CHARGE UP KANSAS

NEVI PLAN

Kansas Department of Transportation

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1.0 INTRODUCTION

With the signing of the Infrastructure Investment and Jobs Act (IIJA) on November 15, 2021, significant funding was made available to states via formula and discretionary funds to advance electric vehicle (EV) charging infrastructure. The State of Kansas will benefit from an estimated $40 million over five years. In addition, Kansas agencies and communities will be eligible to apply for additional funding through $2.5 billion in discretionary programs.

In anticipation of the IIJA legislation that was making its way through Congress, Kansas leaders formed a statewide EV Working Group in October 2021. The EV Working Group was formed to serve in an advisory role to the Kansas Department of Transportation (KDOT) for the development and execution of a Kansas Transportation Electrification Plan. The EV Working Group is chaired by KDOT and staffed by leads from various state agencies and is responsible for furthering the collaborative development of EV infrastructure across the state.

With the signing of IIJA, the Bipartisan Infrastructure Law (BIL) was enacted. The first round of EV rulemaking from BIL became available in February 2022 along with the creation of the Joint Office of Energy and Transportation, a partnership between the United States Department of Transportation and United States Department of Energy. The National Electric Vehicle Infrastructure (NEVI) formula program guidelines and guidance for the development of the Electric Vehicle Infrastructure Deployment Plans was published concurrently with the Joint Office announcement. This document provided information to the states regarding plan development and associated requirements to initiate BIL funding. Additional BIL EV rulemaking was published for comment on June 9, 2022.

Per NEVI guidance, Kansas will develop and adopt the *Charge Up Kansas NEVI Plan* to build on the existing infrastructure along the state's Alternative Fuel Corridors (AFC) by addressing gaps in the AFC network and upgrading existing sites to meet current AFC criteria to achieve "fully built out" status. The plan will include tactical efforts to drive equity, support disadvantaged communities, and encourage workforce development to enable electric vehicle supply equipment (EVSE) installation.

The Plan will be updated each year to reflect the progress from the previous year. Kansas will identify new challenges and opportunities and incorporate those into annual plan adjustments. Kansas is committed to enhancing the access and convenience for EV users through leveraging the federal match in growing a robust, connected, and sustainable EV charging network.

1.1 Dates of State Plan Development and Adoption

Development of the *Charge Up Kansas NEVI Plan* is a coordinated effort across Kansas state agencies. Final approval and adoption of the plan will be authorized by the Secretary of the Kansas Department of Transportation.

The following table presents milestones for the *Charge Up Kansas NEVI Plan.*

Table 1-1: Key Milestones/Activities for the *Charge Up Kansas NEVI Plan*

Date	Milestone/Activity
2017 - 2018	Initial outreach regarding VW Settlement funds
Fall 2019	Creation of the Kansas EV Corridor Planning Group
Fall 2021	Joint administration of VW Settlement fund for EVSE (KDOT, KDHE)
October 2021	Creation of the KS EV Working Group
December 2021	Consultant team engagement and scoping effort
February 2022	Adjusted planning scope to align with NEVI Guidance
Jan – June 2022	Draft plan and engage with stakeholders
June 24, 2022	Submit plan to Joint Office of Energy & Transportation for initial review
July 2022	Modify and edit plan
August 1, 2022	Submit final plan
September 2022	FHWA approval of plan
September-November 2022	Stand-up public facing communications framework and application process
December 2022	Publish RFP
Q1 2023	Review and score first round of applications
Q2-Q3 2023	Execute agreements with selected applicants

2.0 STATE AGENCY COORDINATION

To create an EV charging plan that adequately addresses the needs of all Kansans, KDOT has worked with multiple state agencies and other non-governmental organizations to gather public input. Work originally began as outreach for the VW Settlement funding in 2017. The Kansas Department of Health and Environment (KDHE) worked with the non-profits Clean Energy Business Council and Metropolitan Energy Center to host a series of informational meetings about the funding opportunities available, which included $2.3 million for electric vehicle supply equipment (EVSE). Meetings were hosted by business, university, and other local organization representatives in Salina, Garden City, Topeka, and Wichita. Attendees at the meetings and commentors on the plan were very supportive of EV charging.

In 2019, the Central Kansas Clean Cities Coalition created the Kansas EV Corridor Planning Group to work out a cohesive plan to guide the use of the VW Settlement funds that were set aside by KDHE for EVSE. This group consisted of representatives from KDOT, KDHE (trustee for the Kansas VW settlement funding), charging infrastructure providers and installers, and representatives from small and large electric utilities from across the state. In 2021, KDHE entrusted KDOT with overseeing the process for selecting and awarding locations for the VW EVSE funding. The location plan developed by the Kansas EV Corridor Planning Group was the basis for the locations targeted for VW funding. The same EV corridor plan was used for the Alternative Fuel Corridor nomination process for Round 6 and is guiding this process for the *Charge Up Kansas NEVI Plan*.

As part of preparing the plan, KDOT assembled an EV Working Group composed of multiple state agencies. This group meets regularly to discuss various aspects of the *Charge Up Kansas NEVI Plan* and advises KDOT on a state transportation electrification plan. Participants in the group include representatives from the Kansas Corporation Commission, the Kansas Turnpike Authority (KTA) and the Kansas Departments of Agriculture, Commerce, Health and Environment, Transportation, and Wildlife and Parks.

KDOT is coordinating with our surrounding states to ensure that the *Charge Up Kansas NEVI Plan* continues across state lines into a cohesive regional network. KDOT representatives participate as part of the MAASTO (Mid-America Association of State Transportation Officials) EV Infrastructure Committee which includes 10 regional states to the northeast of Kansas. KDOT held interviews with DOT representatives from Colorado, Missouri, Oklahoma, and Oregon to gather information on EV planning in their states and get input on EV corridor development for the Kansas plan. The Colorado Department of Transportation and the Missouri Department of Natural Resources sent letters in support of KDOT's Round 6 Alternative Fuel Corridor nominations. A Nebraska DOT contact has been identified and KDOT intends to coordinate with the Nebraska DOT for EV charging on corridors that will cross into Nebraska from Kansas. KDOT staff participates in the AASHTO EV Work Group as well as the Midcontinent Transportation Electrification Collaborative (MTEC).

In addition to the previously mentioned efforts, KDOT created a new position within the agency to manage the NEVI Program and other transportation electrification efforts within the state. This position will serve as the state's Transportation Electrification Manager which is responsible for the coordination and administration of state and federal initiatives and funding programs related to the electrification of the multimodal transportation network. Specific responsibilities of this position include serving as a point-of-

contact for stakeholder engagement and managing institutional efforts, planning studies, and other related projects. The Transportation Electrification Manager position was filled in May 2022.

3.0 PUBLIC ENGAGEMENT

The *Charge Up Kansas NEVI Plan* was developed on a foundation of public outreach and engagement to ensure that the plan incorporated a wide range of perspectives and addressed charging infrastructure needs faced by Kansans and Kansas communities.

KDOT's public engagement around EV infrastructure issues dates to 2017, with the efforts of the Kansas EV Corridor Planning Group (see Chapter 2.0).

KDOT's outreach regarding the portion of the VW Settlement funding allocated for EVSE also formed a foundation for this effort. Engagement activities for this effort included brand and logo development for broader electrification strategies and programs – namely *Charge Up Kansas*. Database development to compile potential project applicants included sourcing contacts through: Petroleum Marketers and Convenience Store Association of Kansas, Kansas Association of Cities and Counties, Kansas energy providers, Electrify Heartland and its initiative Electrify Kansas, and Metropolitan Energy Center. Early outreach included a Request for Interest (RFI) to both solicit and engage potential applicants for the program. The RFI was followed by the release of the Request for Proposals (RFP). The RFP advertised a public preproposal meeting where the application information was presented, and questions answered. An email campaign was supported by social media content, published press releases, and web site content.

3.1 Stakeholders Involved in Plan Development

The stakeholder engagement process involved a variety of outreach efforts to educate stakeholders about the NEVI program and solicit input and feedback for use in the development of the plan. In addition to the forums discussed in this section, the *Charge Up Kansas* website provides an overview of the NEVI program and allows interested persons an opportunity to connect with KDOT staff for more information about the program and other opportunities, or to submit any questions, comments, or concerns. Outreach to the general public was conducted as part of the Local Consult meetings and Telephone Town Hall, as discussed below. A list of stakeholder groups who were specifically targeted for engagement in the planning process may be found in Appendix A – Stakeholders.

3.1.1 EV Working Group

The EV Working Group was convened by KDOT Secretary Julie Lorenz in October 2021 to coordinate information and strategies related to EVs among Kansas agencies. The EV Working Group discussed the NEVI planning requirements at meetings on April 7 and May 19, 2022, and reviewed and revised the Plan's vision, goals, and performance measures. The working group also reviewed the draft *Charge Up Kansas NEVI Plan* and provided comments that were incorporated into the final draft.

3.1.2 Key Stakeholder Interviews

The planning team conducted four key stakeholder interviews with agencies working on electrification efforts in other states to learn about best practices. The planning team also conducted key stakeholder interviews with utility providers to leverage industry learning and best practices to support infrastructure deployment. Best practices were used to help the planning team and the EV Working Group understand EV infrastructure needs and opportunities and to refine the plan's policies regarding infrastructure deployment.

3.1.3 Local Consult

During the planning process, KDOT and its program management consultant (PMC) conducted a series of Local Consult meetings to review the BIL formula funding streams with interested stakeholders and solicit local input and insight to determine opportunities for investment across the transportation system and assess local priorities. The Local Consult meetings included three in-person events held in the cities of Hays, Kansas City, and Wichita, and one virtual event, all held in April 2022. Attendance at the three in-person events was 176 people; 228 people attended the virtual event. Engagement with attendees demonstrated that there is widespread interest in the NEVI program's opportunities to expand the EV charging network but that the local match requirement for NEVI funds was a concern for potential applicants.

3.1.4 Topical Focus Groups

The planning team conducted two focus group meetings to gather input around specific topical areas included in the NEVI Plan. Both meetings were structured to educate participants about the NEVI plan and to solicit input from participants in small break-out groups. One focus group centered on implementation issues, including barriers to electrification, fleet transitions, and strategies for responding to EV adoption. Twenty-two people participated in this focus group. The second focus group addressed issues facing communities. Outreach for this focus group concentrated on Disadvantaged Communities as defined in the NEVI guidance. Twenty-seven people participated in this focus group. Focus group discussions uncovered best practices for infrastructure deployment within communities.

3.1.5 Telephone Town Hall

The planning team conducted a telephone town hall on April 14, 2022. The telephone town hall was advertised via Facebook ads, KDOT social media, and a KDOT press release and was offered in both English and Spanish languages. Advertisement resulted in 93 people registering for the town hall in advance. On the day of the town hall, the vendor dialed out to 20,094 Kansas residents via landlines and texted 5,000 mobile phones to invite them to participate in the town hall. Of these, 3,471 people were reached and 1,108 joined the town hall. Of all participants, 23 percent stayed in the town hall for five or more minutes. Participants represented all six KDOT districts.

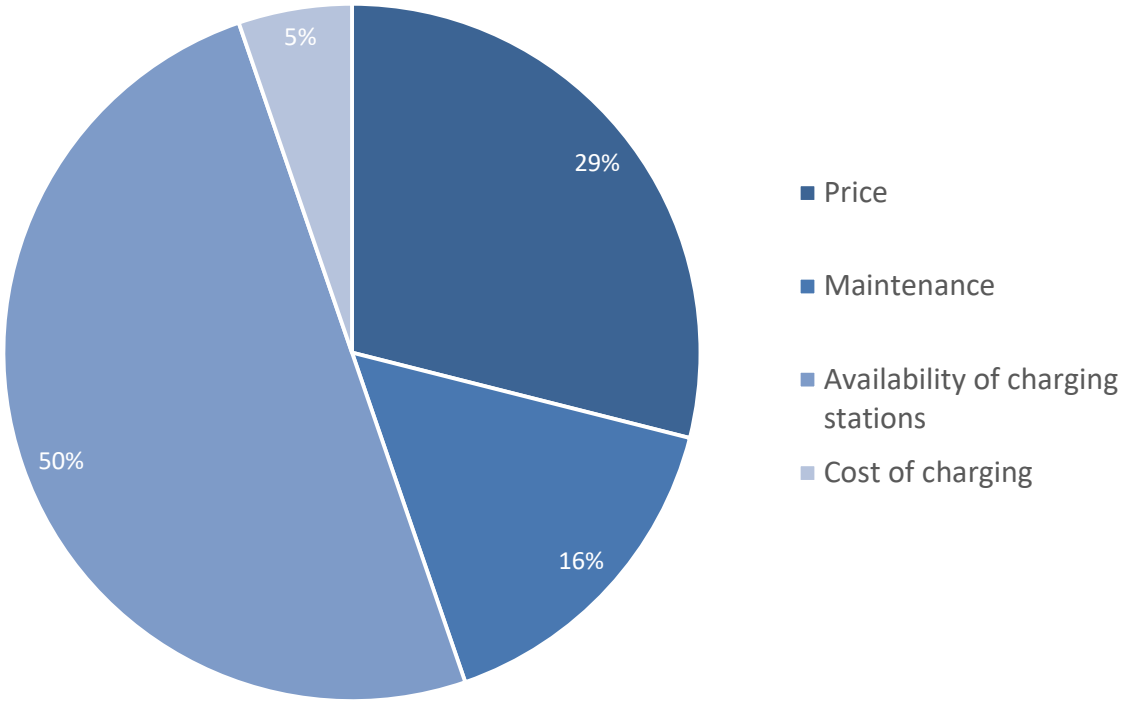
The telephone town hall allowed the planning team to educate participants about EVs and infrastructure needs, answer questions about EV infrastructure deployment, and gather input via polling questions. The town hall identified strong interest in the deployment of charging infrastructure throughout the state.

3.2 Public Outreach

The public outreach efforts showed considerable interest in this topic among Kansas residents and businesses. During the Local Consult meetings, nearly 60 percent of respondents indicated some or strong interest in deploying EV infrastructure in their communities. This rate of interest was consistent across all three in-person meeting locations.

The availability of charging remains a key concern for Kansans who are considering the purchase of an EV. During the telephone town hall, participants were asked about their biggest concern regarding driving an EV. Fifty percent noted that the availability of charging stations was their biggest concern, with the price of an EV the biggest concern for 29 percent of participants.

Figure 3-1: What is the biggest concern you have about driving an EV?



There is widespread interest in charging as an amenity for Kansas communities and attractions such as state parks and trails that will not be addressed solely by investments along highway corridors. While this plan is focused on charging along highway corridors, participants consistently noted a widespread interest in community charging that would support destinations across Kansas rather than focusing on highway traffic. One focus group participant noted a concern about uneven saturation across the state that might create disadvantages for underserved areas.

Many representatives of public agencies on both the state and local level noted that issues supporting EV adoption cross silos between public agencies and departments and require collaboration for long-term success. EV infrastructure is a concern for a wide variety of interests, including transportation agencies, utilities and utility regulators, economic development agencies, and parks. Because of the interdisciplinary nature of this issue, ongoing coordination and communication is essential.

There is currently little coordination or strategic planning happening regarding EV charging infrastructure. Local governments engaged in this process indicated that their EV fleet transition or charging installations are project- or investment-based and not part of a cohesive plan for EV infrastructure.

Focus group participants noted that there are many significant unknowns regarding the charging environment and whether EV drivers will charge primarily at home. The demand for publicly available charging may change significantly over the next few years as EV adoption increases. Business representatives noted that uncertainties around costs of electricity and rate structures make the business case for installing charging stations ambiguous. High installation costs and unclear demand are big barriers for businesses to invest in EV charging.

Installation costs and the amount of required local match funds are a significant concern for the NEVI program. Participants in the Local Consult meetings were specifically asked whether the local match would be a barrier for entities to apply for the NEVI program. Nearly 70 percent indicated that the local match requirement would be a barrier and an additional 16 percent were unsure. Rural participants were even more likely to see the local match as a barrier.

There are economic and community development opportunities for rural communities as well as urban areas. Many focus group participants identified destinations in their communities that could be supported by EV charging infrastructure, ranging from youth sports complexes to downtown districts to parks and other regional attractions. One community had installed EV charging at a regional park and found those stations to be highly used as park visitors charged their vehicles while enjoying the park's amenities.

A shift to increased EV adoption and EV charging is expected to have widespread impacts, such as workforce training demands. Focus group participants noted that there will be a need for more well-trained EV service technicians. While some participants are concerned about impacts on the electric grid, another noted that loads for small utilities have been flat or declining, and so EV adoption could be a benefit in maintaining or increasing loads for small utilities.

3.3 Community Engagement Outcomes Report

Community engagement is a continuous process, particularly regarding outreach to DACs to ensure success in meeting Justice40 goals for the NEVI program. KDOT's outreach to DACs is addressed in Section 10.0, Equity Considerations. As part of the annual update of the *Charge Up Kansas NEVI Plan*, KDOT will report on its community engagement regarding NEVI implementation. KDOT anticipates that ongoing engagement will be conducted primarily as part of its Local Consult process but may also involve specific NEVI program outreach. The Community Engagement Outcomes Report will address how KDOT conducted outreach and how that engagement was reflected in updates to the Kansas plan.

4.0 PLAN VISION & GOALS

The Vision and Goals for the *Charge Up Kansas NEVI Plan* were developed by the EV Working Group (see Section 3.1.1). These goals have been developed based on the funding availability from BIL.

4.1 Vision

Establish Kansas as a leader in the development of a convenient, affordable, reliable and equitable EV charging network that supports:

- the sustainable movement of goods and people throughout the state and nation,
- the modernization of transportation infrastructure, and
- the promotion of investments in Kansas communities and places.

