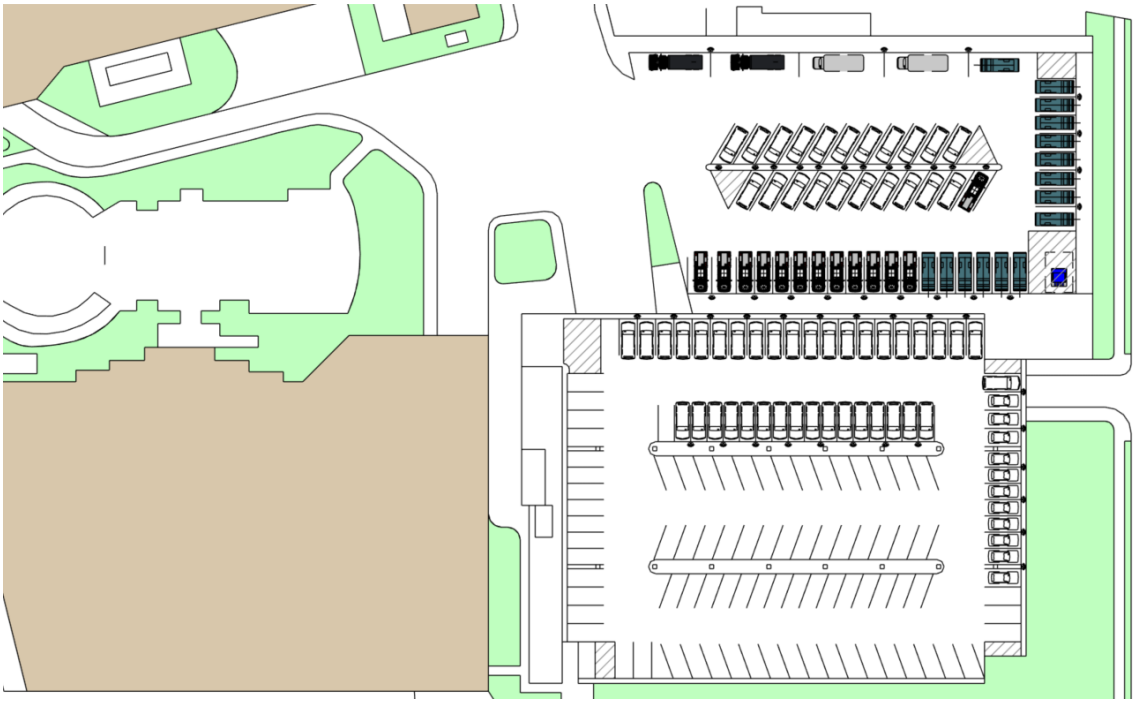
Source: Google Earth

Infrastructure for 100 Percent EVs

Facility Infrastructure

It will be challenging to accommodate parking stalls and charging infrastructure to support 101 vehicles with the existing conditions. Due to the small lot, Bernie Field Parking Garage is also recommended as the charging site. Figure 18 shows the use of both Contractor's Lot outside of the parking garage and the top floor of the garage to accommodate all 101 vehicles with charging infrastructure. This presents no impact on the existing Court House lot and allows for maintaining an efficient amount of public parking at the parking garage. For the purposes of this plan, these 101 vehicles are shown independently of the County Complex vehicles, as installation for the two locations may happen at different times. If full buildout is completed for both locations, there would be a total of 211 spaces for charging at the Bernie Field Parking Garage.

Figure 18: Court House Site Entrance



Source: WSP

Electrical Infrastructure and Utility Coordination

The Court House, Prosecutor's Office, and Public Health facilities require power to charge 101 vehicles. Per Table 10, a quantity of 50 Level 2 chargers (11.5kW/11.5kVA) and three (3) DC Fast Chargers (60kW/66.4kVA) are used. With a total of 53 charging stations, the total connected load is 755kW/774.2kVA as shown in Table 14.

Table 14. Estimated Power Requirement of Proposed Charging Infrastructure at Court House / Prosecutor's Office / Public Health

Charger Type	Charger Load	Charger Quantity	Total Connected Load (KW/KVA)
Level 2 Chargers	11.5kW/11.5kVA	50	575kW/575kVA
DC Fast Chargers	60kW/66.4kVA	3	180kW/199.2kVA
Combined Connected Load			**755kW/774.2kVA**

One (1) new 800kVA (480/277V, 3-phase) utility transformer is recommended to satisfy the new anticipated load on site. The size and location of the new transformer, as well as available capacity to provide additional utility infrastructure, shall be confirmed by PSEG.

CURRENT WORKFORCE

To gain a thorough understanding of the County's current workforce, a variety of quantitative and qualitative data sources were gathered and analyzed. Details from the latest employee rosters, job descriptions, and available training curriculum were collected. Additional context was added through ongoing meetings with County representatives. These resources offer a clear overview of the County's existing workforce composition, responsibilities, and operational readiness for the transition to EV technologies.

