Philippine Section

APPLICATION GUIDELINES FOR ASEAN ENGINEERING REGISTRY

ver4 series of 2018

Philippine Technological Council
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APPLICATION GUIDE FOR ASEAN ENGINEERING REGISTRY

1. QUALIFICATION REQUIREMENTS

a. You have attended and completed an accredited or recognized engineering program by the appropriate authority in the country

b. You have Been assessed as eligible for independent practice.

b.1. The assessment maybe undertaken by the monitoring Committee, by a competent Professional Association and/or by an authority with responsibility for registration or licensing of professional engineers.

c. You have Gained a minimum of seven (7) years of professional experience after registration, and:

c.1. The works in question should be clearly relevant to the fields of engineering in which the applicant claims experience.

c.2. Should have participated in a range of roles and activities appropriate to these fields of engineering

d. Spent at least two (2) years in responsible charge of significant "engineering" work

d.1. The work should have required the exercise of independent engineering judgement, the project concerned should have been substantial in duration, cost and complexity and the applicant should be personally accountable for the success or failure of the project.

d.2. In general, an applicant may be taken to have been in responsible charge of significant engineering work if they have:

a. Planned, designed coordinated and executed a small project; or
b. Undertaken part of a larger project based on understanding of the whole project; or
c. Undertaken novel, complex, and/or multi-disciplinary work.

e. You must maintain continuing professional development (CPD) at a satisfactory level. CPD to be submitted must be the latest, last 3 years.

f. Bound by the established Code of Professional Conduct or Ethics.

g. Held individually accountable for your actions as a professional engineer.

2. CERTIFIER

Must be Certified by HR or Immediate Supervisor or any authorize Individual of the Company where the applicant is/was connected.

3. ATTESTER ROLE

Each significant "engineering" work you listed in Form 3 and/or Form 4 must be attested/verified by an engineer in the same discipline and if possible with equivalent experience and standing. Your attester/s must have known you for at least one year and willing to endorse and affix his/her signature on your application. Your attester/s is responsible for providing support and guidance throughout the application and interview process. They should check your application for accuracy and completeness, ensuring that the information provided is true, you are of sound character and that you are applying for the appropriate level of register. They should be confident that you are able to demonstrate the competence criteria called for and be able to advise and assist you in understanding and addressing any shortfall. A direct family member cannot attest your application.

4. SUPPORTING DOCUMENTS

Submit Supporting Documents as applicable such as, but not limited to: Design Works, Plans, Specifications, Pictures of Project, before/After, Certificates of Completion, Commendation, Appointment papers, Organization Chart, etc.

5. CURRICULUM VITAE (employment details) Annex I

Write a short summary of your work Experience and attached half body Photo. Your curriculum vitae should be in chronological order providing full details of your work experience. This should include details of the companies you have worked for, the positions you have held, and level of responsibility. (Start from Latest).

6. ORGANIZATIONAL CHART

Submit an organization chart which clearly indicates your position in your company. If you are self-employed and do not have organization chart, provide a brief note outlining your level of responsibility and leadership in projects undertaken.

7. TWO (2) YEARS SIGNIFICANT ENGINEERING WORK OF RESPONSIBLE CHARGES (ANNEX II)

In no less than 2000 words, write your two years significant engineering work of responsible charge in English and narrative form, clearly stating your role and responsibilities. Use the first person – I, Me, My, to show your personal contribution and should emphasize your:

a. Personal engineering and/or management contribution and responsibility.
b. Problem faced, before or during and/or after the project activity/ duration.
c. Solution/s formulated/found and implemented.
d. Description of engineering judgement you made
e. Impact generated by the above solutions and judgement.

Note: 1. The 2000 words excludes career episodes introduction and listings.
2. Include a title page which states your word count.
3. Summarize the key features of each projects, client, scope, dates, etc.

Your two (2) years significant engineering work of responsible charge will consist of one or more significant engineering work (career episode report) on projects and accomplishments that you regard as highlighting your professional experience on the area of your competency. This project/s is/are within the seven (7) years professional experience you listed in Form 3. Always begin your narration with the project background/introduction and project name so that reviewer will have an idea about the project.

8. CONTINUING PROFESSIONAL DEVELOPMENT

Using the Guidelines established by the Philippine Technological Council (PTC), applicant for ASEAN Engineer are required to undertake at least 150 weighted hours of CPD activities during any 3-year period and must be certified by each professional organization and /or PTC. *See Annex III – CPD Guidelines).*

9. HOW TO FILL – UP APPLICATION SEMINAR/WORKSHOP

PTC or the Professional Organization are here to help you through the application process and offer the following services:

a. Applicant briefing session/workshops/seminars.
b. Supporting documentations including sample reports, information on the application process, and interview guidelines.

Note: Applicant must attend ASEAN/APEC SEMINAR – WORKSHOP before they apply for Advanced Level Engineer

10. FEES

a. Application fees must be course through the applicant National Professional Organization.
b. The National Professional Organization will pay PTC the amount corresponding to the number of applicants endorsed to PTC.
c. All Payment must be deposited to PTC Bank Account. PTC DOES NOT ACCEPT DIRECT PAYMENT FROM APPLICANT.

11. RENEWAL OF REGISTRATION

You must renew your registration every 3 years and submit the following:

a. 150 weighted hours of CPD
b. Certified independent practice during the last 3 years – Form 3
c. Any changes in your status
d. Organization Chart
e. Two ID size pictures, white background, (High Resolution, 48mmx33mm)
f. Payment of applicable fee

GUIDELINES FOR ASSOCIATE ASEAN ENGINEERS

APPLICATION GUIDE FOR ASEAN ENGINEERING REGISTRY

1. QUALIFICATION REQUIREMENTS

a. You have attended and completed an accredited or recognized engineering program by the appropriate authority in the country

b. You have Been assessed as eligible for independent practice.

b.1. The assessment maybe undertaken by the monitoring Committee, by a competent Professional Association and/or by an authority with responsibility for registration or licensing of professional engineers.