4.2 Goals

Sustainable movement of goods and people throughout the state and nation

1. Collaborate with partner states to provide a seamless charging experience for EV drivers
2. Facilitate the adoption of EVs
3. Support improved air quality and reduction of greenhouse gas emissions

Modernization of transportation infrastructure

4. Build out electric Alternative Fuel Corridors (AFCs)
5. Integrate EV infrastructure planning into other modal planning efforts
6. Leverage other electrification funding opportunities such as fleet modernization and EV workforce development

Promote investments in Kansas communities and places

7. Provide equitable access/investments in Disadvantaged Communities (as defined by the joint interim guidance from the US Department of Energy and Department of Transportation for Disadvantaged Communities[1])
8. Modernize the electrical grid (where required to support equitable access)
9. Facilitate data sharing on EV charging

4.3 Performance Measures

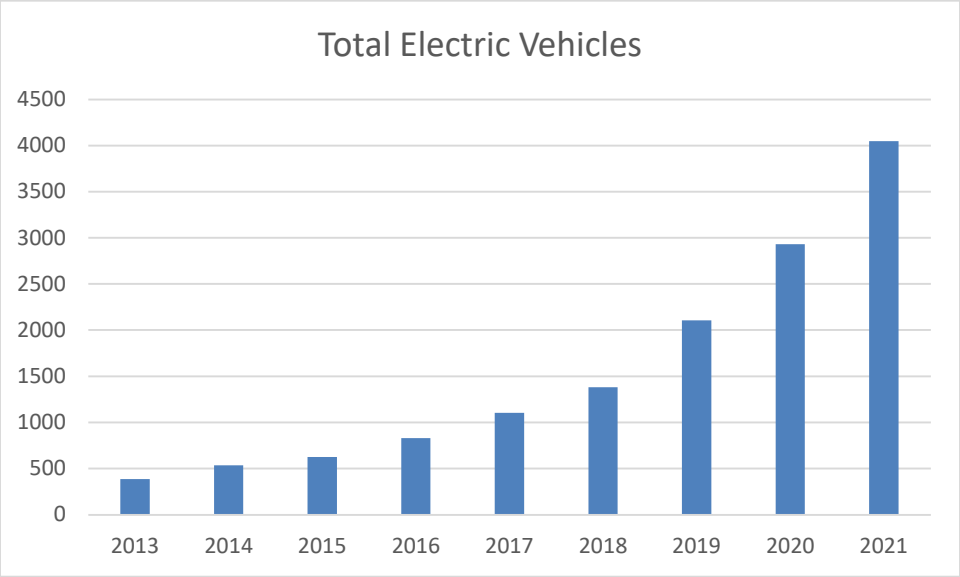
This plan identifies five performance measures for tracking progress toward the plan's goals.

[1] https://www.anl.gov/es/electric-vehicle-charging-equity-considerations

Measure 1: Number of registered EVs

The number of registered EVs has grown steadily since 2013. According to vehicle registration data from the Kansas Department of Revenue, there were 384 EVs registered in Kansas in 2013; the number of registered EVs rose to 4,046 in 2021. These numbers do not include hybrid vehicles. Investments in charging infrastructure do not directly cause an increase in EV adoption. However, given that the availability of charging facilities is still a key concern for drivers, increased charging infrastructure will indirectly support EV adoption. Even with strong growth since 2013, EVs comprise only 0.13 percent of all passenger vehicles in Kansas as of 2021.

Figure 4-1: EV Registration, 2013 to 2021



The annual growth in EV registration has varied from 17 percent to 52 percent over the past eight years.

- **Baseline**: 4,046 registered EVs, 2021
- **Year One Target:** 5,260 registered EVs
- **Year Five Target:** 15,022 registered EVs

Measure 2: Charging Station Uptime

At the time of this plan's development, comprehensive data on uptime for charging stations in Kansas was not available. In April 2022, University of California, Berkley researchers published a study evaluating the functionality of public direct current fast charge (DCFC) charging stations in the Greater San Francisco Bay Area. Of the 657 electric vehicle supply equipment (EVSE) connectors evaluated by the study, 72.5 percent were found to be functional, or able to charge an EV for 2 minutes[2]. This amount of uptime is much lower than the 95 to 97 percent often claimed by charging networks. The performance

[2] Rempel, David and Cullen, Carleen and Bryan, Mary Matteson and Cezar, Gustavo Vianna, Reliability of Open Public Electric Vehicle Direct Current Fast Chargers. Available at SSRN: https://ssrn.com/abstract=4077554 or http://dx.doi.org/10.2139/ssrn.4077554

measure target for year one recognizes that there may be start-up challenges for a new charging station, but reliability is essential for developing infrastructure that supports widespread EV adoption and reduces range anxiety. Uptime will be measured based on the formula set by Section 680.116, establishing that "a charging port is considered 'up' when its hardware and software are both online and available for use, or in use, and the charging port successfully dispenses electricity as expected."

- Year One Target: 97% uptime by the end of the first year of service
- Year Five Target: 97% total uptime

Measure 3 Percentage of total mileage designated as EV Corridor Ready AFCs (Rounds 1-6)

Designated Electric Vehicle AFCs in Kansas include I-70 from the Missouri border to the Colorado border, US-400 from the Missouri border to the Colorado border, I-35 from the state line in Kansas City to the Oklahoma border, US-81 from the Nebraska border to I-70, I-135 from I-70 to I-35, and I-335 from Topeka to Emporia. In total, these routes span 1,584.76 miles. As of 2022, only 68.61 miles are designated as EV Corridor Ready. The goal of this plan is to have all routes designated EV Corridor Ready for their entire lengths. The year one target is for 140 additional miles to be designated EV Corridor Ready.

- **Baseline**: 68.61 miles EV Corridor Ready (4.3% designated EV Corridor Ready)
- **Year One Target**: 140 additional miles designated EV Corridor Ready, for a total of 208 miles of EV Corridor Ready (13% designated EV Corridor Ready)
- **Year Five Target**: 1,584.76 miles designated EV Corridor Ready (100% designated EV Corridor Ready)

Measure 4 Number of charging stations in Disadvantaged Communities

Annual updates of this plan will measure the number of charging stations developed in Disadvantaged Communities, as defined by the joint interim definition of disadvantaged communities (DAC) from the US Department of Transportation and the US Department of Energy for the NEVI program.

Measure 5 Dollar amount leveraged as local match, in Disadvantaged Communities and statewide

Annual updates of this plan will measure the dollar amount leveraged as local match for the implementation of charging infrastructure and will track this figure in both Disadvantaged Communities and statewide.

5.0 CONTRACTING

Based on currently available guidance and regulations related to the NEVI program, Kansas state agencies do not plan to purchase, install, maintain, operate, or own EV charging infrastructure. Infrastructure development and operation will be by a private entity or local/tribal government which supports and enhances the state's overall transportation network. Development of corridor charging locations will be facilitated and enabled by the state to modernize and maintain system continuity and reliability. KDOT intends to contract with local/tribal governments and/or private entities for the installation, ownership, operation, and maintenance of the EV charging infrastructure.

The FHWA *Notice of Proposed Rulemaking (NPRM); Request for Comments,* published June 9, 2022, cites numerous contractual obligations for states and NEVI fund awardees. These elements include six specific areas:

1. Installation, operation, and maintenance by qualified technicians of EV infrastructure
2. Interoperability of EV charging infrastructure
3. Traffic control devices and on-premise signs acquired, installed, or operated
4. Data requested related to a project funded under the NEVI Formula Program, including the format and schedule for the submission of such data
5. Network connectivity of EV charging infrastructure
6. Information on publicly available EV charging infrastructure locations, pricing, real-time availability, and accessibility though mapping applications.

Kansas plans to use a traditional Request for Proposals process to identify site hosts/contractor and enter into contracts as appropriate for the construction of charging sites and installation, operations, and maintenance of EVSE.

5.1 Buy America

Use of American-made equipment in the development of new charging stations is a priority for the use of NEVI funds. However, KDOT recognizes that ongoing supply chain challenges may make meeting these requirements difficult. KDOT intends to follow Buy America requirements in the use of NEVI funds.

During the project selection process, KDOT will evaluate proposals under many criteria. To maximize the use of local suppliers, businesses and installers, the evaluation process may give priority consideration to Kansas suppliers and Kansas businesses. Using a points system, Kansas suppliers and businesses will receive the maximum point allowance and small businesses will be given additional consideration. Applicants will be required to comply with Buy America requirements.

5.2 Community Engagement

Development of EV infrastructure is an investment in the future of transportation. The following methods of engaging and informing the community about these investments are recommended as part of the implementation process:

KDOT commits to engaging with communities where charging stations will be installed. Preliminary ideas include:

- Funding applicants may be asked to include letters of support from the community indicating level of engagement and commitment to support the location.
- KDOT will continue to make information publicly available via the Charge Up Kansas web site and social media in alignment with a broader Kansas Electrification communication strategy.
- Applicants may be asked to demonstrate that they have provided the opportunity for members of the public to listen, learn, and provide feedback and comment on charging locations.
- Awardees will be encouraged to plan a 'grand opening' type event after the chargers are installed to make the community aware of the opportunity for charging.
- KDOT will develop a communication plan to promote new charging station installations.
- KDOT may issue statewide press releases to announce NEVI award recipients and locations, and to announce significant corridor designation and completion.
- Awardee contracts will require reporting operational chargers to the Alternative Fuels Data Center (AFDC), PlugShare.com, and other relevant databases as determined by the agency, to build awareness and reliability for end users.
- Awardee contracts may require training for staff at charging locations to enable them to provide assistance and share their knowledge with the public.

5.3 Sole Source Certification Requirement for Proprietary Product

The Certification must include a statement by the appropriate official attesting that the proprietary product is essential for synchronization with existing facilities; or that no equally suitable alternative exists (23 CFR 635.411(a)(2)), such as:

> *"I (name of certifying official), (position title), of the (Name of contracting agency), do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), that this patented or proprietary item is essential for synchronization with existing highway facilities,*
>
> *or*
>
> *"I (name of certifying official), (position title), of the (Name of contracting agency), do hereby certify that in accordance with the requirements of 23 CFR 635.411(a)(2), that that no equally suitable alternative exists for this patented or proprietary item."*

The extent of the Certification (project-specific, multiple projects, region/districtwide, statewide, or programmatic) should be specified. When the extent of a Certification extends beyond a single project, a sunset date should also be specified.

Although not required to be included in the Certification, as a matter of good contracting practice, the contracting agency's file should contain the information and supporting documentation upon which the Certification was based. Such documentation may include, as appropriate:

- A description of how the proprietary product requirement will benefit the public.
  - The unique needs that are being addressed that result in no equally suitable alternative.
  - Identified safety locations or critical decision points that would justify a higher standard.
- An evaluation of the pool of potential products, and a description of why these products cannot meet the contracting agency's needs.
- An estimate of additional costs, if any, incurred as a result of this proprietary product requirement.

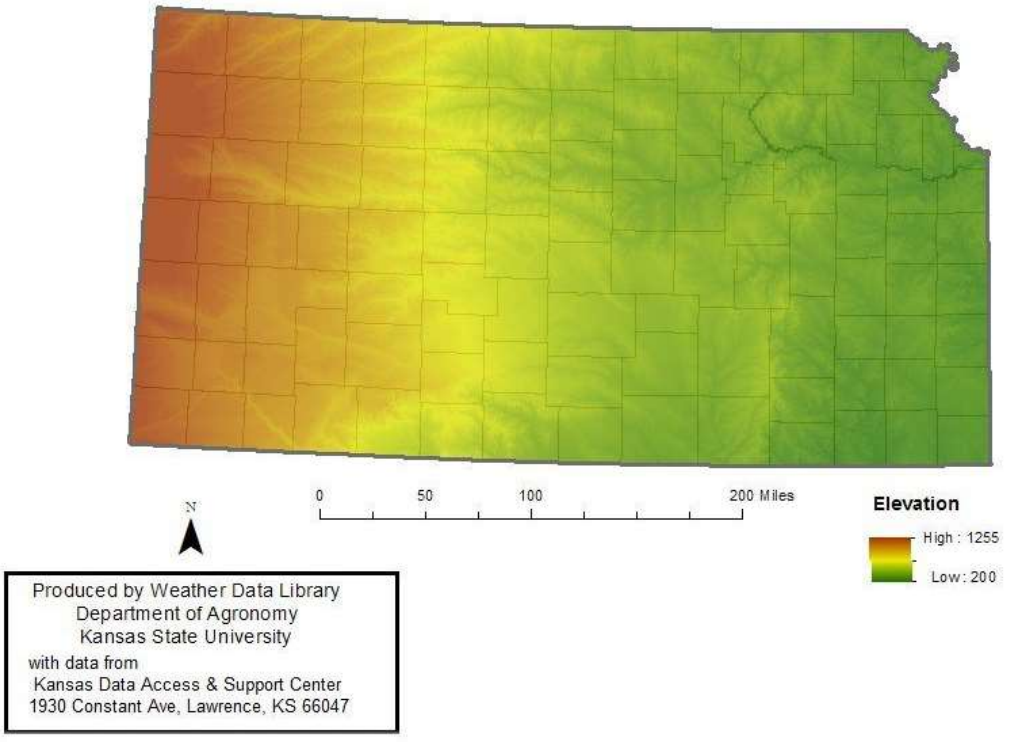
6.0 EXISTING AND FUTURE CONDITIONS ANALYSIS

Based on geography and diverse climate, Kansas experiences a wide range of temperatures and some extreme weather events, including snowstorms, flooding, and tornados. Planning for extreme weather events is important, as it will affect infrastructure such as power and communications. From the experience of other states, we have learned that not all electric grids are fully resilient under some extreme weather conditions like severe cold or heat. Charging stations need to be reliable and available for continued use during evacuations caused by any extreme conditions, especially in remote areas. Choosing locations near easily accessible interchanges and crossroads, with suitable commercial or public sites that have adequate power aligned to grid capabilities, communications, and security are considerations for operational feasibility and for having capable infrastructure available in extreme conditions.

6.1 State Geography, Terrain, Climate and Land Use Patterns

The state of Kansas, located in the Midwest of the United States, is the 15th largest state with about 81,759 sq miles of land and 520 sq miles of water. It borders Nebraska on the north, Oklahoma on the south, Missouri on the east and Colorado on the west. The state is mostly rolling plains with the mean elevation of about 600 meters above sea level with the highest point at 1231 meters and lowest point at 206 meters above sea level (Figure 6-1).

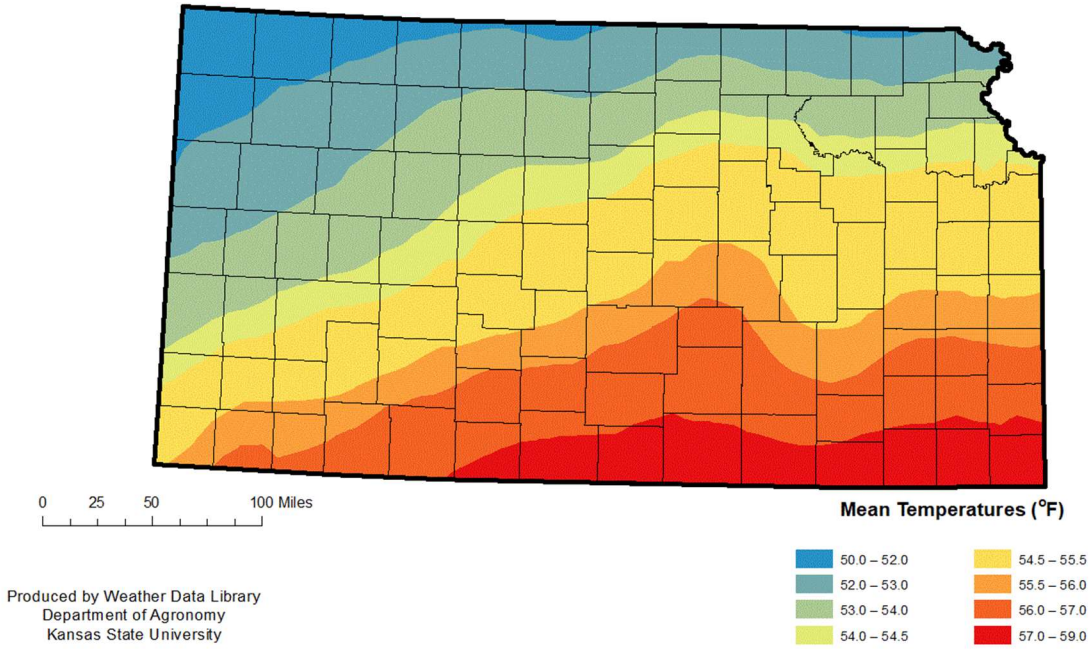
Figure 6-1: Kansas Digital Elevation (meters)



Monthly average temperatures range from a high of 92.9 F to a low of 15.7 F. The annual mean temperatures range from around 58 °F along the Oklahoma border to less than 52 °F in the northwestern

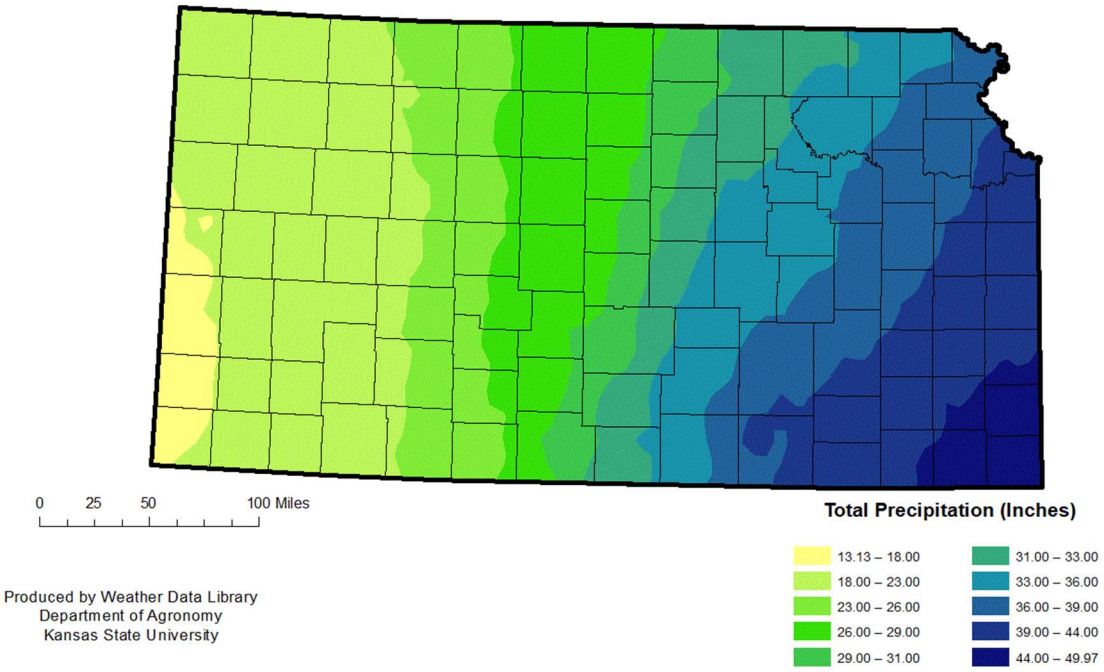
corner of the state. The highest and lowest temperatures recorded are 121°F on July 24, 1936 in Alton and -40°F on February 3, 1904 in Lebanon (Figure 6-2).