The County employs 111 employees in total in both the Transportation and Vehicle Maintenance Divisions. The workforce includes 85 vehicle operators, categorized into three (3) focuses: Motor Coach operators, Mini-Bus Drivers, and Home Delivered Meals Drivers. While these three roles have distinct titles, their overall responsibilities and qualifications are similar, and the impact of the EV fleet transition on them will be negligible.

Operations supervision is provided by various management and support roles, including one (1) Director of Transportation, one (1) Assistant Director of Transportation, two (2) Road Supervisor Trainers, and one (1) Transportation Assistant. These positions collectively anchor day-to-day public transportation service delivery and customer interactions. Administrative and technical support roles include one (1) Business Manager, one (1) Community Transit Manager, one (1) Senior Dispatcher/Scheduler, and four (4) Dispatchers/Schedulers.

The maintenance unit consists of one (1) Shop Floor Manager and fourteen (14) Vehicle Mechanics. This supervisor-technician ratio balances supervisory oversight with vehicle maintenance efficiency, providing core diagnostic and repair capacity, and utility coverage across the County's vehicle fleet. Notably, the Transportation and Maintenance divisions have had low turnover rates in the last 12 months, with only one (1) open position in the entire workforce as of October 20, 2025.

As agencies transition to EV fleets, workforce roles evolve to reflect a greater emphasis on energy management, system integration, and electrical expertise rather than traditional mechanical operations. Vehicle operators must adopt new driving and charging behaviors, such as managing range, understanding state of charge, and optimizing use of regenerative braking, rather than relying on familiar refueling practices. Road supervisor trainers must shift instruction toward these concepts as well as high-voltage safety, while dispatchers and schedulers must incorporate charging constraints, dwell time, and infrastructure availability into routing decisions, introducing

a level of operational complexity not currently present with ICE fleets. Mechanics require new skills focused on battery systems, electric drivetrains, and advanced diagnostics, moving away from engine repair, and shop floor managers must oversee charging operations, energy use, and workforce upskilling in electrical competencies. At the leadership level, transportation managers and executives must guide the overall transition strategy, including capital planning for vehicles and charging infrastructure, utility coordination, workforce development, and policy alignment—requiring a more integrated, long-term approach than traditional fleet management.

Table 15: Distribution of Workforce

Transportation	Vehicle Operator	Motor Coach Operator	12
Transportation	Vehicle Operator	Mini-Bus Driver	61 (1 open position)
Transportation	Vehicle Operator	Home Delivered Meals Driver	11
Transportation	Leadership	Director of Transportation	1
Transportation	Leadership	Assistant Director of Transportation	1
Transportation	Leadership	Business Manager	1
Transportation	Leadership	Community Transit Manager	1
Transportation	Leadership	Transportation Assistant	1
Transportation	Support	Senior Road Supervisor/Trainer	1
Transportation	Support	Road Supervisor/Trainer	1
Transportation	Support	Lead Dispatcher/Scheduler	1
Transportation	Support	Dispatcher/Scheduler	4
Maintenance	Leadership	Shop Floor Manager	1
Maintenance	Mechanic	Mechanic	14

Vehicle Operators

The Motor Coach Operators, Mini-Bus Drivers, and Home Delivered Meal Operators are responsible for the safe, reliable, and courteous transportation of eligible Somerset County residents, including seniors and individuals with disabilities, regardless of weather conditions. The role involves operating vehicles on scheduled routes, assisting passengers as needed, maintaining accurate records of trips and vehicle inspections, and ensuring that passengers requiring assistance are met by staff or family members. Operators must follow all safety instructions from supervisory staff, adhere to assigned routes, and promptly report any delays or roadway issues to

dispatch. The position also requires the ability to read maps, determine appropriate routes, and demonstrate proficiency in written and spoken English for reading road signs and route sheets. To qualify, candidates must possess and retain a valid New Jersey Class "A" or "B" commercial driver's license with the necessary endorsements[6], as well as a valid Medical Examiner Certificate. Experience working with seniors or persons with disabilities is desirable, and strong customer service skills are essential for maintaining courteous relationships with a diverse client base.

Transportation Leadership

Transportation Division Leadership consists of five (5) positions: Director of Transportation, Assistant Director of Transportation, Business Manager, Community Transit Manager, and Transportation Assistant.

These supervisory positions are responsible for managing vehicle operators and support roles, securing and administering grants and other financial operations, integrating new technology to keep transit services running smoothly, and driving improvements to optimize workflows and upgrade systems to meet Somerset County's evolving transportation needs. From a technology standpoint, this includes overseeing computerized scheduling and dispatch systems, ensuring staff are trained to use mobile data terminals and radios, and successfully adopting new technologies such as EVs, EV charging, GPS tracking, and electronic reporting to improve efficiency and safety.

Transportation Division Leadership employees coordinate daily operations using computerized systems to manage routes, vehicle assignments, and passenger intake, while also responding quickly to service disruptions or emergencies. They monitor performance metrics, prepare risk assessment and compliance reports, prepare and manage the Division budget, and manage other financial operations.