c. You have Gained a minimum of seven (7) years of professional experience after registration, and: (OPTIONAL FOR AAE APPLICANT)

c.1. The works in question should be clearly relevant to the fields of engineering in which the applicant claims experience.

c.2. Should have participated in a range of roles and activities appropriate to these fields of engineering

d. Spent at least two (2) years in responsible charge of significant "engineering" work (OPTIONAL FOR AAE APPLICANT)

d.1. The work should have required the exercise of independent engineering judgement, the project concerned should have been substantial in duration, cost and complexity and the applicant should be personally accountable for the success or failure of the project.

d.2. In general, an applicant may be taken to have been in responsible charge of significant engineering work if they have:

a. Planned, designed coordinated and executed a small project; or
b. Undertaken part of a larger project based on understanding of the whole project; or
c. Undertaken novel, complex, and/or multi-disciplinary work.

e. You must maintain continuing professional development (CPD) at a satisfactory level. CPD to be submitted must be the latest, last 3 years.

f. Bound by the established Code of Professional Conduct or Ethics.

g. Held individually accountable for your actions as a professional engineer.

2. CERTIFIER

Must be Certified by HR or Immediate Supervisor or any authorize Individual of the Company where the applicant is/was connected.

3. ATTESTER ROLE (OPTIONAL FOR AAE APPLICANT WITH LESS THAN 1 YEAR EXPERIENCE)

Each significant "engineering" work you listed in Form 3 and/or Form 4 must be attested/verified by an engineer in the same discipline and if possible with equivalent experience and standing. Your attester/s must have known you for at least one year and willing to endorse and affix his/her signature on your application. Your attester/s is responsible for providing support and guidance throughout the application and interview process. They should check your application for accuracy and completeness, ensuring that the information provided is true, you are of sound character and that you are applying for the appropriate level of register. They should be confident that you are able to demonstrate the competence criteria called for and be able to advise and assist you in understanding and addressing any shortfall. A direct family member cannot attest your application.

4. SUPPORTING DOCUMENTS

Submit Supporting Documents as applicable such as, but not limited to: Design Works, Plans, Specifications, Pictures of Project, before/After, Certificates of Completion, Commendation, Appointment papers, Organization Chart, etc.

5. CURRICULUM VITAE (employment details) Annex I

Write a short summary of your work Experience and attached half body Photo. Your curriculum vitae should be in chronological order providing full details of your work experience. This should include details of the companies you have worked for, the positions you have held, and level of responsibility. (Start from Latest).

6. ORGANIZATIONAL CHART

Submit an organization chart which clearly indicates your position in your company. If you are self-employed and do not have organization chart, provide a brief note outlining your level of responsibility and leadership in projects undertaken.

7. TWO (2) YEARS SIGNIFICANT ENGINEERING WORK OF RESPONSIBLE CHARGES (OPTIONAL FOR AAE APPLICANT) ANNEX II

In no less than 2000 words, write your two years significant engineering work of responsible charge in English and narrative form, clearly stating your role and responsibilities. Use the first person – I, Me, My, to show your personal contribution and should emphasize your:

a. Personal engineering and/or management contribution and responsibility.
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8. CONTINUING PROFESSIONAL DEVELOPMENT

Using the Guidelines established by the Philippine Technological Council (PTC), applicant for ASEAN Engineer are required to undertake at least 150 weighted hours of CPD activities during any 3-year period and must be certified by each professional organization and /or PTC. *See Annex III – CPD Guidelines).*

(FOR AAE APPLICANT WITH 3 YEARS OR MORE EXPERIENCE, BUT LESS THAN 7 YEARS EXPERIENCE.)

9. DEVELOPMENT ACTION PLAN

In no less than 1000 words, provide a statement on how you intend to continue with your personal and professional development. You should show your commitment to keep yourself up to date with developments and with maintaining skills and expertise. You should identify your short (1-3 years), medium (3-7 years) and long term (7-10 +years) goals and indicate how you propose to meet them.

10. ASEAN/APEC SEMINAR-WORKSHOP

PTC or professional organization are here to help you through the application process and offer the following services:

a. Applicant briefing session/workshops/seminars. Applicant must attend ASEAN/APEC SEMINAR – WORKSHOP before they apply for Advanced Level Engineer
b. Supporting documentations including sample reports, information on the application process, and interview guidelines

11. FEES

a. Application fees must be course through the applicant National Organization.
b. The National Organization will pay PTC the amount corresponding to the number of applicants endorsed to PTC.
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12. RENEWAL OF REGISTRATION

You must renew your registration every 3 years and submit the following:

a. 150 weighted hours of CPD
b. Certified independent practice during the last 3 years – Form 3
c. Any changes in your status
d. Organization Chart
e. Two ID size pictures, white background (High Resolution, 48mmx33mm)
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GUIDELINES FOR ASEAN TECHNICIAN / TECHNOLOGIST

APPLICATION GUIDE FOR ASEAN ENGINEERING REGISTRY

1. QUALIFICATION REQUIREMENTS

a. You have attended and completed an accredited or recognized Engineering Technologies program/Technician program by the appropriate authority in the country.

b. You have Been assessed as eligible for independent practice.

b.1. The assessment maybe undertaken by the monitoring Committee, by a competent Professional Association and/or by an authority with responsibility for registration or licensing of professional engineering technologies and technicians.

c. You have Gained a minimum of seven (7) years of professional experience at the practice level, and;

c.1. The works in question should be clearly relevant to the fields of engineering in which the applicant claims experience.

c.2. Should have participated in a range of roles and activities appropriate to these fields of engineering

d. Spent at least two (2) years in responsible charge of significant "engineering" work

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b. Undertaken part of a larger project based on understanding of the whole project; or

c. Undertaken novel, complex, and/or multi-disciplinary work.

e. You must maintain continuing professional development (CPD) at a satisfactory level. CPD to be submitted must be the latest, last 3 years.

f. Bound by the established Code of Professional Conduct or Ethics.

g. Held individually accountable for your actions as a professional engineering Technologies or Technician.

2. CERTIFIER

Must be Certified by HR or Immediate Supervisor or any authorize Individual of the Company where the applicant is/was connected.

