

RISK MANAGEMENT

DiGioia Gray defines risk management as a proactive effort that seeks to reduce the probability of controllable adverse events, as well as to reduce the magnitude of its consequence. Risk Management is blended into the engineering practice at DiGioia Gray, where opportunities to mitigate risk are found throughout the project life-cycle. These risk management efforts include:

- Identifying risks
- Analyzing risks
- Monitoring and controlling risks
- Planning for risks
- Developing risk mitigation strategies



Our focus on safety drives our overarching commitment to quality engineering and using good standards of practice, current technology and proprietary tools in our designs. We extend our focus on risk management to minimizing potential schedule and cost uncertainties for DiGioia Gray's clients. Our approach to designing substations and transmission lines is discussed below:

Substation and Transmission Line Risk Management

Substation and Transmission Line project risks include the availability of material to meet the construction schedule, estimates to complete, physical safety, and technical quality. DiGioia Gray's Substation group implements a robust work-flow process for all stages of each project to identify and minimize associated project risks. Project and challenge meetings are conducted throughout the lifecycle of a project to identify any potential gaps or oversights. In addition, independent peer review, and QA/QC reviews coupled with cross-checks between technical teams are conducted at various gates for each deliverable before submission to our clients. Upon completion of a project and during our closeout process, lessons learned are gathered, documented, and action items are produced to improve future project performance.

Site Characterization & Foundation Design

Foundation costs present the greatest schedule and budget risk on most projects. Unlike structures which can be generally sized based on wire loads, foundation design is also dependent on the subsurface profile. As a result, there is inherently more uncertainty in the estimated foundation cost when compared to structure costs.

DiGioia Gray has built its expertise on the implementation of cost-effective site characterization and foundation engineering with an emphasis on unique approaches to statistical and reliability-based methods. Our geologic and statistics-based approach to subsurface investigations for large projects, enables our clients to gain the benefit of better site characterization data, thereby reducing foundation construction costs. Improving DiGioia Gray's geologic studies through GIS resources and UAV flight data, further improve the precision and confidence in the identification of geologic hazards.

DiGioia Gray has also developed processes that help assess the potential variability between the preliminary foundation designs and the final designs. Our company expertise and work flow processes allow us to better evaluate the variability that exists in our preliminary geotechnical profiles. Incorporating this variability into the preliminary foundation design process, allows us to provide estimated upper and lower bounds on the actual installed foundation sizes. This approach allows for better risk-based decision making in preparing foundation construction bids for work yet to be engineered.

DIGIOIA GRAY LOCATIONS

PITTSBURGH, PA

MONROEVILLE, PA

PHILADELPHIA, PA

ROANOKE, VA

CHARLOTTE, NC

PHOENIX, AZ