Leadership roles in the Transportation Division's leadership staff generally require at least a bachelor's degree in transit planning[7], or related field and working knowledge of relevant computer programs used for scheduling, GPS reporting, and other transportation planning activities.

Road Supervisor Trainers

The Road Supervisor-Trainer and Senior Road Supervisor-Trainer ensure that daily transportation services are delivered safely, proficiently, and professionally through direct observation and hands-on training. These roles require comfort with mobile data terminals and transit-oriented

[6] As required by New Jersey Statute 39:5B-32, FMCSR Title 49 CFR 390-397
[7] For Business Manager, a minimum of associate's degree in financial management is preferred

technologies, as well as proficiency in the division's computerized scheduling and dispatching program. The Supervisor-Trainer provides passenger sensitivity and assistance training, including wheelchair securement, and delivers NJ Motor Vehicle Commission (MVC)-approved Commercial Driver's License (CDL) training to current county employees seeking a Passenger Endorsement. The position enforces county policies, work rules, and procedures, maintains divisional training certification records, and interacts daily with vehicle operators, passengers, residents, and other county departments. Responsibilities include handling service complaints, reporting critical issues to management, evaluating service requests and transport logistics, responding to accident scenes for initial investigation, and preparing incident reports. The Supervisor-Trainer works with management to maintain efficient transit services and may perform additional duties as assigned.

Dispatch Scheduler

The Dispatch Scheduler reports directly to the Division's Business Manager and is responsible for ensuring that daily dispatching and assignment functions are performed professionally, promptly, and courteously. This role involves carrying out duties assigned by management, utilizing two-way radios, mobile data terminals, and transit-oriented technologies, and operating the division's computerized scheduling and dispatching program. The Dispatch Scheduler redistributes assignments to available road staff as needed, requiring a strong understanding of county geography and driver workflows. Responsibilities also include client intake, scheduling, and reassignment to maintain continuous operations and meet passenger demand, as well as daily interaction with vehicle operators, passengers, residents, and the county Office on Aging regarding transportation services and home-delivered meals. The position fields basic service complaints, forwards critical issues to management, and serves as the primary contact for road staff in emergency situations. Coordination with the vehicle maintenance division is essential to ensure sufficient vehicles are available for daily operations and to address emergency maintenance requests. The Dispatch Scheduler must work independently with minimal supervision, follow and enforce all division safety standards, and perform additional duties as assigned. Completion and retention of the Passenger Assistance Safety & Sensitivity (PASS) course and Defensive Driving Course (DDC) certifications are required. A valid New Jersey driver's license must be maintained as needed to assist in transportation services.

Mechanics and Shop Floor Manager

Mechanics, working under the supervision of the shop floor manager, are responsible for performing a wide range of repairs and maintenance tasks on various types of automotive equipment, trucks, vehicles, and heavy equipment, all in accordance with County safety codes and safe work practices.

Key responsibilities for these roles include repairing gasoline and diesel-powered vehicles and equipment, addressing components such as transmissions, brakes, drivetrains, cooling and electrical systems, and alignments. Mechanics and Shop Floor Managers perform preventative maintenance, operate diagnostic, hand, electric, and air-driven tools, and test, service, and repair vehicles and equipment. Additional duties involve assisting and training other mechanics, inspecting and replacing parts, operating forklifts, ensuring shop cleanliness, conducting safety checks, and diagnosing problems using computerized scanning equipment and laptops. Mechanics may also fabricate parts using welding equipment and perform other related tasks as assigned by management.

Candidates must possess knowledge of automotive and truck repair, vehicle maintenance shop practices, hydraulics, hose replacement and fabrication, and skill in using tools and equipment common to the automotive trade. All Vehicle Maintenance staff complete annual training for confined space, eye safety, fall protection, hand and power tools, noticing hazards, heavy equipment safety, lockout/tagout, Personal Protective Equipment (PPE), and welding. When new equipment types are introduced to the maintenance shop, mechanics are required to watch safety training videos from the equipment OEM.

WORKFORCE DEVELOPMENT AND TRAININGS

As the County moves toward electrifying its fleet, the current workforce will undergo key development changes to meet the needs of the transition. The section also outlines staffing requirements, anticipated training needs, and key recommendations for successful implementation.

No displacement of the existing workforce due to the implementation of EVs is anticipated; instead, existing employees will receive appropriate training, coaching, and refresher courses to ensure they can safely operate and maintain the new fleet while continuing to deliver County services.

This section is organized by functional categories, including Vehicle Operators, Operations Leadership and Support, Vehicle Maintenance, and provides detailed descriptions of how each position's duties may change as a result of the ZEV transition. These insights will help identify where responsibilities may shift, expand, or require additional support as the agency modernizes its fleet and infrastructure.

While basic battery electric operation training must be mandatory for all those involved in the transportation division, some roles will be more significantly affected by the transition due to the differences in vehicle propulsion systems (Table 16).