3. ATTESTER ROLE

Each significant "engineering" work you listed in Form 3 and/or Form 4 must be attested/verified by an engineer in the same discipline and if possible with equivalent experience and standing. Your attester/s must have known you for at least one year and willing to endorse and affix his/her signature on your application. Your attester/s is responsible for providing support and guidance throughout the application and interview process. They should check your application for accuracy and completeness, ensuring that the information provided is true, you are of sound character and that you are applying for the appropriate level of register. They should be confident that you are able to demonstrate the competence criteria called for and be able to advise and assist you in understanding and addressing any shortfall. A direct family member cannot attest your application.

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7. Two (2) years Significant Engineering Work of Responsible Charge – Annex II

In no less than 1000 words, write your two years significant engineering work of responsible charge in English and narrative form, clearly stating your role and responsibilities. Use the first person – I, Me, My, to show your personal contribution and should emphasize your:

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8. CONTINUING PROFESSIONAL DEVELOPMENT – Annex III

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10. FEES

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b. The National Organization will pay PTC the amount corresponding to the number of applicants endorsed to PTC.
c. All Payment must be deposited to PTC Bank Account. PTC does not accept direct payment from applicant.

11. RENEWAL OF REGISTRATION

You have to renew your registration every 3 years and submit the following:

a. 90 for ASEAN Technologist weighted hours of CPD
b. 60 for ASEAN Technicians weighted hours of CPD
c. Certified independent practice during the last 3 years – Form 3
d. Any changes in your status
e. Organization Chart
f. Two ID size pictures, white background (High Resolution, 48mm x 33mm)
g. Payment of applicable fee

13. INSTRUCTIONS/PROCESS

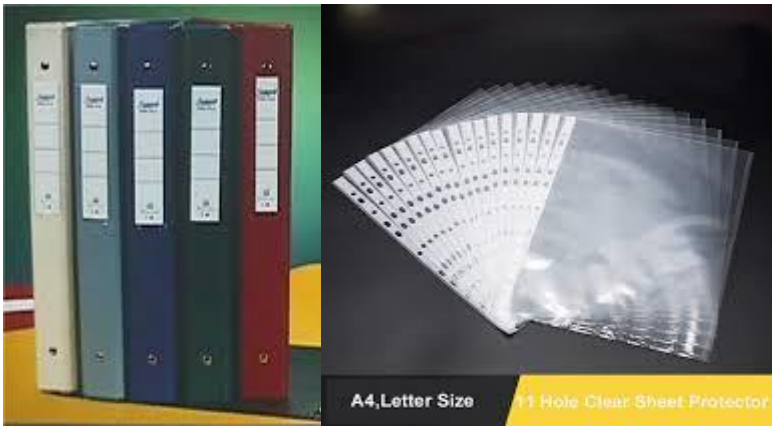
APPLICATION GUIDE FOR ASEAN ENGINEERING REGISTRY

A. Requirement

1. Submit 2 sets of Filled up Application (Forms 1 – 7 only) and Curriculum Vitae. To be printed Back to Back, use Binder clip.
2. Submit Two (2) sets of Complete Application (Forms and attachments) Each set shall be submitted using a **Blue Ring Bind/Clearbook, COMPLETE WITH TABLE OF CONTENTS AND TABS.**
3. Use A4 size white bond paper of not less than substance (80 gsm) thickness.
4. Photocopies of large documents shall be reduced accordingly.
5. Submit a softcopy of a completed application documents and supporting documents in USB.
6. E-Mailed Applications or Computer-Generated Signatures on the Application Forms Will Not Be Accepted.

FOR ASEAN ENGINEER ONLY

SAMPLE RINGBIND FOR AE ONLY

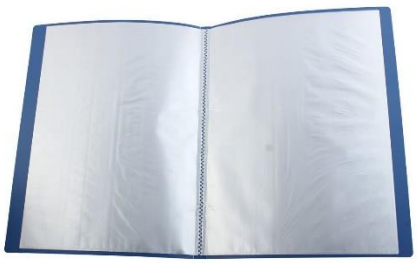


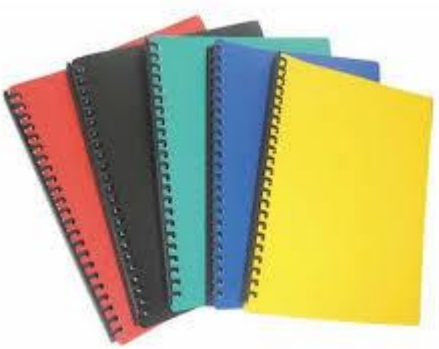
Use Transparent sheets

FOR ASSOCIATE ASEAN ENGINEER & ASEAN TECNICIAN/TECHNOLOGIST

SAMPLE CLEARBOOK FOR AAE and AET

XXXX





B. Process of Application

Step 1.

Submit your Complete Application Documents and application fee to your EPO/APO

EPO/APO

- Provides COGS and Endorsement
- Initial Assessment and Evaluation by the screening committee
- Notify applicant regarding the Initial Evaluation status
- Endorsed Application and payment to PTC

PTC

1. PTC will Provide Tracking number for each of Applicant
2. Final Assessment and Evaluation
3. PTC Directorate Office notifies applicant of the status thru Email.
4. Country registrar recommends the approval of applicant to the PTC Board of Trustees for endorsement to AFEO
5. PTC Board of Trustees thru PTC – Directorate Office submits the list of applicants to the AER Secretariat.

-

Step 2.

AFEO Governing Board

1. AER Secretariat endorsed the List to the AFEO Governing Board to approve/Disapprove applications.

Note: AFEO Governing Board (Member Countries) Meets twice a year (July & November).

DISAPPROVED

2. PTC will send notice to the applicant
3. If the application returns twice, the applicant needs to re – apply on the following year.

