



Republic of the Philippines  
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS  
**CENTRAL OFFICE**  
Manila

097.13 DPWH  
11.29.2019

NOV 28 2019

DEPARTMENT ORDER )

No. 132 )

Series of 2019 *of* 11.29.19 )

**SUBJECT: Amendments to Department Orders  
Relative to Creation and Operation of  
the Quality Assurance Units (QAUs)**

In order to continuously ensure the quality and safety of all infrastructures undertaken by the Department and to rationalize the activities of the Quality Assurance Units from the Central Office (QAU-CO) and Regional Offices (QAU-RO), Department Order (D.O.) No. 33, series of 2007, D.O. No. 18, series of 1994, amending D.O. No. 26, series of 1990, D.O. No. 52, series of 1997, D.O. No. 155, series of 1996, D.O. No. 82, series of 1994 and D.O. No. 68, series of 2004, amending and reactivating D.O. No. 169, series of 1991, respectively are hereby amended as follows, for the guidance of all concerned:

#### **FOR QAU-CO**

1. The QAU-CO shall be composed of engineers from the Bureau of Quality and Safety (BQS), Bureau of Research and Standards (BRS), Bureau of Construction (BOC), Bureau of Design (BOD) and Bureau of Maintenance (BOM) who have undergone the required QAU training.
2. During quality audits, each QAU shall be composed of at least two (2) engineers from the above-mentioned Bureaus.
3. The QAU-CO shall be reporting directly to the QAU Steering Committee (QAUSC) composed of the Undersecretary and Assistant Secretary responsible for the overall supervision and control of the BQS, as Chairman and Vice-Chairman, respectively and the Directors of BQS, BRS, BOC, BOD and BOM as members. The BQS shall be in-charge of the overall coordination and management of the QAU operations. The QAUSC shall ensure the proper implementation of the Guidelines for the Imposition of Administrative Sanctions to Erring Engineers Involved in the Defective Implementation of DPWH Projects.
4. The BQS shall be the overall coordinator of the QAU operations and shall evaluate written explanations based on the approved guidelines and report of corrective actions and requests for reconsideration, and recommend imposition/lifting of sanctions to the erring engineers.
5. The quality audit of on-going and completed projects implemented by the Department (i.e. Unified Project Management, Regional and District Engineering Offices) shall be undertaken by the QAU-CO.
6. The QAUs may be tasked to assist other offices (government or private) to address QA related issues and concerns as determined by QAUSC.
7. To ensure compliance with the recommended corrective measure, monitoring shall be undertaken by the QAU.

**FOR QAU-RO**

8. The QAU-RO shall be composed of engineers from the Planning and Design Division, Maintenance Division, Construction Division and the Quality Assurance and Hydrology Division (QAHD) of every Regional Office who have undergone the required QAU training.
9. The Chief of QAHD shall (a) act as overall coordinator of the QAU-RO; (b) report directly to the Regional Director pertaining to QAU activities, (c) provide service vehicle and materials testing services for samples taken by the QAU-CO, and (d) ensure the submission of the recommended corrective actions and written explanations by the Regional Office and District Engineering Offices regarding quality audits and other activities of the QAU-CO.
10. The QAU-RO may be tasked to assist the Regional Office and other offices to address issues and concerns as determined by the Regional Director within their area of jurisdiction.

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

This Order supersedes previous issuances inconsistent herewith and takes effect immediately.

  
**MARK A. VILLAR**  
Secretary

15.1 MGM/GSR/EKS

Department of Public Works and Highways  
Office of the Secretary



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## **TERMS OF REFERENCE FOR THE SET-UP AND OPERATION OF QUALITY ASSURANCE UNITS (QAU)**

### **I. Background**

By virtue of Executive Order No. 124, the Department of Public Works and Highways was reorganized to be the engineering and construction arm of the government which shall continuously develop its technology for the purpose of ensuring the safety of all infrastructure facilities and securing the highest efficiency of all public works and highways and the most appropriate quality in construction.