Table 16: EV Impacts on Staff Responsibilities

Job Title	Impact
Director of Transportation	Medium
Assistant Director of Transportation	Medium
Business Manager	Medium
Community Transit Manager	Medium
Transportation Assistant	Medium
Senior Road Supervisor/Trainer	High
Road Supervisor/Trainer	High
Lead Dispatcher/Scheduler	Low
Dispatcher/Scheduler	Low
Motor Coach Operator	High
Mini Bus Driver	High
Home Delivered Meals Driver	Medium
Shop Floor Manager	High
Mechanic	High

The training needs of the positions expected to be most impacted are detailed below, and EV requirements must be integrated into the long-range planning and service planning work.

Applicants proposing funding for zero-emission projects under Federal Transit Administration's (FTA's)[8] examines the impact of transitioning. To support the development of this plan, FTA offers a Workforce Evaluation Tool.[9]

Vehicle Operators

Vehicle Operators in Somerset County's Transportation Division include Motor Coach Operators, Mini-Bus Drivers, and Home Delivered Meals Drivers. Employees in these roles who transition to operating zero-emission vehicles must be trained in the safe and efficient operation of ZEVs.

[9] Zero-Emission Fleet Transition Plan – Element 6: Workforce Evaluation Tool

Operators will encounter instrument panels and display systems that are distinct from those found in traditional ICE vehicles. This difference necessitates instruction on how to interpret dashboard indicators and warning lights. Training should thoroughly address the appropriate procedures for responding to each type of warning, ensuring operators can distinguish between alerts that require immediate intervention and those that are informational or related to system diagnostics and software updates. It is essential for operators to develop the ability to make informed decisions in response to these signals and to follow established protocols for reporting issues through appropriate lines of supervision.

In addition, operators must be trained to effectively monitor their vehicles' battery charge levels. This includes learning techniques to optimize regenerative braking, which can help extend the vehicle's range, and minimizing reliance on the conventional service brake to enhance both energy efficiency and passenger comfort.

Another safety consideration arises from the quiet operation of EVs. Because these vehicles produce much less noise than conventional models, there is an increased risk that pedestrians may not notice an approaching vehicle, and nearby drivers may not hear an EV's motor. Training programs should therefore incorporate procedures for confirming pedestrian and nearby driver awareness, and EVs are completely powered down when parked.

Transportation Leadership

Transportation Leadership staff will require training that both builds on their current expertise with ICE vehicles and addresses the unique challenges introduced by EV technology. The transition introduces new considerations for supervisory roles that may alter preventive maintenance (PM) scheduling with coordination among EV charging, software updates, and new component maintenance intervals, troubleshooting approaches, and safety practices (including PPE and high-voltage work procedures). The original equipment manufacturer (OEM) is expected to develop and deliver a significant portion of this training.

Road Supervisor Trainers

New EV knowledge is primarily held and disseminated through the Senior Road Supervisor and Road Supervisor, who are responsible for delivering onboarding and technical training, adapting materials to evolving BEB technologies, and coordinating with OEMs and third-party providers. Their feedback will help refine the curriculum and ensure the training aligns with operational needs. These roles currently provide New Jersey Motor Vehicle Commission-approved Commercial Driver's License (CDL) training to current County employees. In addition to this CDL training, Trainers will also incorporate zero-emission technology training based on the trainee's role and assigned vehicle type. Based on County preference, instructors can receive hands-on training either directly from the OEM or from a third-party training provider. Training instructors

are also required to enroll in a continuous learning program with refresher training at least once per year.

Dispatcher and Scheduler

With the introduction of EVs, the core responsibilities of dispatchers and schedulers remain largely the same. However, there are some new considerations specific to EV operations. For example, dispatchers and schedulers now need to monitor charger availability and coordinate charging schedules to ensure vehicles are ready for operation, a new operational factor compared to gasoline fleets. Additionally, they must know the estimated time required for new maintenance activities related to EV systems. They must also be familiar with basic EV troubleshooting steps and be able to assist vehicle operators with issues related to charging or electric vehicles. Dispatchers and schedulers are also responsible for scheduling and planning vehicle routes and assignments that reflect EV capabilities.

As these roles serve as the primary contact for road staff in emergency situations, dispatchers and schedulers will need to learn to handle vehicle accidents and passenger incidents involving an EV system. Annual refresher courses are recommended for these roles, including emergency procedures and evolving best practices.

Mechanics and Shop Floor Manager

Mechanics and Shop Floor managers will encounter substantial day-to-day changes as Somerset County transitions to EVs. Although many core maintenance practices will remain familiar since EVs share numerous components with traditional ICE Vehicles, the shift introduces a range of new requirements, particularly those related to high-voltage electrical systems. Mechanics must become proficient in the use of ARC Flash Level 2 personal protective equipment (PPE) and strictly adhere to updated safety protocols when working with high-voltage components, which are far more prevalent in EVs than in ICE vehicles.

