

## So you're ready to build your training tower...

# THE RIGHT QUESTIONS

In 2003, WHP Trainingtowers responded to 1,876 inquiries from organizations interested in building a Fire Training Tower. Recognizing that there is a need is the easy part. Let us assume:

- You have completed a thorough needs analysis.
- You have the land.
- Your funding is in place.

The next step is designing and engineering a building that will meet your unique training and budgetary requirements. How do you do that? Planning a training center is a once-in-a-career experience. You are either planning an entirely new building, or replacing a structure that some long-since-retired professional built years ago. In either case, YOU'VE never done it before. Where do you begin? In our 25 years in the fire training industry, many of the same questions keep showing up.

An excellent place to start is with other departments who have been through the process. Ask questions – lots of questions. Find out what choices they did right and what choices they would like to change. Talk to the manufacturers of the training buildings. What is their track record? Who are their customers? Don't just talk to the "new" customers; visit with owners of towers that have been around for a while. What shape are they in? If you choose to work with an architect, ask questions. How much do they charge? How many fire training complexes have they designed? Select a design professional with experience – you don't want to pay for someone's "learning experience."

**Should I build a concrete or pre-engineered building?** At one point, almost all training buildings were concrete structures. In 1980, metal training buildings were introduced to the market. These structures affect a great economic savings, typically costing 40-60% less than their concrete counterparts. In addition, they often times result in considerable savings in architectural/engineering fees. With improved engineering and technology, metal buildings, once the province of smaller departments, are expanding to meet the needs of large metropolitan areas. They are bigger, stronger, and better than the earlier buildings. In addition, they are now designed to meet previously unattainable aesthetic requirements with innovations like brick facades. Concrete structures, over time, have proven to be costly to construct and maintenance intensive.

**How much will it cost?** This is dependent on the size of the structure and the scope of the training evolutions you intend to perform in the building. Cost will vary with the number of

## The important question to ask is "How will this building look and serve in 20, 25 and 30 years?"

burn rooms desired, type of "props" required, stair requirements, and number of floors in the tower. To avoid inappropriate expense, be realistic in your requirements. If the buildings in your community are three stories, then a five-story tower is probably not a good choice.

**How long will it last?** This relates directly to the quality of engineering that went into the building. Whether you're planning a concrete or metal building, someone in your organization needs to become educated about the nitty-gritty of building construction needs to ask questions like:

- How strong are the walls of the building? What's holding them up?
- Do the interior floors have concrete topping for longevity and ease of maintenance?
- How durable is the exterior/interior finish? What about rust?
- How about the burn room insulation – what sort of track record does it have?
- What type of doors, windows, shutters, stairs and railings are being used? How are they assembled? Are they OSHA compliant? Do they meet construction standards for your area?
- Who will install my building? Who does the warranty work?

All of these things need to be very carefully spelled out in your specifications. Unfortunately, there is no such thing as a "standard requirement" specifically for fire training towers. This leaves you pretty much at the mercy of the building provider. You do **NOT** want a building that will barely meet your requirements for strength and ruggedness. You want one that will **EXCEED** those requirements. You want to use the strongest building materials available because this structure will be taking a severe beating, often on a daily basis. **ASK, ASK, ASK.** Talk to other departments. Ask very pointed questions of the building provider, and be **SURE** to include all of your requirements in the specifications. Remember specifications must be detailed. Be

precise and make the low bidder provide what you specify or better.

**What about maintenance?** Two questions come to mind when it comes to ongoing maintenance...How much work will it be? How much will it cost me? Planning well and asking the right questions will pay off in the long run. What type of finish do you want on the building? This is a building that will be expected to sustain a great deal of wear and tear. Do you want it painted on the outside? On the inside? Does the manufacturer provide additional protection for the building in areas that will take abuse from repeated laddering and rappelling? Ask manufacturers about their finishes and why they use what they do. Stairs and railings factor in heavily in the cost of your building. How strong are they? Why are they designed the way they are? What materials are used and how are they put together? Ask, then choose the **BEST**. Finally, a very important consideration when looking at long-term maintenance - Is the building weather-tight or is the interior exposed to the elements? Although a training structure is subject to water from training, you don't want it to have icicles hanging from the interior during freezing weather. These requirements **MUST** appear in your specifications.

**What about safety?** Is it OSHA compliant? Is fall protection provided? OSHA Standard 29CFR.1926.502 states that working surfaces more than six feet above ground require fall protection. In addition, they are very specific about what's required in stairs and railings. Is your organization willing to accept legal responsibility for specifying or installing anything less?

**Warranty.** READ IT! Especially the fine print. Talk to others to see how their warranty work has gone. Know what to look forward to if you do have a problem.

With careful planning, you will design a fire training tower you can truly be proud of, one that will provide years of service and bear up well under the daily wear-and-tear.