To monitor the implementation of the Quality Assurance Program (QAP) of the Department, the QAU was created thru Department Order No. 26, series of 1990, and QAU-Regional Office (QAU-RO) thru Department Order No. 169, series of 1991, who shall perform project assessment of the quality of construction and compliance with plans and specifications of both on-going and completed projects.

Under the approved Rationalization Plan of the Department pursuant to Executive Order No. 366, series of 2004, the Bureau of Quality and Safety (BQS) was created and is tasked with the monitoring of policies relating to the implementation of the QAP of the Department.

In pursuit of this task, the BQS shall be the overall coordinator of the QAU operations. The BQS has been undertaking activities to effectively implement the QAP, such as but not limited to:

1. Conduct quality audits of on-going and completed projects of the Department to check their compliance with the approved plans and specifications;
2. Participate in/Conduct investigation of projects which are subject of complaints;
3. Propose policy direction, including formulation of Quality Assurance (QA) policies for DPWH project implementation;
4. Monitor implementation of policies to ensure that effective quality control of materials in the implementation of DPWH projects is carried out by the contractor's testing laboratory or its designated private accredited testing laboratory; and
5. Monitor the effectiveness of the implementation of DPWH Standard Specifications for Project Quality Assurance.

### **II. Objective**

The QAUs shall ensure the proper implementation of the Department's QAP.

### **III. Functions**

To attain its objective, the QAU shall have the following functions, such as but not limited to:

#### A. QAU-CO

1. Conduct quality audit of on-going and completed projects implemented by the Implementing Offices (IOs) of the Department.
2. Assist other offices to address issues and concerns as determined by the QAUSC i.e. investigations, special audits, final inspection for completion and acceptance, billing, etc.
3. Monitor the IOs' compliance with the recommended corrective measure on noted defects/deficiencies.
4. Utilize regional/district testing laboratories/apparatus/equipment, service vehicles and support personnel to check compliance with specifications of samples taken during quality audits.

#### B. QAU-RO

1. Assist the Regional Office and its District Engineering Offices to address issues and concerns as determined by the Regional Director within their area of jurisdiction, i.e. investigations, special audits, pre-final inspection, billing, etc.
2. Assist other offices to address issues and concerns as determined by top management i.e. investigations, special audits, final inspection for completion and acceptance, billing, etc.
3. Undertake QA related activities of the Department upon instruction from the Department's Management.

### **IV. Organization**

The QAU was 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 responsibility.

The total number of units to be created shall be dependent on the QAU's assigned tasks. The QAU shall be directly reporting to the QAUSC composed of the Undersecretary and Assistant Secretary in-charge of the overall coordinator of the QAU operations as Chairman and Vice-Chairman, and the Directors of BQS, BOD, BRS, BOM, and BOC as members. The BQS shall be the overall coordinator of the QAU operations, who shall forward the findings and recommendations of the units to the Chairman of the QAUSC.

During quality audits, the QAU shall be composed of engineers from the BQS, BRS, BOC, BOD and BOM who have undergone the required QAU training.

The QAU-RO shall be composed of engineers from the Planning and Design Division, Maintenance Division, Construction Division and the Quality Assurance and Hydrology Division of every Regional Office who have undergone the required QAU training.

Only **"active"** QAU members are allowed to participate in the conduct of QA related activities. The QAU member shall be considered **"inactive"** if not assigned/deployed in any QAU quality audit for **three (3) consecutive years**. For QAU members in **"inactive"** status, they shall be required to attend the QAU training upon evaluation and approval of the QAUSC to be able to keep abreast with the latest instructions and guidelines in the conduct of project quality audits.

Further, the Heads of the concerned Bureaus/Offices shall ensure that all QAU members under their respective offices are in "active" status. This is to ensure that QAU activities will not be hampered due to unavailability of eligible members. Thus, participation in the conduct of QA project assessments is hereby enjoined among all QAU members with the support and discretion of the concerned Office Heads.