Beyond learning these new safety measures, mechanics will need specialized training to maintain, diagnose, and troubleshoot the advanced systems unique to EVs, such as battery management, electric drivetrains, and regenerative braking technologies. Their responsibilities will also expand to include servicing and maintaining the EVSE that supports the EV fleet's operations. This means mechanics must be prepared to address issues not only with vehicles themselves but also with the charging stations and related electrical systems. Shop Floor Managers must also be trained to manage warranty claims, understand performance data, and coordinate repairs with OEM representatives, including battery state -of health, charging cycles, energy efficiency, and software status.

To ensure readiness for these evolving responsibilities, all mechanics should participate in comprehensive training programs which would include technical training, safety and compliance training, and fleet operations and management training. These should cover PPE usage and high-voltage safety procedures, in-depth vehicle system diagnostics and repair techniques, and the maintenance of charging infrastructure. Such training will help mechanics adapt to the technological advancements and operational changes brought about by the ZEV transition, ensuring both safety and efficiency in fleet operations.

Other County Staff

As Somerset County explores transitioning its non-Transportation department fleet to zero-emission vehicles, other County staff who currently operate traditional ICE vehicles will need to learn new skills and techniques to adapt to the new technology.

Similar to Transportation Division operators, operators of light-duty passenger vehicles may encounter gauges and displays that differ from those in conventional vehicles, requiring training on dashboard controls and warning signals. To effectively manage their vehicle's state of charge, operators will also learn to maximize regenerative braking and minimize reliance on the service brake, thereby optimizing EV range and improving ride quality for passengers.

County staff will need to be especially aware of potential risks associated with the lack of sound cues. Due to their low noise levels, EVs pose unique safety considerations, especially when pedestrians may not hear an approaching EV or drivers may not hear the engine of parked vehicles. Training should include protocols for verifying that parked EVs are fully powered down.

County employees involved in emergency response will need training to handle EV incidents, as they are an essential part of EV deployment. Emergency responders need to understand what types of disruptions are likely to occur with the presence of ZEV equipment. Utilities can often provide reliability reports that show expected service restoration times during significant weather events.

Training

Staff will need to develop new skills in areas such as EV fleet management, EV operations, and EV maintenance. This section includes targeted training programs covering electrical maintenance, charging infrastructure, operational safety, and emergency response. Training strategies are designed to address knowledge gaps and ensure staff are prepared for the transition to low- and zero-emission technologies, which primarily affect operations and maintenance (O&M).

Table 17 details the recommended training curriculum topics for each job classification impacted by the County Fleet Transition Plan.

Table 17: Training Curriculum by Job Classification

Job Classification	Required	Optional
Vehicle Operators	· Behind the Wheel (BTW) vehicle operation · Regenerative and mechanical braking, hill holding, rollback · Emergency response	· Basics of vehicle safety and modernization · Electrical safety and proper use of PPE when operating or moving buses · Dashboard configuration and warning devices · Charge management · Troubleshooting basics · Successful EV driving habits · Pedestrian risk awareness · Hazard reporting
Transportation Leadership & Support	· Dashboard configuration and warning devices · Emergency response · EV range limitations and block planning · Incorporating EV delivery timelines into scheduling	· Awareness of EV safety and modernization fundamentals · Overview of charging technologies · Behind-the-wheel (BTW) EV operation · Troubleshooting basics · Successful EV driving habits · Pedestrian risk awareness · Hazard reporting
Mechanics	· In-depth troubleshooting · Battery handling, storage, disposal and charge management	· Dashboard configuration and warning devices · BTW EV operation · Regenerative and mechanical braking, hill holding, rollback · Pedestrian risks (especially visually impaired) · On-board diagnostic systems · Recovery/towing procedures · Preventive maintenance (PM) program for EVs · Unscheduled maintenance · Hazards of chargers vs. conventional fuels · Personal protective equipment (PPE) · Emergency cutoff switches and fire response equipment · Maintenance and testing of safety-critical systems · Hazard reporting

Shop Floor Manager	· High Voltage (HV) safety and emergency response · Charge management · In-depth troubleshooting · Maintenance and testing of safety-critical systems · Train-the-trainer	· Dashboard configuration warning devices · BTW vehicle operation · Regenerative and mechanical braking, hill holding, rollback · Pedestrian risks (visually impaired) · Lockout/tagout (LOTO) · On-board diagnostics · Battery handling/storage/disposal · Recovery services · PM and unscheduled maintenance · Charger hazard awareness · PPE · Emergency cutoff/fire response · Maintenance and testing of safety-critical systems · Hazard reporting

Raritan Valley Community College

As a part of their Automotive Technology program, Raritan Valley Community College offers several courses focused on electric vehicle operations, including hands-on and classroom setting instruction.

Relevant classes include Automotive Electrical Systems I/II (AUTC 104/AUTC 204)[10], and Hybrid/Electric Vehicles (AUTC 220).[11] The latter course provides technical training which covers the operation of hybrid and electric vehicles, motor/generator operation with experiments and animations, battery management systems, drive systems, power electronics including inverters, DC to AC conversion and safe handling of HV systems, internal combustion engines, and instructor fault insertion included for troubleshooting the system. Enrollment in these classes is recommended for all vehicle maintenance staff to learn the technical foundation of EV system technology and operations.