Figure 6-2: Normal Annual Mean Temperatures (1991-2020)



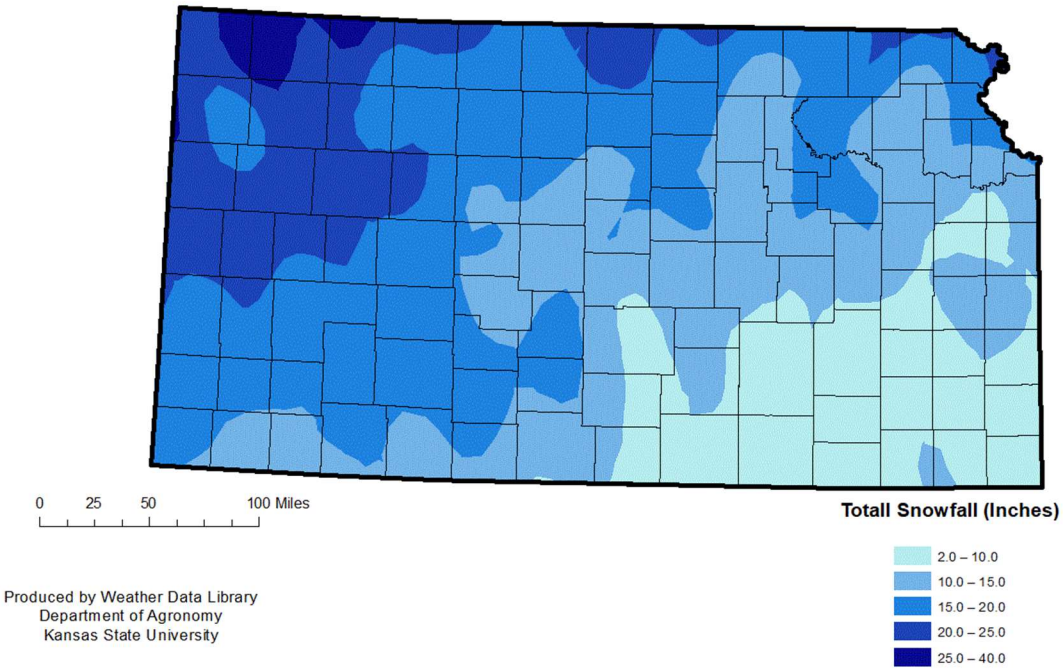
Annual precipitation, based on 1991—2020 information, varies from more than 45 inches in southeastern Kansas to less than 18 inches in southwestern Kansas (Figure 6-3).

Figure 6-3: Normal Annual Precipitation (1991-2020)



The normal annual snowfall shows a pronounced gradient from northwest to southeast. Winter moisture in the southeast is more likely to come in the form of rainfall rather than snowfall. The highest normal annual snowfall is in the range of 28 to 42 inches, while the lowest annual normal values are less than 12 inches. Amounts vary widely from year to year (Figure 6-4).

Figure 6-4: Normal Annual Snowfall (1991-2020)

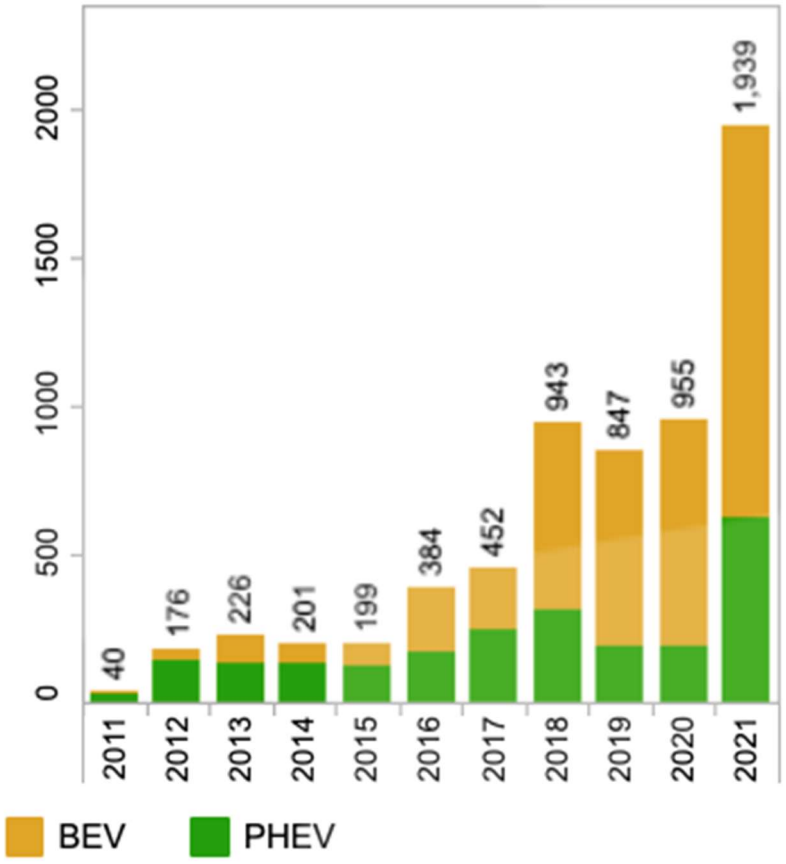


Overall, Kansas has a temperate climate with multiple days of snow and freezing temperatures in winter and high heat, tornadoes, and rain in summer. The diverse climate and weather events are important to consider for proper operations and maintenance of EV charging infrastructure as they have an impact on battery performance and a vehicle's range. This requires additional consideration for strategic placement and deployment of charging stations and other related services. Heavy snow storms and tornadoes can cause power outages and therefore planning for resiliency is also very important and is addressed in a later section.

6.2 EV Ownership, Availability, and Industry Landscape

According to Kansas Department of Revenue vehicle registration data, Kansas had 4,046 EVs, 359 plug-in hybrids, 2,408 electric hybrids, and 16,613 hybrid vehicles in 2021. Sales of battery electric vehicles (BEV) and plug-in hybrid electric vehicles (PHEVs) have been going up year over year (Figure 6-5). In addition, companies like Tesla, Rivian, and Lucid Motors are bringing new EVs to the market. More traditional motor companies such as Ford and GM are launching electric pick-up trucks, SUVs and sedans to appeal to mass markets. Medium and heavy duty EVs are coming to market to serve school bus needs, transit, airports, last mile delivery, mid and long-haul freight, drayage and the intermodal freight industry.

Figure 6-5: Yearly sales of PHEV and BEV in Kansas



Source: https://www.autosinnovate.org/resources/electric-vehicle-sales-dashboard

The production of BEVs is increasing in the US. Major automakers are rapidly developing battery production capacity in the US to electrify their vehicle fleets.

Below is the list of passenger BEVs available as of Q2, 2022.

- Tesla Model S
- Tesla Model 3
- Tesla Model X
- Tesla Model Y
- Hyundai IONIQ Electric
- Chevrolet Bolt EV
- Hyundai Kona Electric
- Hyundai Ioniq
- Nissan LEAF S
- Kia Niro Electric
- BMW i3
- Ford Mustang Mach-E
- Ford Mustang Mach-E
- Mini Cooper SE
- Polestar 2
- Volvo C40
- Volvo XC40
- Jaguar I-PACE
- Porsche Taycan
- Audi e-tron
- Lucid Air
- Mazda MX-30
- Volkswagen
- Ford F150 Lightning
- Rivian
- Mercedes EQS
- Polestar

Table 6-1: Existing and Planned US Battery Factories

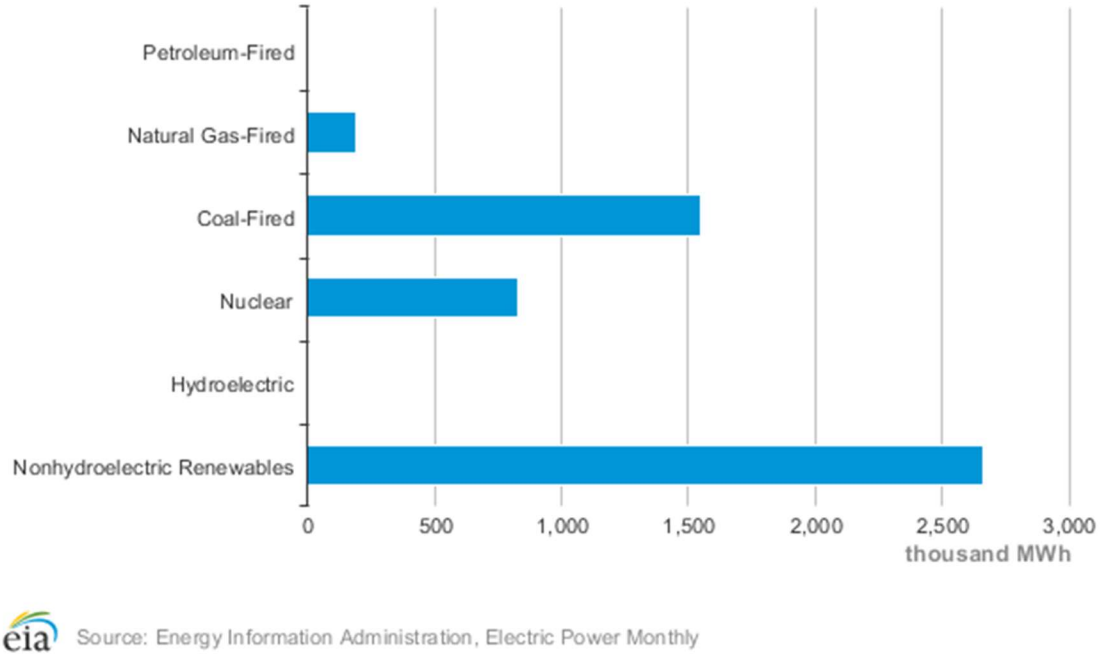
Company	Location	Planned Annual Capacity (GWh)	Planned Year
Tesla	NV	38	2022
Tesla	CA	10	2022
Tesla	TX	100	2022
Ford	TN	43	2025
Ford	KY	86	2025
GM	OH	30-35	2022
GM	TN	30-35	2023
GM	MI	5	2023
SK Innovation	GA	21.5	2023
Mercedes	AL	TBD	2024
VW	TN	TBD	TBD
Stellantis	ON	45	2025
Stellantis	IN	TBD	2026
Panasonic	KS	TBD	2026
Various other companies	Multiple	80-100	2022 and onwards

Source: Various sources from internet

6.3 Grid Capacity

Based on the Kansas electricity profile 2020 from the US Energy Information Administration, net summer capacity is 16,981 MW. As of December 2021, total net electricity generation in Kansas is 5,253,000 MWh.

Figure 6-6: Kansas Net Electricity Generation by Source



For charger deployment locations, total grid capacity is not as important as the availability of power at specific locations including parameters such as 3-phase power and proximity to transmission lines. Other key considerations are available amenities, proximity to freeway exits, good lighting, and more. Transmission and availability of required power will be discussed with the local utility.

To view electric utilities that service the area, see Appendix D.

All major utilities in Kansas are members of the Southwest Power Pool (SPP), which operates as the Regional Transmission Organization (RTO). SPP oversees the bulk electric grid and wholesale power market in the central United States on behalf of a diverse group of utilities and transmission companies in 14 states (Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas and Wyoming).

As an RTO, SPP does not own the power grid; it independently operates the grid minute-by-minute to ensure that power gets to customers and to eliminate power shortages. The role of SPP is to ensure the reliable supply of power, adequate transmission infrastructure, and competitive wholesale electricity prices for a 575,000-square-mile region including more than 60,000 miles of high-voltage transmission lines.

6.4 State Travel Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs

6.4.1 State Travel Patterns

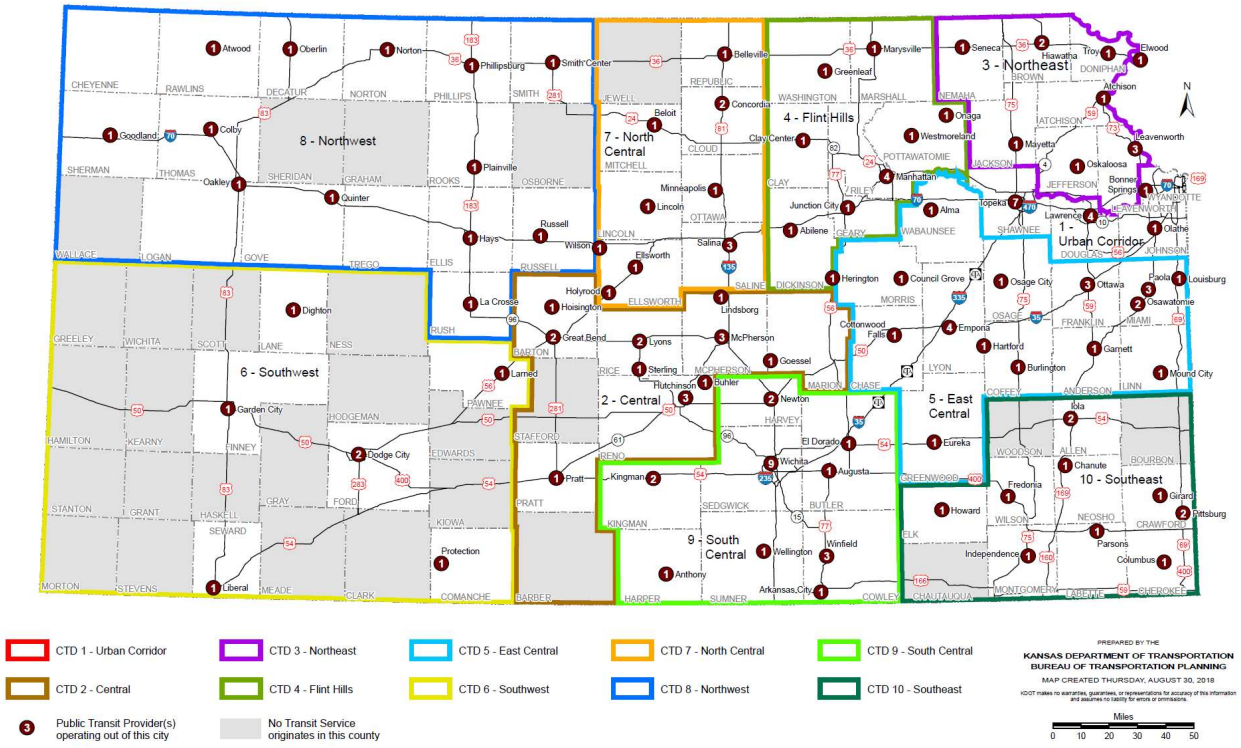
KDOT and its partners at KTA, as well as the state's six metropolitan planning organizations (MPOs), regional and local governments across the state, and various private sector organizations are responsible for the state's multimodal transportation system. Kansas has the fourth-largest public highway and local road system by miles in the United States. Nine primary or auxiliary Interstate highways and 29 U.S. highways (not including business routes) within Kansas reflect the state's central location in the national transportation system. Kansas also has designated State Freight Corridors of Significance, which are routes of statewide and regional importance for freight movement.

In Kansas, most people rely on personal automobiles for travel in the state. There is minimal usage of public transportation systems in cities like Kansas City where only three percent of the population use public transportation. In most communities, the automobile remains the most viable or convenient means of transportation available. Statewide Vehicle Miles Traveled (VMT) is used to calculate the total annual miles traveled by all vehicles in the state. VMT in Kansas increased by 14 percent from 2000 to 2016 – from 28.1 billion VMT in 2000 to 32.1 billion VMT in 2016. By 2030, vehicle travel in Kansas is projected to increase by another 15 percent.

6.4.2 Public Transportation Needs

There are 145 transit and para-transit providers in Kansas, covering most of the state's 105 counties (Figure 6-7). Some of the state's larger service providers in urbanized areas, like Wichita, Lawrence, and the Kansas City areas have all begun deployment of electric buses. Generally, these larger agencies have their own depots and maintenance crews which make electrification more feasible with space and resources to accommodate for charging infrastructure. Many of the state's smaller public transit agencies are interested in electrifying their fleets with multiple agencies currently conducting feasibility studies to assess their induvial needs to convert and may have electric vehicles in operation within the next five years. Wichita Transit, Lawrence Transit, and the Kansas City Area Transportation Authority have all begun deployment of electric buses. Generally, these agencies serve the local cities and may have their own depots with charging infrastructure. Please see the list of transit agencies in the Appendix.

Figure 6-7: Kansas Coordinated Transit Districts



Electric vehicle charging for public transportation fleets will require a lot of power and in most cases a deep analysis will be needed to plan that EV charging infrastructure. This will drive a need to upgrade utility infrastructure, increase demand for microgrids, and overhaul general infrastructure.

6.4.3 Freight and other supply chain needs

Kansas is served by a comprehensive freight rail network and intercity passenger rail service is provided by Amtrak. The state also has direct access to one inland barge navigable waterway, the Missouri River with five private commercial terminals. Kansas is home to 138 public-use airports, including six commercial service facilities and more than 200 private airports that serve general aviation.

