

NAVIGATING ELECTRIC VEHICLE CHARGING INFRASTRUCTURE PROJECTS:

A Q&A WITH PRIMERA'S EXPERTS



In the rapidly evolving landscape of Electric Vehicle (EV) charging infrastructure, Primera has established itself as a leader through its innovative approach and broad experience. This expertise is particularly evident in their use of the Design-Build project delivery method, which has proven to be highly effective in delivering efficient and cost-effective EV charging solutions.

Primera's utilities experts, **ELIZABETH ODEGAARD** and **GUY NIEDORKORN**, recently sat with our lead municipal and civil engineer, **CHAD DILLAVOU**, to discuss EV charging infrastructure projects, comparing Design-Build with Design-Bid-Build methods. Elizabeth, Vice President and Project Delivery Department Manager at Primera, has over 20 years of experience in managing electrical distribution and utilities projects. Guy, Vice President and Sr. Director of Business Development, is an expert in the electrical construction industry and client relationship management. Both have significant experience in EV design projects and understand the associated challenges and considerations. Their insights in this Q&A session highlight the advantages of early contractor involvement, streamlined processes, significant cost savings, and strong relationships with Original Equipment Manufacturers (OEMs) and material suppliers.

This article captures their detailed responses, showcasing Primer's wide-ranging experience, proficiency, and thought leadership in providing efficient and cost-effective EV charging solutions, emphasizing the importance of early stakeholder involvement and commitment to delivering high-quality sustainable infrastructure projects.



CHAD DILLAVOU

Can you share your experience with EV charging infrastructure and the Design-Build Project Delivery Style?



GUY NIEDORKORN

Over the past year and a half to two years, Primer has increasingly engaged in design-build projects within the EV sector. Many clients lack a comprehensive understanding of EV systems and their requirements, which is where our expertise comes in. We start with a feasibility study to assess infrastructure, requirements, and site suitability. This phase is crucial as it informs the subsequent pricing and construction phases.



ELIZABETH ODEGAARD

Through my experience at Primer, I've had the opportunity to work on both design and design-build EV charging projects. For instance, we recently did a feasibility study for a Cook County EV charging site. The design-build process has

been particularly effective when collaborating with subcontractors like MZI, allowing for seamless integration from design to construction.

CD: Have you delivered EV projects in the traditional Design-Bid-Build style?

E0: While I haven't fully completed a traditional design-bid-build EV project, I am currently involved in one where contractors are being selected based on feasibility studies we conducted. This process involves guiding the client, Cook County, on how to prepare Request for Proposals (RFPs) and select suitable contractors. However, the design-build approach has proven to be more efficient in our experience.

GN: I have experience with both design-build and design-bid-build project delivery methods. For instance, we worked on a large project where we handled engineering, bid package preparation, and coordination with utilities like ComEd. While design-bid-build projects are feasible, design-build offers significant advantages in terms of efficiency and cost savings.



CD: What are the typical steps for EV Charging Infrastructure in the Design-Build project delivery?

E0: The key steps include:

- 1. SITE ASSESSMENT:** Conducting a thorough site visit to identify potential obstacles and determine power routing.
- 2. DESIGN DEVELOPMENT:** Collaborating with the contractor to create a design that aligns with their installation capabilities.
- 3. APPROVAL AND PERMITTING:** Obtaining necessary approvals and permits while the contractor procures equipment.
- 4. CONSTRUCTION:** Implementing the design with minimal delays, thanks to prior coordination with the contractor.

GN: My experience has been that we begin with a feasibility study, where we collaborate with the client to understand the scope and requirements. This includes assessing power capacity and infrastructure needs. Following the feasibility study, we move into the design phase that Elizabeth outlined previously.

CD: What has been the typical timeline for EV charging projects from your experience (Design-Build)?

E0: For projects I have led, the design phase takes about two to three months, depending on the complexity of approvals required. Construction itself is relatively quick, often completed within a few weeks, with smaller projects only requiring one to two weeks of construction. However, delays can occur due to approval processes, such as those involving complicated review and approval processes.