[10] Raritan Valley Community College. "AUTC 104 – Automotive Electrical Systems I." Accessed October 8, 2025. https://catalog.raritanval.edu/preview_course.php?catoid=16&coid=15802

[11] Raritan Valley Community College. "AUTC 220 – Hybrid/Electric Vehicles." Accessed October 8, 2025. https://catalog.raritanval.edu/preview_course.php?catoid=16&coid=15911

FUNDING ANALYSIS

To offset the sizeable upfront costs associated with EV fleet transitions and new EV charger installations, Somerset County is advised to leverage available funding sources, rebates, and programs that reduce barriers to EV adoption. Collectively, these incentives address vehicle acquisition across light-, medium-, and heavy-duty classes; support the development of charging infrastructure in workplaces, multi-unit dwellings, fleet depots, corridors, and destinations; and strengthen the EV market through consumer awareness, dealer training, and utility "make-ready" investments.

Federal Funding Opportunities

Key federal-level opportunities relevant to Somerset County are administered through the FTA and the United States Department of Transportation (USDOT). To apply for FTA funding opportunities, projects are typically submitted through a Governor-designated recipient or an existing public transit operator/MPO authorized as a direct recipient. For USDOT funding, although the County can apply directly, projects must still be consistent with MPO plans and the Transportation Improvement Program (TIP) to receive federal funding.

Funding availability, eligibility rules, and award cycles change frequently. The opportunities below reflect information available as of early 2026 and should be verified at the time of application.

FTA Section 5339 (A) & (B): Grants for Buses and Bus Facilities Formula Program and Competitive Grant Program[12]

FTA Section 5339 supports the replacement and rehabilitation of buses, as well as improvements to bus facilities, through both formula and competitive programs. These funds can support bus and cutaway/van purchases (when eligible), charging equipment, and depot upgrades needed to operate low- and zero-emission fleets.

FTA Section 5339 (C): Low or No-Emission Vehicle Program

FTA Section 5339(c) (Low-No) is a primary competitive funding source for purchasing low- and zero-emission transit buses and the supporting infrastructure needed to operate them. Applications typically require a Zero-Emission Transition Plan that describes fleet strategy, facility readiness, and how charging and maintenance needs will be met over time.

[12] Federal Transit Administration. "Grants for Buses and Bus Facilities Program." Accessed October 16, 2025. https://www.transit.dot.gov/bus-program

United States Department of Transportation (USDOT): Better Utilizing Investments to Leverage Development (BUILD)

USDOT's BUILD is a competitive grant program that can fund multimodal transportation projects with regional or national significance. For Somerset County, it may be a fit for larger, bundled investments that combine fleet-supporting charging infrastructure with broader mobility, safety, or state-of-good-repair improvements. Applications require a benefit-cost analysis, and projects compete best if their benefit-cost ratio is above 1.0.

State Funding Opportunities

Key state-level opportunities relevant to Somerset County are administered through the New Jersey Department of Environmental Protection (NJDEP), the New Jersey Economic Development Authority (NJEDA), and the New Jersey Board of Public Utilities (NJBPU).

New Jersey Department of Environmental Protection

NJDEP encourages the adoption of electric vehicles through the information and incentives provided through the Drive Green program.[13] The program promotes electric mobility through resources on rebates, charging options, and the benefits of driving electric, and supports the disbursement of funds through the following two incentive programs.

- **It Pay$ to Plug In**[14] – This program provides grants that offset the purchase and maintenance costs of EV charging stations; Level 1/Level 2 are accepted on a rolling basis, while DC fast charging is offered through competitive solicitation periods.
- **eMobility**[15] – This program funds electric shared-mobility pilots, such as e-carshare, e-rideshare, and EV charging stations, often with a focus on improved access for overburdened communities. Eligible project types under this program include electric vehicle and EV charging station procurement for fixed route shuttle services.

New Jersey Economic Development Authority (NJEDA)

NJEDA encourages the adoption of electric vehicles primarily through its programs for commercial fleets and charging infrastructure, working alongside other state agencies, such as NJBPU, that manage consumer-facing incentives.

[13] NJ Department of Environmental Protection. "Drive Green." Accessed October 23, 2025. https://dep.nj.gov/drivegreen/
[14] NJ Department of Environmental Protection. "It Pay$ to Plug In." Accessed October 8, 2025. https://dep.nj.gov/wp-content/uploads/drivegreen/ippi/overview.pdf
[15] NJ Department of Environmental Protection. "eMobility Grant Program." Accessed October 8, 2025. https://dep.nj.gov/wp-content/uploads/drivegreen/pdf/emobility/emobility-grant-program_overview.pdf

- **New Jersey Zero-Emission Incentive Program (NJ ZIP)**[16] **–** This program issues point-of-sale vouchers for new zero-emission Class 2b–8 medium-duty vehicles to New Jersey state institutional organizations. Only accepting waitlist at the moment.

