

AI Prompting Tips for Building Compliance

How to craft smarter questions and validate answers for AEC workflows.



Prompt Guide

General-purpose AI tools like ChatGPT and Gemini are great at drafting emails, analyzing data, and creating to-do lists, but they weren't built for building compliance. Getting reliable answers requires careful prompting and rigorous validation.

We know this firsthand. UpCodes has spent the past several years building AI specifically for compliance workflows. Whether you're using a general AI tool or one [purpose-built for AEC](#), you can use this guide to craft better prompts and verify answers.

Configure your settings

This is where you define who you are and how the AI should interact with you. Follow the steps below and customize to fit your background and preferences.

1

Go to settings.

Using your AI of choice, navigate to the system settings.

2

Define your role.

Example: "I'm a principal architect at a mid-size firm working on multi-family projects in Massachusetts."

3

Tailor its communication style.

Example: "Write responses with as much detail as possible, while citing every source that you reference."

4

Define your tone.

Example: "Talk to me as if I were an [expert / novice] architect."

5

Determine the context.

Example: "Before you generate your answers, ask me follow-up questions for clarification. Highlight edge cases and exceptions whenever possible."

Include project context in every prompt

Enrich AI prompts with as much context before you ask the question. Whether you're copying this context into a new thread each time or embedding it within a project, the more information you provide, the better the answer.

Your code questions should include four primary components:

- Jurisdiction
- Code year
- Brief description of the building
- Specific code books to pull from
- Occupancy Group (when known)

I'm working on a 150,000 square foot, three-story, non-sprinklered, core and shell commercial building in Los Angeles. It's a primary occupancy Group B.

Can I have an unprotected continuous stairway between all the floors of the building? Only reference the 2025 Los Angeles City Building Code in your answers.

Upload supplemental materials

Don't stop at just writing out the context in your prompts. Upload relevant project data, like briefs, plan corrections, soil sample reports, and more, to give AI the full context.

Attached is the Orange County Fire Authority's correction list. Review the comments and provide recommendations on how to address them. Reference requirements in the 2025 California Fire Code when appropriate.

Note: To protect your firm's intellectual property, be sure to disable the setting that allows AI to train on your data. Some AI platforms won't let you opt out of this feature unless you're on a particular plan, so use with caution.

Streamline your prompts in distinct threads

One topic = one thread. If you need to change topics, create a new thread to keep the LLM focused on the task at hand. If you need to ask a follow-up question, keep it nested within the same thread.

Multiple Questions in a Single Thread

Question 1:

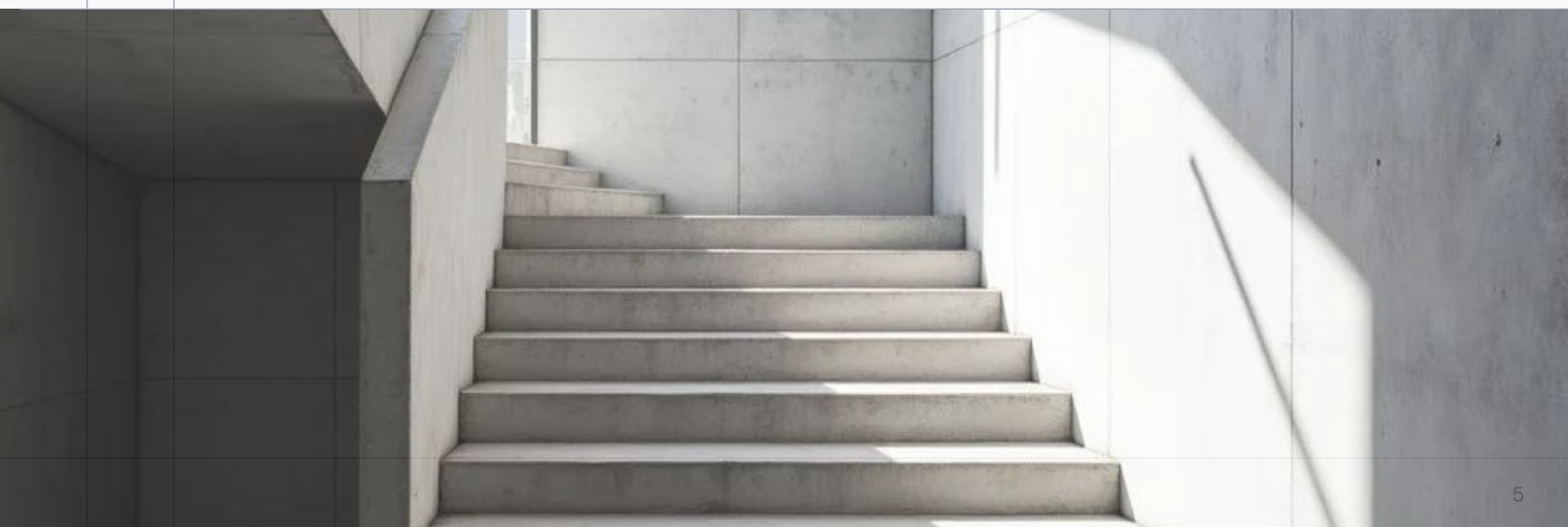
The building I'm designing is Type IIA construction. List the benefits of using this type over Type IIB construction in terms of building heights and areas.