## **V. Scope of Work and Schedule**

### **A. Setting-up of QAUs**

1. Heads of the concerned Bureaus shall submit to the BQS the names of available QAU members of their respective offices prior to deployment. The Director of BQS shall recommend the approval of the official list to the Undersecretary in-charge of the overall coordinator of QAU.
2. QAU assessments should cover the target number of projects implemented by the Department under its regular budget as approved by the QAUSC. QAUs may also assess projects funded by other agencies but implemented by the DPWH. Assessments shall be carried out on all project categories, including roads, bridges, school and public buildings, flood control, water supply, and farm-to-market roads.

### **B. Criteria for Project Assessment**

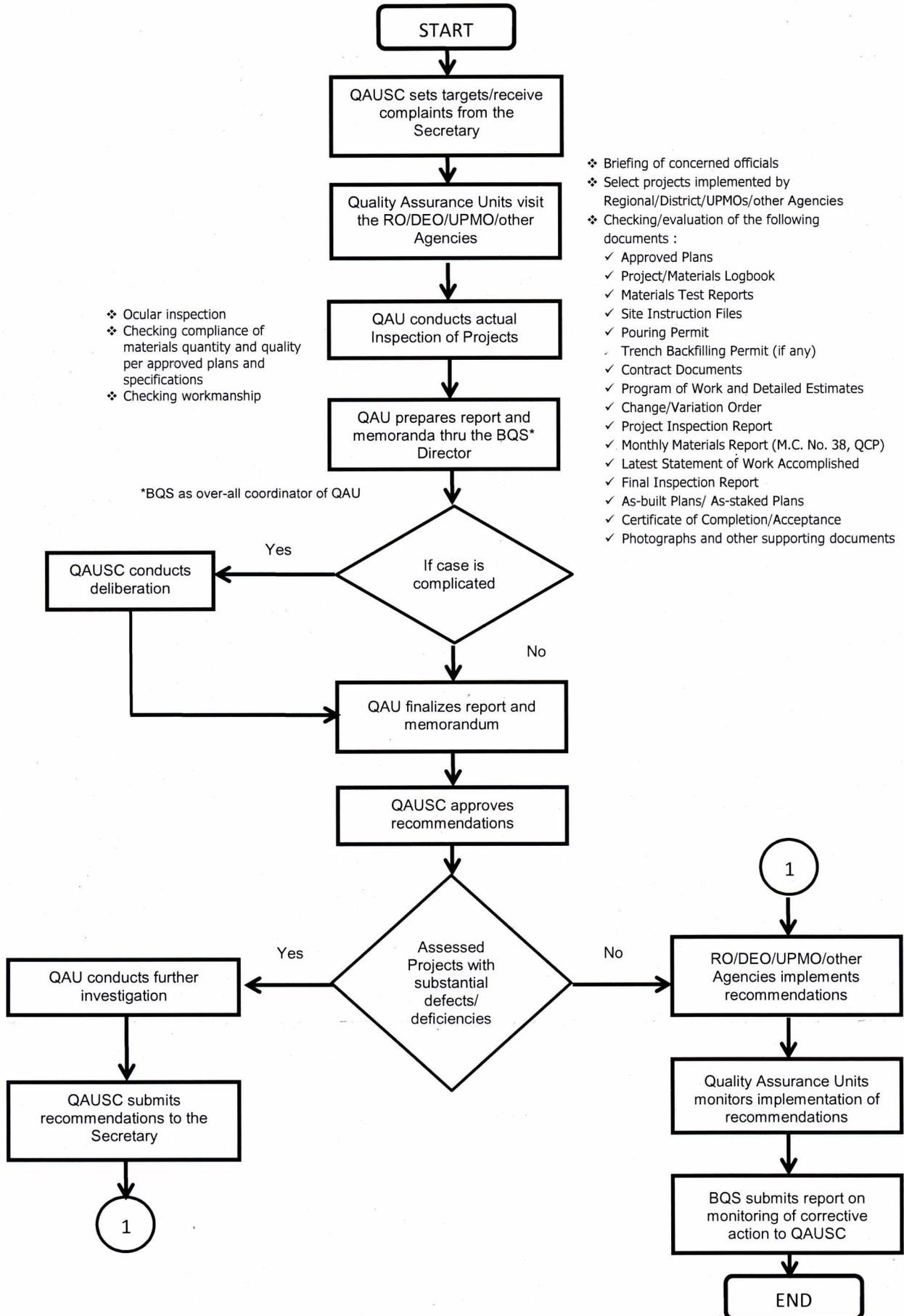
Each QAU shall assess the minimum number of projects per IO in order to meet the targets approved by the QAUSC. Project selection will be based on project status from Project and Contract Management Application (PCMA). The attached **Flow Chart of Proforma Procedure for QAU Activities** (Annex A) should be followed by the QAUs in their operation. The **General Guidelines for Undertaking Assessment of Projects** (Annex B) shall be used by the QAUs as checklist of activities in the conduct of the assessment of project implementation.