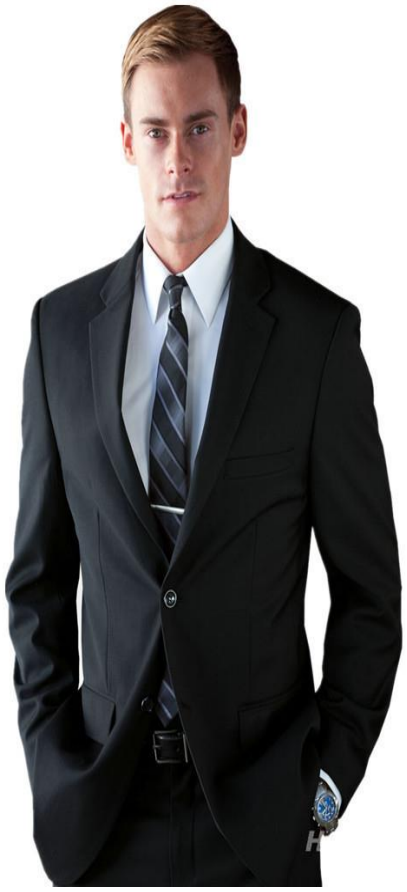
PTC

1. PTC will send official letter of approval upon receipt of Registration nos. from AER Secretariat
2. PTC will send statement of Account for Lifetime Membership
3. PTC will announce the Conferment Schedule to award Medal and Certificate (applicant is required to attend conferment)
4. PTC will issue AER ID during Conferment

ANNEX I – CURRICULUM VITAE TEMPLATE

JUAN MIGUEL CRUZ
Dipolog St. Pael Subdivision Brgy. Vasra, Visayas Avenue, Quezon City
Contact: (+973) 12345678
Email Address: abcde@gmail.com

EXPERIENCE SUMMARY:



Output oriented, with extensive experience spread over multiple roles in project management, reviewing contract agreements, preparing technical plans and cost estimates, and developing construction specifications and procedures, an enterprising leader and innovative thinker with excellent communication, interpersonal and management skills.

- A resourceful decision-maker that combines management, organizational, leadership skills with the ability to pursue bottom-line goals and objectives.
- Proven abilities in analyzing and interpreting unique problems, with a combination of experience, trainings, and logical thinking to achieve efficient and effective solutions
- Additional excellence in preparing base and conceptual designs and details; review technical design data and drawings; plan, execute, monitor and control of project resources; plan, conduct, and administer procurement; monitor and control project execution; and liaising.

SKILLS AND EXPERTISE:

Contract Administration

- Interpret contractual obligations and rights, evaluates technical and financial problems, and resolves commercial issues.
- Handle pre-tender corresponds and tender queries to minimize project deliverables discrepancies.
- Participate in the development of tender procedures, prepares necessary terms of reference for contracts, analyzes and recommends awards, and checks the submissions meet the international contract standards

- Carry – out design activities and calculations, including the production of CAD Drawings, schedules and other documents, interpret clients and other related activities to meet project requirements.

Project Planning and Management

- Handle project evaluation, analysis of cost and Benefit.
- Finalize requirements and specifications in consultation with project sponsors and stakeholders
- Preside Project Review Meetings

Construction Management

- Handle project evaluation, analysis of cost and Benefit.
- Finalize requirements and specifications in consultation with project sponsors and stakeholders
- Preside Project Review Meetings

CURRENT GENERAL RESPONSIBILITIES AND DUTIES

1. Formulates, develops, implements, monitors and assesses Quality Control Program, Quality Control, Quality inspections and Testing Methods.
2. Formulates Develops, Studies, implements, monitors and assesses health and safety policies and procedures
3. Member of Strategic Business Unit.
4. Knowledge expert on Condition Survey and Problem Identification and Solution
5. Survey and Analysis Coordinator

CAREER HIGHLIGHTS

I am with the Department of Public Works and Highways 10 (DPWH) for 50 years. At the moment, I serve as a District Engineer in Misamis Oriental 2nd District Engineering Office, an ISO 9001 – 2008 Quality Management System 9QMS) certified.

I have gained my professional experience in engineering and perform engineering duties in planning designing and overseeing construction and maintenance of building structures and facilities; such as roads, airports and bridges, flood control and other infrastructures projects. Further, I administer, supervise and inspect all administration phases of activities in the office.

Employment Record and Detailed Experience

August 20, 2012 – present
District Engineer, San Jose 2nd District Engineering Office

For more than two (2) years of experience as District Engineer, I courageously contributed success to the Department in achieving the goals, mission and vision and became an Outstanding District Engineer of Region 10 for CY 2015 respectively. On June 23, 2016 under my supervision, San Jose 2nd District Engineering Office received the ISO 9001 – 2008 Registration Certificate.

In compliance with the Special Order No. 48 dated August 15, 2014 I assumed the duties and responsibilities appurtenant as OIC – District Engineer, and on December 15, 2014 I assumed as District Engineer with item number 00 – 0000 – PSIOP 2014.

As District Engineer I administer, supervise and inspect all administration and technical phases of DPWH activities of this office; I check and supervise the survey and design of civil engineering facilities and structure both horizontal and vertical, including the execution and implementation thereof; reviews and analyzes maps; notes other engineering programs involving the determination of feasibility of proposes project.

August 27 to August 19, 2014
Chief, Construction Division (Engineer V), DPWH – Regional Office #10

As Chief, of Construction Division, I was responsible for planning, supervision, direction and coordination
As District Engineer I administer, supervise and inspect all administration and technical phases of DPWH activities of this office; I check and supervise the survey and design of civil engineering facilities and structure both horizontal and vertical, including the execution and implementation thereof; reviews and analyzes maps; notes other engineering programs involving the determination of feasibility of proposes project.

October 18, 2010 to June 17, 2012
Acting Asst. Chief Construction Division (Engineer III), DPWH – Regional Office #10

As Acting Assistant Chief of Construction Division, I provided technical services in the construction division for projects and facilities.

April 03, 1989 to June 30, 1989
Civil Engineer

As Civil Engineer, I was tasked to inspect and check projects, roads and buildings in conformity to plans and specifications. I prepared program of works and estimates with its accomplishments as required and prepared monthly, quarterly and annual reports for submission.

I hereby certify that all statement in this report are true and correct and I have made claims of acquired competencies in good faith.