Kansas is a major hub for railroads (KCS, BNSF). According to the 2017 Kansas Statewide Freight Plan, freight was associated with $180 billion in direct, indirect, and induced economic impacts in 2014. In addition, the freight transportation industry in Kansas is a large employer, supporting an estimated 446,600 full-time jobs and generating $22.2 billion in wage income in 2014. According to the 2017 Kansas Freight Plan, truck freight tonnage across Kansas is forecast to increase 33.9 percent between 2014 and 2040.

The primary freight network in Kansas consists of I-70, I-335, I-135 and I-35 (Figure 6-9). I-70 is the main freeway for east-west freight movement across the state and I-135, I-35 and I-335 mainly run north-south in direction. The state travel pattern deciphered from the traffic counts also shows the same driving behavior. The highest traffic counts are in Kansas City, Wichita, and Topeka.

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Figure 6-8: Traffic Counts

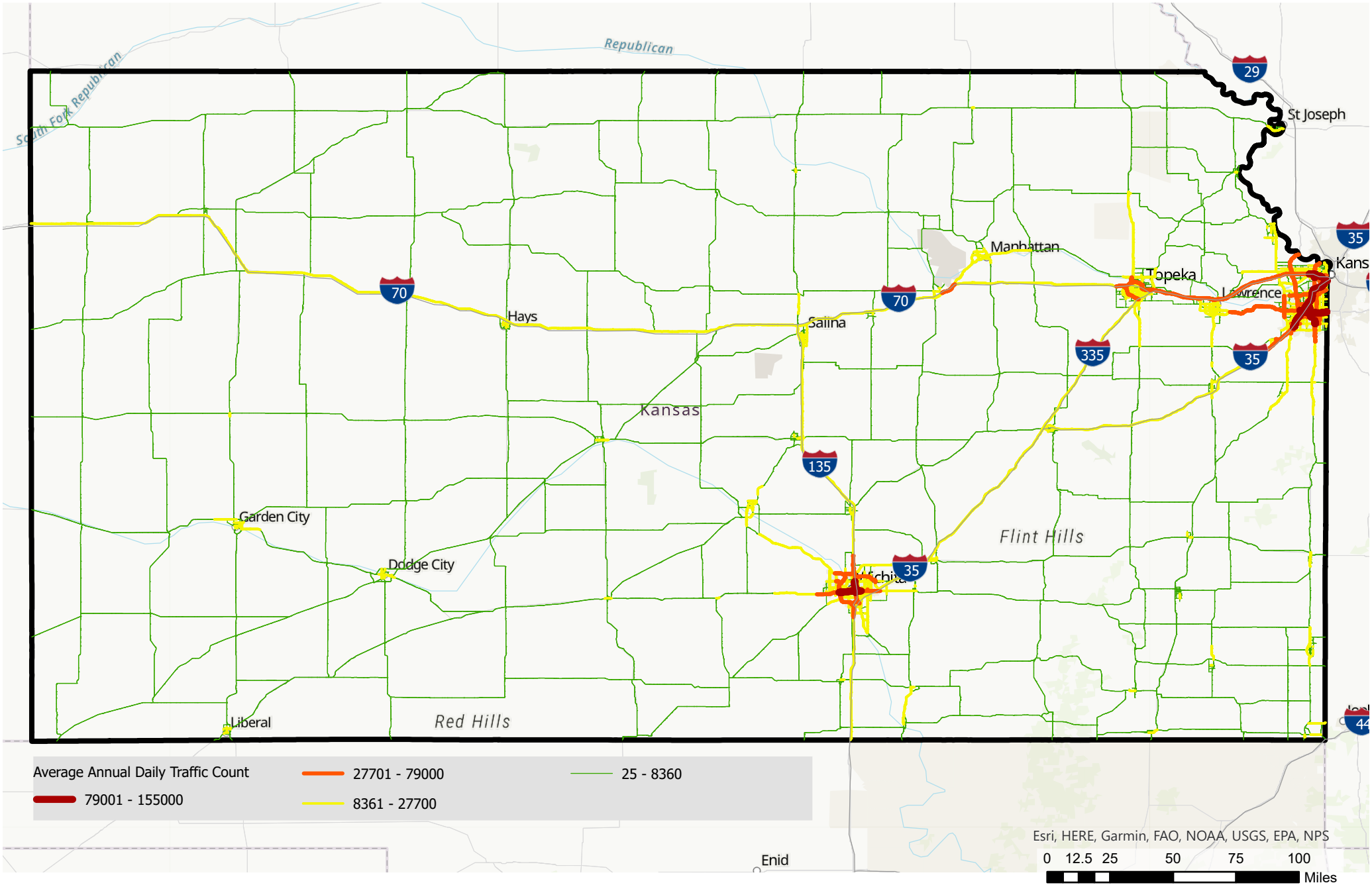

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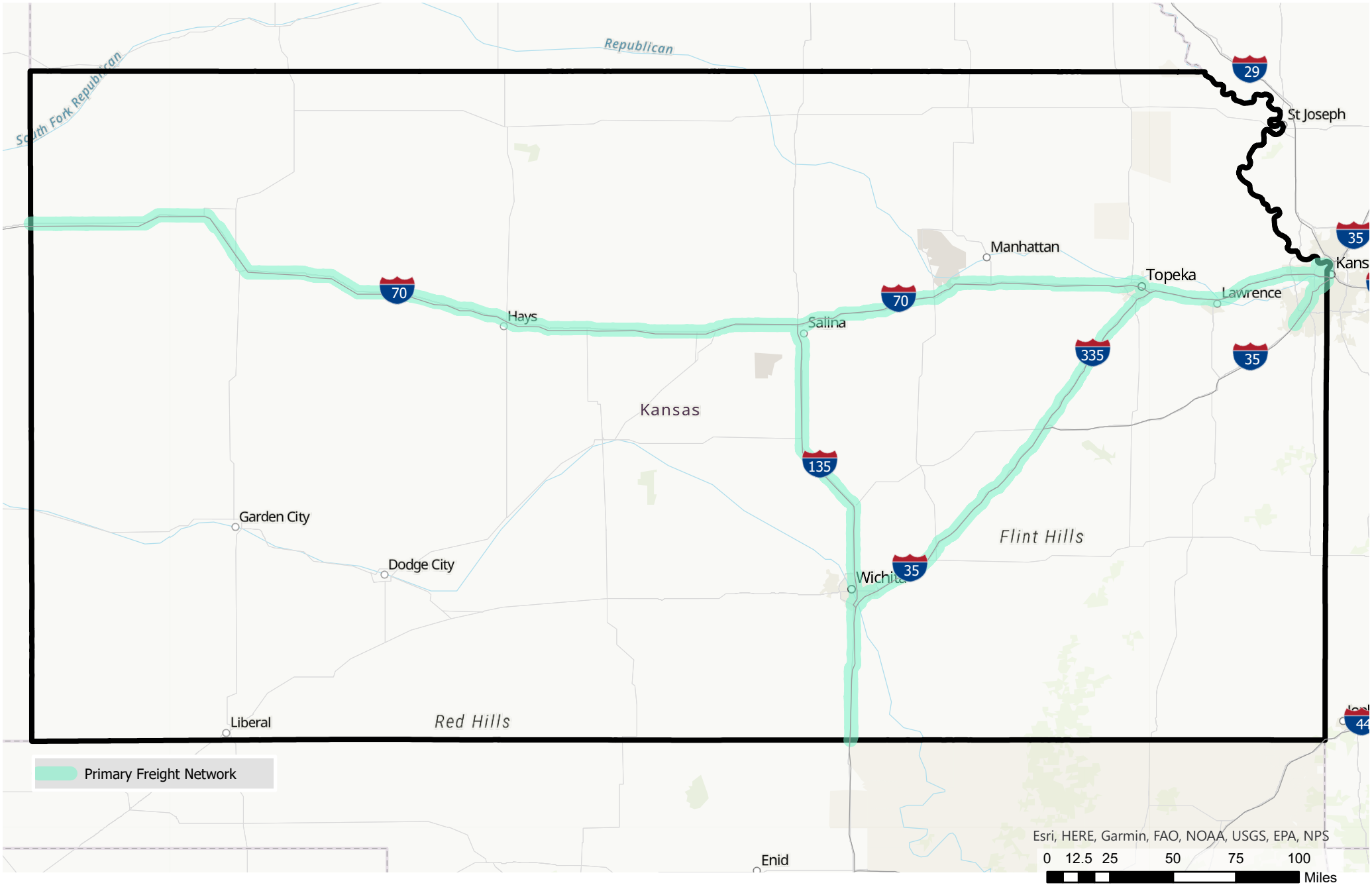
Figure 6-9: Freight Routes



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The freight electric vehicles (mainly medium and heavy duty) will rely on fast and reliable charging to avoid any disruption to business operations and to avoid longer downtime to charge vehicles on routes. Electric Vehicle Charging Infrastructure (EVCI) for medium- and heavy-duty vehicles must be easily accessible and must be co-located with services such as food, showers, and parking for rest periods.

6.5 AFC – Corridor Networks

Kansas has nominated multiple alternative fuel corridors in several rounds of nominations, including 4 additional corridors nominated and approved for designation in Round 6. The most recent EV corridor nominations were based on an EV Corridor Plan created by the Kansas EV Corridor Planning Group organized by the Central Kansas Clean Cities Coalition in 2019. This group consisted of representatives from KDOT, KDHE, Kansas Municipal Utilities, Kansas Power Pool, Kansas Electric Power Cooperatives, and other representatives from small and large electric utilities from across the state. Experienced EV charging equipment providers and installers from the area were also included in the corridor planning. The group analyzed traffic data from KDOT to determine necessary corridors for EV charging. Location selection was based on the alternative fuel corridor guidance for EV charging locations every 50 miles. This plan was used as the basis for the VW EVSE funding that was awarded earlier this year and is also the basis for the *Charge Up Kansas NEVI Plan*.

Designated EV corridors in Kansas include: I-70, I-35, I-135, I-335, US-400 and US-81 from I-70 north to the Nebraska border (Figure 6-10). These corridors were targeted for charging in the Kansas EV Corridor Plan created in 2019. Additional infrastructure is needed for these corridors to achieve certification as fully built out.

As US-400 stretches across Kansas from the Colorado border through the Missouri border, KDOT reached out to the Colorado Department of Transportation and the Missouri Department of Natural Resources for its nomination as an EV corridor. Both states submitted letters in support of the round 6 nomination. KDOT also contacted the Oklahoma Department of Transportation to communicate about corridor nominations. I-35 crosses the Kansas/Oklahoma state line and will need additional infrastructure for Corridor-Ready status. KDOT was unable to reach an alternative fuel corridor contact in Nebraska before the AFC nomination deadline but intends to coordinate with Nebraska and will continue to communicate with Colorado, Oklahoma and Missouri on alternative fuel corridors and infrastructure. This cross-state communication is necessary to ensure viable national corridors for our region.

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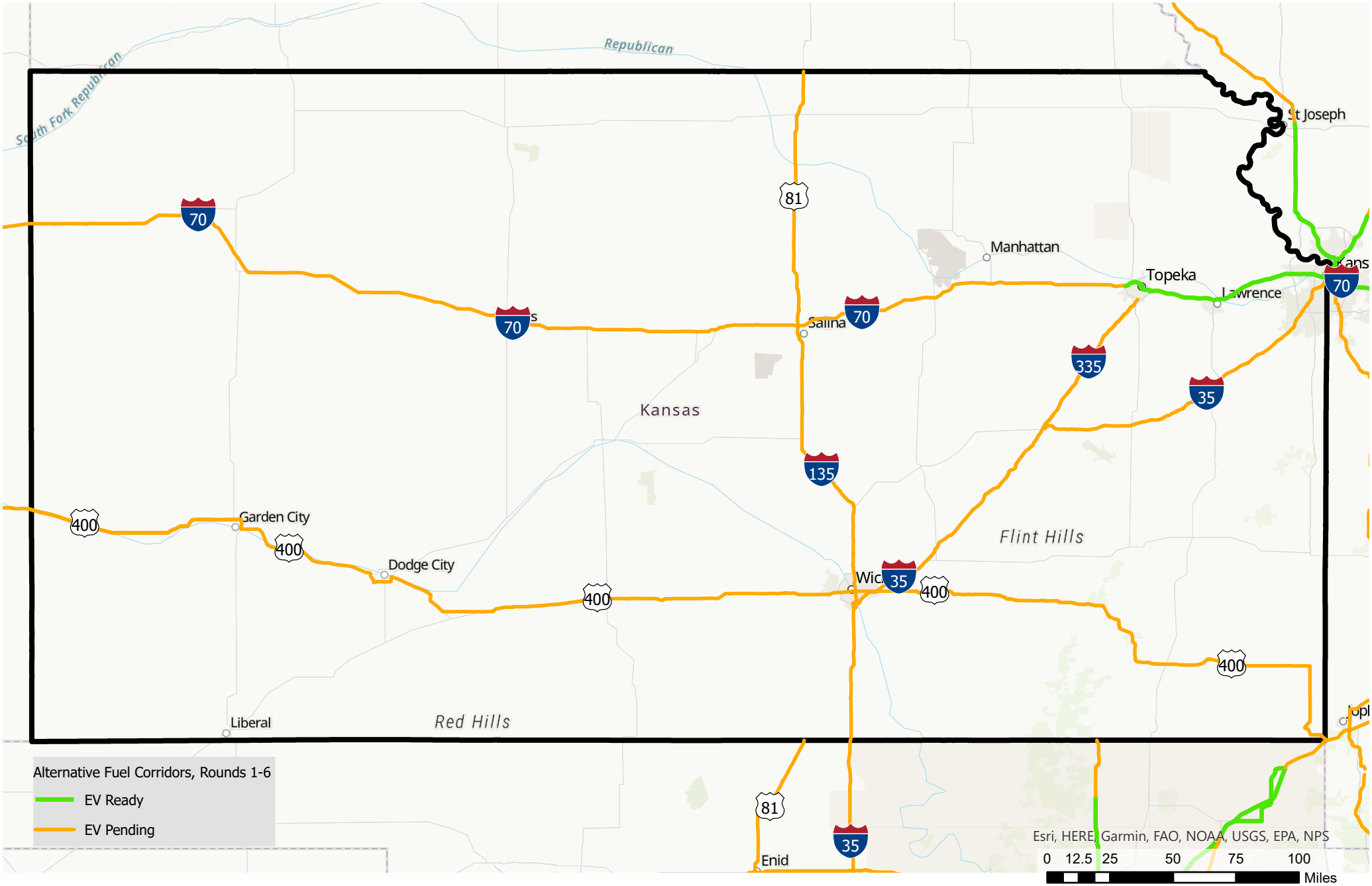
Figure 6-10: Designated Alternative Fuel Corridors



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6.5.1 Upgrades of Corridor Pending to Corridor Ready

The *Charge Up Kansas NEVI Plan* will address the needed infrastructure to upgrade designated Pending EV corridors to Ready. This plan calls for new locations for EV charging infrastructure to fill in the gaps with EVSE that meets the NEVI program requirements along existing designated EV corridors and install new charging along the newly designated EV corridors. Siting new locations for charging will be the initial priority under the plan to enable EV travel across more area of Kansas. As demand for charging increases, existing DCFC locations that do not currently meet the NEVI requirements for ports or power level will be upgraded to the new standard. This process will result in a network of "fully built out" corridors around the state.

6.6 Existing Locations of Charging Infrastructure Along AFCs

As of March 17, 2022, there are 5 DC chargers along the AFCs that meet the current NEVI guidance for power, number of charging ports, and Combined Charging System (CCS) connectors. These are Electrify America chargers (Table 6-2).

