

Tips for a Successful Healthcare Project

HEALTH CARE CONSTRUCTION SUMMIT

Tuesday, May 27, 2008

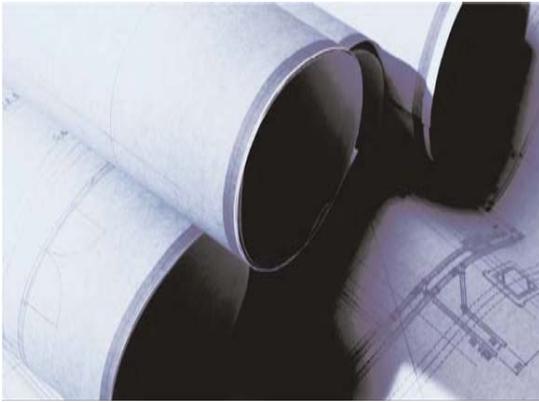
Fire Sprinklers





Topics for Discussion

- Why is health care construction different?
 - *Health care construction in California vs. other states*
- What is unique to your trade on a hospital project?
- Health care construction: The Ideal State vs. Reality
 - *What is supposed to happen*
 - *What does happen*
 - *Common slip-ups to avoid*
- Resources available to help contractors succeed?
- How to get involved in health care construction jobs



Health Care Construction is Different

“It’s a matter of life or death”

- Patient and staff safety depend on the proper operation of the systems in hospitals
- Life Support
 - *Emergency Power Systems*
 - *Medical Gas Systems*
- Infection Control
 - *Ventilation Systems*
 - *Plumbing Systems*
 - *Architectural Finishes*
- Earthquakes



Health Care Construction is Unique

Higher Standards for Performance

- Commercial buildings may not be repairable or functional following a “Design Event” (fire, earthquake, etc.)
- Hospitals must function following an incident
- Fire philosophy is to “defend in place”
 - *Patients may be too ill to evacuate*
 - *Patients are moved to adjacent “compartments”*
- Earthquake philosophy: Hospitals must be reasonably capable of providing services to the public
 - *Limited damage*
 - *Critical equipment and systems remain operational*



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What is Supposed to Happen

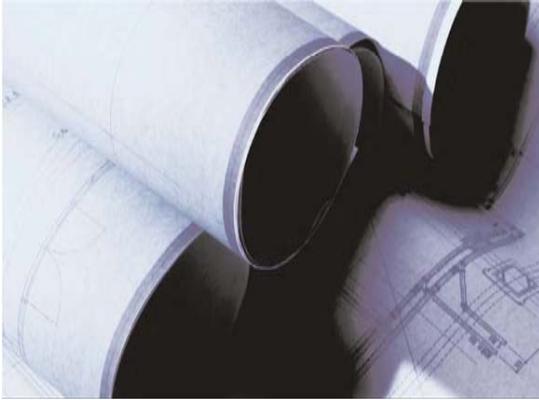
- The Hospital Design Team (Architects, Engineers, etc.)
 - *Identify existing conditions*
 - *Design a code compliant project*
- OSHPD Reviewers
 - *Identify every code deficiency and see they are corrected*
- Contractors
 - *Build according to the approved drawings*
- IORs and OSHPD Field Staff
 - *Inspect for conformance with the approved drawings*



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What Does Happen

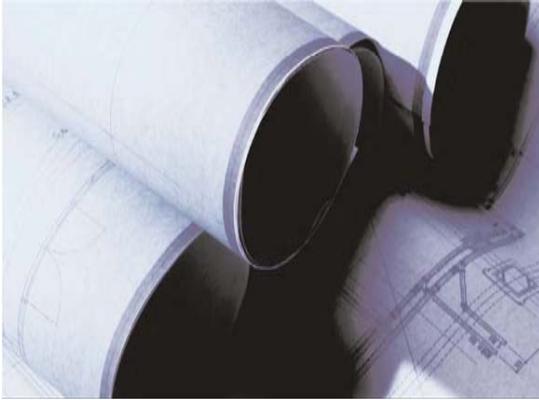
- The Hospital Design Team
 - *Designs a code compliant project based on the information they have and constraints of time and budget*
- OSHPD Reviewers
 - *Identify major code deficiencies, major coordination issues*
- Contractors
 - *Builds according to the approved drawings, accounting for variations in the existing conditions and uncertainty in the code and drawings, corrects “unbuildable” conditions*
- IORs and OSHPD Field Staff
 - *Inspect for conformance with the approved drawings and the code – identifying major and minor code deficiencies*
 - *Attempts to be flexible when code is “unclear” or where the design is “unbuildable”*



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Keys to a Successful Project

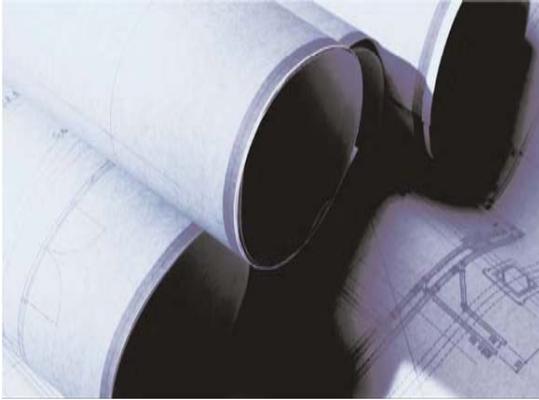
- Familiarity with the building code
- Coordination with other trades
- Craftsmanship!
- Foresight-
 - *Identify potential problems*
 - *Clarify before you build*
- Team effort – not a battle of wills



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When Problems Arise...

