



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
MANILA

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DEPARTMENT ORDER

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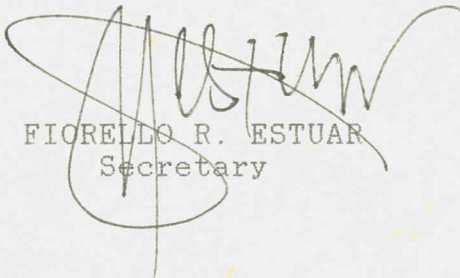
SUBJECT: Creation of Quality Assurance Units

In line with the policy of the Department of ensuring the safety of all infrastructure facilities and securing for all public works and highways, the highest efficiency and the most appropriate quality in construction, Quality Assurance Units (QAUs) are hereby created to perform project assessment of the quality of construction and compliance with plans and specifications of both on-going and completed projects.

The QAUs shall be composed of engineers from the Bureau of Research and Standards, Bureau of Construction and Bureau of Maintenance. They shall be reporting directly to the Office of the Secretary thru a committee composed of the Undersecretary for Technical Services as head, and the Directors of the aforesaid three Bureaus as members.

The set-up and operations of the QAUs shall be in accordance with the attached Terms of Reference and Guidelines for Undertaking Project Assessment.

For strict compliance.


FIORELLO R. ESTUAR
Secretary

attachment: As stated.

TERMS OF REFERENCE
FOR THE SET-UP AND OPERATION OF
QUALITY ASSURANCE UNITS

I. Background

By virtue of Executive Order No. 124, the Department of Public Works and Highways was reorganized to be the government engineering and construction arm which shall continuously develop its technology for the purpose of ensuring the safety of all infrastructure facilities and securing for all public works and highways, the highest efficiency and the most appropriate quality in construction. Under the same Executive Order, the Bureau of Research and Standards (BRS) was created specifically to develop and set effective standards and reasonable guidelines in consonance to the said policy.

In pursuit of this task, the BRS has been undertaking measures to effectively implement the Department's quality assurance program, among others are:

1. Assessment of testing requirements of the program;
2. Tapping the capabilities of the private sector through accreditation of private testing laboratories; and,
3. Measurement and upgrading the quality of projects through rating quality control in project implementation.

Additionally, the Bureau of Construction (BOC), which has started its emphasis to the management aspects of their responsibilities, has its own task for the trust of the Department, among others are:

1. Provide review and advisory services on specialty construction methods; and,
2. Provide Engineering performance audit review teams to support the technical monitoring and assessment requirements of Department Officials.

Likewise, the Bureau of Maintenance, which has been more oriented towards the management aspects of its area of responsibility, is now doing the mechanisms and procedures that will result in, among others:

1. Availability of QUICK RESPONSE mechanisms for addressing calamities and the everyday demands of our clientele for basic services.

2. A more reliable inventory of the physical assets, particularly infrastructures, under its responsibility so that a proper matching of scope of work to resource requirements can be made.

Supplementary to these measures, Quality Assurance Units (QAUs) will be created to perform assessment of the quality of construction and compliance with plans and specifications of both on-going and completed projects, as part of the immediate DPWH responsibilities regarding the proposed Transport Sector Project.

II. Objectives

A. General

The QAU shall aim to insure the proper implementation of the Department's quality assurance program.

B. Specific

The specific objectives of the QAU shall be:

1. To check compliance of projects to plans and specifications; and,
2. To determine the quantity and quality of materials incorporated in the projects and works undertaken.

III. Functions

To attain its objectives, the QAU shall have the following functions:

1. Conduct regular assessment and evaluation of projects of the Department.
2. Monitor the progress of quality control implementation of projects inspected and corrective actions undertaken in the light of the assessment.

