

Quality Control/Quality Assurance

Quality Assurance.....
.....encompasses
both quality engineering and quality control

Quality Assurance is.....
.....the application
of standards and procedures to ensure that a
product or facility meets or exceeds desired
performance criteria

Quality Control/Quality Assurance

Quality Assurance is.....
.....documentation
to verify the results obtained

- *Quality Engineering* describes procedures to ensure the design for a structure proceeds according to recommended and mandatory criteria set by:
 - related trade and professional associations
 - building code authorities
 - federal, state, and local government entities

Quality Control/Quality Assurance

- *Quality Control* includes:
 - setting specific standards for construction performance, usually through plans and specs
 - measuring variances from the standards
 - taking action to correct or minimize adverse variances
 - planning for improvements in the standards

The architects and design engineers set the criteria for construction, QC ensures that the physical work conforms to those standards

Quality Control/Quality Assurance

- *Elements of Quality* include:

- Quality Characteristics**
- Quality of Design**
- Quality of Conformance**

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Quality
Characteristics.....

- **dimension**
- **color**
- **texture**
- **strength**



Quality Control/Quality Assurance

Quality of Design.....

- Defines tolerances or ranges of acceptable variation for attributes such as:
 - size, spacing, clearance, strength, finish, etc.

Designers must understand the impact that higher standards and tighter tolerances have on cost

- standards of quality should be appropriate to the intended function and appearance

Quality Control/Quality Assurance

Quality of Conformance.....

- The degree to which the physical work conforms with the standards.

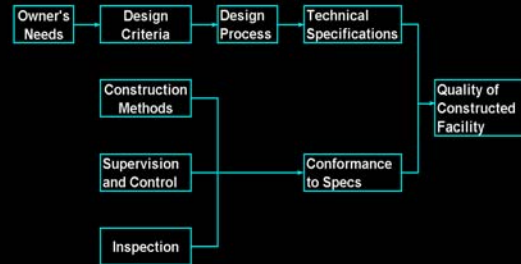
– Often measured in terms of “rate of rejection”

Example:

“x” rejects per 100 or 1000

– Often applies statistical concepts and techniques

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“Quality in the Constructed Project”

- a comprehensive manual published by the ASCE
- includes guidelines and recommendations for owners, designers, and constructors on how to provide quality in constructed projects
- addresses peer reviews