GN: My experience has been slightly different. The timeline varies depending on the project's scale and complexity. Generally, the feasibility study and design phases can take about six to eight weeks total. The construction phase's duration depends on factors such as equipment lead times and site conditions. For smaller projects, we have completed installations in as little as eight to ten weeks. However, larger projects with more complex requirements may take longer, especially if there are extended lead times for specific equipment.

CD: What are the efficiencies using a design-build approach that are useful on projects with tight deadlines?

E0: The primary efficiency is the early involvement of the contractor, which minimizes delays during construction. By starting the relationship at the site visit, we can work out a design that is practical and executable. This approach also allows for concurrent activities, such as equipment procurement and permitting, which accelerates the overall timeline.

GN: I agree that the early involvement of all stakeholders, including contractors and suppliers is the primary efficiency of the design-build approach. This early collaboration allows for accurate budgeting, streamlined approvals, and concurrent activities such as equipment procurement and permitting. Additionally, our strong relationships with material suppliers/OEMs enable us to secure shorter lead times for critical components, further enhancing project efficiency.

CD: In your opinion, what are the opportunities for cost savings through the Design-Build PD process?

GN: Significant cost savings can be achieved through the design-build process by eliminating the bid phase and reducing scope changes. Early contractor involvement helps to develop a design that is practical and executable, avoiding costly revisions. Our ability to provide comprehensive budgets and manage the entire project lifecycle, including commissioning, also contributes to cost savings.

EO: I agree with Guy 100%! The only thing I would add is that our collaborative nature of design-build projects streamlines approvals and reduces administrative overhead.



CD: How are potential issues or defects handled during construction?

EO: Effective stakeholder engagement is crucial. For instance, we encountered a situation where a school objected to the placement of an EV charger after construction had begun. Ensuring all stakeholders are on board from the outset can prevent such issues. In cases where unexpected obstacles arise, having a collaborative team ready to address and resolve them quickly is essential.

GN: Effective communication and early identification of potential issues are key to managing construction challenges. We maintain regular site meetings and open lines of communication with all stakeholders to address any unforeseen issues promptly. For example, if we encounter unexpected underground utilities, we work with the client to adjust the design or reroute as necessary. This proactive approach ensures that issues are resolved quickly, minimizing delays and additional costs.

Primera's expertise in EV charging infrastructure projects, particularly through the Design-Build approach, has proven to be highly effective in delivering efficient and cost-effective solutions. If you're looking for a partner to help you navigate the rapidly evolving EV infrastructure landscape, please reach out to **CHAD DILLAVOU**.

ABOUT THE AUTHORS



CHAD DILLAVOU is one of Primera's leading civil and traffic engineers. His expertise is the result of over 16 years of experience in the planning, design, and construction of transportation projects. He has significant knowledge of traffic engineering and management with a wide range of abilities in the transportation field. He has substantial experience performing preliminary engineering studies, geometric design and contract plans, specification, and estimate development, and is well versed in traffic studies, traffic signal design, and public involvement.

ABOUT THE AUTHORS (CONT.)



ELIZABETH ODEGAARD serves as the Vice President and Project Delivery Department Manager at Primer. She brings over 20 years of experience in the power industry, with a strong background in project management. Her work includes managing the project delivery for Primer's Distribution Group as well as electrical distribution and utilities projects. Her primary responsibilities include estimating, budgeting, scheduling projects, and coordination with customers and clients.



As a Vice President and Sr. Director of Business Development in Primer's Utilities division, **GUY NIEDORKORN** is a master at collaborating and managing client relationships. He's a senior professional with more than 45 years of experience in high-voltage underground and overhead electrical projects. Guy boasts a unique combination of project management, estimating, and electrical design-build experience. Guy also oversees complex utility coordination projects and advocates for clients in the utility and power markets.

