ATTACHMENT 1 – TECHNICAL REQUIREMENTS

Funding for any agreement resulting from this Request for Proposals (RFP) will be paid from National Electric Vehicle Infrastructure (NEVI) formula funds and state funds. All applicable requirements of Title 23 United States Code (USC) and 2 Code of Federal Regulations (CFR) Part 200 apply to the administration of these funds, which include, but are not limited to: 23 CFR 680, the Davis-Bacon Act, the Americans with Disabilities Act of 1990 (ADA), Title VI of the Civil Rights Act of 1964, the National Environmental Policy Act of 1969 (NEPA), and the Build America, Buy America (BABA) Act. The Grantee must also comply with all other standards and requirements required by federal, state, and local laws.

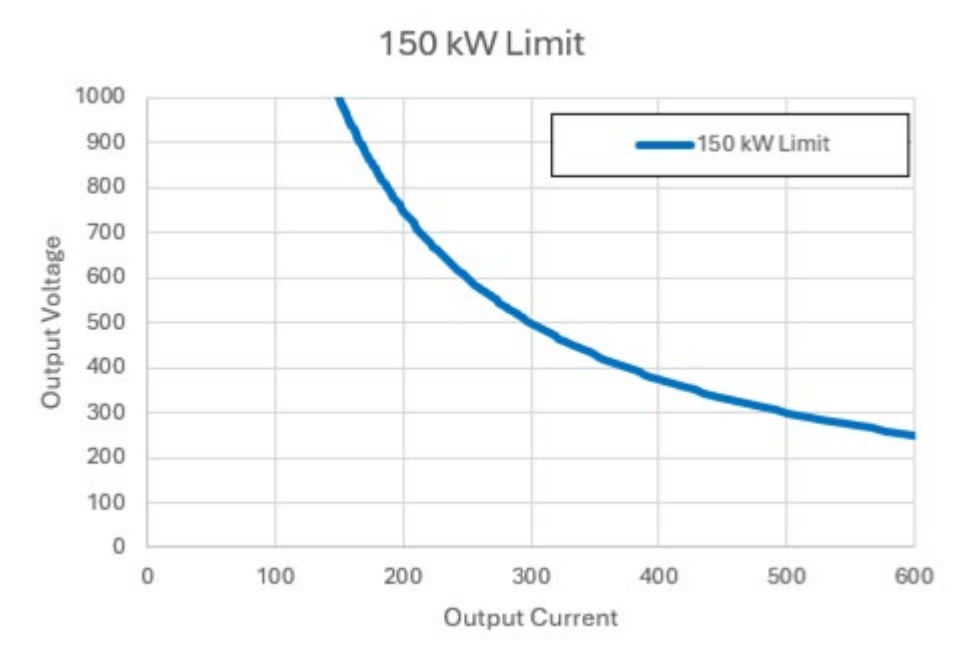
Electric Vehicle Supply Equipment (EVSE) funded under any agreement resulting from this RFP will be covered by the ***Build America, Buy America Implementation Plan to Enhance Buy America for Electric Vehicle (EV) Chargers.***

In addition to the above, Grantees must comply with the following technical requirements.

1	ADDITIONAL PROJECT SITE REQUIREMENTS	
1.1	**Distance from AFC**	The Project site shall be within a maximum driving distance of 1 mile from the Alternative Fuel Corridor (AFC). The measurement of the distance shall begin from the end of the nearest interstate off-ramp to the charging station and conclude at the entrance to the charging station.
1.2	**Site Accessibility**	The Project site shall be accessible to the public and reachable from a public road 24 hours per day, 7 days per week, throughout the year, Access to the Project site must have adequate traffic control measures, such as signage, signals, striping, etc. These sites may be situated on private property.
1.3	**ADA Compliance**	The Project site shall adhere to ADA requirements, incorporating a minimum of one ADA-compliant parking space equipped with access to EV charging infrastructure. The ADA parking space shall adhere to the guidelines specified by the ***US Access Board***.
1.4	**Site Signage**	The Project site shall have clear signage that indicates the site's location and the location of the charging ports within the site. Locations and signage design for the site will be finalized as part of the Project's Preliminary Engineering design phase. The Applicant is responsible for obtaining all permits and approvals related to signage.
1.5	**Safety Lighting**	The Project site shall provide lighting to illuminate all EVSE and corresponding parking spaces. Lighting levels and requirements shall be consistent with existing jurisdictional and zoning requirements.
1.6	**Cell Phone Service**	The Grantee shall make certain that there is adequate cell phone service available at the Project site. This may include an open access Wi-Fi hotspot.