Question 2:

Zoning regulations allow me to build a building with no setbacks from the property line. I have a 6-story 125,000-square-foot building that will be fully sprinklered. Can you list all the requirements for construction within 3 feet of the property line per the 2025 California Building Code using this information?

New Thread

Are there any exceptions to using a 36-inch rear grab bar behind accessible restroom toilets for a project in California under the 2025 California Building Code?



Ask AI for prompt guidance

Whenever you are in doubt about how to ask a question, use AI to tell you how to improve it.

I'm trying to determine the occupancy group for my program. Help me develop a prompt that best answers this. Ask me follow-up questions as they come up.

Example Prompts

Explain a concept or code section

Explain what "fire separation distance" means in the context of the 2024 Ohio Building Code.

Find related sections

Find all sections of the code that pertain to accessible means of egress.

Perform a basic calculation

I have a parking lot with 200 spaces. How many van-accessible spaces do I need per the 2024 Austin Building Code?

Generate a checklist

Provide a checklist for designing a Type 1 grease duct for a commercial kitchen fryer. The kitchen is on the ground floor of a 3-story building. Ventilation equipment will be placed on the roof.

Prompts by design phase

Conceptual Design

Identifying requirements that influence massing

I am designing an office building that has retail space, public space, parking, and an office lobby. I have office spaces with an outdoor terrace accessible to office employees on the roof. What requirements for the occupied roof would affect my building massing?

Evaluating construction methods and materials

For an assembly occupancy of less than 10,000 square feet, can I use heavy timber construction as an exterior trellis for a patio area adjacent to the property line?

Schematic Design

Responding to a local policy

Upload a local building policy and ask: "How should I implement the following policy for a new 10,000 sq. ft. shopping center in Colorado?"

Defining occupancy groups

I am designing residential condominiums with a podium that has retail space, public space, parking, and a restaurant. The residential units have a common outdoor terrace accessible to the residents on the roof, with a community room penthouse. What occupancy group is the roof terrace area?

Design Development

Exit planning

I have an assembly space with 530 occupants. How many exits do I need to plan for?

Performing calculations

The A-3 space has 2 exits, is 7,560 square feet, and has a total of 300 feet of fixed linear seating. Give me a breakdown of all the egressing requirements for this space. Show me your calculations and list any assumptions you made.

Determining standpipe locations

I have a four-story building with two stairwells. Help me find the best place to install a standpipe.

Optimizing plumbing layouts

If I'm required to provide 36 toilets for men on a story in a large concert hall, what is the ideal mix of urinals and toilets? Consider how many ambulatory and accessible toilets are needed to achieve the most efficient layout.

Construction Documentation

Answering plan comments

Generate a checklist to address the corrections from the San Jose Fire Authority.

Finding an assembly

Suggest a through-penetration assembly for PVC pipes passing through a 2-hour-rated metal stud wall.

Determining fire safety requirements

When are combination fire-smoke dampers required in a hospital?

Validating Responses

When you are validating AI responses, ask yourself the following questions:

- ☐ **Is the correct code edition used?** Code updates typically occur in 3-year cycles, so make sure it's referencing the appropriate edition.
- ☐ **Are local amendments incorporated?** Do your code sources include local amendments, updates, and errata? If generic AI isn't citing a local AHJ website, that's a flag that it might be missing appropriate requirements.
- ☐ **Are code sources included?** If AI doesn't cite its sources, you can't properly verify it. Rigorously check links and source materials to ensure responses are accurate.
- ☐ **Is the answer reproducible?** Test the same question multiple times. If it can't reproduce the same answer, validate with other sources.

A better way with purpose-built AI

Unlike generic AI tools, UpCodes Copilot is built for compliance workflows, delivering [over 2x higher accuracy](#) on real code questions.

Copilot pulls from our comprehensive code, product, and assembly libraries, so answers are grounded in trusted, up-to-date sources. It also tailors answers to your firm's project context and data, so you don't have to repeat yourself across prompts.

Beyond answering questions, Copilot generates usable outputs, like compliance checklists. Soon, it will accelerate your code-to-spec workflow end-to-end by drafting and QA-ing specs, finding a building product, and surfacing an assembly.

When it comes to compliance, use the right tool for the job. [Get a personalized demo](#) and see UpCodes Copilot in action.