



# PACIFIC SAFETY

I N C O R P O R A T E D

## Washington State Construction Crane Certifiers

- Mobile Cranes (Lattice / Hydraulic / Fixed)
- Articulating Cranes
- *Tower*
- *Maritime Crane Certification*

## Experienced certifiers throughout Washington State

- More than 110 years of combined crane experience

Phone: 1-360-428-5888

# Federal OSHA Proposed Crane Rule

- n First Draft was published and comments were taken by OSHA from stakeholders in 2009.
- n Revisions: Final Crane rule is proposed to be out by July 2010.
- n WA State must be “at least as effective”.
- n WA State will address differences in Phase II.

# Nationally Recognized Standards

- n The American Society of Mechanical Engineers (ASME)
  - n Updated frequently
  - n Active Committee's
  - n Respond to questions
  - n Provide interpretations

# ASME Crane Related Standard Examples

- n B30-2 – Overhead and Gantry Cranes
- n B30-3 – Construction Tower Cranes
- n B30-4 – Portal Tower and Pedestal Cranes
- n B30-5 – Mobile and Locomotive Cranes
- n B30-9 – Slings
- n B30-10 – Hooks
- n B30-17 – Overhead and Gantry Cranes
- n B30-20 – Below the Hook Lifting Devices
- n B30-26 – Rigging Hardware
- n B30-29 – Self-Erecting Tower Cranes

# ASME B30.5 Activity

- n Most recent update – 2007 – Published March 7, 2008
  - n Newly defined responsibilities for:
    - n Crane Operator
    - n Crane Owner
    - n Crane User
    - n Lift Director
    - n Site Supervisor
  - n Responsibilities left the same:
    - n Crane Manufacturer
    - n Inspector
    - n Signal Person

# ASME B30.5 Issue

“The operator shall be responsible for those operations under his direct control.” – 1968 ASME B30.5

“Each operator shall be held responsible for those operations under the operator’s direct control.” – 1989 ASME B30.5

“The operator is the captain of the ship.”

Deniability = Lack of Planning = Accidents

# ASME B30.5 – Crane Operator

- n Directly controls the crane's functions
  - n Responsible from the hook to the wheels
  - n Pass Physical Qualifications
    - n Vision, Hearing, Strength
    - n Substance Abuse Test
  - n Pass Written Exam for Specific Crane Type
    - n Defines 10 different crane types
  - n Demonstrate ability to read / write in the language of the crane manufacturer's manuals
  - n Pass Operational Test for Specific Crane Type

# ASME B30.5 – Crane Owner

- n Has custodial control of a crane by virtue of lease or ownership
  - n Provide a crane that meets the specific job requirements defined by the Crane User.
  - n Provide additional technical information when requested by Crane User.
  - n Provide field assembly, disassembly, operation, maintenance information.
  - n Establish inspection, testing and maintenance program.
  - n Using qualified personnel for maintenance, inspection, repair, transport, dis/assembly.

# ASME B30.5 – Crane User

- n Arranges the crane's presence on a worksite and controls its use there.
  - n Comply with regulations and manufacturer information.
  - n Using qualified people as supervisors for crane activities.
  - n Ensuring the crane is in proper operating condition prior to initial use at worksite.
  - n Verifying the crane has the necessary lifting capacity.
  - n Using personnel who are qualified.
  - n Ensuring the operator is made aware of adjustments or repairs that have not yet been completed.
  - n Ensure all personnel involved are aware of their responsibilities, assigned duties, and the associated hazards.
  - n Ensure the inspection, testing and maintenance programs specified by the crane owner are followed.

# ASME B30.5 – Lift Director

- n Directly oversees the work being performed by a crane and the associated rigging crew.
  - n Being present at the jobsite during lifting operations.
  - n Ensuring the area needed for crane operations has been prepared before operations commence.
  - n Ensuring personnel involved understand their responsibilities, assigned duties, and associated hazards.
  - n Addressing safety concerns and is responsible if he overrules those concerns.
  - n Appointing the signal person(s) and ensuring they are qualified.
  - n Ensuring compliance when working near power lines or lifting personnel.
  - n Ensuring the load is properly rigged.
  - n Ensuring precautions are implemented in special lifting operations.