## **VI. Reporting Accomplishment**

An annual report of the assessment of the Department's QAP shall be submitted to the QAUSC, which shall include Annual Rating for DEO/RO/UPMOs, analysis of common defects and deficiencies and monitoring of corrective actions to come up with corresponding recommendations and policies for improvement.

**ANNEX A**

**FLOW CHART OF PROFORMA PROCEDURES FOR QAU ACTIVITIES**



## **ANNEX B**

### **GENERAL GUIDELINES FOR UNDERTAKING ASSESSMENT OF PROJECTS**

This Guidelines shall 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 QAU at the District Engineering Office (DEO)/Regional Office (RO)/ Unified Project Management Office (UPMO), an Entry Meeting shall be conducted with the concerned officials regarding the purpose of the visit. The QAU should emphasize that the objective of the undertaking is to verify whether the Quality Assurance Program has been complied with during project implementation.

##### **2. Selection of Project to be Inspected/Assessed**

Projects to be assessed/inspected will be selected from a list of on-going and completed projects prior to the date of assessment. Physical accomplishment of projects shall be at least 10% for Region and UPMO implemented projects, and at least 30% for District implemented projects. No duplication of assessment within the same calendar year shall be allowed. Any change in the said list shall be forwarded to and approved by BQS prior to actual inspection.

##### **3. Checking of Project Documents**

Before doing the actual inspection/assessment, the following documents of individual projects shall be evaluated, such as, but not limited to:

- a. Approved Plans
- b. Project/Materials Logbooks
- c. Site Instruction Files
- d. Pouring Permit
- e. Trench Backfilling Permit (if any)
- f. Contract Documents
- g. Program of Works and Detailed Unit Price Analysis (DUPA)
- h. Change/Variation Order
- i. Project Inspection Report
- j. Monthly Materials Report (M.C. No. 38, QCP)
- k. Latest Statement of Work Accomplished
- l. Final Inspection Report
- m. As-built Plans/ As-staked Plans
- n. Certificate of Completion/Acceptance
- o. Others as stated in the approved QAU Checklists

##### **4. Actual Inspection**

During the actual project inspection/assessment, the following activities shall be undertaken/checked, such as, but not limited to:

- a. Compliance of materials quantity and quality as per plans and specifications; and
- b. Workmanship based on generally accepted construction methods.

Reference shall be made to the **Detailed Guidelines for Conducting the Assessment of Projects** (Annex C). Substantive documentation of the observations should be made by attaching photographs and copies of official test results, when necessary.

## 5. Exit Dialogue

An Exit Meeting/Dialogue between the QAUs and the concerned Engineers of the projects assessed shall be conducted after the quality audit in each IO. Findings and observations noted in the projects with their corresponding recommendations shall be discussed therein and documented by attendance sheets and minutes of meeting. Only the disclosed findings and observations shall be included in the final reports.

