



Design and Engineering

When auto dealers decide to install electric vehicle (EV) chargers, there are several important design and engineering concerns they should consider. These considerations help ensure the successful implementation and functionality of the charging infrastructure. Here are some key aspects we consider:

Power Capacity and Grid Connection:

- Evaluate the power capacity available at the dealership and ensure it can support the charging stations.
- Consider the grid connection and work with local utility companies to ensure sufficient power supply and appropriate permits.

Charger Types and Standards:

- Choose the right types of chargers based on the dealership's location and customer needs (Level 2 AC chargers or DC fast chargers).
- Adhere to industry standards and regulations, such as SAE J1772 for Level 2 chargers and CCS (Combined Charging System) or CHAdeMO for DC fast chargers.

Space and Layout:

- Plan the layout of charging stations to maximize accessibility and convenience for customers and staff.
- Ensure that there is adequate space for future expansion if needed.

User Experience:

- Design user-friendly interfaces for the charging stations to enhance the customer experience.
- Consider additional amenities such as seating areas, Wi-Fi, or electric vehicle information displays to make the charging experience more enjoyable.



Permitting and Compliance:

- Obtain all necessary permits from local authorities before installing charging infrastructure.
- Ensure compliance with local building codes, zoning regulations, and any other relevant standards.

Accessibility and ADA Compliance:

- Design charging stations to be accessible to all users, including those with disabilities, in compliance with the Americans with Disabilities Act (ADA).

Maintenance and Monitoring:

- Implement a robust maintenance plan for the charging infrastructure to address issues promptly.
- Consider remote monitoring systems to track usage, identify problems, and perform preventive maintenance.

Integration with Dealership Operations:

- Integrate the EV charging infrastructure with the dealership's overall operations and management systems.
- Explore the potential for synergies with other services or technologies offered by the dealership.

Security and Safety:

- Implement security measures to protect the charging stations from vandalism and unauthorized access.
- Ensure that all electrical components meet safety standards and are installed by certified professionals.

Cost Considerations:

- Evaluate the overall cost of installation, including equipment, electrical upgrades, and ongoing maintenance.
- Explore available incentives or grants that may help offset installation costs.

By addressing these design and engineering concerns, auto dealers can create a reliable, efficient, and user-friendly EV charging infrastructure that aligns with the needs of their customers and the broader community.