

**2014**  
**Rocky Mountain West  
Pavement Preservation Partnership**

**Quality Assurance**



**Mike San Angelo, P.E.**  
**State Materials Engineer**  
**Alaska DOT & Public Facilities**  
[michael.sanangelo@alaska.gov](mailto:michael.sanangelo@alaska.gov)

# QUALITY ASSURANCE PROGRAM, 23 CFR 637b

Applies to all NHS Projects, and program must include:

1. SHA central laboratory to be AAP (or comparable) by June 30, 1997
2. All other laboratories to be qualified by June 29, 2000
3. All personnel to be qualified by June 29, 2000

Material  
Acceptance  
Program

- Program must include:
1. Frequency Guide
  2. Random Sample Locations
  3. Material Quality Attributes
  4. Validation through the IAP

SHA Verification  
Sampling & Testing

Conventional  
S&T and IAST  
criteria apply

Independent  
Assurance  
Program  
SHA  
administered

IAST frequency based  
on Time or Units

- Equipment evaluated by:
1. Calibration
  2. Split or Proficiency samples

- Personnel evaluated by:
1. Split or Proficiency Samples
  2. Limited Observations

Prompt laboratory comparison  
of IAST with the  
Acceptance Program

Project Basis  
of IAST

Project Materials  
Certification to the FHWA



for non-exempt projects only



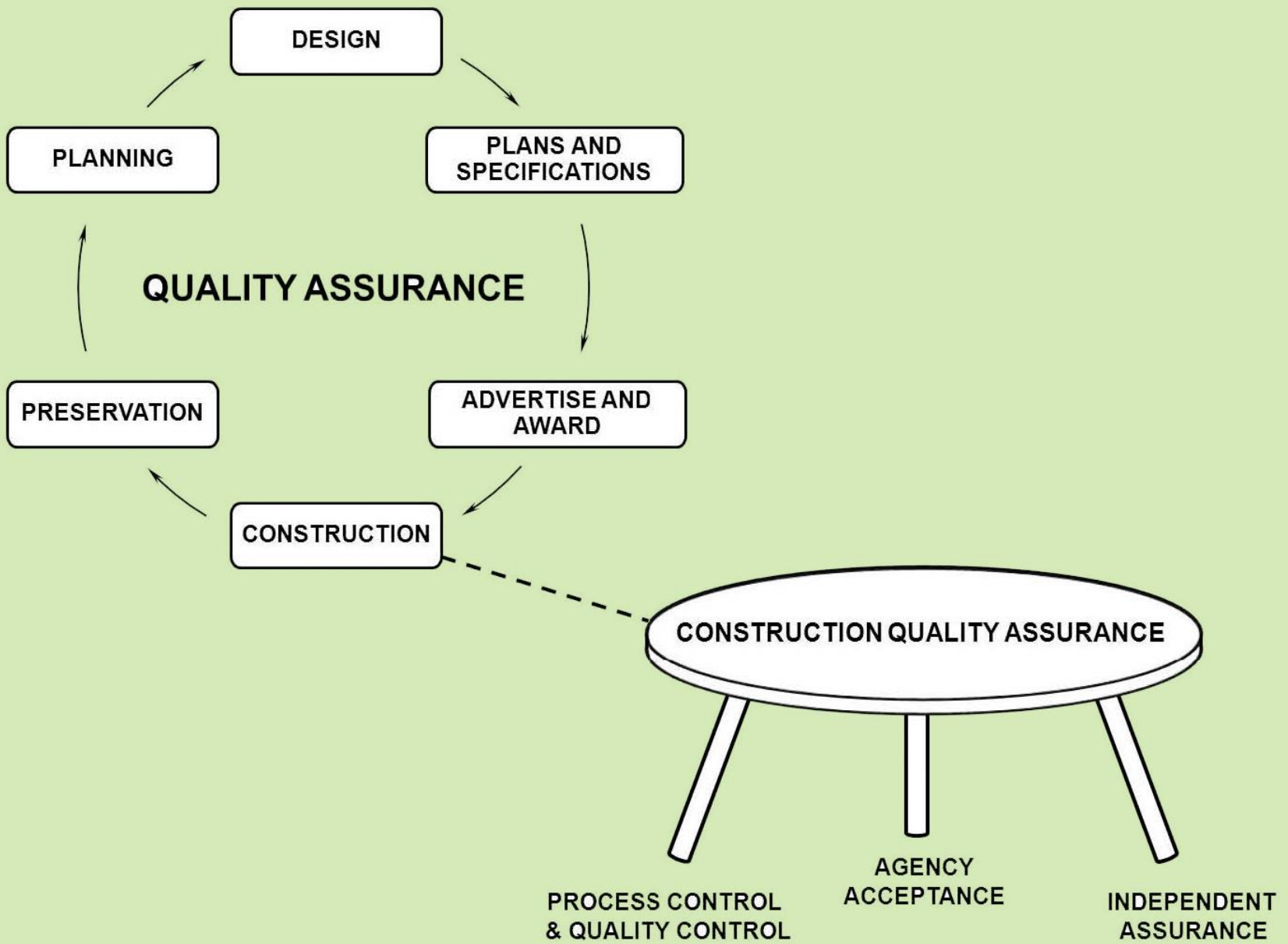
# Quality assurance (QA)