1	ADDITIONAL PROJECT SITE REQUIREMENTS	
1.7	**Security Cameras or On-Site Staff**	The Grantee shall ensure security through security cameras or on-site staff. The security cameras shall fully cover the Project site, including the EVSE, EV infrastructure equipment, and parking area. High -definition, color cameras shall be used and footage from the cameras shall be stored for at least 30 days, complying with cybersecurity and data management requirements. If utilizing on-site staff, they shall be present and available at the site during normal operational hours, throughout the year.
1.8	**Trash and recycling receptacles**	The Project site shall have trash and recycling receptacles available to site users. The trash and recycling receptacles shall be emptied and maintained on a regular basis to prevent overflow of contents. If recycling services are not available in the Project site location, the Applicant must state that clearly in the application.
1.9	**Snow Removal**	The Grantee shall provide snow and ice removal service at the Project site when snow accumulates above 1 inch within 2 hours of the end of the weather event.
1.10	**Fire Extinguisher**	The Grantee shall provide a functioning Class C fire extinguisher within 10 feet of the EVSE.
1.11	**Physical Security**	All EVSE, electrical infrastructure, and other equipment at the Project site shall be protected (e.g., bollards) from being hit by vehicles from inside and outside of the site. They must also be secured physically to prevent unauthorized access.

2	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
2.1	**Range of Operating Temperature**	EVSE shall be capable of operating over an ambient temperature range of minus 22 degrees to 122 degrees Fahrenheit.
2.2	**Range of Output Current**	All charging ports shall be able to provide output currents up to at least 350 amps of direct current (ADC).

2	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
2.3	**Weather Resistance**	EVSE shall be constructed to withstand harsh weather conditions, such as snow, heavy rains, extreme temperatures, and high winds. All above-ground structures, cabinets, and enclosures shall be designed in accordance with local building code standards, and EV charger enclosures shall have a minimum rating of IP54 or equivalent.
2.4	**Output Current Limit**	The output current may be the lower of 350 ADC or the current required to reach 150 kW based on the output voltage. The EVSE shall be capable of outputting at least one voltage and current combination that reaches 150 kW. This is satisfied by operating at any point along the line in the figure. ***Figure 1**: Required Operating Output* 
2.5	**Charger Locks and Tamper Prevention**	EVSE shall incorporate security features to deter tampering. Features shall include the use of locks on enclosures and tamper-resistant screws.
2.6	**NACS Connectors**	The direct current fast charging (DCFC) charger(s) must be capable of charging any North American Charging Standard (NACS) compliant vehicle. A minimum of 4 permanently attached NACS connectors and 4 permanently attached CCS1 connectors are required at the Project site.
2.7	**Minimum Power Supply**	The utility feed to the Project site shall have a minimum power capacity of at least 150 kW per port, and the ESVE shall have an input power rating of at least 150 kW per port.

2	ADDITIONAL CHARGER REQUIREMENTS AND SPECIFICATIONS	
2.8	**NEVI Port Power Sharing**	The Project site shall have a minimum of 4 NEVI compliant charging ports. Additional charging ports that do not meet the NEVI requirements are allowed, but these additional non-NEVI ports are ineligible for NEVI funding. Power sharing between the NEVI ports and the non-NEVI ports is allowed as long as the 150 kW continuous and simultaneous power requirements for the NEVI ports are met. The full cost of the utility upgrades to support all charging ports is an eligible expense. The cost of any equipment that supports only the non-NEVI ports are an ineligible expense. The cost eligibility of any shared equipment that supports both the NEVI and non-NEVI ports shall be prorated based on the proportion of the power rating of the equipment that can supply the NEVI ports simultaneously. If the site contains both NEVI ports and non-NEVI ports, signage shall be provided to clearly identify the NEVI ports.
2.9	**Emergency Stop Button**	All EVSE must have an emergency stop (E-Stop) button that will stop power from the charging port when activated.