# ASME B30.5 – Site Supervisor

- n Exercises supervisory control over the work site on which a crane is being used and over the work that is being performed on that site.
  - n Ensuring that a qualified person is designated as the lift director.
  - n Ensuring that crane operations are coordinated with other jobsite activities that will be effect by or will effect the lifts.
  - n Ensuring the area for the crane is prepared:
    - n Access roads
    - n Sufficient room for assembly/disassembly
    - n Operating area that is suitable for the crane with respect to levelness, surface conditions, support capability, proximity to power lines, excavations, etc...
  - n Ensuring crane operators are qualified
  - n Ensuring the rigging crew is supervised by a qualified person
  - n Ensuring crane maintenance is performed by a designee.

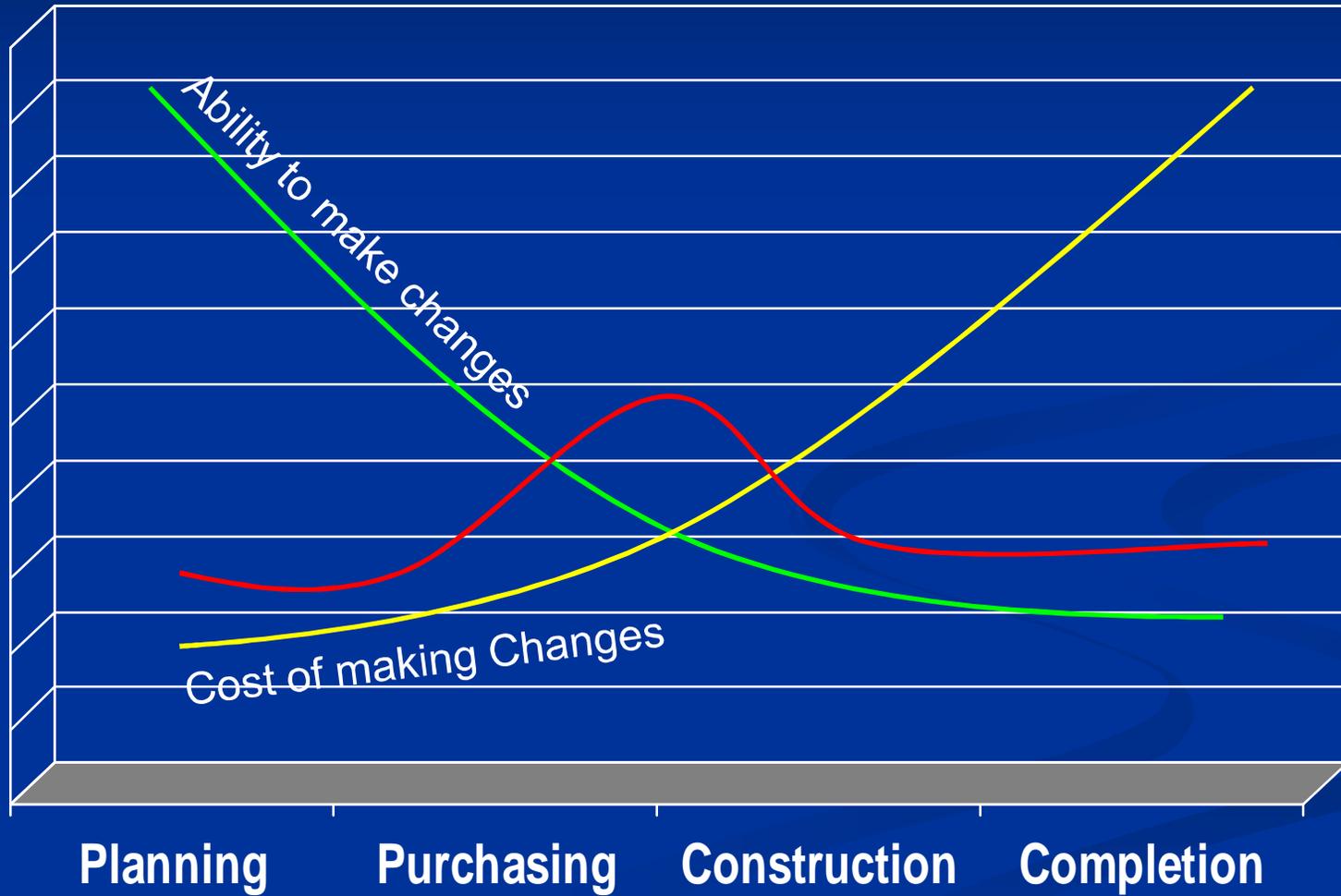
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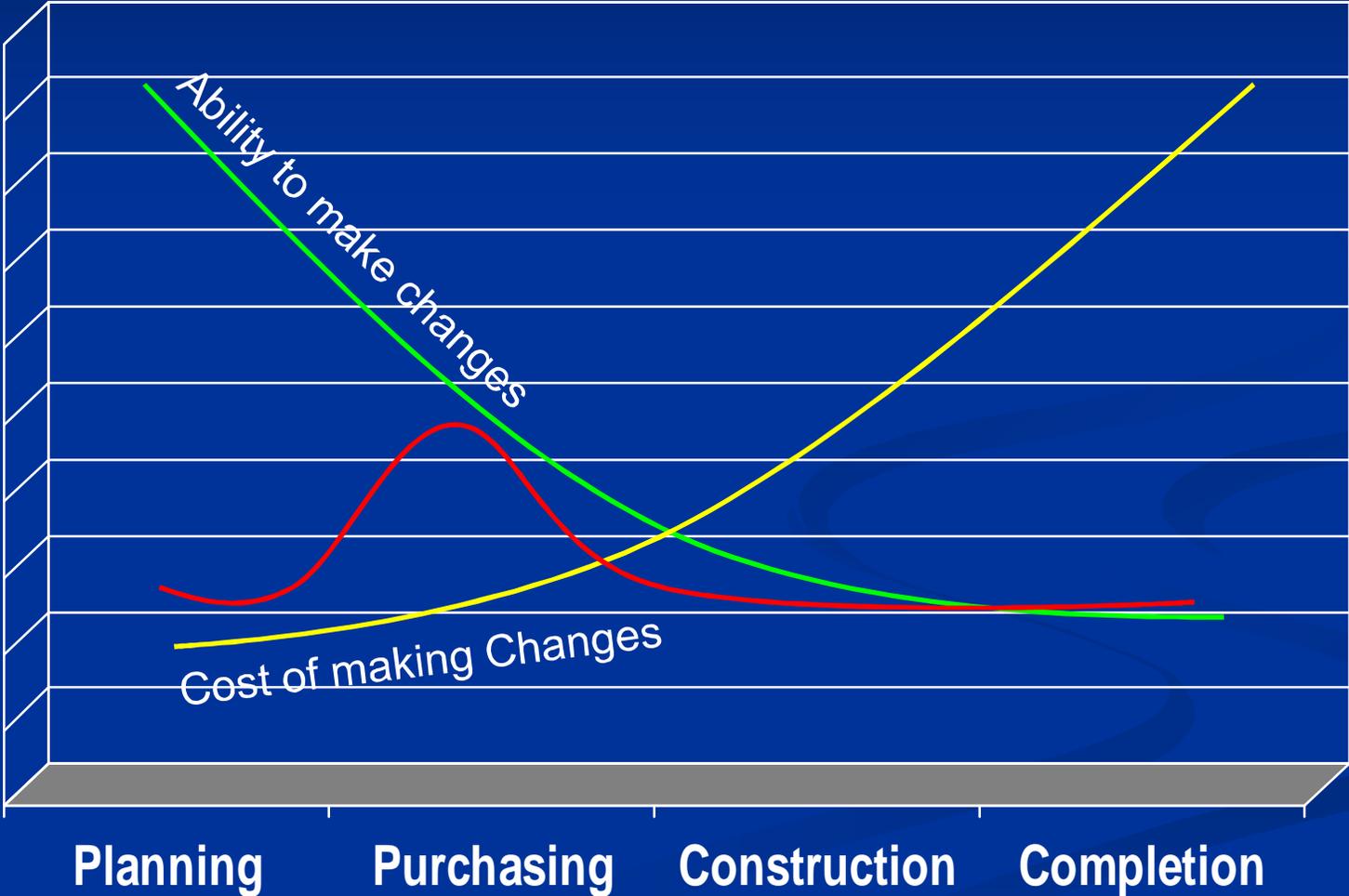
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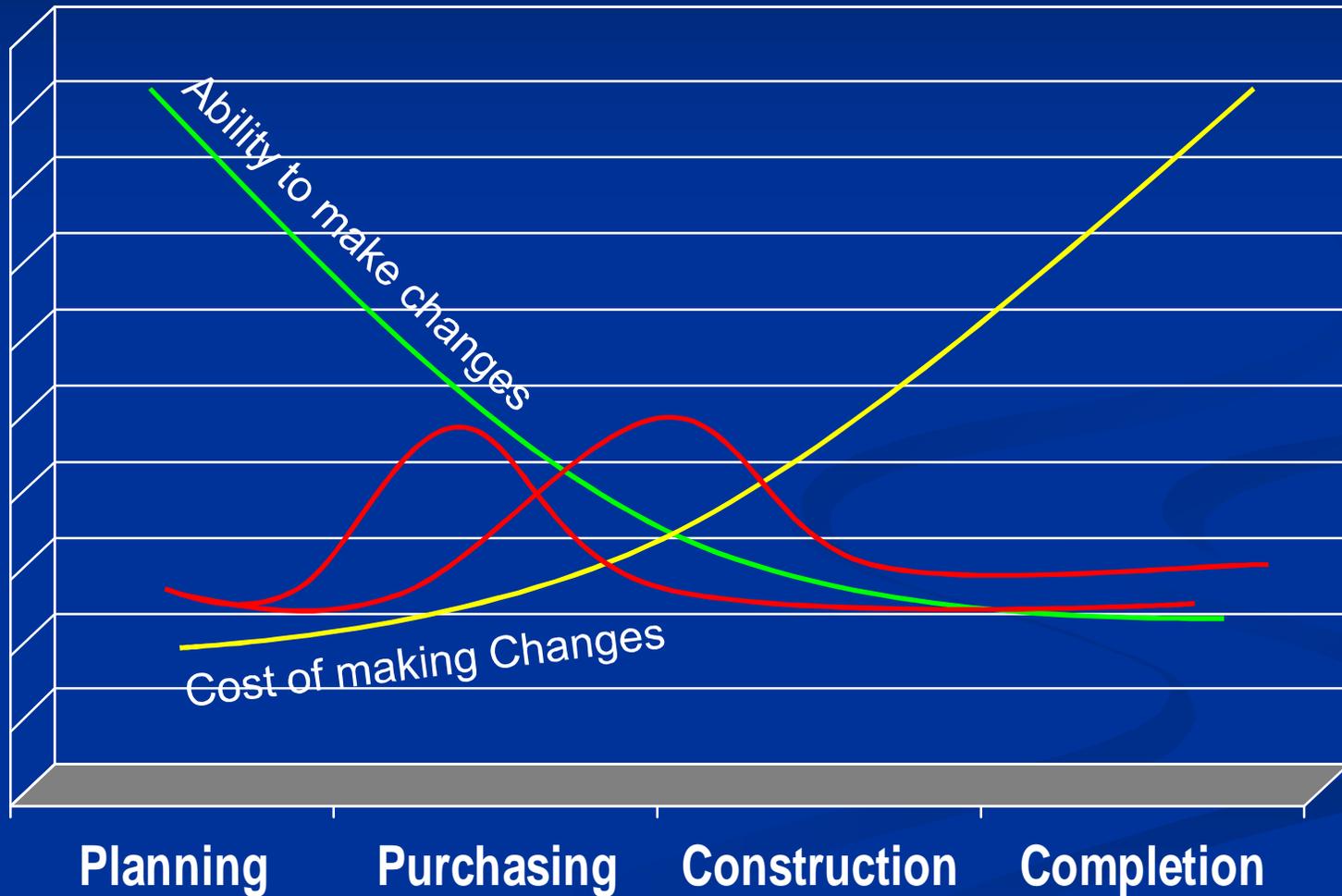
# Planning



# Pre-Planning – The Better Solution



# Pre-Planning – The Benefit



# How does this effect cranes?

- n Site Constraints
  - n Space
  - n Ground Conditions
  - n Lifting Paths
- n Crane Sizing
  - n Know the “defining lift”
- n Hook utilization

# Before Pre-Planning...

- n Check your contracts
  - n ASME responsibilities need to be allocated.
  - n Scope of work may require different contracts.
- n Pre-Qualify
  - n Two interesting facts about crane companies.
  - n Know what KING, KIRO and KOMO are going to know.
    - n Perform web searches
    - n Look up citation history
    - n Evaluate EMR history
    - n Qualify Lift Directors as you would subcontractor Superintendents
  - n Verify the information

# Documentation

- n Require documentation before the job happens
  - n Scope – who is who?
  - n Lift Plan
  - n Lift Director Documentation
  - n Operator Certification
  - n Crane Certification
  - n Rigger Documentation
  - n Signal Person Documentation
  - n Rigging Certification

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