**1) All those planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service;**

**or**

**2) making sure the quality of a product is what it should be**



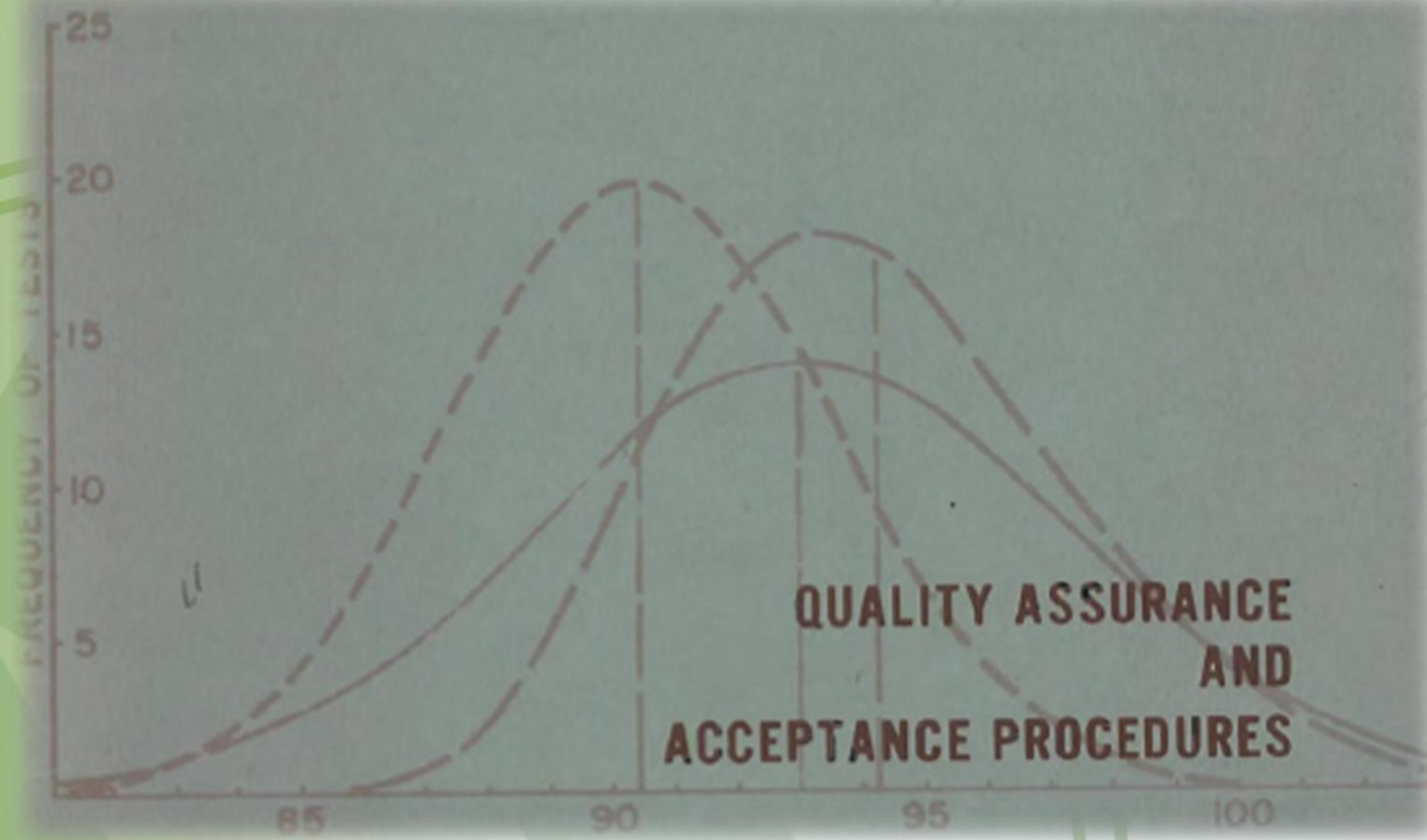
**FIGURE 1** QA system elements (26, 42).

1

9

7

1



## Highway Department Needs

In a discussion of obtaining the level of quality of highway construction necessary to perform its intended functions, quality assurance in its simplest terms is defined (1) as a 3-step process:

1. What do we want?
2. How do we order it?
3. How do we determine that we got what we want?

Most quality assurance programs have stressed answering question number 3.

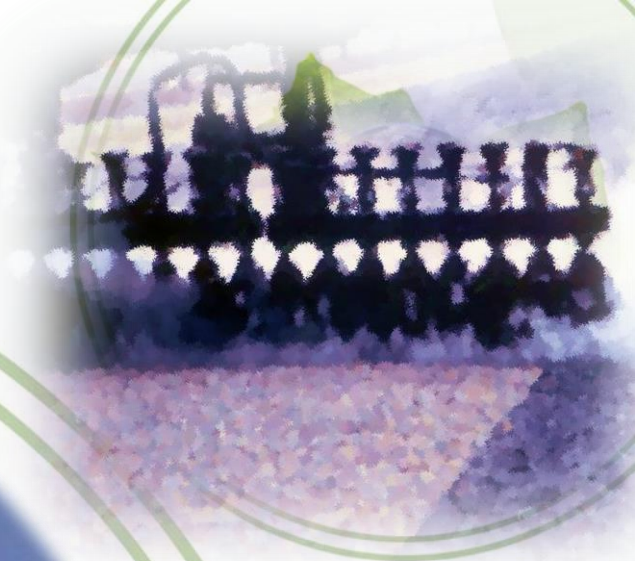
# 1971



3-step process:

1. What do we want?
2. How do we order it?
3. How do we determine that we got what we want?

# The New Normal



# Relevance Paradox



**An attempt to gather information relevant to a decision “Which Fails” because we eliminate information perceived to be distracting or unnecessary,.....thus detrimental to an Optimal Decision.**



# The Filter Bubble



[duckduckgo.com](https://duckduckgo.com)



Google “Filter Bubble”  
and your IP Address



- Doesn't track past searches
- Uses subcategories
- Eliminates sites with excessive advertising