## 6. Inspection/Assessment Report

A detailed report on the projects assessed shall be prepared and submitted to the Chairman of the QAUSC within the prescribed timeline set by the BQS.

At the end of each assessment period, the BQS shall forward a copy of the quality audit report to the concerned IO.

QAUs shall use the approved checklists and latest version of the Quality Audit Database System (QADS) developed by the BQS for report preparation.

## 7. Monitoring of Corrective Actions

Recommendations made by the QAUs and approved by the Chairman of the QAUSC shall be forwarded to the concerned IOs and the same shall be monitored by the QAUs as to compliance thereof. The calibrated sanctions to be imposed against erring engineers shall be referred to Annex D, **Guidelines for the Imposition of Administrative Sanctions to Erring Engineers Involved in the Defective Implementation of DPWH Projects**.

The QAU shall submit to the QAUSC the status of implementation of corrective actions by the concerned office.

## 8. Project Assessment by the QAU-RO

- a. The QAU-RO may be involved in the conduct of Final Inspection for Completion and Acceptance as representative of the Regional Office.
- b. In case of project investigation, the QAU-RO may be called upon by the QAU-CO for coordination with the concerned IO and complainants.
- c. The QAU-RO may assist the QAU-CO in the conduct of project quality audit upon instruction of the QAUSC.

## ANNEX C

### 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 shall be checked against the actual completed works, by category, such as, but not limited to:

<b>ITEMS OF WORK</b>	<b>:</b>	<b>ACTIVITY</b>
<b>1. ROADS (National Roads and Barangay Roads)</b>		
1.1 a.) Subgrade	:	Check on compaction, workmanship, dimensions, and its compliance with plans and specifications. (e.g. test pitting)
b.) Subbase Course	:	
c.) Base Course	:	
1.2 a.) Pavement Surface	:	Check on dimensions, workmanship, and other items as to its compliance with plans and specifications. (e.g. coring)
b.) Weakened Plane Joint	:	
c.) Asphalt Sealant	:	
d.) Roughness	:	
e.) Blocking	:	
f.) Length and Width	:	
g.) Thickness	:	
1.3 a.) Riprap	:	Check on their compliance with plans and specifications.
b.) Curb and Gutter	:	
c.) Sidewalk/Shoulder	:	
d.) Drainage	:	
<b>2. BRIDGES</b>		
2.1 Footings of Abutment and Piers	:	Check on workmanship, dimensions, crackings and others physical defects per as-staked/as-built plans and specifications.
2.2 Abutments and Piers	:	
2.3 Girders and Diaphragm	:	
2.4 Slabs	:	
2.5 Sidewalks and Railings	:	
<b>3. WATER SUPPLY</b>		
<b>LEVEL I</b>		
<b>3.1 WELLS</b>		
a.) Location	:	Check on centeredness to the service area.
b.) Water Quality and Quantity	:	Check on potability and water quality.
c.) Depth	:	Check against approved Program of Works and final inspection report for pavement.
d.) 1. Drainage	:	Check whether provided or not, required dimensions, workmanship and other defects.
2. Concrete Platform	:	
3. Guide Post	:	
<b>3.2 SPRINGS</b>		
a.) Water Quality	:	Check on potability and water quality.
b.) Materials used	:	Check on its requirements per approved plans and specifications.
c.) Elevation of Source	:	Check on its gravitational flow to the service area.
d.) Installation of Faucets	:	Check on its requirements per approved plans and specifications and against as-staked/as-built plans.