Table 6-2: Existing Charging Infrastructure Along AFCs

State EV Charging Location	Charger Level	Route	Address	Number of EV Connectors	EV Network (if known)
Towne East Square, Wichita	DCFC	I-35	7700 E Kellogg Dr.	4	Electrify America
Walmart 664, Hays	DCFC	I-70	4301 Vine St.	4	Electrify America
Walmart 1214, Colby	DCFC	I-70	115 W Willow St.	4	Electrify America
Casey's, Salina	DCFC	I-70	500 N Ohio St.	4	Electrify America
Walmart 1802, Topeka	DCFC	I-70	1501 SW Wanamaker Rd.	4	Electrify America

Figure 6-11: Map of Existing Charging Infrastructure

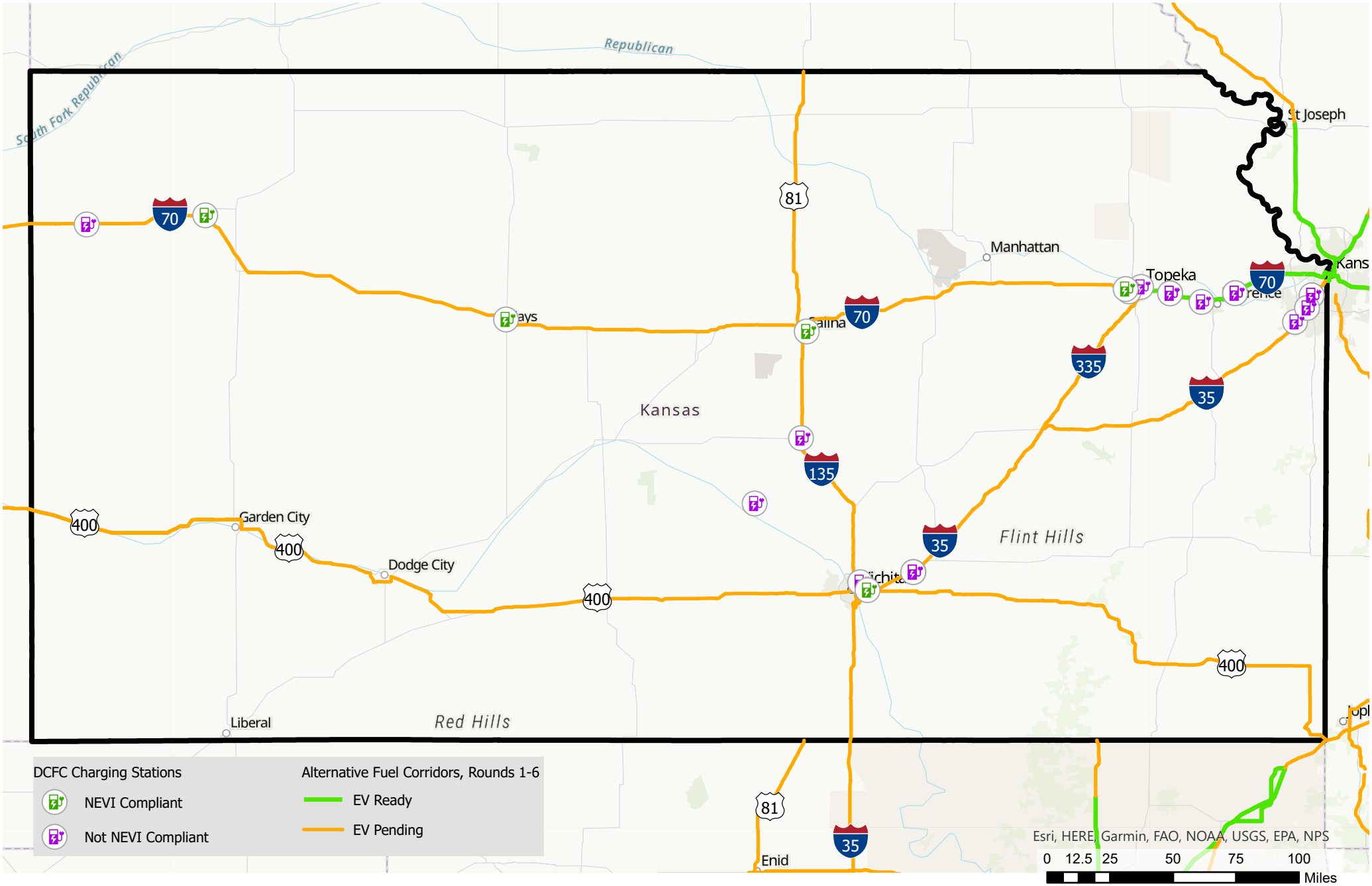

Figure 6-12, provided below, shows the transmission lines across the state of Kansas, owned by various utilities (shown by different colored lines) and substations which are less than 1 mile from major routes for easy installation of electrical infrastructure for future AFC chargers. This map shows a sufficient number of substations that would be able to serve the existing and newly nominated AFCs if granted designation. However, KDOT recognizes that there are some locations where convenient access to substations may prove to be more challenging, requiring innovative solutions to provide public charging stations that fulfill the NEVI program requirements.

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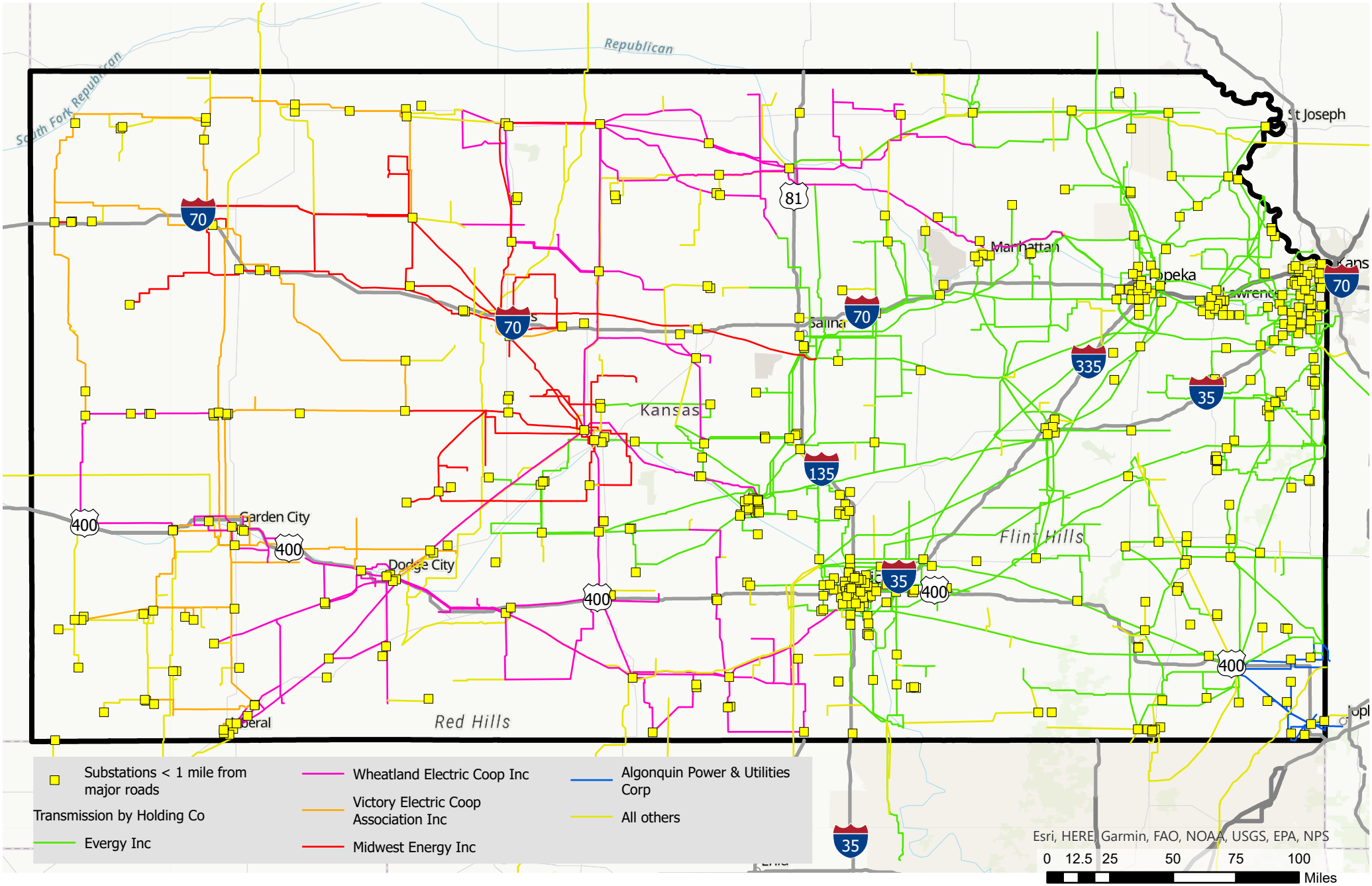
Figure 6-12: Substations & Transmission Lines within 1 mile of Major Roads



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6.7 Known Risks and Challenges

The State of Kansas has identified three major risks for the deployment of EV charging stations under the NEVI program. These risks include addressing power needs in some isolated areas of the state, mitigating supply chain issues, and addressing the availability of a qualified installation workforce.

It is anticipated that KDOT will be able to meet requirements for DCFC station spacing and power ratings in most parts of the state. However, based on the analysis, KDOT has identified that there are not enough substations less than one mile from EV corridors in the southeast part of the state. KDOT will engage with local utilities in those areas of the state to identify their plans to install electrical infrastructure needed to support the EV charging infrastructure.

At the time of this plan's development, comprehensive data on uptime for charging stations in Kansas was not available. In April 2022, University of California, Berkley researchers published a study evaluating the functionality of public direct current fast charge (DCFC) charging stations in the Greater San Francisco Bay Area. Of the 657 electric vehicle supply equipment (EVSE) connectors evaluated by the study, 72.5 percent were found to be functional, or able to charge an EV for 2 minutes[3]. This amount of uptime is much lower than the 95 to 97 percent often claimed by charging networks.

The ongoing supply chain issues with equipment, precious metals, and microchips have the potential to lengthen timelines and limit private sector capabilities.

Additionally, the NPRM for the NEVI program proposed requiring installers be Electric Vehicle Infrastructure Training Program (EVITP) trained and certified. The State may be limited by the availability of licensed electricians/electrical contractors and EVITP trained and certified workforce. Rural and tribal areas may be more affected than other parts of the state. This may slow down the deployment if there is not enough trained workforce. KDOT plans to recommend development of new EV infrastructure training and certification programs to state agencies responsible for workforce development.

[3] Rempel, David and Cullen, Carleen and Bryan, Mary Matteson and Cezar, Gustavo Vianna, Reliability of Open Public Electric Vehicle Direct Current Fast Chargers. Available at SSRN: https://ssrn.com/abstract=4077554 or http://dx.doi.org/10.2139/ssrn.4077554

7.0 EV CHARGING INFRASTRUCTURE DEPLOYMENT

To establish Kansas as a leader in the development of a convenient, affordable, reliable, and equitable EV charging network, it is important to have a strategy in place for deploying EVSE. The plan approach will consist of analyzing the status of Alternative Fuel Corridors, identifying charging needs and EVSE gaps, and working with different state agencies to study the feasibility of location recommendations. It will be important to understand the funding structure and requirements outlined in the NEVI Guidance along with the local, state, and federal policies for installing, implementing, operating, and maintaining EVSE. Outlined below is a high-level approach to most of these topics.

7.1 NEVI Charging Station Requirements

KDOT will comply with NEVI Program requirements for the use of funds in infrastructure deployment. Current proposed program requirements include:

- EV charging infrastructure shall be located along designated Alternative Fuel Corridors. When all AFCs in the state are certified as fully built out, KDOT may use funds for EV charging infrastructure on any public road or in other publicly accessible locations.
- EV charging stations must be available every 50 miles, within 1 travel mile of the AFC.
- EV charging stations must include at least four 150kW DC Fast Charger ports with CCS connectors. Other connectors, such as CHAdeMO, may also be included.
- EV charging stations must have minimum station power capability at or above 600 kW and supporting at least 150kW per port simultaneously.

NEVI Formula funds require that stations be open to the general public or to authorized commercial motor vehicle operators from more than one company.

7.2 Funding Sources

Funds for the NEVI Formula Program will be distributed by FHWA; Kansas will receive approximately 39.5 million dollars over the span of five years. KDOT will prioritize using the funding sources for improvements to designated Alternative Fuel Corridors, ensuring the build-out of the AFC network as required by the NEVI program before funds are used to address other Kansas needs.

The federal cost-share for a NEVI formula program project is 80% and can be combined with other USDOT funding as long as the federal cost-share does not exceed the aforementioned threshold. This will allow state and private organizations to work together to provide funds for the remaining cost-share (20%).

Two current funding opportunities and incentive programs from agencies and organizations within Kansas include:

- Evergy Commercial Rebate Program

  - Evergy is a large regional utility serving much of eastern Kansas. The utility offers rebates to reduce the upfront cost of installing publicly accessible charging stations. Two rebates are available based on highway proximity:
    - If a site is within one mile of a highway intersection, a $45,000 rebate is available. Sites that meet this criterion are required to install two DCFC units.
    - If a site is not within one mile of a highway intersection, a $55,000 rebate is available.
- Kansas Power Pool (KPP): KPP, a joint action agency, serves 24 Kansas public utilities and offers customers rebates of up to $1,500 for any type of EV charger.

To efficiently manage and maximize funds, the State will leverage actions and lessons learned from the cost-share approach used in the administration of the Volkswagen Mitigation Trust Funds for DCFC installation and other previous FHWA supported transportation cost-share programs. Funding applications and application processes, selection criteria and selection processes will be developed in collaboration with statewide stakeholders. Gathering non-federal support will require active engagement with potential owner/operators, municipalities, interested private entities, local jurisdictions, and utilities. There was a willingness to share costs across those various entities evidenced in the applications received for the VW program, and similar interest in the NEVI program is anticipated.

7.3 2022 Infrastructure Deployments/Upgrades

Before NEVI Guidance issuance, KDOT led planning efforts to analyze and identify charging gaps along important routes across Kansas. The intent of the planning efforts was to use the Volkswagen Mitigation Trust Fund to fill EV charging gaps along those corridors. Through their research, KDOT strategically chose priority locations along I-70, I-35, and I-135/US-81. Nearly $2,000,000 was awarded in February 2022 through a competitive process where applicants could request up to 80% of eligible costs. Projects selected will help mitigate most of the gaps along I-70 and connect I-35 to the Oklahoma border. More details of the planned EVSE can be found in Table 7-1. It is unclear how many locations will meet NEVI guidance requirements, but the intent is to keep an open dialogue with recipients of the VW Settlement funds and site hosts (if different) and other interested parties to upgrade station equipment to become NEVI compliant, if feasible.

Table 7-1: Planned 2022 EVSE Deployments

State EV Charging Location Unique ID*	Route	Location	Anticipated EV Network	Utility Territories	Anticipated Station Ownership** (if known)	FY22 Funding Amount
TBD	I-70	Oakley, KS	TBD	Midwest Energy, Inc.	P	$190,000
TBD	I-70	WaKeeney, KS	TBD	Midwest Energy, Inc.	P	$222,204
TBD	I-70	Russell, KS	TBD	City of Russell	P	$335,104
TBD	I-70	Abilene, KS	TBD	Evergy	P	$271,815
TBD	I-70	Maple Hill, KS	TBD	Evergy	P	$295,071
TBD	I-35	Matfield Green Service Area	TBD	Flint Hills Rural Electric Cooperative	P / SG	$335,104
TBD	I-35	Belle Plaine Service Area	TBD	Sumner Cowley County Electric Cooperative, Inc.	P / SG	$335,104

**Defined by the State – this should match the unique ID in the State's applicable GIS databases. It should be clear that the Unique IDs correspond to general locations for proposed installations rather than pinpoint geocoordinates.*

***Federal Government Owned (FG), Jointly Owned (J), Local/Municipal Government Owned (LG), Privately Owned (P), State/Provincial Government Owned (SG), or Utility Owned (T)*

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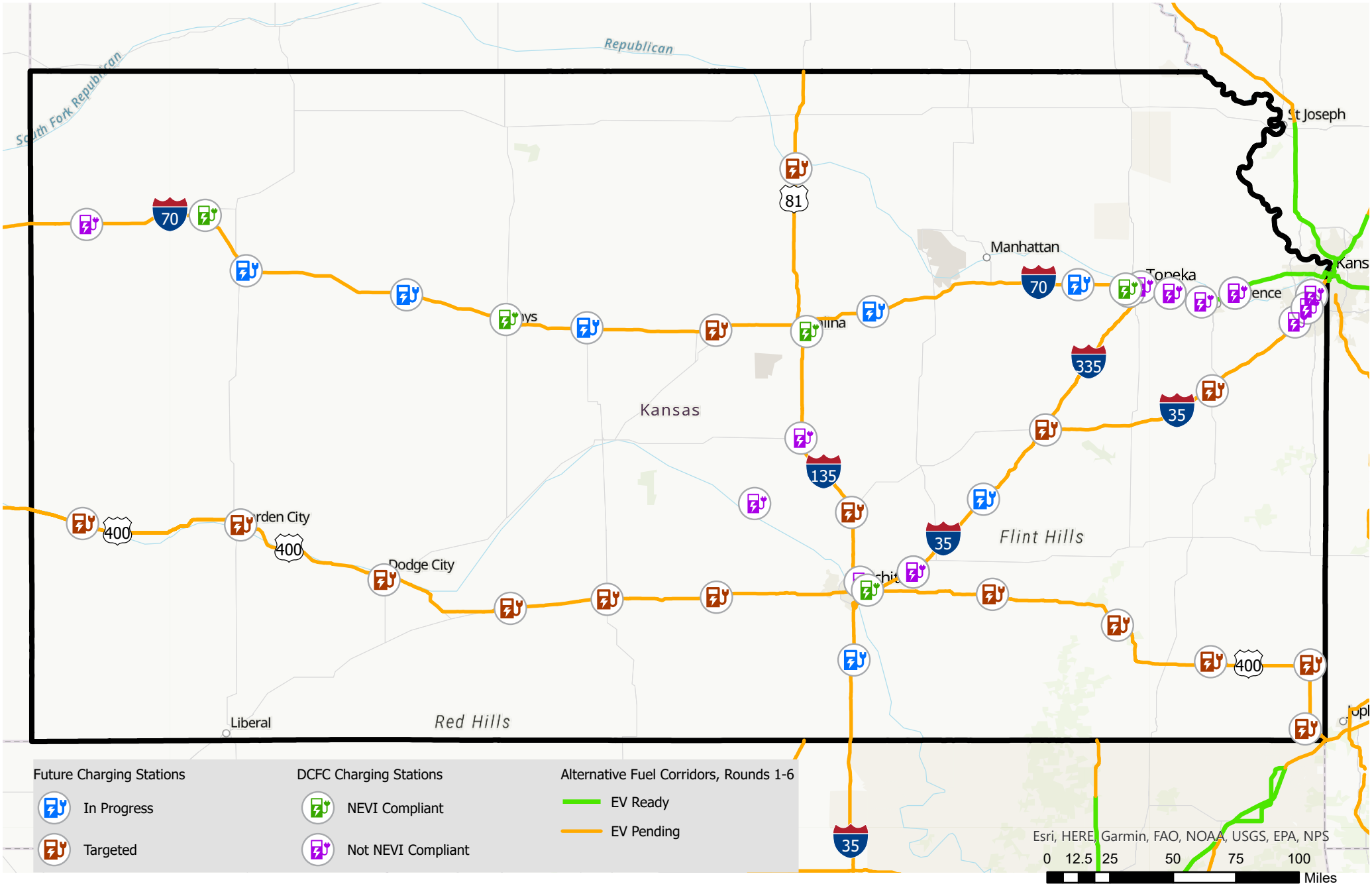
Figure 7-1: Existing and Planned Charging Infrastructure



Note: targeted station locations (shown in red) are general areas for future stations, not specific locations. Charging stations are needed within 1 mile of designated EV corridors with no more than 50 miles between charging locations.

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Kansas currently hosts five DCFC locations that meet NEVI program requirements and several other publicly accessible DCFC stations along existing Alternative Fuel Corridors. Seven additional locations along the state's AFCs have received awards from the Volkswagen Mitigation Trust Fund for the installation of DCFC stations with the potential for some locations to also meet NEVI program requirements.