JUAN MIGUEL CRUZ

FORM 4: ANNEX II - SAMPLE

TWO (2) YEARS SIGNIFICANT ENGINEERING WORKS

1. TWO (2) YEARS RESPONSIBLE CHARGE OF SIGNIFICANT ENGINEERING WORK (Please use separate sheets for each company.)

RESPONSIBILITIES AS MATERIALS ENGINEER						
Work No	**Starting Month (MM/YY)**	**Ending Month (MM/YY)**	**Project Title**	**Position /Title**	**Specific Responsibility / Relevant Accomplishments**	**Period (Month /Weeks)**
1	04/15	11/16	Construction of Pagsangahan-San Marcos Road, Brgy. Pagsangahan/San Marcos, San Miguel Catanduanes	Materials Engineer	See Narration below	19 months
2	05/16	02/17	Rehab. Of Flood Control Structure (Seawalls) & Reblocking of Damaged PCCP in Catanduanes Damaged by Typhoon "Yolanda" Francia Section, Virac, Catanduanes	Materials Engineer	See narration below	9 months

(Submit Supporting Documents)

(This form is good only for one office/company)

Work No.1 Construction of Pagsangahan-San Marcos Road, Brgy. Pagsangahan/San Marcos, San Miguel Catanduanes

PROJECT BACKGROUND

The Project involves of the construction of barangay road with a roadbed width of 8.0 m and pavement width of 5.0m. It was a road opening with a total area of 1,880 sq.m. and 0.15m thick. This is located at Pagsangahan, San Miguel, Catanduanes. The Contract Cost was P 18,711,174.01.

Technical Description of Scope of Works

The Items of Work for this Project were Clearing and Grubbing, Roadway Excavation for Surplus Common and Surplus Soft rock materials, Embankment from Borrow, Subgrade Preparation, Sub-Base Course, Surface Course, Drainage and Slope Protection and Portland Cement Concrete Pavement, 015m thick.

A. Clearing and Grubbing

This activity was clearing and grubbing of 1.20 hectare of forest with the use of minor tools to clear all the obstructions during construction. Its limits should be set on both sides of centerline at roadway extending one (1) meter beyond the toe of the fill slopes or beyond rounding of cut slopes.

B. Roadway Excavation for Surplus Common and Surplus Soft Rock Materials

Roadway Excavation will include excavation and grading of roadways, slope rounding, and removal of unsuitable material from roadbed and beneath embankment areas. This activity was classified as Rock Excavation and Common Excavation. This was done with the use of Heavy Equipment Unit such as Bulldozer, Pay Loader, Dump truck and Backhoe with breaker.

C. Embankment

This roadway embankment with a volume of 1,075 cu.m. was placed on horizontal layers not exceeding 200mm, loose measurement and compacted to the required density before the next layer was placed. The embankment material was from Borrow. It was tested and have passed the material test before incorporation into the work. The construction of embankment was in accordance with the specifications and in conformity with the lines, grades and dimensions shown on the Plans.

D. Subgrade Preparation

This Item consisted of the preparation of the subgrade of 17,580 sq.m. for the support of overlying structural layers. It was extended to full width of the roadway. Every layer of 150mm was compacted to the required density before the next layer was made. Necessary scarifying, blading, dragging and rolling were done to provide thoroughly compacted roadbed shaped to the cross-sections shown on the Plans.

E. Aggregate Sub-Base Course

This Item was furnished, placed and compacted an Aggregate Sub-Base Course with a total volume of 2,217 cu.m. on a prepared subgrade in accordance with the Plans and specifications. Sub-base material was tested and found to have conformed to the required specifications before incorporation to the work. The required thickness is 150mm and compacted to the required density at least 100% of the maximum dry density. The material used passed the requirements.

F. Portland Cement Concrete Pavement (PCCP)- 0.15m thk.

This Item consisted of 1,880 sq.m. Portland Cement Concrete with tie and dowels bars. Tie Bars were deformed bars 16mm Ø x 600mm Ø spaced at 0.60 m and the dowels were 16mmØ plain round bars. The required flexural strength of concrete is 3.80 MPa when tested by the third-point method at 14 days. Forms was made of steel and rigidly supported on bed of thoroughly compacted material during the entire operation of placing and finishing of concrete as shown on the Plans and specifications. All construction materials used passed the required specifications.

G. Reinforced Concrete Pipe Culvert (910mmØ)

This Item consisted of 110 l.m. reinforced concrete pipe culvert with internal diameter of 910mmØ as required on the plans. These were constructed on sand bedding. The laying of conduit begins on the downstream section. Jointing of conduit was tongue and grove using Portland cement mortar consist of 1 part by volume of cement and two (2) parts of approved sand. Backfilling on each side of the conduit for the full trench width and to an elevation of 300mm above the top of the conduit was made of compactible soil from excavation.

H. Grouted Riprap, Class A

This worked consisted of furnishing and construction of 399 cu.m. Grouted Riprap in accordance with the specification and the lines and grades and dimensions shown on the Plans. Stones for Riprap were Class A ranging from 15kg. to 25kg. The mortar used consists of one (1) part of cement and three parts of sand. All walls were provided with 4" PVC Pipe with filter cloth as weep holes spaced at 3.00 m on center and placed horizontally at the lowest points where free outlets for water was obtained. The side slope was 1:2 and with 0.40 m x 0.60 m foundation.

1. Personal engineering and /or management contribution and responsibilities

As assigned Materials Engineer for the project, I am the one responsible in ensuring the integrity of the structure to be free from defects and be safe for public use. I see to it that construction materials used are in accordance with the specifications and the method of incorporation in the project. I make sure that the required laboratory and field tests are properly performed.

Whenever I noticed any deviations from the specifications of the materials being used, I recommend to the Project Engineer to require the Contractor to replace it with the prescribed materials. I closely monitor and supervise the construction process as I felt that I am bounded by whatever defects that may result after the completion of the project.