<b>ITEMS OF WORK</b>	<b>:</b>	<b>ACTIVITY</b>
<b>LEVEL II</b>		
a.) Water Quality	:	Check on potability and water quality.
b.) Depth of Trench	:	Check on its requirements per approved plans and specifications and against as-staked/as-built plans.
c.) Drainage		
d.) Finishing of Tank		
e.) Faucet installation		
f.) Protection of Pump		
g.) Depth of Well		
<b>4. PUBLIC/SCHOOL BUILDING</b>		
4.1 Columns/Beams	:	Check on workmanship, dimensions, crackings and other defects per as-staked/as-built plans and specifications.
4.2 CHB Laying/Plaster		
4.3 Installation of Doors, Windows, Truss, Purlins		
4.4 Roofing		
4.5 Slabs		
4.6 Finishes		
4.7 Foundation	:	Soil test, soil bearing capacity, FDT
<b>5. FLOOD CONTROL, DRAINAGE AND SEAWALLS</b>		
5.1 Hairline/Surface Defects	:	Check on workmanship, dimensions, crackings and other physical defects per as-staked/as-built plans and specifications.
5.2 Stagnant water (for drainage)		
5.3 Insufficient compaction		
5.4 Erosion of soil materials (earthworks)		
5.5 Provision of mortar collar of pipes		
5.6 Scouring of riprap		
5.7 Non-compliance to standard requirements for the type/class of boulders (for dikes)		
5.8 Insufficient mortar grout on riprap		
5.9 Deep cracks and settlements of structure		
<b>6. OCCUPATIONAL SAFETY AND HEALTH (OSH)</b>		
6.1 Worker's Personal Protective Equipment (PPEs)	:	Check on the compliance with the approved Construction Safety and Health Program requirement of the project
6.2 First Kit		
6.3 OSH Staff		
<b>7. TRAFFIC MANAGEMENT</b>		
7.1 Roadworks signages	:	Check on compliance as per Traffic Management Plan of the project

## ANNEX D

### GUIDELINES FOR THE IMPOSITION OF ADMINISTRATIVE SANCTIONS ON ERRING ENGINEERS INVOLVED IN THE DEFECTIVE IMPLEMENTATION OF DPWH PROJECTS

To promote consistency in the administration of disciplinary action (sanction) on project personnel found and proven to be instrumental on project quality deficiencies in the QAU report, the following are hereby prescribed for the guidance of all concerned:

1. Disciplinary actions shall be imposed to Project Engineer, Project Inspector and Materials Engineer, found and proven to be liable in the poor implementation of the project resulting to deficiencies. Imposition of disciplinary action shall be pursued only after the concerned project personnel's justification (in writing) is not plausible.
2. Sanctions shall be based on the nature and extent and/or frequency of the defects/deficiencies noted on both on-going and completed projects.
3. The nature of the defects/deficiencies shall be categorized as follows:
  - a. **Less serious defects/deficiencies** – those associated with aesthetics but do not affect the stability of the structure, or are related to project documentation, i.e., Program of Work (POW), Approved Plans and Specifications, Test Reports, Quality Control Program (QCP), Certificates of Quality Control Assurance (CQCA), Change/Variation Order, and the like.
  - b. **Serious defects/deficiencies** – those that need immediate corrective measures but do not need the replacement of the defective part of the structure.
  - c. **Very serious defects/deficiencies** – those that affect structural members, can not be economically corrected and would require the immediate removal and replacement of the defective part of the structure.

*Annex "D", List of Common Defects/Deficiencies of Department Order No. 102, series of 2016, Revised Criteria for Rating of Quality Assurance in Project Implementation, shall be used as reference in the classification of defects/deficiencies.*

4. The extent of the defects/deficiencies shall be classified as follows:
  - a. **Localized** – those affecting less than 2.5 % of the completed work.
  - b. **Limited** – those affecting 2.5 % to 3.5 % of the completed work.
  - c. **Significant** – those affecting more than 3.5% but not greater than 5% of the completed work.
  - d. **Extreme** – those affecting more than 5% of the completed work

5. The nature and extent of the defects/deficiencies shall be quantified and/or computed on a per project basis per assessment depending on the responsibility areas as defined by the position of the concerned engineers.
6. Only defects/deficiencies with explanations which are evaluated as not acceptable shall be used as basis in the issuance of sanctions.
7. The calibrated sanctions to be imposed against erring engineers are as follows:

**7.1 For DPWH Road and Bridge Projects**

**a. Written Warning**

A written warning shall be issued to the concerned project personnel if the QAU report on any project under his/her supervision receives a rating of 15 points or greater based on the values shown in Table 1.