The top priority of the NEVI Formula Program is to create a national network of EV chargers that is convenient, reliable, affordable, and equitable for all users. With that in mind, and considering the current and future conditions of EV chargers around Kansas, KDOT has developed a strategy to continue delivering EV charging infrastructure:

1. Focus on gaps along designated EV Alternative Fuel Corridors (Rounds 1-6)
    a. Through the efforts of KDOT and the Kansas EV Corridor Planning group, general areas along EV Alternative Fuel Corridors have already been identified as potential hosts to fill remaining gaps along the corridors.
    b. Continue to have open conversations with awardees of Volkswagen Mitigation Trust Funds to work towards NEVI Guidance compliance.
    c. Hold recurring conversations among the EV Working Group to continue planning and engaging important stakeholders around the state.
2. Subsequent to the Round 6 EV Alternative Fuel Corridor designations, the KDOT team will leverage research on nominated corridors and NEVI Guidance requirements to seek potential locations and site hosts.
    a. NEVI Formula funds will be used to improve corridors from Corridor "Pending" to Corridor "Ready" status.
    b. Conduct further research for potential sites along corridors (i.e. DAC benefits, power supply analysis, site host interest, availability of matching funds).
    c. Assist interested site hosts with funding applications and provide educational content and information to potential site hosts.

7.3.2 Upgrades of Corridor Pending Designations to Corridor Ready Designations

Kansas submitted four additional nominations for EV Alternative Fuel Corridors in Round 6. With the Round 6 designations, AFCs cover all corridors in the Interstate Highway system in the State. This effort will also allow KDOT to use the NEVI formula funds to address the charging needs to change all interstates from Corridor "Pending" status to Corridor "Ready". Additionally, two heavily trafficked US Highways have been designated as Pending EV Corridors to help bridge the gap between the southern Nebraska border, eastern Colorado border, and western Missouri border. For a map of AFC designations and EVSE station locations, see Figure 7.1.

7.4 Increases of Capacity/Redundancy along Existing EV AFC

There are many locations along EV-pending AFCs in Kansas where KDOT anticipates a need for significant electrical distribution line upgrades to support new 600kW charging loads. KDOT will coordinate with local utilities, but ultimately expects the utility relationships and requests for new service to be owned by the long-term operator of the charging stations. KDOT will communicate this expectation to potential applicants through the Charge Up Kansas website and the formal application process.

7.4.1 Electric Vehicle Freight Considerations

Freight is one of the main employment generators in the State of Kansas. Based on the KDOT Freight Plan published in 2017, freight amounted to more than 372,000 jobs in 2014 and $22 billion in earned wages for Kansas workers. Because of the importance of the freight industry in Kansas, supporting the electrification of freight is a key consideration for transportation electrification generally. Advancements in technology are rapidly approaching which is creating a sense of urgency to keep medium and heavy-duty EVs in the conversation.

To plan accordingly for the future transition to freight EVs, KDOT's considerations currently include:

- Researching Kansas's freight EV market, charging infrastructure for medium and heavy-duty EV's, use cases, and operations.
- Understanding power requirements, electricity infrastructure, and guidelines for medium and heavy-duty trucks.
- Engaging stakeholders such as EVSE manufacturers, medium and heavy-duty EV manufacturers, utility providers, fleet owners, and the logistics industry.

7.4.2 Public Transportation Considerations

There are 145 transit and paratransit providers in Kansas, therefore it is important to understand the level of public transportation's interest in electrified fleets and future electrification goals. As the efforts of implementing charging and addressing charging needs along Alternative Fuel Corridors continue, KDOT will simultaneously work to coordinate with public transportation providers.

KDOT will focus on the following considerations to ensure public transportation agencies are being included and valued as EV infrastructure planning moves forward:

- Understand current goals and objectives for public transportation agencies that have begun or plan to electrify their fleet;
- Discuss charging needs and strategize to maximize NEVI formula funds;
- Support small agency plans and establish goals for electrification of their fleets and charging needs; and
- Explore funding to support workforce training requirements in the operation of electric fleets.

7.5 FY23-26 Infrastructure Deployments

Based on current and near-future conditions, Kansas will continue its focus on converting the state's EV Alternative Fuel Corridors to Corridor Ready status. With the help of stakeholders and the use of the Volkswagen Mitigation Trust Fund, KDOT has positioned some of the Alternative Fuel Corridors to comply with NEVI Guidance requirements. Because KDOT understands the importance of building up a national network of EV chargers, conversations will continue with neighboring states to ensure charging needs are being met at state borders. Open dialogue between neighboring State DOTs is important to strategically place EV infrastructure and make the most out of NEVI formula funds.

KDOT also plans to build upon existing relationships with communities around Kansas to better understand their charging needs and transportation electrification goals. KDOT will coordinate and support communities in the application process for discretionary grant funds as they become available. In addition, if AFCs are certified as fully built out before FY 2026, KDOT plans to use NEVI formula funds to support further EV charging infrastructure in Kansas communities. As the moving parts develop, KDOT will continue working to meet the sustainable movement of goods and people throughout Kansas, modernizing transportation infrastructure, and promoting investments in Kansas communities.

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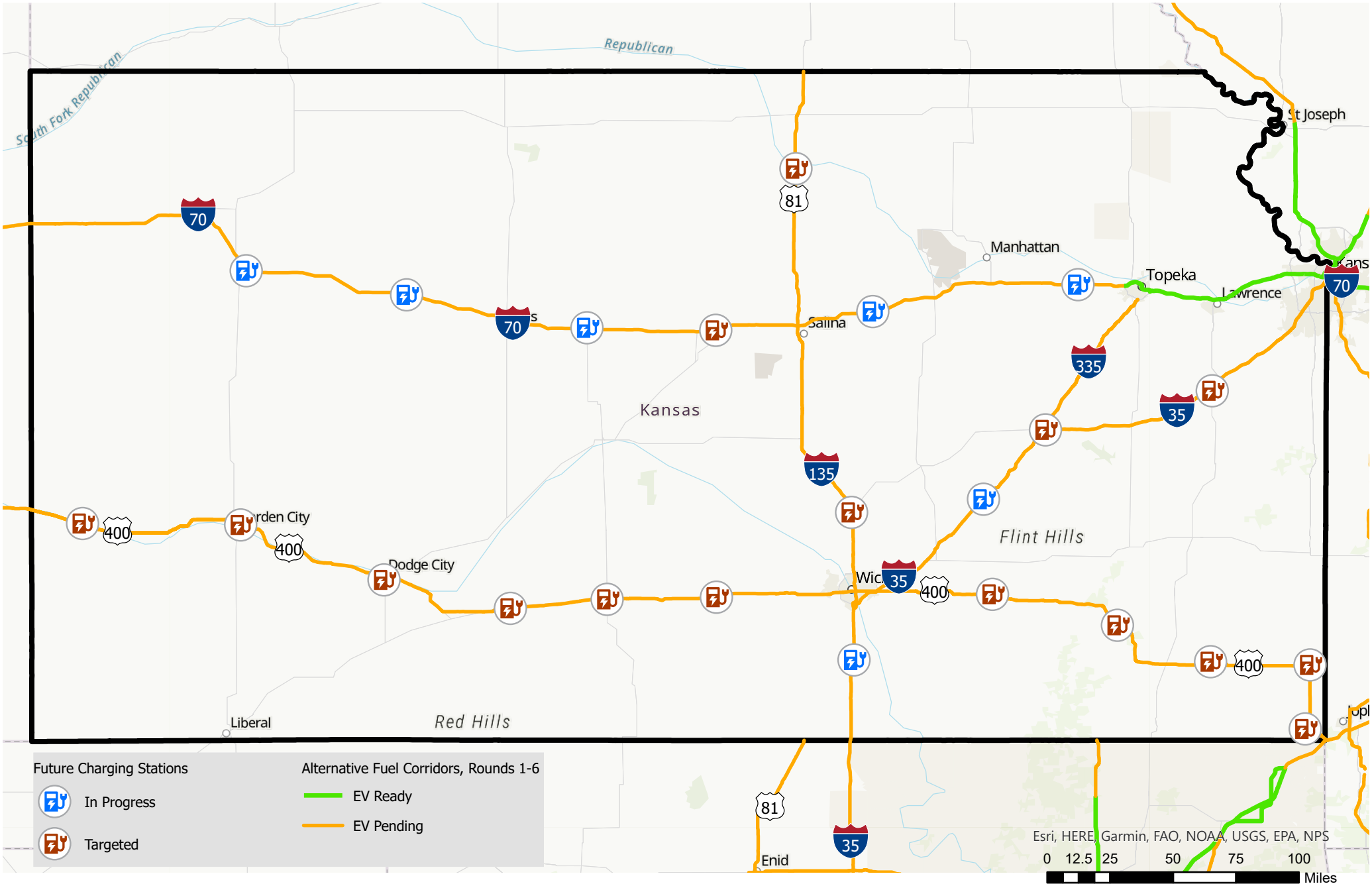
Figure 7-2: Target Locations for Future Infrastructure Deployment



Note: targeted station locations (shown in red) are general areas for future stations, not specific locations. Charging stations are needed within 1 mile of designated EV corridors with no more than 50 miles between charging locations.

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7.6 State, Regional, and Local Policy

Installation of new EVSE will require site hosts or developers to acquire building or construction permits from local agencies, as appropriate. Kansas will coordinate with NEVI program applicants to ensure that they obtain appropriate permits and to encourage local jurisdictions to streamline EVSE permitting processes.

ADA accessibility is an important consideration for the development of charging stations that serve all Kansans. All charging stations funded through this program must be fully accessible and maintain accessibility through their functional life. Monitoring ADA accessibility will be incorporated into program monitoring. KDOT will encourage local jurisdictions to incorporate accessibility standards into local permitting and inspections.

8.0 IMPLEMENTATION

Once KDOT and its selected partners/vendors complete the procurement and installation process of the Electric Vehicle Supply Equipment (EVSE), it is very important that the EVSE is operated and maintained so that it can be used by EV drivers. Both the RFP and the contract will stipulate that funding recipients will be responsible for maintenance and operations of the EVSE for a minimum of five years after installation. There will be reliability and time-of-day accessibility requirements put in place as well.

KDOT will require funding recipients to report charging, usage, uptime, and availability data of the EVSE and the network. These requirements will be included to ensure that the minimum 97 percent uptime requirement is met. There will also be a requirement of real-time data sharing protocols and publicly available location and station information sharing protocols. The required data will be shared with the Joint Office of Energy & Transportation on a stipulated timeline.

8.1 Strategies for EVSE Operations & Maintenance

Well-planned EVSE operations and maintenance are key components of providing a good experience to EV drivers on designated EV corridors. KDOT plans to require applicants to meet a minimum uptime of 97 percent. Applicants will also be required to provide a detailed Service Level Agreement (SLA) and Operations and Maintenance (O&M) plan in their application, and provide maintenance, recordkeeping, and reporting samples and requirements. KDOT also plans to monitor station up time, availability and usage through vendor reported data and general user satisfaction on publicly accessible third-party charging web sites.

The Operations & Maintenance Plan must acknowledge that stations will be publicly accessible 24 hours a day, 7 days a week, as required by the NEVI Program. O&M Plans must provide lighting security plans for the station. KDOT will encourage station developers to become familiar with Crime Prevention Through Environmental Design (CPTED) principles, incorporate those into the station development, and address station security in the O&M Plan.

The process of O&M for EVSE has various components such as costs, fees, maintenance plans, and equitable access and are addressed below:

8.1.1 Electricity Cost

The cost of electricity to charge vehicles includes per kilowatt-hour (kWh) charges plus demand charges which are typically based on the highest 15-minute average use recorded over a billing period. Direct-current (DC) fast charging equipment are more likely to trigger demand charges. Also, some utilities offer time-of-use (ToU) rates or other rate incentives for charging infrastructure owners.

The funding recipient will be responsible for electricity and demand costs to operate the chargers. They will work with local utilities on the tariffs in their respective service areas.

8.1.2 Maintenance Costs

Routine EV charging infrastructure maintenance costs can be minimal, yet, repairing broken chargers can be costly if they are no longer under warranty. Therefore, it is important to establish responsibility for maintenance costs and make the awarded vendor responsible for maintenance of EVSE installed as part of

the NEVI program. Maintenance contracts may include both a response time, time for a given repair, and an overall uptime requirement.

8.1.3 Warranty Costs

KDOT plans to require applicants and awardees to provide information on standard warranty and terms and conditions as part of the solicitation process.

8.2 Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners (Site Hosts)

KDOT will use dynamic and complementary solicitation methods to advertise, select, and award contracts to electric vehicle charger service providers and station/property owners (site hosts). Experience from implementing the VW settlement funds shows that charging equipment companies have the expertise and ability to locate suitable locations for charging stations within KDOT's proposed areas.

To enhance communications to targeted charging station owner/operators, KDOT will build on the database of targeted municipalities, gas station/convenience store owners, utilities, and charging station equipment providers that was developed under the State's work for the VW settlement. KDOT will supplement that information with additional research, workshops, and meetings with EVSE companies and network providers to build the solicitation package.

KDOT may consider the following key factors during identification of EV charger service provider, and station owners:

- Current offerings and roadmap
- Size and stability of business
- Local presence in Kansas
- Ability to promote small businesses participation
- Diversity
- Equity

8.3 Strategies for EVSE Data Collection & Sharing

Per FHWA rulemaking published on June 9, 2022, the State will be responsible for quarterly data submittals, annual data submittals, and the creation of an annual community engagement outcomes report. This round of rulemaking also indicates that FHWA will work with the Joint Office to provide State DOTs with resources to facilitate the data collection and submission, which could include an online data portal, instructions for data formatting, standard reporting templates and automating data collection from charging network providers. With this guidance in hand Kansas will draft and track awardee contracts to monitor proper data collection and submission.

8.4 Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs

Kansas has a moderate climate year-round with extreme heat events in summer and freezing temperatures in winter. In case of extreme conditions such as snowstorms or tornados, charging stations need to be

reliable for continued travel, and be ready to support the public in evacuating and traveling. KDOT will explore and establish readiness capabilities to meet these challenges.

It starts with placing charging stations in easily accessible locations near interchanges and crossroads, near commercial or public sites, and with adequate physical and cyber security, communications systems, and power availability.

The technology and availability of mobile EV charging for these types of extreme weather events are improving and growing. AAA currently offers a service to EV drivers in states such as Oregon and Colorado, where it has installed a large battery with Level II or DC Fast Charge capability on a truck. Similarly, Tesla installed super chargers on semi-truck trailers to provide surge capacity at high volume stations, a strategy that KDOT could adopt in the future to assist motorists during emergency evacuation events.

Funding recipients will be responsible for ensuring maintained access to charging stations. For example, providing an action plan that addresses on-site snow removal and other strategies in response to adverse weather or operational issues will be a requirement of project proposals as a condition included in the RFP.

8.5 Strategies to Promote Strong Labor, Safety, Training, and Installation Standards

Building America's EV charging network opens opportunities for small businesses to participate in building this new infrastructure. KDOT plans to promote the participation of small and disenfranchised businesses, diverse workforce, and underrepresented groups at every step of developing EV charging infrastructure along Kansas roadways. Such areas for small diverse participation are:

- Civil and electrical construction
- Utilities coordination
- Installation services
- EVSE maintenance
- Site operations
- Convenance stores and facilities at EVSE sites

KDOT expects selected funding recipients under the NEVI program to emphasize safety in all aspects of station development, installation, maintenance, and ongoing operations.

KDOT will stay abreast of rulemaking and the proposed requirement to use Electric Vehicle Infrastructure Training Program (EVITP) or Registered Apprenticeship programs as part of the requirement for vendor selection. A list of Kansas contractors is available at https://evitp.org/kansas. Currently, EVITP certifications are highly concentrated in Eastern Kansas, therefore, KDOT also plans to meet this requirement through Registered Electrical Apprenticeship program including EVSE specific training.

The certification programs for EV Charging equipment (https://evitp.org/) was developed in collaboration with industry, auto-manufacturers, utility providers, EVSE equipment manufacturers and other key stakeholder associations. The EVITP collaborative understands the importance of the EV market being

properly supported as it develops and expands. The electricians installing EVSE or charging equipment must understand the many aspects of the market today to adequately address customer questions, concerns and satisfaction. EVITP has rigorous instruction and training standards. Appropriate entry requirements, expert instruction, and a demanding exam ensure strong comprehension, performance, and consistent training results. Additional discussion regarding workforce considerations may be found in Section 11.

9.0 CIVIL RIGHTS

It is the policy of the Kansas Department of Transportation to assure full compliance with Title VI of the Civil Rights Act of 1964. This Policy has been incorporated into the Title VI/Nondiscrimination Assurances executed by the DOT in connection with all Federal Aid programs including those of FHWA. In all the work functions that KDOT performs, KDOT personnel make every effort to prevent, identify, and eliminate discrimination in any programs or activities of the department and implement policies and procedures to ensure compliance with every aspect of Title VI. KDOT's Office of Civil Rights Compliance is responsible for initiating and monitoring KDOT's Title VI/Nondiscrimination activities and preparing required reports under the supervision of a Civil Rights Administrator and Program Staff. Additional KDOT staff, such as those working with the KDOT NEVI Program, are also engaged in activities and efforts to ensure that civil rights compliance is upheld in the implementation of this program.

The primary way KDOT actively assures compliance with every aspect of Title VI is by maintaining a Title VI Implementation Plan and Title VI Assurances with FHWA. With this Plan, KDOT prepares an annual report to review how KDOT is taking proactive measures to assure that our agency is not discriminating in the products or services that we provide. Both the FHWA Title VI Implementation Plan and FHWA Title VI Report can be found at https://www.ksdot.org/bureaus/divadmin/CivilRights/default.asp.

KDOT's Title VI Assurance is Applicable to *Charge Up Kansas NEVI Plan* and can be found in Appendix C.

Application of Title VI and other civil rights related policies to the NEVI program will be addressed through all phases of deployment from project development to implementation to monitoring and reporting with adherence to this implementation plan and all other relevant guidance and federal regulations.