New Jersey Board of Public Utilities (NJBPU)

NJBPU provides financial support to public entities' EV adoption projects through the following two programs.

- **Clean Fleet EV Program** [17]– This program issues population-based grants for public entities such as Somerset County to:
    - Acquire light-duty battery electric vehicles (up to $4,000)
    - Acquire Class 2B-6 battery electric vehicles (up to $10,000)
    - Install Level 2 charging equipment (up to $5,000 if publicly available)
    - Install DC fast charging stations (up to $180,000)

  The first two incentives of the Clean Fleet EV Program will assist in the County's EV Fleet transition, and the latter two incentives will support the County's installation of upgraded power infrastructure.
- **Regional Greenhouse Gas Initiative (RGGI) Medium and Heavy Duty (MHD) EV Charging Program**[18] – The program supports the installation of medium- and heavy-duty electric vehicle charging infrastructure and behind-the-meter costs.

Regional and Local Funding Opportunities

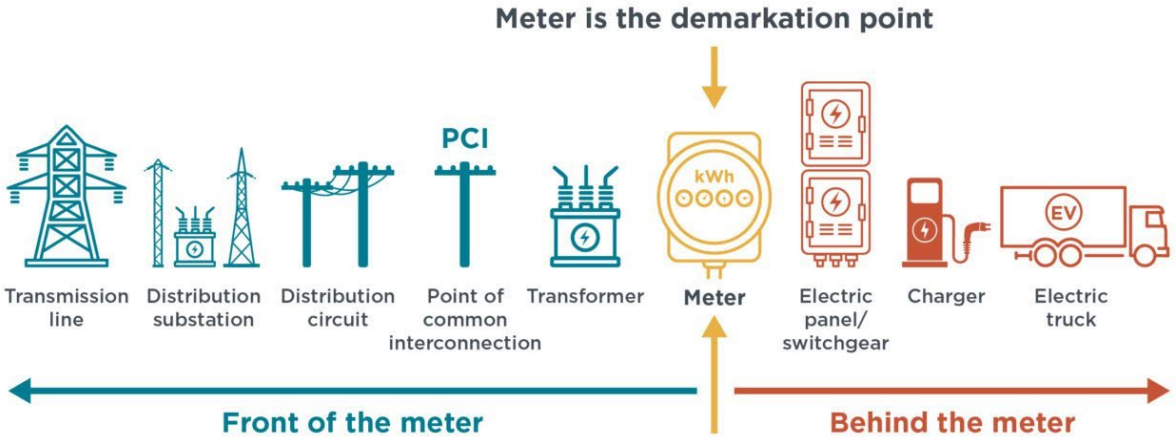
- **North Jersey Transportation Planning Authority (NJTPA) Subregional EV Infrastructure Charging Program**[19] – A regional funding opportunity that can support public charging deployment in the NJTPA's 15 subregions. Can provide funding for charging infrastructure at three locations. Application is rolling.

[16] NJ Economic Development Authority. "NJ ZIP New Jersey Zero-Emission Incentive Program." Accessed October 8, 2025. https://dep.nj.gov/wp-content/uploads/drivegreen/pdf/emobility/emobility-grant-program_overview.pdf
[17] New Jersey Board of Public Utilities Charge Up. "Clean Fleet EV Program." Accessed October 8, 2025. https://chargeup.njcleanenergy.com/clean-fleet
[18] Clean Energy NJ. "Regional Greenhouse Gas Initiative (RGGI) Medium and Heavy Duty (MHD) EV Charging Program." Accessed October 8, 2025. https://cleanenergy.nj.gov/programs/electric-vehicles/regional-greenhouse-gas-initiative-rggi-medium-and-heavy-duty-mhd-ev-charging-program
[19] New Jersey Transportation Planning Authority. "The NJTPA Subregional Electric Vehicle Charging Infrastructure Program." Accessed April 1, 2026.
https://njtpa.maps.arcgis.com/sharing/rest/content/items/4adc4ce294484e44949f763dc91a14bb/data

- **Congestion Mitigation and Air Quality (CMAQ) Program**[20] – CMAQ, a USDOT-supported program, supports readily implementable projects that reduce congestion and improve air quality in designated maintenance/nonattainment areas under two categories: Local Mobility Initiatives (LMI) for shuttle and micromobility projects and Transportation Clean Air Measures (TCAMs) for non-shuttle projects.
- **Various Utility-specific make-ready programs** – These programs can cover eligible front-of-the-meter and behind-the-meter electrical infrastructure (Figure 19), such as service upgrades, panels, and conduit, substantially lowering the installed cost of both Level 2 and DC fast charging at fleet depots, workplaces, and public sites.
    - **PSE&G EV Charging Program**[21] – PSE&G supports Level 2 mixed-use/commercial chargers as well as high-capacity public DC fast charging, making it applicable to county fleet depots, publicly accessible county facilities, and shared-use sites in the County.
    - **JCP&L / FirstEnergy New Jersey EV Infrastructure Programs**[22] – For Somerset County sites served by JCP&L, FirstEnergy's New Jersey EV programs offer make-ready support focused on distribution system and service upgrades needed to accommodate EV charging. Program availability and coverage vary by utility territory, making early confirmation of the serving electric utility critical for project planning.