**Table 1. Point system depending on nature and extent of defect**

NATURE OF DEFECT	EXTENT OF DEFECT			
	LOCALIZED	LIMITED	SIGNIFICANT	EXTREME
Less Serious	2	5	8	10
Serious	5	8	10	12
Very Serious	8	10	12	15

**b. Written Advice Not to Handle/Supervise Projects for a Period of Six (6) Months**

If after being issued a written warning, the same project personnel is given a QAU rating of at least 15 points for the subsequent project, the concerned project personnel shall be suspended from handling/supervising project for six (6) months.

**c. Written Advice Not to Handle/Supervise Any Project for a Period of One (1) Year**

If after being issued a written advice not to handle/supervise any projects for six (6) months, the same project personnel is given a QAU rating of at least 15 points for the subsequent project, the concerned project personnel shall be suspended from handling/supervising project for one (1) year.

**d. Perpetual Disqualification from Handling/Supervising Any Project**

A project personnel who has been issued an advice not to handle/supervise any project for a year and again receives a QAU rating of 15 points or greater in a subsequent project shall be perpetually disqualified from handling any project.

## **7.2 For Other DPWH Projects**

### **a. Written Warning**

A written warning shall be issued to the concerned project personnel if the frequency and nature of the defects/deficiencies observed in any of the projects he/she supervised satisfies any of the following conditions:

- i. Two (2) or more very serious defects/deficiencies.
- ii. Four (4) or more serious defects/deficiencies.
- iii. Eight (8) or more less serious defects/deficiencies.

### **b. Written Advice Not to Handle/Supervise Projects for a Period of Six (6) Months.**

If after being issued a written warning and the frequency and nature of defects/deficiencies in any project he/she supervised in an ensuing assessment satisfies any of the conditions mentioned in Section 7.2.a, the concerned project personnel shall be suspended from handling/supervising project for six (6) months.

### **c. Written Advice Not to Handle/Supervise Any Project for a Period of One (1) Year**

If after being issued a written advice not to handle/supervise any project for six (6) months and the frequency and nature of defects/deficiencies in any project he/she supervised in an ensuing assessment satisfies any of the conditions mentioned in Section 7.2.a, the concerned project personnel shall be suspended from handling/supervising project for one (1) year.

### **d. Perpetual Disqualification from Handling/Supervising Any Project**

A project personnel who has been issued a written advice not to handle/supervise any projects for a year shall be perpetually disqualified from handling any project if the frequency and nature of defects/deficiencies in any project he/she supervised in an ensuing assessment satisfies any of the conditions mentioned in Section 7.2.a.

## **7.3 General Sanction**

- a. All project personnel (PEs, PIs and MEs) shall be given the opportunity to submit a written explanation on the circumstance that lead to the project defects. Concerned project personnel who fail to submit the required written explanation and report of corrective actions shall be reminded to submit the same within two (2) weeks upon receipt of notice, otherwise an outright written warning for the first offense or imposition of the next higher sanction shall be issued if they fail to comply with the instruction.
- b. Any project personnel who had been issued a sanction shall not be issued another sanction on the same project already considered in his/her previous

sanction. The same project refers to the project having the station limits or locations which have been the basis of the previous sanction.

- c. Request for reconsideration/appeal of sanctions imposed may be deliberated upon:
  - 1. Submission of additional written explanations;
  - 2. Submission of request within 30 days from the date of issuance of the sanction
- d. All results of evaluation of request for reconsideration/appeal shall be final.