Affordable Housing Units

(ASI Modeling, BIM & VDC Coordination Services)

CASE STUDY

TECHTURE

Client	: Architect	**Team Size**	: 6 Nos. (Architect & ASI BIM Coordinator)
Disciplines	: Architecture	**Duration**	: 2 Months
Scale	: 55,000 Sq Ft.	**Software**	: Autodesk Revit, Navisworks, Bluebeam
Type	: Affordable housing	**Location**	: California, USA

Project Overview

Our team delivered comprehensive BIM support for a large-scale residential development that demanded precise modeling, robust code compliance, and detailed construction documentation. The project involved managing complex site conditions, diverse building typologies, and evolving design requirements — all while maintaining strict adherence to local standards and stakeholder expectations. By navigating frequent design updates, multiple construction details, and coordination with various consultants, we ensured seamless project progression from early design to construction documentation stages.

Scope & Deliverables

- Develop and update detailed LOD 300–400 architectural models including construction detailing, roof drainage slopes, storefronts, guardrails, and facades.
- Perform compliance checks for building code standards covering aspects like distance from property lines, exit counts, occupant load, and specific stair and guardrail design standards.
- Coordinate modeling for concrete, wood, and CMU construction typologies across contoured sites.
- Integrate mechanical placeholders, shaft layouts, and elevation details as per updated design inputs.
- Manage updates of window and door families, guardrail details, and G-Series code compliance sheets.
- Resolve plan checker and entitlement set comments for A-Series and E-Series drawings.
- Collaborate through Basecamp and bi-weekly meetings for issue resolution, task alignment, and client communication.

Challenges

- Tight ceiling spaces made it difficult to route ductwork and mechanical equipment without interfering with structural and electrical elements.
- Frequent design revisions and updates from the architect and other trades led to repeated coordination cycles and model rework.
- Balancing airflow efficiency with spatial constraints in a building like a fire station, where operational zones (bays, dorms, etc.) have very different ventilation needs.
- Limited mechanical room space required compact yet efficient equipment layouts without sacrificing maintainability or performance.

- Implementing construction typologies for concrete, wood, and CMU assemblies on contoured sites.
- Integrating mechanical placeholders, shaft layouts, staircases, and guardrail details as per varying standards.
- Handling construction details for windows, doors, storefronts, facades, and methane barriers.
- Maintaining clear communication and resolving input delays from consultants, especially for interior design.

Techture Approach

- Daily coordination via Basecamp and dedicated meetings facilitated clear query resolution and timely information flow, minimizing delays and rework.
- Proactive compliance reviews and detailed markups ensured adherence to standards like DASD, CALGreen, NFPA, and LABC throughout the design stages.
- Detailed sheet setups for A100s to A900s and G-Series diagrams streamlined clarity in drawings and distinguished critical area boundaries.
- Consistent updates to wall sections, staircases, guardrail details, and storefront facades demonstrated the team's technical agility in handling evolving design inputs.
- A flexible team structure supported simultaneous project switching and managed multiple deliverables while maintaining quality benchmarks.

Benefits

- Our experienced BIM team enabled faster milestone delivery across various design phases — from SD to CD stage.
- Rigorous compliance and construction detailing minimized costly back-and-forth at later stages.
- Accurate, updated models and annotated drawings helped the client reduce plan check turnaround times.
- A collaborative approach fostered trust, ensuring JZA could focus on client coordination and approvals while Techture handled technical complexities with confidence.