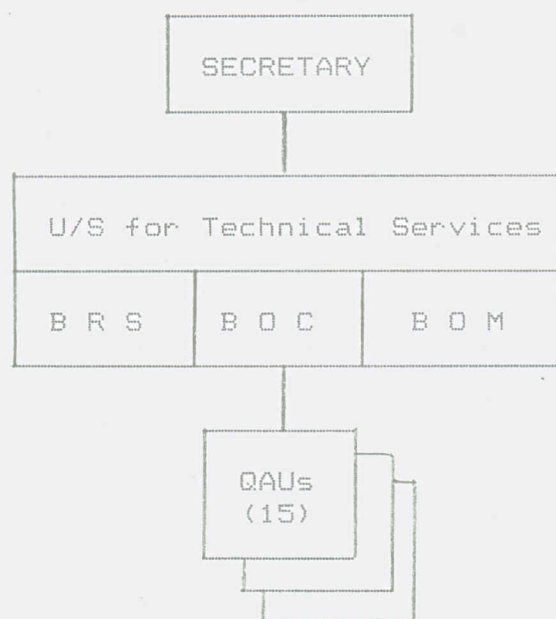
IV. Organization

The QAU, shall be composed of:

- 1-Engineer III or II from BRS;
- 1-Engineer III or II from BOC; and,
- 1-Engineer III or II from BOM

The total number of units to be created is 15. Each unit (please see the organizational chart below) shall be directly reporting to a Committee composed of the Undersecretary for Technical Services as head and the Directors of the aforesaid three Bureaus as members, who shall forward the findings and recommendations of the units to the Secretary.

A semestral evaluation of QAUs will be conducted to determine the effectiveness and efficiency of each unit/member.



V. Scope of Work and Schedule

A. Setting-up of QAUs

1. Organization of QAUs

The Undersecretary for Technical Services shall name the members of the QAUs from among the recommendees of the Directors of BRS, BOC and BOM. The team must have been organized by the third week of January 1990.

2. Preparation of detailed guidelines for conducting actual assessment

This will be jointly undertaken by BRS, BOC and BOM and must have been completed by the last week of January 1990.

B. Operationalization of QAUs

Starting February 1, 1990, each QAU shall assess at least ten (10) projects per Region per month. Project

selection will be based on status, i.e., 30%, 60% and 100% accomplishment, and broken down into the following categories:

National Road	-	2
Barangay Road	-	2
Water Supply	-	2
School Building	-	2
Port/Lighthouse	-	1
Flood Control/Seawall	-	1

In undertaking the foregoing, the established General Guidelines for Undertaking Project Assessment (herein attached as Annex A) and the Detailed Guidelines mentioned in Section V.A.2 shall be followed.

VI. Reporting on Accomplishment vs. Targets

At the end of each month, the QAUs shall submit to the Secretary, thru the Quality Assurance Committee a list of projects assessed during the period in review. A detailed report on the findings/observations and recommendations of each project shall accompany the foregoing list.

ANNEX A

GENERAL GUIDELINES FOR UNDERTAKING ASSESSMENT
OF PROJECTS

This **Guidelines** should serve as checklist of activities to be undertaken by the Quality Assurance Units (QAUs) in the conduct of the assessment of project implementation. A schematic presentation of the activity relationships is shown in the attached Flow Chart of Proforma Procedures for Assessment of Projects.

Activity Checklist of the Units

1. Briefing Officials in the Field.

Upon arrival of the unit at the PMO/RDO/DEO, a briefing should be conducted with the concerned officials regarding the purpose of the visit. The unit should emphasize that the objective of the undertaking is to verify whether quality assurance program had been complied in project implementation.

2. Selection of Projects to be Inspected/Assessed.

Project to be assessed/inspected will be selected from a list of projects completed within one year prior to the date of assessment.

3. Checking Project Documents

Before doing the actual inspection/assessment, the following documents of individual projects should be evaluated.

- a. approved plans and specifications as well as contract documents
- b. program of work
- c. change/variation orders
- d. project inspection report
- e. certificate of quality control assurance
- f. monthly materials reports
- g. final inspection reports
- h. as-built plans
- i. project log books and quality control log books
- j. certificate of completion and acceptance of project

4. Actual Inspection

During the actual project inspection/assessment, the following activities should be undertaken:

- a. checking compliance of materials quantity and quality as per plans and specifications.
- b. checking workmanship against generally accepted construction methods.