9.1 ADA Compliance

One important example of civil rights applicability to the deployment of EVSE is that of ADA Compliance. Section 504 of the Rehabilitation Act of 1973 prevents organizations from denying individuals with disabilities unequal opportunities to receive program benefits or services. As we move forward with implementation of our NEVI program, KDOT will proactively work to ensure that access to EVSE and site amenities is maintained. EV charging stations funded through KDOT programs must comply with all applicable accessibility standards adopted by the Department of Transportation ADA regulations. The KDOT ADA Transition Plan is available at https://www.ksdot.org/Assets/wwwksdotorg/bureaus/offTransInfo/ADA/KDOTADAPlan.pdf and includes methods for submission of grievances.

During the 2021 Call for Projects for the VW Mitigation Trust Fund, charging stations were required to be ADA compliant. Issued RFP language for charging stations read *"Charging stations must be ADA compliant. Guidance on equipment specifications like installation reach, accessible controls, and payment systems is available from US Department of Energy ADA workplace charger guides at ADA Requirements for Workspace Charging Installation – Guidance in Complying with Americans with Disability Act,"* available at

https://afdc.energy.gov/files/u/publication/WPCC_complyingwithADArequirements_1114.pdf. Per the document, best practices should "consider accessibility, ease of use, and safety for disabled drivers, including those using wheelchairs or other assistive equipment. Key considerations include ensuring adequate space for exiting and entering the vehicle, unobstructed access to the EVSE, free movement around the EVSE and connection point on the vehicle, as well as clear paths and close proximity to any building entrances."

Similar wording will be used in all future RFPs issued as part of the *Charge Up Kansas NEVI Plan*. All charging equipment will be required to be ADA Compliant regardless of location or funding source. Site hosts also must maintain the charging stations per city-state agreement to ensure accessibility and functionality. This includes snow removal around the stations in the winter months.

9.2 Disadvantaged Business Enterprises

Before a project is issued for the construction bidding process, it will go to the Office of Civil Rights Compliance to establish a disadvantaged business enterprise (DBE) goal. Setting and meeting DBE goals is an important component of the Title VI Program as it assists disadvantaged individuals and businesses to compete for federally funded projects at a fair and equitable level. It is not yet known if there are DBE certified qualified technicians of EV infrastructure available in Kansas at this early date to set a DBE goal for this type of work. The NPRM for the NEVI program proposed requiring installation of EVSE by this specifically skilled workforce. Should that become the final rule, it will require discussion and further coordination with our federal partners. Appropriateness of DBE goals is also dependent on the type of projects that are selected and whether there are approved DBEs available in Kansas to perform the new types of work that are eligible now under NEVI.

Provided DBE goals are set for NEVI projects, KDOT Program Staff and Civil Rights Staff will ensure the goal is met as proposed by the contractor and proper monitoring procedures are in place during construction and that the responsibilities to the DBE are being maintained. Proper reporting activities are to take place. Staff will also take proper steps to ensure that there are no discriminatory activities taking place within project activities.

For NEVI funded projects, KDOT will ensure that all applicable state and Federal civil rights laws are held in compliance. KDOT will continue to follow our established FHWA Implementation Plan as we progress from each phase of implementing this deployment plan for EV charging stations. KDOT will continue to make every effort to involve our stakeholders from every segment of the state's population, specifically targeting our rural and underserved communities, in the outreach conducted for yearly updates of this plan and during future calls for projects. Adhering to our agency's established project development processes will ensure proper oversight of civil rights rules and regulations.

10.0 EQUITY CONSIDERATIONS

The *Charge Up Kansas NEVI Plan* recognizes the importance of achieving Justice40 Initiative goals as a part of the NEVI Formula Program. NEVI program investments offer an opportunity to invest in Disadvantaged Communities (DACs) to ensure that they benefit from the historical investment represented by this program.

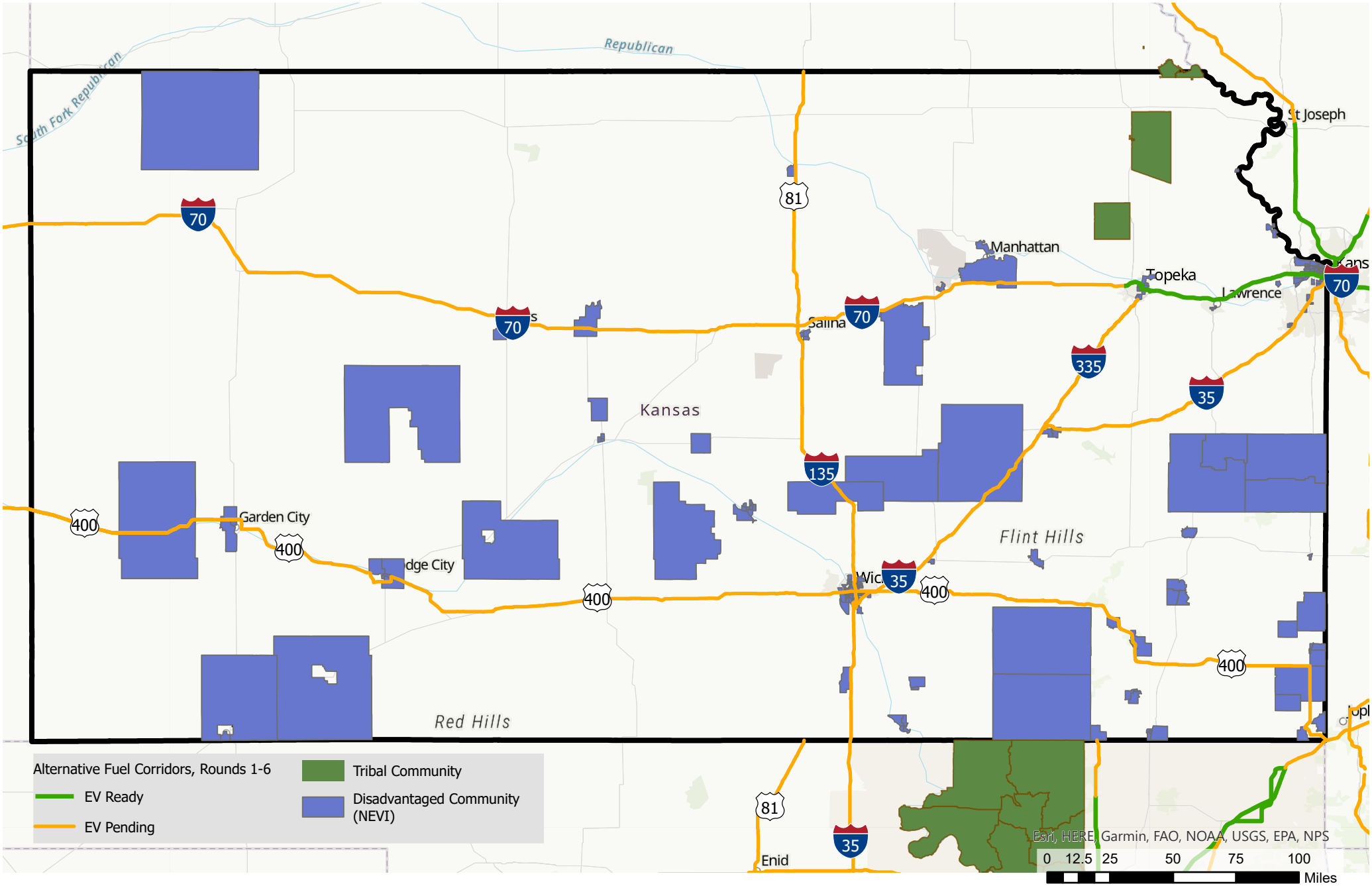
10.1 Identification and Outreach to Disadvantaged Communities

Disadvantaged Communities (DACs) are found throughout the state, in both urban and rural areas. The *Charge Up Kansas NEVI Plan* recognizes that the DOT and DOE joint interim definition of DACs includes energy and transportation burdened communities, including "communities facing high rates of environmental pollution, those whose economies are highly dependent on fossil energy sources, and those with high rates of social vulnerability."[4] DACs are defined based on Census tracts and include tribal communities. DACs in Kansas are shown in Figure 10.1.

[4] For more information about the joint interim definition of DAC, see https://www.anl.gov/esia/electric-vehicle-charging-equity-considerations.

Kansas
Department of Transportation

Figure 10-1: Kansas Disadvantaged Communities



IKE TRANSPORTATION PARTNERS

As part of the *Charge Up Kansas NEVI Plan's* community engagement process, DACs and Spanish-speaking Kansans were targeted for Facebook advertisements for the Telephone Town Hall. Community leaders in these areas were also invited to participate in the Community Leaders focus group to discuss community needs and best practices around EV charging.

KDOT plans to continue outreach to DACs throughout the NEVI implementation process. During plan implementation activities, DAC outreach will include webinars and in-person events about the NEVI RFP process, to educate DACs about NEVI program requirements and the RFP process.

KDOT will also coordinate with Metropolitan Energy Center to provide information on the NEVI program for outreach to DACs. MEC is experienced in community outreach and is a known community partner. MEC houses both the Kansas City Regional and Central Kansas Clean Cities Coalitions.

Future outreach to DACs will include education about EVs and the NEVI program, identifying any priorities specific to DACs, and refining Charge Up Kansas goals related to DACs based on their feedback.

10.2 Process to Identify, Quantify, and Measure Benefits to DACs

The *Charge Up Kansas NEVI Plan* identifies two performance measures to quantify benefits to DACs, as discussed in Section 4.0. Performance measure 4 is the number of charging stations located in DACs; Performance measure 5 is the dollar amount leveraged as local match for charging stations developed in DACs. These two performance measures will help quantify progress toward the Justice40 goals for the NEVI program. KDOT will use data supplied by applicants during the contracting and construction process to track these metrics.

10.3 Benefits to DACs through this Plan

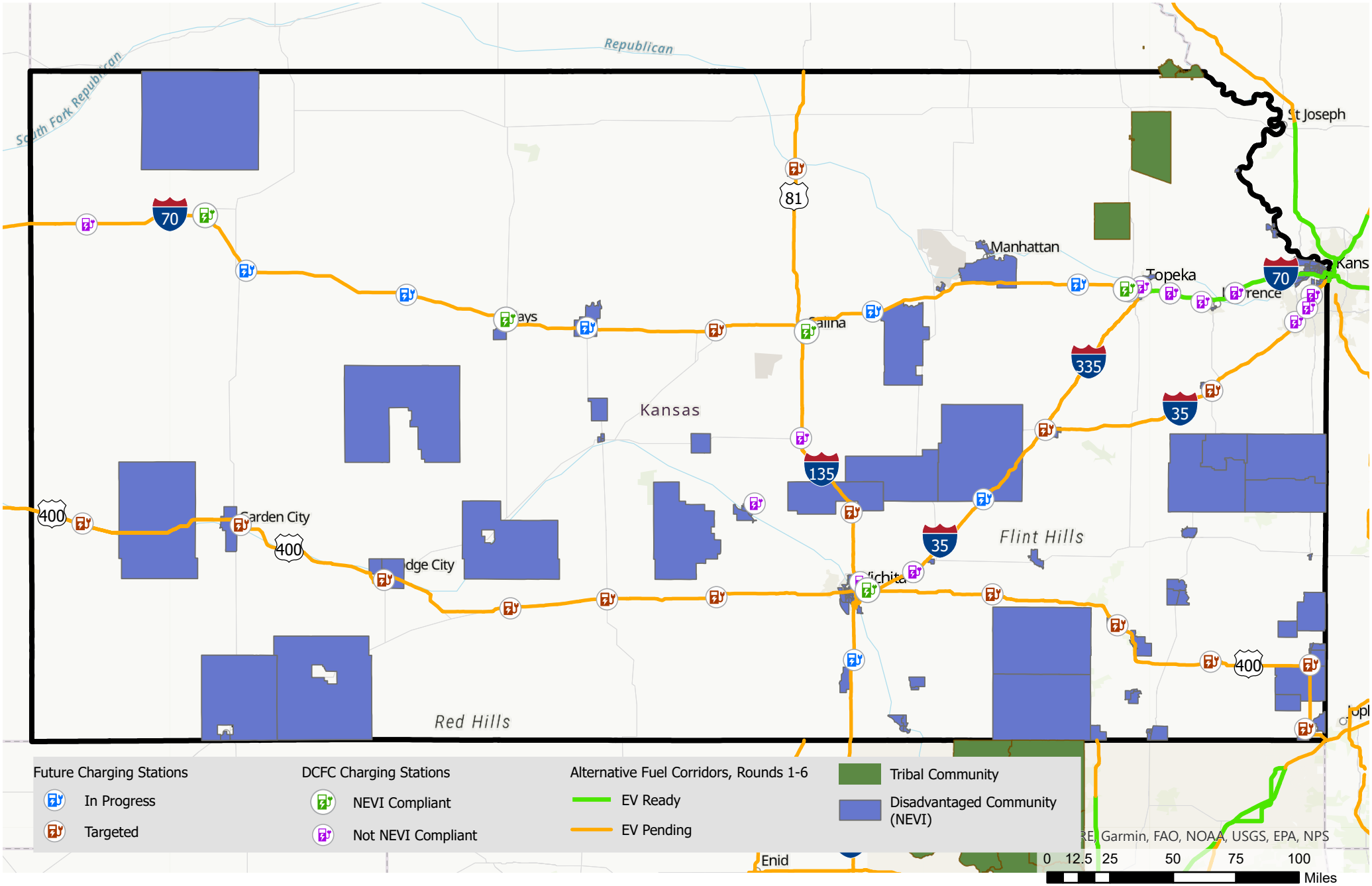
The primary benefit to DACs through the *Charge Up Kansas NEVI Plan* is investment in the development of new charging stations. This plan identifies 15 target locations for new charging stations along existing AFCs in order to fully build out those corridors for EV charging. Seven of the target locations provide possible locations within DACs. These locations are:

- Garden City
- Dodge City
- Fredonia/Neodesha
- Pittsburg
- Baxter Springs
- Emporia
- Concordia

Proposals to develop charging stations in DACs will be evaluated more favorably during the funding application review process. Additional benefits to DACs from the NEVI program, such as employment for DAC residents, will be evaluated in future updates to this plan as more detailed guidance on measuring such benefits becomes available.

Kansas Department of Transportation

Figure 10-2: Targeted Charging Locations



Note: targeted station locations (shown in red) are general areas for future stations, not specific locations. Charging stations are needed within 1 mile of designated EV corridors with no more than 50 miles between charging locations.

IKE TRANSPORTATION PARTNERS

11.0 LABOR AND WORKFORCE CONSIDERATIONS

Based on currently available guidance and regulations related to the NEVI program, KDOT will require, as part of contracting with site hosts/contractors, that the construction of charging sites and installation, operations, and maintenance of EVSE comply with Section 680.106(j) regarding the use of Qualified Technicians for the installation, maintenance, and operations of EVSE under the NEVI program. This section requires that electricians installing, operating, or maintaining EVSE be certified by the Electric Vehicle Infrastructure Training Program (EVITP) or be a graduate of a Registered Apprenticeship Program that includes EVSE-specific training.

KDOT will also coordinate with the Kansas Association of Community College Trustees to ensure that community colleges providing electrician training programs are aware of the NEVI program requirements and the EVITP or Registered Apprenticeship Program requirements associated with this program.

Applicants for NEVI funds are strongly encouraged to demonstrate linkages or partnerships with educational institutions. Proposals that include these partnerships will be evaluated more favorably during the review process.

The Kansas Department of Commerce provides Community Development and Workforce services within the state and participates in the state's EV Working Group. KDOT will continue to coordinate with the Department of Commerce on workforce development.

12.0 CYBERSECURITY

Cybersecurity, security of Personal Identification Information (PII), and physical security are very important considerations in deploying electric vehicle charging infrastructure on designated EV corridors. KDOT is committed to setting contractual guidelines to safeguard EV charging networks against cybersecurity and personal privacy risk to the state of Kansas and to EV drivers.

Cybersecurity strategies such as user identity and access management, selection of appropriate encryption systems, intrusion and malware detection, event logging and reporting, management of software updates, and secure operation during communication outages, as proposed by FHWA, will be added in the solicitation as a requirement.

NEVI funding recipients will become contracted vendors who will own, operate, and maintain the EVSE as well as the data produced. As part of the contract, prior to issuance of the award or other funding, the vendor will be required to provide a cybersecurity plan that demonstrates their cybersecurity maturity and compliance with applicable Kansas, regulatory, and Federal cybersecurity requirements. The State's solicitation will require the applicants to demonstrate methods they will use to maintain and improve cybersecurity throughout the life of the proposed solution. This will include requirements to maintain compliance with current and future cybersecurity requirements as well as alerting KDOT and the Cybersecurity and Infrastructure Security Agency (CISA) of any known or suspected network or system compromises.

In July 2021, Kansas Governor Laura Kelly established the bipartisan Governor's Cybersecurity Task Force to protect Kansas' digital infrastructure. The Task Force is comprised of four sub-committees related to Statewide Coordination and Collaboration, Workforce Development and Education, Cyber Incident and Disruption Response, and Strategic Vision and Planning. Since its formation, the Task Force has produced two reports: an interim report with 45 broad recommendations to advance a whole-state approach, and final report which highlighted 17 critical recommendations the were found to be either essential to the implementation of other recommendations or top priorities that if implemented would have the greatest impact on protecting the state from cybersecurity threats.

The Task Force's complete profile of recommendations outline potential opportunities for entities from local and state government, education, the private sector, and other critical infrastructure sectors can address cybersecurity challenges collectively as a state. This includes cybersecurity training, establishing partnerships that support workforce development and cyber response, and education.

13.0 PROGRAM EVALUATION

Kansas will assess the performance of its NEVI program annually. Annual assessments will include reviewing progress toward the identified performance measures, updating maps to include new charging stations and changes to Alternate Fuel Corridor designations, and establishing the annual funding plan.

The annual evaluation efforts will provide an opportunity for public input into the plan update. Kansas uses its ongoing Local Consult process to solicit feedback on infrastructure needs and concerns from stakeholders and to advise them of new projects and program milestones. Local Consult will provide a forum for ongoing public input into the annual plan updates.

