



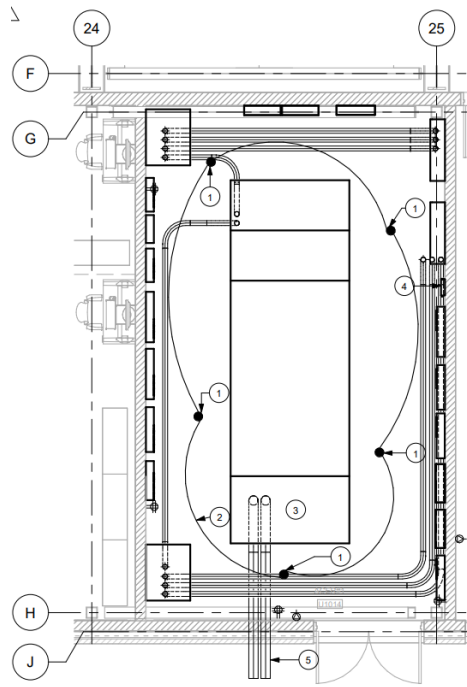
# Industrial Electrical BIM & Shop Drawings

(Electrical BIM Modeling & Shop drawings, BIM & VDC Coordination Services)

CASE STUDY



TECHTURE



**Client** : Electrical Contractor

**Team Size** : 3 Nos. (BIM Engineer & BIM Coordinator)

**Disciplines** : Electrical

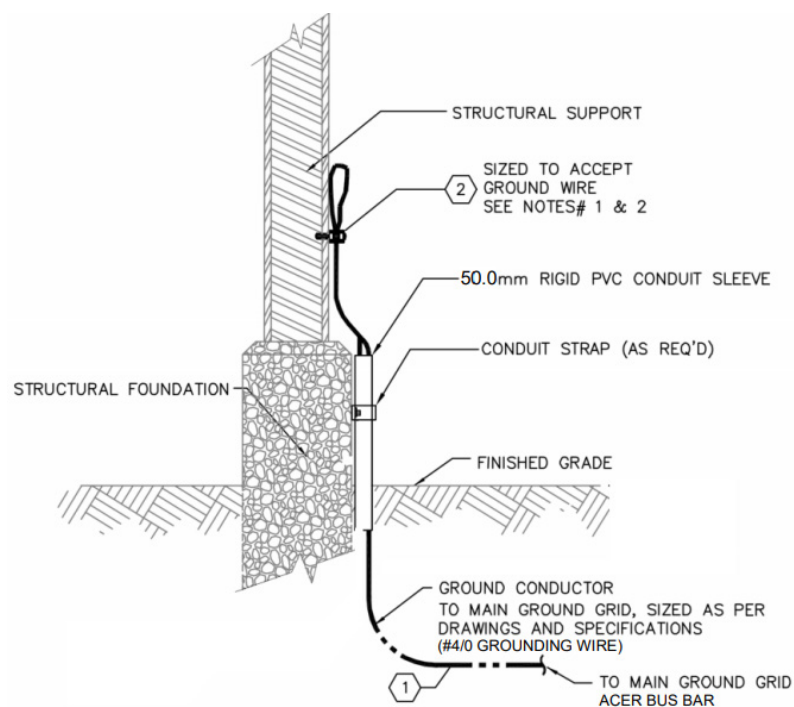
**Duration** : 2 Months

**Scale** : 50,000 Sq. Ft.

**Software** : Autodesk Revit & Naviswork

**Type** : Industrial

**Location** : Virginia, USA



## Project Overview

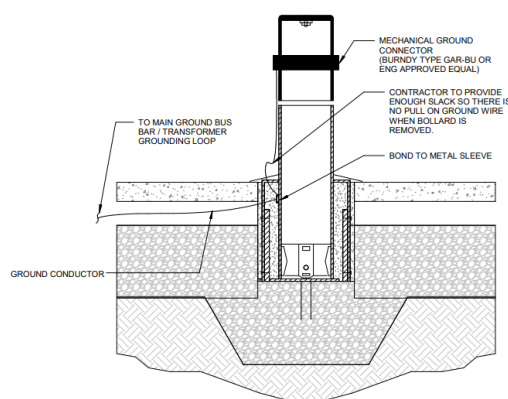
The industrial project involved discipline-specific BIM delivery for electrical systems across a 73,700 sq. ft. facility using Autodesk Revit and Navisworks. Techture developed an LOD 350 electrical BIM model based on client-issued design drawings and referenced architectural geometry. The scope included detailed modeling of power distribution, lighting, and electrical equipment, followed by multi-disciplinary clash coordination. A clash-free model was achieved through iterative updates and RFI resolution, enabling the extraction of comprehensive electrical drawing packages for construction.

## Scope & Deliverables

- ❏ Development of an LOD 350 Electrical BIM model based exclusively on client-provided design drawings
- ❏ Modeling of electrical systems including panels, feeder conduits, cable trays, lighting fixtures, controls, devices, and associated power equipment
- ❏ Creation of standard and project-specific Revit families aligned with approved submittals and specifications
- ❏ Clash coordination with Architectural, Structural, Mechanical, and Plumbing models using Navisworks
- ❏ Model updates based on clash resolutions and RFI responses, followed by extraction of 78–80 electrical drawings including feeder, hanger, Trimble points, lighting, power, fire alarm, security, and telecom layouts

## Challenges

- ❏ Coordinating dense electrical infrastructure within an active industrial building layout
- ❏ Resolving inter-trade clashes while maintaining electrical clearances and code compliance
- ❏ Managing extensive device and equipment modeling within a single-discipline scope
- ❏ Ensuring drawing consistency across a large volume of shop and coordination drawings



# Techture Approach

- Developed a disciplined LOD 350 electrical model strictly aligned with issued design documentation
- Federated electrical, architectural, structural, and MEP models in Navisworks for clash detection
- Conducted coordination sessions to validate clashes and confirm resolution strategies
- Implemented approved RFI responses directly into the electrical model
- Extracted coordinated, field-ready drawings directly from the validated BIM model

## Benefits

- Clash-free electrical model reduced installation conflicts and site rework
- Accurate feeder, hanger, and Trimble point drawings improved field layout efficiency
- Faster approvals enabled by clear, coordinated electrical documentation
- Improved coordination across trades through model-driven clash resolution
- Reduced RFIs and construction delays through early validation of electrical systems