2. Problems Faced During the Project/Activity Duration

The construction site of the project was specifically identified in the Approved Plan. This involves excavation of the volume of soil as reflected in the contract. But during my field inspection, I noticed that the mountain was very steep where the heavy equipment being used in the excavation could hardly climb the slope. I investigated if the location being excavated is the correct site of the project of which I found out that during Stake-out, the Project Engineer of the Contractor did not coordinated with DPWH Project Engineer. Therefore, the contractor constructed the project at a different site. As a result, the volume of soil had increased more than what was in the contract. But the contractor had excavated only up to what was in the contract which resulted to steep slope. Despite being so, the contractor still constructed the Portland Cement Concrete Pavement and completed the project. But the Mayor of San Miguel, Catanduanes had complained about the gradient of the road which was too steep and did not follow the prescribed degrees in the approved Plans. As such, the contractor was ordered to choose to relocate the road to the correct

site or redo the construction and adhere to what was in the Plan and Contract. The contractor then opted to redo the work. But the contractor refused to undergo another materials and field test.

3. Solutions formulated/found and implemented

So, as Materials Engineer, I recommended and insisted that the process of materials and field tests should be done all over again. Close monitoring and supervision was also conducted to avoid repeat of lapses/error. Also, close monitoring was also done to ensure that all materials that were originally put in place were removed.

4. Descriptions of engineering judgments made

My Engineering judgment was that prior to the start of work, there must be a close coordination with the implementing agency to start the project right and identity the site that was staked-out. If the project was not redone and materials and field test were not also done, the project could be easily cracked damaged caused by broken structure/parts of the original work.

5. Impacts Generated by the above solutions and judgment

The impact generated was that the road had accelerated gradually which becomes easy to traverse in going up. Farm product could be easily transported even if loaded in work animals. The Mayor of San Miguel was also pleased since there will be no more complaints from the constituents/farmers. Unnecessary/additional expenses will not be incurred if the contractor had coordinated with the implementing section. Also, the probability of landslide would be reduced if the project is constructed in the correct site and the government will be spared of road rehabilitation. Likewise, in the re-construction of the project, the period of completion (calendar days) was extended thereby depriving the public for its immediate use.

PROJECT PHOTOS

Work No.2 Rehab. Of Flood Control Structure (Seawalls) & REblocking of Damaged PCCP in Catanduanes damaged by Typhoon "Yolanda" Francia Section, Virac, Catanduanes.

PROJECT BACKGROUND

The Project consisted of the Rehabilitation/Reconstruction of 362.5 l.m. Seawalls and Reblocking of 1,590 sq.m. damaged Portland Cement Concrete Pavement (PCCP) damaged by Typhoon "Yolanda". The Project was undertaken By Contract with Contract Cost of P13, 230,628.30 and the Project was located at Barangay Francia, Municipality of Virac, Province of Catanduanes.

Technical Description of Scope of Works

The Project was provided with 362.50 l.m. of Seawalls with Reinforced Concrete Sheet Pile and Reblocking of 1,590 sq.m. Portland Cement Concrete Pavement, 028m thick on a prepared base with Subbase, Base Course and Embankment from Borrow.

A. Removal of Damaged Structure

This Item of work consisted of the removal of damaged seawall and PCCP and was disposed in a manner as shown on the Plans and backfilling the resulting trenches.

B. Reinforced Concrete Sheet Pile

This Item consisted of furnishing, driving and cutting off sheet piling covered by the required specifications with a total length of 1,456 l.m . The concrete was Concrete Class "A" as specified in the Plans and have a compressive strength @ 28 days of 3000 Psi. The reinforcement was Grade 40 and in conformity with the requirements shown in the Plans. The minimum penetration below dredge line was 3000mm. All materials such as Portland Cement, Washed Sand, Washed Gravel, Water and Reinforcing Steel Bars were tested and passed the requirements before incorporation into the work.

C. Embankment

A volume of 1,592.44 cu.m. Borrow Materials for Embankment was provided. It was tested first before incorporated into the work. This was placed in horizontal layers exceeding 200mm, loose measurement and compacted by vibratory roller until the required density was attained. Field Density Tests were performed to measure the density of the compacted embankment materials.

D. Rubble Concrete

This Item of Work was 246.96 cu.m Rubble Concrete. . It was used in the construction of seawall. The Concrete was Class "B" with minimum compressive strength of 2400 Psi at 28 days. The stone used were hard and durable and more than 0.015 cu.m. in volume. All construction materials were tested and passed the requirements. One layer of concrete Class "B" was placed on the prepared bed prior to placing the stones and consolidated thoroughly by vibrator inserted in each layer of concrete. The lines, grades, slopes and dimensions were in conformity with the approved plan.

E. Hand-Laid Rock Embankment

This Item consisted of hand-laid rock embankment with an estimated volume of 246.96 cu.m., constructed in accordance with the specifications and in conformity with the lines and grades shown on the Plans. All stones were more than 0.015 cu.m. in volume and sound and durable. The larger stones were placed in the lower part of the structure.

F. Portland Cement Concrete Pavement (0.28m thk)

This Item consisted of 1,590 sq.m. Portland Cement Concrete with 16mm Ø x 0.75m RSB Grade 40 spaced at 0.75 on center as deformed Tie Bars. The required flexural strength of concrete is 3.80 MPa when tested by the third-point method at 14 days. Forms were made of steel and rigidly supported on bed of thoroughly compacted material during the entire operation of placing and finishing of concrete as shown on the Plans and specifications. It was constructed on the prepared base of 0.125m thk. Item 200- Aggregate Sub-Base Course

and 0.10m thk Item 201-Aggregate Base Course. All construction materials used were tested and passed the required specifications.

1. Personal engineering and /or management contribution and responsibilities

As assigned Materials Engineer for this project, I am the one responsible in ensuring the integrity of infrastructure projects constructed. I perform the required laboratory and field tests to ensure conformity to the specifications which would define the integrity of the structure to make it free from defects and safe for the public use. I see to it that construction materials used are in accordance with the specifications and the method of incorporation in the project. I conduct regular inspection of the project and supervise the progress of the construction. As Materials Engineer, it is my mandate to ensure compliance of the Quality Assurance Program.

Whenever I noticed some non-conformity, I recommend to the Project Engineer to require the contractor to remove/replace the defective portion or redo everything.