13.1 Alternative Fuel Corridor Updates

Kansas nominated additional Alternative Fuel Corridors during the 2022 Request for Nominations process. Future updates to the *Charge Up Kansas NEVI Plan* will include updating the AFCs to include newly designated corridors and to update corridors as they progress from Corridor Pending to Corridor Ready status.

13.2 Community Engagement Outcomes Report

The annual assessment and plan update will include the development of a Community Engagement Outcomes report consistent with the proposed requirements of Section 680.112 Data Submittal[5]. This report will use the Local Consult process that provided part of the initial public engagement for this planning process and will gather public feedback on the implementation of the NEVI program in Kansas as well as an assessment of possible improvements.

[5] https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/resources/nprm_evcharging_unofficial.pdf

14.0 DISCRETIONARY EXCEPTIONS

At this time, Kansas does not request any Discretionary Exceptions. As EV charging infrastructure is deployed, the state will continue to evaluate challenges to meeting the requirements of the NEVI program and may determine a need for a Discretionary Exception in the future.

APPENDIX A STAKEHOLDERS

Category	Participated	Invited
State departments of energy	• Kansas Electric Cooperatives, Inc	
State environmental protection agencies	• Kansas Department of Health and Environment	
State economic development agencies	• Kansas Department of Commerce • KDOT- Economic Development	
State public utility commissions	• Kansas Corporation Commission	
State weights and measurement agencies	• Kansas Department of Agricultura	
State and Federal land management agencies	• Kansas Department of Wildlife and Parks • Kansas Department of Agriculture	
Other appropriate parties	• Kansas Department of Transportation • Kansas Turnpike Authority • Kansas Commission on Disability Concerns • Burns and McDonnell • Power System Engineering • Larrie Ann Brown- Attorney at Law • Walmart- Public Relations	• Kansas Department of Transportation • Peak Strategic Consulting Group • American Petroleum Institute • Watkins Public Strategies • Garver
Minority- and women-based organizations	• Devine and Donley & MWE	
Private sector EV charging infrastructure owners and network operators	• Lily Pad EV • HiON • Charge Ahead Partnership • Francis Energy • Fuel True Independent Energy and Convenience	• Universal Green Group
Community-based organizations, environmental justice and environmental protection organizations, small business associations, Chambers of Commerce; labor organizations, and private entities	• Capitol Strategies	• Kansas Automobile Dealers Association • Americans for Prosperity

Category	Participated	Invited
Counties and cities, including coordination with existing EV charging programs	• City of Overland Park • City of Topeka • City of Olathe • City of Dodge City • City of Marion	• City of Coffeyville • Neosho County
Relevant environmental justice, equity, environmental protection, and other community advocacy organizations	• Gencur Svaty Public Affairs • Federico // Duerst Consulting Group • League of Kansas Municipalities • Kansas Manufacturing Solutions • Kansas Motor Carriers Association • Kansas Automobile Dealers Association • Kansas Contractors Association	• Climate and Energy Project • Clean Energy Business Council • Renew Kansas Biofuels Assn
Gas station owners and operators	• Casey's Convenience Store • 24-7 Travel Stores by Triplett, Inc. • Mitten, Inc	
Utilities	• Kansas Municipal Utilities	
Real estate industry groups	• Kansas Manufactured Housing Association	
Electric utilities and transmission and distribution owners and regulators	• Midwest Energy, Inc • Kansas Municipal Energy Agency • Livingston Energy Group, LLC • ITC Great Plains	• Kansas Electric Power Cooperative • Evergy
Public transportation agencies		• KDOT- Public Transportation • KS Public Transit Assn.
Unions and other labor organizations		• IBEW Local 304 • Greater Kansas City Building & Construction Trades Council • Kansas Building Trades Council • Kansas AFL-CIO

Category	Participated	Invited
Tribal governments		• Prairie Band Potawatomi Nation • Kickapoo Tribe in Kansas

APPENDIX B TRANSIT AGENCIES

Transit Agency	City
Anderson County Council on Aging	Garnett
Butler, County of	El Dorado
Chase County	Cottonwood Falls
Cheyenne County	Saint Francis
City of Abilene	Abilene
City of Bonner Springs	Bonner Springs
City of Derby	Derby
City of Dodge City	Dodge City
City of Goodland	Goodland
City of Great Bend/Commission on Aging	Great Bend
City of Kingman	Kingman
City of Lawrence	Lawrence
City of Liberal	Liberal
City of Paola/Lakemary Center	Paola
City of Phillipsburg	Phillipsburg
City of Russell	Russell
City of Smith Center	Smith Center
City of Wakeeney Transportation Bus	WaKeeney
City of Wichita	Wichita
City of Wilson	Wilson
Class LTD	Columbus
Clay County Task Force	Clay Center
Coffey County Transportation	Burlington

Community Senior Service Center	Osawatomie
Concordia Senior Citizen Center	Concordia
Cowley County Council on Aging, Inc.	Winfield
Decatur County Transportation Bus	Oberlin
Developmental Services of Northwest Kansas, Inc.	Hays
Doniphan County	Troy
Doniphan County Services and Workskills	Elwood
Elk County	Howard
Ellsworth County Council on Aging	Ellsworth
Elm Acres Youth and Family Services	Pittsburg
Finney County Committee on Aging, Inc.	Garden City
Flint Hills Area Transportation	Manhattan
Flint Hills Regional Council	Ogden
Four County Mental Health, Inc.	Independence
Franklin County Aging Services	Ottawa
Futures Unlimited	Wellington
Gove County Medical Center	Quinter
Greenwood County Council on Aging	Eureka
Harper County Department on Aging	Anthony
Harvey County Department on Aging	Newton
Herington Hilltop Community Center	Herington
Hoisington Commission on Aging/City of Hoisington	Hoisington
Independence, Inc.	Lawrence
Jefferson County Service Organization	Oskaloosa
Johnson County Kansas	Olathe

Kingman County Council on Aging	Kingman
Lane County Transportation	Dighton
Leavenworth County Council on Aging	Leavenworth
Lincoln County Public Transportation	Lincoln
Linn County	Mound City
Logan County Hospital	Oakley
Louisburg Area Senior Citizens, Inc.	Louisburg
Lyon County Area Transportation	Emporia
Marshall County Agency on Aging	Marysville
McPherson County Council on Aging	McPherson
Morris County Transportation (formerly Morris Co Senior Citizens	Council Grove
Multi Community Diversified Services, Inc.	McPherson
Nemaha County Transit	Seneca
Northeast Kansas Area Agency on Aging	Hiawatha
Norton County Senior Citizens	Norton
OCCK, Inc.	Salina
Osage County Council on Aging	Lyndon
Ottawa County Transportation	Minneapolis
Paola Senior Citizen Center, Inc.	Paola
Pottawatomie County	Westmoreland
Prairie Band Potawatomi Nation	Mayetta
Pratt County RSVP	Pratt
Project Concern	Atchison
Rawlins County	Atwood
Reno County Public Transportation	Hutchinson

Republic County Transportation	Belleville
Rice County Council on Aging	Lyons
Rooks County Transportation Service	Plainville
Rush County Public Transportation	La Crosse
Sac and Fox Nation of Missouri	Reserve
Sedgwick County Transportation - Dept. on Aging	Wichita
Solomon Valley Transportation, Inc.	Beloit
Southeast Kansas Community Action Program	Girard
Sunflower Diversified Services	Great Bend
Thomas County	Colby
Topeka Metropolitan Transit Authority	Topeka
Tri-Valley Developmental Services	Chanute
Twin Rivers Developmental Supports, Inc.	Arkansas City
Unified Government of Wyandotte County and Kansas City, KS	Kansas City
University of Kansas	Lawrence
Wabaunsee County General Public Transportation	Alma

APPENDIX C TITLE VI ASSURANCE

Standard U.S. Department of Transportation Title VI Assurances

The State of Kansas (hereinafter referred to as the "Recipient") HEREBY AGREES THAT as a condition to receiving any Federal financial assistance from the Department of Transportation and the Federal programs including the Federal Highway Administration, Federal Transit Administration and Federal Aviation Administration, it will comply with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d-42 U.S.C. 2000d-4 (hereinafter referred to as the Act), and all requirements imposed by or pursuant to Title 49, Code of Federal Regulations (CFR), Department of Transportation Sub Title A, Office of the Secretary, Part 21, nondiscrimination in Federally-Assisted Programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act of 1964, Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes – Implementation and Review Procedures (hereinafter referred to as the Regulations) and other pertinent nondiscrimination authorities and directives, to the end that in accordance with the Act, Regulations, and other pertinent nondiscrimination authorities and directives, no person in the United States shall, on the grounds of race color, or national origin, sex (23 USC 324), age (42 USC 6101) disability/handicap (29 USC 790) and low income status (Executive Order 12898) be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Recipient receives Federal financial assistance from the Department of Transportation, including the Federal Highway Administration, Federal Transit Administration and Federal Aviation Administration, and HEREBY GIVES ASSURANCE THAT it will promptly take any measures necessary to effectuate this agreement. This assurance is required by Title 49 Code of Federal Regulations, subsection 21.7(a)(1) and Title 23 Code of Federal Regulations, section 200.9(a)(1) of the Regulations, copies of which are attached.

More specifically and without limiting the above general assurance, the Recipient hereby gives the following specific assurances with respect to its Federal-Aid Highway, Transit and Aviation Programs:

1. That the Recipient agrees that each "program" and each "facility as defined in 49 CFR subsections 21.23(e) and 21.23(b) and 23 CFR 200.5(k) and (g) of the Regulations, will be (with regard to a "program") conducted, or will be (with regard to a "facility") operated in compliance with all requirements imposed by, or pursuant to, the Regulations.

2. That the Recipient shall insert the following notification in all solicitations for bids for work or material subject to the Regulations and made in connection with the Federal-Aid Highway and, in *Programs* adapted form in all proposals for negotiated agreements:

The State of Kansas in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Sub Title A, Office of the Secretary, Part 21, Nondiscrimination in Federally assisted programs of the Department of Transportation and Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes, issued pursuant to such Act, hereby notifies all bidders that it will affirmatively insure that in any contact entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin, sex, age, disability/handicap and low income status in consideration for an award.

3. That the Recipient shall insert the clauses of Appendix A of this assurance in every contract subject to the Act and the Regulations.

4. That the Recipient shall insert the clauses of Appendix B of this assurance, as a covenant running with the land, in any deed from the United States effecting a transfer of real property, structures, or improvements thereon, or interest therein.

5. That where the Recipient receives Federal financial assistance to construct a facility, or part of a facility, the assurance shall extend to the entire facility and facilities operated in connection therewith.

6. That where the Recipient receives Federal financial assistance in the form, or for the acquisition of real property or an interest in real property, the assurance shall extend the right to space on, over or under such property.

7. That the Recipient shall include the appropriate clauses set forth in Appendix C of this assurance, as a covenant running with the land, in any future deeds, leases, permits, licenses, and similar agreements entered into by the Recipient with other parties: (a) for the subsequent transfer of real property acquired or improved under Federal-Aid Highway, Transit or Aviation Programs; and (b) for the construction or use of or access to space on, over, or under real property acquired, or improved under Federal-Aid Highway, Transit or Aviation Programs.

Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, disability/handicap and low income status.

(4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources or information, and its facilities as may be determined by the Recipient or the FHWA, FTA or FAA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Recipient, or the FHWA, FTA or FAA as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Recipient shall impose such contract sanctions as it or the FHWA, FTA or FAA may determine to be appropriate, including, but not limited to:

(a) Withholding of payments to the contractor under the contract until the contractor complies, and/or

(b) Cancellation, termination or suspension of the contractor, in whole or in part.

(6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontractor procurement as the Recipient or the FHWA, FTA or FAA may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Recipient to enter into such litigation to protect the interests of the Recipient, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX B

A. The following clauses shall be included in any and all deeds effecting or recording the transfer of real property, structures or improvements thereon, or interest therein from the United States.

(GRANTING CLAUSE)

NOW, THEREFORE, the Department of Transportation, as authorized by law, and upon the condition that the Recipient will accept Title to the lands and maintain the project constructed thereon, in accordance with K.S.A.68-401 et Seq. the Regulations for the Administration of the Department of Transportation, and also in accordance with and in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Sub Title A, Office of the Secretary, Part 21, Nondiscrimination in federally assisted programs of the Department of Transportation and Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statues (hereinafter referred to as the Regulations) pertaining to and effectuating the provision of Title VI of the Civil Rights act of 1964 (78 Stat. 252; 42 U.S.C. .2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the Kansas Department of Transportation all the right, Title and interest of the Department of Transportation in and to said lands described in Exhibit "A" attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto Kansas Department of Transportation and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provisions of similar services or benefits and shall be binding on the Kansas Department of Transportation, its successors and assigns.

The Kansas Department of Transportation, in consideration or the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person shall on the grounds of race, color, or national origin, sex, age, disability/handicap and low income status, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over or under such lands hereby conveyed [,] [and)*(2) that the Kansas Department of Transportation shall use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Sub Title A, Office of Secretary, Part 21, Nondiscrimination in federally assisted programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964, Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes – Implementation and Review Procedures, and as said

Regulations may be amended[,] and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department shall have a right to re-enter said lands and facilities on said land, and the above described land and facilities shall thereon revert to and vest in and become the absolute property of the Department of Transportation and its assigns as such interest existed prior to this instruction.*

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*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

APPENDIX C

The following clauses shall be included in all deeds, licenses, leases, permits, or similar instruments entered into by the Kansas Department of Transportation pursuant to the provisions of Assurance 7(a).

The (grantee, licensee, lessee, permitee, etc., as appropriate) for himself, his heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that in the event facilities are constructed, maintained, or otherwise operated on the said property described in this (deed, license, lease, permit, etc.) for a purpose for which a Department of Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permitee, etc.) shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Sub Title A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964, Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes – Implementation and Review Procedures, and as said Regulations may be amended.

[Include in licenses, leases, permits, etc.]*

That in the event of breach of any of the above nondiscrimination covenants, Kansas Department of Transportation shall have the right to terminate the [license, lease, permit, etc.] and to re-enter and repossess said land and the facilities thereon, and hold the same as if said [licenses, lease, permit, etc.] had never been made or issued.

[Include in deed.]*

That in the event of breach of any of the above nondiscrimination covenants, Kansas Department of Transportation shall have the right to re-enter said lands and facilities thereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of Kansas Department of Transportation and its assigns.

The following shall be included in all deeds, licenses, leases, permits, or similar agreements entered into by Kansas Department of Transportation pursuant to the provisions of Assurance 7(b).

The (grantee, licensee, lessee, permitee, etc., as appropriate) for himself, his personal representatives, successors, in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds, and leases add "as a covenant running with the land") that (1) no person on the ground of race, color or national origin, sex, age, disability/handicap and low income status shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over or under such land and the furnishing of services thereon, no person on the ground of race, color, or national origin, sex, age, disability/handicap and low income status, shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permitee, etc.) shall use the premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Sub Title A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation – Effectuation of Title VI of the Civil Rights Act of 1964, Title 23 Code of Federal Regulations, part 200, Title VI Program and Related Statuses – Implementation and Review Procedures, and as said Regulations may be amended.

[Include in licenses, leases, permits, etc.]*

*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

That in the event of breach of any of the above nondiscrimination covenants, Kansas Department of Transportation shall have the right to terminate the [license, lease, permit, etc.] and to reenter and repossess said land and the facilities thereon, and hold the same as if said [license, lease, permit, etc.] had never been made or issued.

[Include in deeds]*

That in the event of breach of any of the above nondiscrimination covenants, Kansas Department of Transportation shall have the right to re-enter said land and facilities thereon, and the above described lands and facilities shall thereupon revert to and vest in and become the absolute property of Kansas Department of Transportation and its assigns.

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* Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to effectuate the purposes of Title VI of the Civil Rights Act of 1964.

APPENDIX D

CLAUSES FOR CONSTRUCTION/USE.ACCESS TO REAL PROPERTY ACQUIRED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by State of Kansas Department of Transportation pursuant to the provisions of Assurance 7(b):

A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits or, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above of the above Nondiscrimination covenants, State of Kansas Department of Transportation will have the right to terminate the (license, permits, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*
C. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, State of Kansas Department of Transportation will there upon revert to and vest in and become the absolute property of State of Kansas Department of Transportation and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

APPENDIX E

During the performance of this contract, the contractor, for itself, its assignees, and succors in interest (hereinafter referred to as the "contractor") agrees to comply with the following nondiscrimination statutes and authorities, including, but not limited to:

Pertinent Nondiscrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat.252), prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, prohibits discrimination on the basis of disability; and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 U.S.C. § 471, Section 47123, as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);

- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination of the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations 49 C.F.R. parts 37 and 38.
- The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq*).

APPENDIX D ELECTRIC UTILITIES THAT SERVICE THE AREA

1. Evergy Inc.
2. Midwest Energy Inc.
3. Wheatland Electric Coop Inc.
4. Victory Electric Coop Association Inc.
5. Algonquin Power and Utilities Corp
6. Free State Electric Cooperative
7. Heartland Rural Electric Cooperative
8. Bluestem Electric Cooperative
9. Kansas Electric Power Cooperative
10. Lane-Scott Electric Cooperative
11. Western Cooperative Electric Association
12. CMS Electric Cooperative
13. Pioneer Electric Cooperative
14. Prairie Land Electric Cooperative
15. Flint Hills Rural Electric Cooperative Association
16. Butler Rural Electric Cooperative Association
17. Ark Valley Electric Cooperative
18. Rolling Hills Electric Cooperative
19. Lyon-Coffey Electric Cooperative
20. Twin Valley Electric Cooperative
21. The Radiant Electric Cooperative
22. Caney Valley Electric Cooperative
23. Sumner-Cowley Electric Association
24. Sedgwick County Electric Cooperative Association
25. Ninnescah Rural Electric Cooperative Assn
26. Doniphan Electric Cooperative Association
27. DS&O Electric Cooperative
28. Brown-Atchison Electric Cooperative Association