Reference should be made to the **Detailed Guidelines for Conducting the Assessment of Projects**. Substantive documentation of the observations should be made, e.g. pictures and test results.

5. Prepare Inspection/Assessment Report

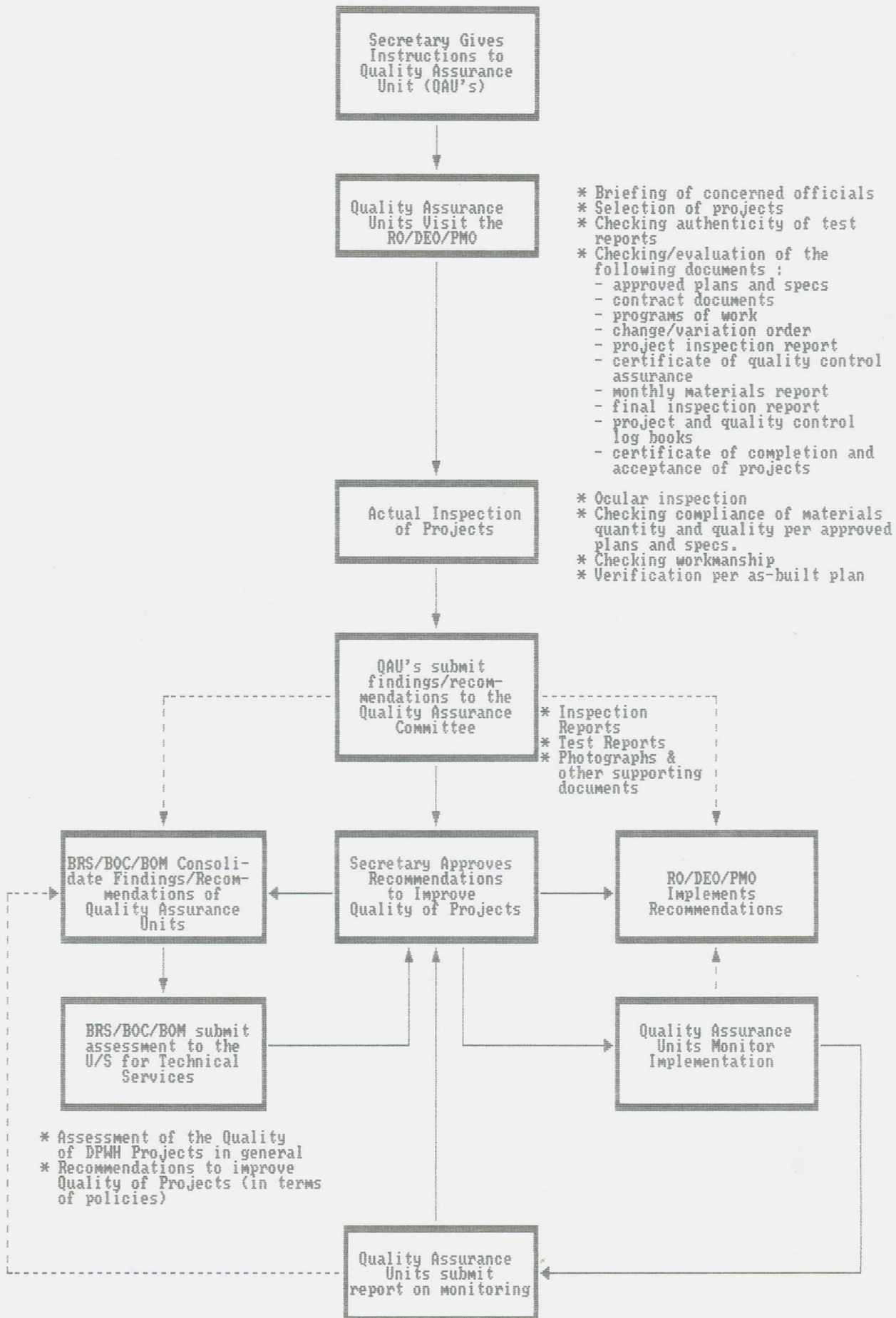
A detailed report for each project assessed shall be prepared and submitted to the Undersecretary for Technical Services within three (3) days after completion of the travel.