- Types of problems you may encounter
 - *Unforeseen Conditions*
 - *Work that does not match the approved drawings*
 - *Code deficiencies that were not caught in plan review*
 - *Code interpretation issues*
- When problems occur resources are available
- On-site resources
 - *IOR's*
 - *OSHPD Field Staff*



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Additional Resources

- How to get involved in health care construction jobs
 - *Contact you Trade Association*
- Industry resources
 - *Training & Certification Classes*
- OSHPD
 - *www.oshpd.ca.gov/fdd/*



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- FDD LINKS**
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Facilities Development Division (FDD) - Plan Review & Construction Observation

Plan Review and Construction Compliance Goal:

Plan Review and Construction Compliance will (a) provide quality service to our clients by being efficient, flexible, responsive and accountable, and (b) will review plans, specifications, and observe health care facilities construction to ensure compliance with applicable codes and regulations.

PLAN REVIEW & CONSTRUCTION OBSERVATION

→ [Plan Review Process](#)

→ [60/30/30 Program](#)

→ [Over the Counter \(OTC\)](#)

→ [Standard Comments](#)

→ [Alternate Method of Compliance](#)

→ [Comment and Process Review \(CPR\)](#)

→ [Required Weight & Size](#)

→ [Plan Approval with Comments](#)

→ [Construction Observation Process](#)

→ [Testing Inspection Observation \(TIO\)](#)

→ [Hospital Inspector Certification Program](#)

→ [Field Reviews - FREER](#)

→ [SB 1838 Exemption from Plan Review for Projects of \\$50,000.00 or less](#)

→ [AB 2632 Project Review](#)

→ [SB 224 Project Review](#)

→ [Licensed Clinics](#)



General Tips

- Ensure you have a building permit before you start
- Have a copy of the OSHPD approved plans and specifications (contract documents) onsite
- Conduct a pre-job conference with the foreman, Inspector of Record (IOR) and OSHPD prior to installation.



General Tips

- Don't perform work that is not shown on the approved contract documents which alters the intent, scope or function of the project until approved by OSHPD
- Don't make substitution of materials that are not in the submittal booklet
- Make sure the Inspector of Record has a copy of the approved submittal book



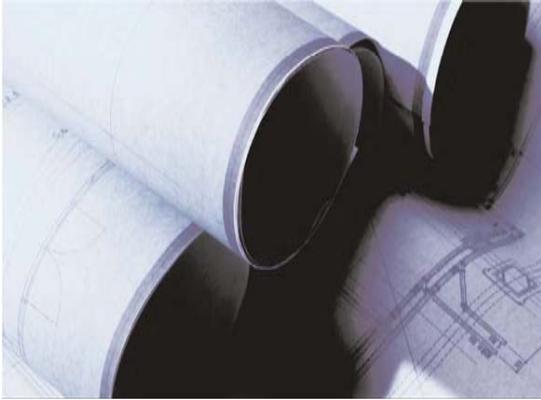
General Tips

- Timely submittals of changes, redesign, alternate means or methods and material substitutions
- Install materials in accordance with the contract documents, manufactures installation instructions and/or approved listings



General Tips

- If your project is a deferred approval system, and the piping is less than 2 ½” in diameter then you will need an Engineer’s professional stamp on the drawings.
- If your project is NOT part of a larger project or deferred approval and all piping is 2 ½ “ or less, only a contractors C- license stamp is required.



General Tips

- If your project has any piping greater than 2 ½” in diameter then an Engineer must design the bracing and stamp the drawings with their professional stamp.
- Complete the “A” and “U” Contractors Test sheets found in NFPA 13 prior to the OSHPD Fire Marshal witnessing the tests.
 - Yes, that means that the Fire Marshal must witness the pressure tests for underground and aboveground piping.



General Tips

- Do NOT bury nor conceal the piping until instructed to do so after testing is completed. Ask if unsure.
- now the correct edition of NFPA for your project. OSHPD currently has projects using the 1996 edition, 1999 edition and 2002
- Accompany the OSHPD Fire Marshal on his job walk with the IOR. Learn firsthand if everything is going in OK. Ask for a copy of his written report.



General Tips

- Restrain the ends of the branch lines for upward and lateral movements
- Every length of sprinkler piping requires a hanger, unless you can show the Fire Marshal an exception in NFPA 13.
- Make sure that you inform the Architect in writing, of the proper size floor drains that are going to be required in the basement if you are going to need to perform a flow test.



General Tips

- You cannot penetrate the stair enclosure with transitional sprinkler piping, mains, or branch lines. Only those items that directly serve the stairwell are allowed.



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Q & A