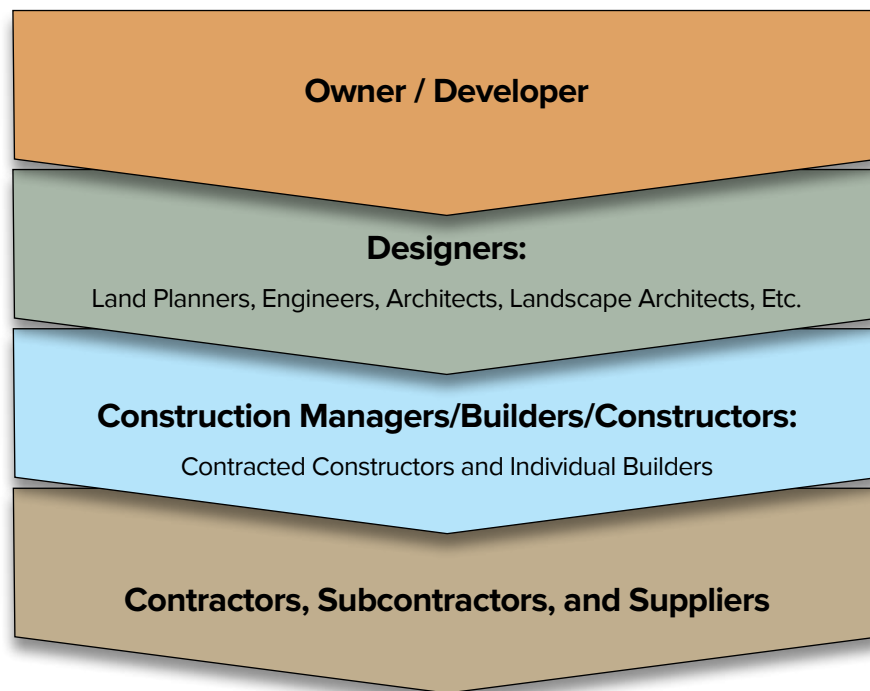


Land Development

Construction Hierarchy

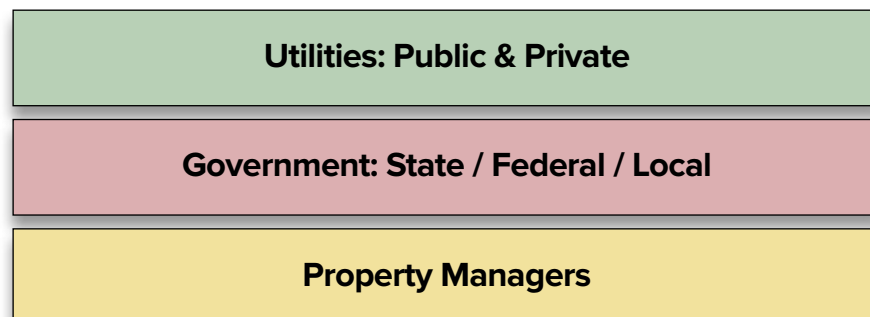
Land development projects can be organized in many different ways, but generally the owner/developer orchestrates the project. The owner/developer hires designers, as well as builders/constructors, who subsequently hire contractors, subcontractors, sub-subcontractors, and suppliers.

Robson Forensic is regularly retained on behalf of all of these parties in casework involving personal injury matters as well as construction claims.



Other Parties in Construction Projects

Other parties involved in construction projects typically operate parallel to the hierarchy described above. Our experts are often retained to review their actions within the scope of a specific project.



Development & Construction for Safety

We have discussed how the actions of developers, designers, and constructors influence the safety of finished projects. Below we have outlined some of the most common issues we find in completed projects.

Contact our experts to discuss your case and determine whether or not these, or other issues, were contributing factors toward the incidents in your case.

Premises Safety and Security

- Adequate lighting (reference IES)
- Clear lines of sight
- Boundaries, buffer areas, and separation of incompatible uses
- Safe walkways with positive guidance
- Reduction of slip/trip/fall incidents

Storm Water Management

- Retention/detention pond safety
- Outfall structures
- Slope protection
- Safety slope
- Drainage system infrastructure
- Prevention of pipe failures, settlement, subsidence
- Protection of retaining walls, headwalls, and seawalls
- Flooding
- Control of standing water, roadway washouts & debris control
- Run-off water quality (toxicity)

Utilities

- Water and sewer
- Contamination prevention
- Prevention of washouts and pipe failures
- Avoid hazards created by trench settlements, raised or settled manholes and valve boxes, inappropriate F/H location, etc.
- Gas, electric and communications
- Avoid guy wire conflicts
- Unobstructed lines of sight
- Guarding of utility trenches
- Proper trench backfill
- Guard energized equipment
- Safe placement of poles and structures

Recreation & Commercial Recreation

- Golf Courses
 - Errant golf ball protection
 - Golf cart paths, stairs, walkways
- Parks, playgrounds
- Proper surface materials & age appropriate equipment
- Athletic fields/facilities: fields, courts, rinks, tracks...
- Maintenance of surface & facilities
- Aquatic facilities

Construction Sites & Public Safety

- Protection of public from construction site hazards (Reference: International Building Code Chapter 33 & ANSI A10.34)
- Open excavations & trenches
- Earth stockpiles
- Construction materials
- Construction equipment
- Provisions to safely accommodate motor vehicle, bicycle and pedestrian traffic
- Identification and mitigation of potential site hazards (e.g. sink holes, slides, contaminated soils and water, etc.)

Transportation Systems

- Proper roadway geometries
- Proper construction, inspection & maintenance
- MUTCD compliant traffic signals, signage & markings
- Inclusion of roadside recovery areas, clear zones, sight triangles, and vegetation management
- Bicycle & pedestrian safe facilities
- Adequate lighting (reference IES)

Landscaping

- Plant and tree selection
- Toxicity & species failure patterns
- Planting and bracing
- Placement - Allowance for ultimate growth
- Prevent upheaval of pavement and walking surfaces
- Lines-of-sight maintenance
- Roadway & utility clear zones
- Irrigation systems
- Prevent slippery conditions/ice on roads and walkways.
- Prevent tripping hazards from irrigation heads, washouts, etc.

Environmental

- Conduct environmental due diligence
- Environmental questionnaires: Transaction screens, Internal environmental screens
- Environmental Site Assessments, Phase I ESAs, and Phase II ESAs

Vertical Construction

- Safety during construction
- OSHA 29 CFR 1926 - Construction Industry Regulations
- ANSI A10 series of construction safety standards
- Protecting the public during construction (see *Construction Sites & Public Safety*)
- Building Design & Construction
- ICC Family of Codes
- Life safety codes
- AIA contract documents
- Indoor air quality, water intrusion/mold

Featured Experts



C. William Brewer, P.E.
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Bill has over 30 years experience in large-scale engineering, construction, and real estate development projects. He provides expert analysis in land acquisition, strategic planning, entitlements, design program management, and site development issues. He has specialized expertise in the construction of large-scale, master-planned communities and environmental issues including wetland mitigation, mass earthwork, blasting, and erosion control.

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