6. Monitoring of Corrective Actions

Recommendations made by the QAUs which were approved by the Secretary for implementation will be forwarded to the concerned implementing office and/or Service/Bureau and the same shall be monitored by the QUAs as to compliance.

A periodic report shall be submitted by the QAUs to the Secretary on the status of implementation of his instructions by the concerned office.

FLOW CHART OF PROFORMA PROCEDURE FOR PROJECT ASSESSMENT



DETAILED GUIDELINES FOR CONDUCTING ASSESSMENT OF PROJECTS

Once the Quality Assurance Units (QAUs) have already selected the projects to be assessed/inspected, ocular inspection can now be undertaken. The following items of work per approved plans and specifications should be checked against the actual completed works, by category:

Items of Work	Activity
1. ROADS (National Roads and Barangay Roads)	
1.1. a) Subgrade	: Check on compaction, workmanship,
b) Subbase Course	: dimensions, grading and its com-
c) Base Course	: pliance to plans and specifica-
	: tions.
1.2. Pavement	: Check on dimensions, workmanship,
a) Weakend joints	: and other items as to its compliance
b) Asphalt sealer	: to plans and specifications.
c) Roughness	:
d) Blocking	:
e) Length & width	:
f) Thickness	:
1.3. a) Riprap	: Check on their compliance to plans
b) Curb and gutter	: compliance to plans and specifi-
c) Sidewalk/shoulder	: cations.
d) Drainage	:
	:
2. BRIDGES	
a. Footings of Abutment	: Check on workmanship, dimensions,
b. Abutment, piers	: crackings and other defects, per
c. Girders and diaphragm	: as built plan and specifications.
d. Slabs	:
e. Sidewalks	:
	:
3. WATER SUPPLY	
LEVEL I	
A. WELLS	
1. Location	: Check on centerness to the service area.
2. Water Quality/Quantity	: Check on potability and water quality.
3. Depth	: Check against program of work and final
	: inspection report for payment.
4.a) Drainage	: Check whether provided or not, required
b) Concrete Platform	: dimensions, workmanship and other
c) Guide post	: defects.
B. SPRINGS	
1. Water Quality	: Check on potability and water quality.
2. Materials used	: Check on its requirements per plans and
	: specifications.

Items of Work	:	Activity
3. Elevation of source	:	Check on its gravitational flow to the service area.
4. Installation of faucets	:	Check on its requirements per plan and specifications and against as-built plan.

LEVEL II

a) Water Quality	:	Check on potability and water quality.
b) Depth of trench	:	Check on its requirements per plans and specifications and against as built plans.
c) Drainage	:	
d) Finishing of tank	:	
e) Faucet installation	:	
f) Protection of pump	:	
g) Depth of Well	:	

4. SCHOOL BUILDINGS

a) Columns/Beams	:	Check on workmanship, dimensions, crackings and other defects per as built plans and specifications.
b) CHB Laying/Plaster	:	
c) Ins. of Doors, Windows, Truss, Purlins	:	
d) Roofings	:	
e) Slabs	:	
f) Finishes	:	

5. FLOOD CONTROL, DRAINAGE AND SEAWALLS

a. Hairline/surface defects	
b. Stagnant water (for drainage)	
c. Insufficient compaction	
d. Erosion of soil materials (earthworks)	
e. Installation of mortar collar of pipes	
f. Scouring of riprap	
g. None compliance to standard requirements for the type/class of boulders (for dikes)	
h. Insufficient mortar fillings on riprap	
i. Deep cracks and settlements of structure	

Items of Work	:	Activity
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6. PORTS AND HARBOR

a) Pier	:	Check on materials quality, quantity, dimensions, workmanship and other items as to its compliance to plans and specifications.
b) Wharf	:	
c) Causeway	:	
d) Breakwater	:	
e) Lighthouse	:	
f) Roadway	:	
g) Mooring bit	:	
h) Pile clusters	:	
i) Transit shed	:	