2. Problems faced during the project/activity duration

During project site inspection, I noticed that the on-going construction of embankment did not performed all the necessary clearing of unsuitable materials such as remaining broken debris of the seawall, beach sand & gravel, broken PCCP and cracked concrete with protruding steel bars. When I reviewed the Approved Plan, Contract & Specifications there was a provision to remove and dispose it. The delivered suitable embankment materials are being placed on top of the unsuitable materials. But the contractor did not want to remove this debris. As Materials Engineer I did not allow it.

3. Solutions formulated/found and implemented

As Materials Engineer, I instruct to stop the embankment work and removed first or clear the area of said unsuitable materials. Because presence of said materials could not be properly compacted and the required density will not be attained. Because of this reason, the contractor's men obeyed and performed the clearing. Then prescribed embankment materials be placed and compacted observing the construction methods in the placement of embankment materials by horizontal layers not exceeding 200mm loose measurement and shall be compacted up to its required density before the next layer is placed.

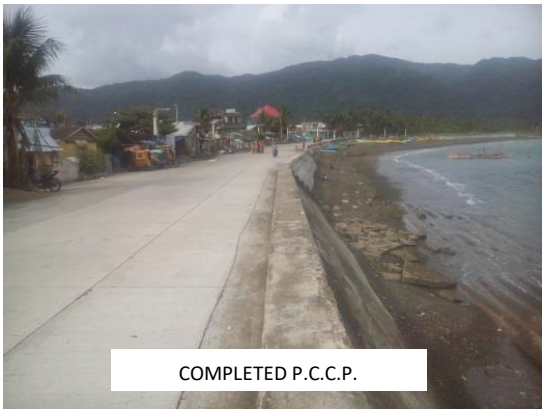
4. Description of Engineering Judgments Made

The engineering judgment that I made was based on my experience that no embankment work must commence without clearing the area with unsuitable materials as prescribed in the specifications. Prior the commencement of the project a meeting between the Contractor and the Implementing Office represented by the Project and Materials Engineer is a must to tackle every activity under contract so that all drawings and requirements stated on the approved Plans must be clearly specified and understood to avoid the mistakes made. If ever the unsuitable materials were not removed, the embankment will collapse/damage then the new structure off course will also damage which will definitely translates to another expenses for the government.

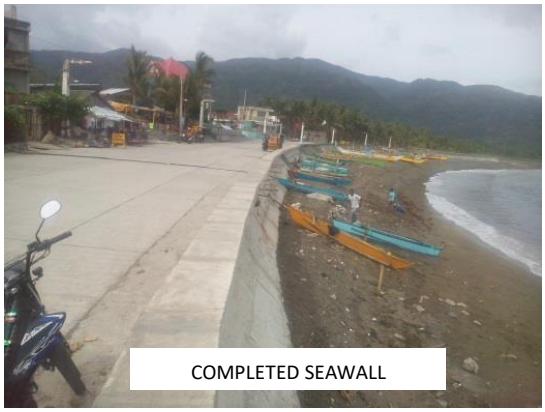
5. Impacts Generated by the above solutions and judgment

Regarding the solutions/corrections I made, the embankment work was done as per plans and specifications. The impact of the solutions and judgment was that the project has been completed sound, durable and safe to the travelling public and spare the government from further loses/expenses. And now, the project serves the purpose and being used by Barangay Francia, Municipality of Virac and the Province of Catanduanes as a whole.

PROJECT PHOTOS

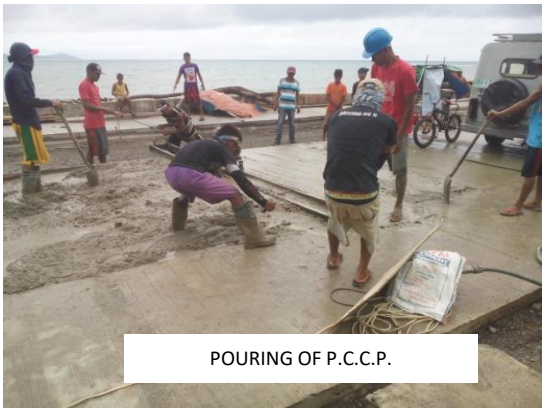


COMPLETED P.C.C.P.



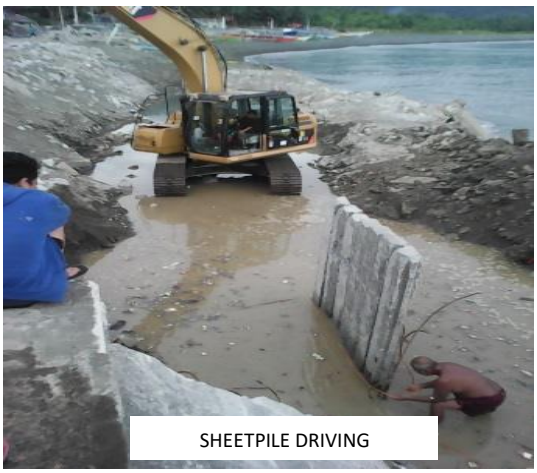
COMPLETED SEAWALL

HAND-LAID ROCK EMBANKMENT



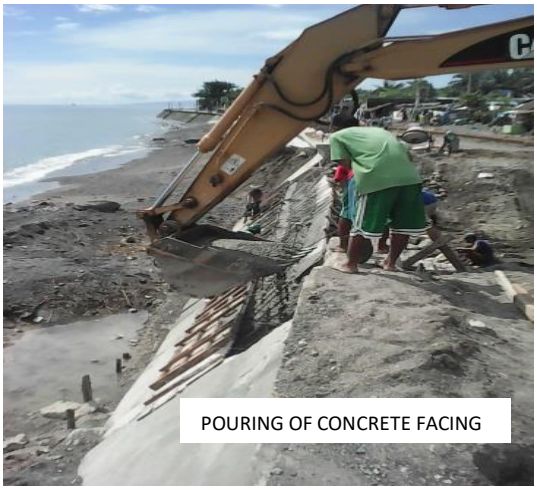
POURING OF P.C.C.P.

