QUALITY ASSURANCE
AND
QUALITY CONTROL
IN INFRASTRUCTURE PROJECTS

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If Presidents are elected on 51% of the votes, why being correct 80 and 90 percent of the time isn’t sometimes acceptable?
At 99.9% we would have to accept:

- 500 incorrect surgical operation every week
- 20,000 incorrect drug prescription every year
- 16,000 pieces of mail lost by USPS every hour
- 32,000 missed heartbeats per person every year
- 1 hour of unsafe drinking water every month
- 2 unsafe plane landings at O’Hare airport every day
- 50 newborn babies dropped by doctors each day
- 22,000 checks deducted from wrong account every hr
How important quality is?

“A Tale of 2 Walkways”
What it was?  What Happened!  What it should have been
Hyatt Regency Walkway Collapse – July 17, 1981
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2\textsuperscript{rd} Floor Hangar Rod And Cross Beam Assembly

4\textsuperscript{th} Floor Beam

Hanger Rod, Washer, And Supporting Nut
Contributing Factors to the Collapse

• Poor communications
• Poor engineering design
• Poor QA/QC
• Failure to adhere to the engineering code of ethics
“You may never reach perfection but if you pursue it long enough, you may catch excellence”.

Edward Demming