[20] New Jersey Transportation Planning Authority. "CMAQ Program." Accessed April 1, 2026. https://njtpa.org/cmaq-program/
[21] PSE&G. "Electric Vehicle (EV) Charging Program." Accessed October 8, 2025. https://nj.myaccount.pseg.com/myservicepublic/electricvehicles
[22] FirstEnergy New Jersey EV Driven. "Commercial Program." Accessed October 8, 2025. https://www.firstenergycorp.com/help/electric-vehicles/nj-ev/new-jersey-ev.html

Figure 19: Front of the Meter vs. Behind the Meter Equipment



Source: Xie and Minjares, International Council on Clean Transportation

IMPLEMENTATION STRATEGY

When evaluating sites to support the County's fleet transition, a phased approach is appropriate due to varying levels of site complexity. These differences are driven by the number of vehicles parked at each location, the mix of vehicle types, and the extent of utility upgrades required to support charging infrastructure.

Two sites identified for initial fleet electrification, the Richard Hall and Social Services Building, present relatively low complexity. These locations have limited demand and only require Level 2 charging infrastructure. As a result, these sites are well-suited for near-term implementation and could follow a timeline shown in Table 18, with an anticipated total duration of approximately one to two years for planning, permitting, and installation.

Table 18: Richard Hall and Social Services Building EV Infrastructure Installation Timeline

Year	Charging Infrastructure Installation Timeline
1	■ Identify Funding Sources. ■ Advertise and contract for charger installation. ■ Select the chosen EV charger equipment ■ Utility coordination and provide a load letter to the utility.
2	■ Install charging infrastructure and equipment mounting pads. ■ Commission chargers

Source: WSP

The next phase of fleet electrification would focus on higher priority but more complex locations, including the County Complex, the Courthouse, the Prosecutor's Office, and the Public Health Complex. Fleet vehicles associated with these facilities are expected to be primarily parked at the Bernie Field Parking Garage. This site will need to accommodate a large volume of vehicles and a diverse fleet mix, requiring a substantial number of chargers and a combination of Level 2 and Level 3 DC fast charging. Due to the scale of deployment and the likelihood of significant utility upgrades, the timeline for this site will be longer and more complex than for the Richard Hall and Social Services buildings.

Charging infrastructure deployment at the Bernie Field Parking Garage could be further phased to align with fleet replacement schedules and evolving vehicle availability:

- Initial implementation could focus on installing lower-power Level 2 chargers, approximately 11.5 kW, to serve light-duty fleet vehicles in the near term. One Level 3 DC fast charger could also be considered to provide operational flexibility and contingency charging, given the large number of vehicles located at this site.

- As suitable electric models become available to replace police vehicles, which is anticipated within approximately three to five years, higher power Level 2 chargers, approximately 19.2 kW, could be added.
- In later stages, additional Level 3 DC fast chargers would be installed to support the electrification of medium and heavy-duty vehicles as those vehicle segments become viable.

Table 19 presents a detailed timeline for facility upgrades to support EV transition at the Bernie Field Parking Garage.

Table 19: Bernie Field Parking Garage EV Infrastructure Installation Timeline

Year	Bernie Field Parking Garage EV Infrastructure Installation Timeline
1	■ Identify funding sources ■ Technology / Equipment decision ■ Utility coordination and official load letter submission to the utility ■ RFP generation and advertisement for retrofit
2	■ Finalize funding ■ Contract for design and detailed engineering design ■ Utility upgrade ■ Provide basic and general training regarding ZEV technology
3	■ New electric service is complete ■ Bidding and contracting for construction ■ Site retrofit for initial deployment ■ Procurement process for long lead equipment and vehicles (18-24 months)
4	■ Site retrofit for initial deployment ■ Chargers commissioning
5+	■ Continuing charger installations for police vehicles and medium- and heavy-duty vehicles

Source: WSP

Beyond these high-priority locations, additional sites that house County fleet vehicles could be considered for future electrification. These sites are lower priority because many of the vehicles currently stationed there are not yet easily replaceable with electric alternatives due to market immaturity or limited vehicle availability. In addition, these locations would likely require a higher proportion of Level 3 DC fast chargers to support fleet operations, which would in turn necessitate more significant utility upgrades. As a result, utility upgrade timelines at these sites could extend to approximately two to three years, further increasing overall project complexity and cost.

As electrification technology advances and additional vehicle models become available, these lower-priority sites should be reevaluated. While full electrification at these locations is not feasible in the near term, there may be opportunities to install Level 2 chargers to support existing light-duty vehicles and initiate incremental transition efforts. However, this approach differs from the higher priority sites identified in this section, which are expected to support more comprehensive electrification earlier in the transition period. Given the anticipated utility upgrade requirements and extended planning timelines, charger commissioning at these sites may not occur until approximately years five to six, requiring longer term capital planning and phased investment.