SHEET PILE FABRICATION



SHEETPILE DRIVING

POURING OF FOUNDATION



POURING OF CONCRETE FACING

ANNEX III CPD Guidelines

CONTINUING PROFESSIONAL DEVELOPMENT (CPD)
Information and Record Sheet

1. What is CPD?

Broadly speaking, Continuing Professional Development CPD) includes any activity that extends or updates one's knowledge, skill or judgement and enables him/her to:

- be more productive
- understand and apply advances in technology
- face changes in career direction
- better serve the community

Registered Professional Engineers undertake CPD activities in order to maintain and extend their knowledge, skills and judgement. One of the main functions of CPD is to equip one to plan his/her career \path.

For an activity to qualify as CPD, it must be related to one's career as a Professional Engineer. For many Engineers, CPD activities will include both technical and non-technical topics. Non-technical topics include management, accounting, law, economics and foreign languages by which one carries out business.

Functions that are routinely performed as part of one's employment are not normally claimable, for instance university lecturers cannot claim, under Presentations and Papers (see section 7 below) the lectures they present as part of their employment.

2. CPD requirements for Accredited Professional Organization (APO) members

The CPD requirements for APO members are identical in scope. On an ongoing basis, one needs to undertake at least 150 weighted hours of CPD activities during any three-year period, keeps records of such activities and makes the records available for audit when required.

APPENDIX E

For many engineers, the most convenient method of recording in sufficient detail for audit will be through brief entries I their professional diaries.

Six main types of CPD activities are discussed below for which different time weighting

factors apply. Engineers in academic positions must also show that they undertake a minimum of 40 hours of industry involvement in any three years.
The weighted hours of CPD for any given activity are obtained by multiplying the actual hours spent on the activity by the relevant time weighting factor.

For example, participation in a short course attracts a time weighting factor of 2 (see Section 4 below) Hence, if 8 hours were actually spent on the short course, this would convert to 16 weighted hours.

3. Types of CPD

The six major types of CPD are:
A Formal Education and Training Activities
B Informal Learning Activities
C Conferences and Meetings
D Presentations and Publications of Papers
E Service Activities
F Industries Involvement (for Academia)

If one believes he is undertaking other types of CPD that comply with the general definition in Section 1 above, one should make a submission for this to be recognized.

4. A- Formal Education and Training Activities (time weighting factor – 2)

These include formal face-to-face education distance education, short courses and formal on-the-job training. These will almost always include time spent in preparation and/or follow-up and most will involve assessment.

A special case relates to the undertaking of the entire course work for a higher degree or postgraduate diploma, either by the face-to-face or distance modes, which will cover the CPD requirements for the rolling three-year period containing the course. However, one should continue to record other relevant CPD activities for future reference.

For formal face-to-face education, the time claimed can include the actual hours of lectures attended and/or research undertaken. For distance learning, the simplest approach is to estimate the equivalent number of hours of formal face-to-face education that would have been involved if this mode had been utilized instead of the distance mode. A time weighting factor up to 2 can then be applied.

Short courses are defined as involving presenters who are external to the workplace. These include courses at tertiary institutions that are not taken for award purposes. On-the-job training activities are similar to short courses, but are conducted by expert staff from within the workplace.

5. B – Informal Learning Activities (various time weighting factors)

Typical of these activities are the reading of books, journals, manuals, etc. and familiarization with the operation of technological aids, computer programs, equipment, etc.

Informal learning activities include on-the-job learning that takes place because of workplace requirements and private study where one can exercise complete discretion. On-the-job learning requirements usually arise when one undertakes a new project and identify areas where one needs to extend one's competency base. Private study is an opportunity for one to direct the way in which one's professional career develops.

In both cases, any activity claimed must pass the simple test that it contributes to the development of one's career as a professional engineer. A time weighting factor of 1 applies to on-the-job learning while a factor of 0.5 applies to private study. In each case, the maximum number of "weighted" hours that one can claim over a three year period is 75 hours. Hence one can meet the 150 hours CPD obligations if one is able to justify the maximum allowable claims for both on-the-job learning and private study.

6. C – Conferences and Meetings (time weighting factor = 1)

These include all conferences, symposia, technical inspections and meetings run by APO's & PTC to provide information. Those run by other acknowledge experts could also be claimed provided that the content relates to the development of one's professional career.

The hours claimed should be for the formal technical presentations and inspections that one attended at such conferences, symposia, inspections and meetings.

7. D – Presentations and Publication of Papers (various time weighting factors)

The preparation and presentation of material for courses, conferences, seminars and symposia can be claimed if these activities contribute to the engineering related competencies of engineers and associated professionals. A time weighting factor of 10 should be applied to the actual duration of the presentation if the paper is not published.

Material published in journals and conference papers can be claimed as follows:

- 40 hours per paper for technical papers or research reports for conferences; or
- 50 hours per paper for papers is referred prior to publication

The preparation and presentation of material designed to promote awareness of engineering, membership in PTC and benefits of registration of potential members and the community can be claimed. A time weighting factor of 5 should be applied to the actual duration of the presentation. One may claim up to 30 weighted hours of this type of CPD in any three-year period.

8. E – Service Activities (time weighting factor – 1)

Service to the profession may be allowable particularly where it contributes to the continuing professional development of others. Within PTC, this includes contributions as a Member Reviewer, member of a course accreditation team, participation in CPD audits, review of technical papers prior to publication and technical aspects of work undertaken in or for the Boards and Committees of the APO's and/or PTC, including national committees and technical societies. CPD allowable under this heading is limited to 20% of one's total in any three years.

9. F – Industry Involvement (for academia) (time weighting factor =1)

Engineers employed in academic positions are expected to foster links with industry to the benefit of engineering education, research and practice in Philippines. This requirement also ensures that they are exposed to developments in engineering practice outside their academic institutions.

Industry involvement will normally be in the form of consulting services. However, where one has close ties with industry, one can include supervision of industry-sponsored research.

Supervision of design projects carried out for industry and fieldtrips may also be counted if they have contributed to the above objectives.

Professional Engineers in academic positions must be able to show they have at least 40 hours of industry involvement every three years.