3	CYBERSECURITY AND DATA MANAGEMENT REQUIREMENTS	
3.1	**Cybersecurity and Data Management Plan**	The Grantee shall develop a written cybersecurity plan. The plan shall adhere to the National Institute of Standards and Technology (NIST) Cybersecurity Framework (CSF). The plan shall outline cybersecurity best practices to be used through all phases of the Project and include the EV charging and supporting infrastructure. The plan shall include security and privacy measures to be implemented, a description of how the entire system will be safeguarded against cyberattacks, and a description of how data will be securely stored, transmitted, and protected from unauthorized access, modification, or destruction. In addition, the plan will detail the expected threat surface and specify the NIST 800-53 controls to be implemented for risk reduction. The plan shall establish roles for Project governance and oversight.
3.2	**Cybersecurity Event Management Team**	The Grantee shall establish a Cybersecurity Event Management Team (CEMT) made of Grantee staff members who will be responsible for responding to any cybersecurity events that may occur during any phase of the Project. The Grantee shall develop a Cybersecurity Event Management Plan that outlines the processes that will be followed in response to an event, including notifying the CEMT.
3.3	**Data Segmentation**	Data networks used by the charging network shall be segmented to minimize the risk of unintended damage, unauthorized access, data loss, lack of service, privacy breaches, or other issues resulting from unprotected connections.

3	CYBERSECURITY AND DATA MANAGEMENT REQUIREMENTS	
3.4	**Cybersecurity Operations**	Awardee shall complete the State's third-party vendor risk assessment as part of Task 3: Construction and Commissioning, prior to receiving notice to proceed into Task 4: Operations and Maintenance; and annually thereafter per control #25 in the MNIT Secure Systems Development and Acquisition standard. ***https://mn.gov/mnit/assets/Secure%20Systems%20Development%20and%20Acquisition%20Standard_tcm38-323791.pdf***
3.5	**Risk Assessment Schedule**	The Grantee shall provide a schedule for regular risk assessments and process reviews. Risk assessment read-out reports shall be provided to MnDOT twice per year. A baseline risk assessment shall be part of Task 3 of the Scope of Work and Deliverables and shall include penetration testing. Risk assessments shall include vulnerability scans using the MITRE or Cybersecurity and Infrastructure Security Agency (CISA) Common Vulnerability and Exposures (CVE) database and a report summarizing results and actions for mitigating new or existing vulnerabilities. Qualified personnel shall provide regularly scheduled security patching.
3.6	**Cybersecurity Event Notification**	The Grantee shall inform MnDOT of any cybersecurity event that requires notification to any person under federal or state law, including data breaches or incidents affecting an electric utility, within 24 hours of the Grantee's discovery of the event.

4	OPERATIONS AND MAINTENANCE REQUIREMENTS	
4.1	**Monthly Preventative Maintenance**	The Grantee shall perform monthly preventative maintenance on the EV charging infrastructure. This shall include checking for damage and vandalism and replacing any damaged or deteriorated cables or connectors.
4.2	**Customer Service**	The Grantee shall provide a customer service phone line. The Grantee shall also provide a website or text message number to report problems or issues with the EVSE or Project site. These shall be available 24 hours a day, 7 days a week, and posted clearly and visible at the charging stations. All contact methods must connect the customer to the Grantee and must provide access for users that have limited English proficiency and for people with disabilities.

5	EMERGENCY MANAGEMENT REQUIREMENTS	
5.1	**Emergency Management Plan**	The Grantee shall develop an emergency management plan outlining actions the Grantee will take in the event of a natural disaster or other declared emergency.

6	TRAINING REQUIREMENTS	
6.1	**Annual Safety Training**	The Grantee shall provide annual safety training to all on-site staff, staff operating and maintaining the EV charging infrastructure, and local emergency personnel. The training shall address subjects like electrical safety, shutdown procedures, and firefighting techniques relevant to EVs and/or EV charging emergencies.
6.2	**Qualified Workforce Training and Technician Documentation**	The Grantee shall verify that the workforce installing, maintaining, and operating chargers has appropriate licenses, certifications, and training to verify that charger installation and maintenance is performed safely by a qualified and increasingly diverse workforce of licensed technicians and other laborers per 23 CFR 680. Workforce training is encouraged to target recruiting, training, and hiring individuals from disadvantaged communities.

7	COMMUNITY ENGAGEMENT	
7.1	**Community Engagement Outcomes Report**	The Grantee must supply any relevant information regarding community engagement to support MnDOT's development of the Community Engagement Outcomes Report per 23 CFR 680.112 (d).