

Advancing Free Trade for Asia-Pacific **Prosperity**

Peer Review and Capacity Building on APEC Infrastructure Development and Investment: The Philippines

APEC Policy Support Unit May 2017

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The views expressed in this paper are those of the authors and do not necessarily represent those of the APEC Member Economies.

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EXECUTIVE SUMMARY

Background

As a contribution to the implementation of the APEC Multi-Year Plan on Infrastructure Development and Investment and APEC Connectivity Blueprint 2015-2025, the Committee on Trade and Investment (CTI) in 2015 endorsed a proposal titled "Peer Review and Capacity Building to Advance Cross-Sectoral Issues on Physical Connectivity". Later in the year, APEC Ministers welcomed the reference guide (titled "Reference Guide for Peer Review and Capacity Building on APEC Infrastructure Development and Investment") which has been developed to implement the peer review and capacity building mechanism. With the reference guide in place, the next steps are to identify the volunteer economies, conduct peer reviews and capacity building activities from 2016 onwards.

The reference guide emphasizes the importance of 'Quality of Infrastructure Development and Investment' by making a strong reference to the "APEC Guidebook on Quality of Infrastructure Development and Investment." The guidebook highlighted that there are three key elements of quality infrastructure: Life Cycle Cost (LCC), Environmental and Other Impacts and Safety Assurance. Focusing on these three key elements will secure the quality of service throughout the life of the subject infrastructure starting from the designing stage to the end of maintenance and operation stage.

During the first meeting of the CTI in Lima in February 2016, Japan as the lead economy reported that the Philippines will be participating in the Peer Review process as the reviewed economy with Japan as the facilitating economy and the APEC Policy Support Unit as the adhoc review team secretariat.

The Project Objective and Scope

The objective of the Peer Review and Capacity Building on APEC Infrastructure Development and Investment Project (the project) is to (i) conduct peer review on policies and practices, including relevant laws, regulations and guidelines relating to the planning, selection and implementation process of infrastructure projects; and (ii) identify capacity building needs of the reviewed economy through peer review and provide suggested capacity building activities based on the identified needs.

The Project Scope

The project scope has evolved since project commencement in August 2016 through a series of interactions with the stakeholders. Several discussions were held with Department of Public Works and Highways (DPWH) and the Public-Private Partnership (PPP) Center as the client organizations which resulted in adopting changes in the project scope that are more aligned with the challenges that both organizations face in developing competitive infrastructure for the Philippines.

The ToRs and the Report recognize the status of the Philippines and the skills and capacity that exist within DPWH and the PPP Center for infrastructure planning, development and delivery. The ToRs now include discussion two additional issues that both organizations face in the future that will affect the provision of roads infrastructure and its service delivery. From that approach, the scope of the Report was settled as follows:

- The Project ToRs were confirmed to be limited to national roads only in terms of both standard procurement and PPP procurement;
- The benchmarking study for cooperative infrastructure arrangements indicated in the project ToRs, would be undertaken but at a basic level and involve a brief comparison between the Philippines; Viet Nam; Indonesia; and Malaysia
- The review will follow the APEC Guidelines¹ and questionnaire approach;
- Value for Money (VfM) LCC will be tackled and together as a subject. It was noted that DPWH is very familiar with both concepts and incorporates them into all PPP proposals and LCC is also included in Official Development Assistance (ODA) procured projects. Other economies in ASEAN (Viet Nam; Cambodia; Laos; Indonesia; Myanmar; Brunei; and Malaysia) do not undertake VfM. LCC will be researched for practices and approaches that will assist DPWH. It will also focus on Availability Payments in the context of PPP.
- As a new issue, the ToRs include cooperative arrangements with local governments for road and infrastructure projects. The project will undertake a benchmarking exercise with the USA, Indonesia and South Africa. It will detail the South Africa experience as the economy that has a very organized structure for arrangements between national and subnational governments.
- The interoperation and interconnection of tolled expressways has been added to the ToRs.
 Initial work has been undertaken and two issues will require investigation and support: structuring an interconnection policy and standard interoperation policy and mechanism through DPWH and one that provides DPWH sole responsibility as the road network manager;
- In addition to reviewing the operations of the PPP Center, a high-level review of the draft PPP law will also be conducted. It will be undertaken in the context of flexibility to cope with a fast-changing transaction market, transactions need to be defined more by risk and allocation of risk and the potential to introduce innovative method of transactions for infrastructure such as availability payment arrangements and blended financing between government and the private sector.

The Project Methodology

The methodology for the project was based on the APEC Guidebook on Quality of Infrastructure Development and Investment.

The methodology involved both DPWH and the PPP Center directly in the review and workshops were conducted with them to undertake the first review based on the Guidebook, followed by workshops on the results and on the capacity building issues raised by both organizations.

A major meeting was held with stakeholders, APEC, DPWH and the PPP Center on 15 December 2016, to conform what the stakeholders wanted to pursue as issues, how the issues were to be treated and what additional work was needed to complete the Project.

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¹ APEC Reference Guide for Peer Review and Capacity Building on APEC Infrastructure Development and Investment.

The Report Conclusions

The conclusions of this Report are to identify further issues to pursue for both the DPWH and the PPP Center. The conclusions are based on the three core issues described in the APEC Guidelines (with the adjustments that have been agreed with the DPWH and the PPP Center):

- Quality infrastructure: technical assistance to DPWH in analyzing project LCC, Environmental and Other Impacts and Safety Assurance;
- Capacity Building and the development of key skills identified by the DPWH and the PPP Center to support their roles;
- Defining major issues to review and develop solutions within the roads infrastructure context.

Quality Infrastructure

LCC: DPWH undertakes LCC analysis as part of its project preparation. The organization possesses an inherent understanding of the LCC concept and its need. However, it is not practiced on every project and is largely limited to ODA and PPP roads, because of the detailed project preparation guidelines applying to those projects. A VfM analysis is undertaken for PPP projects in accordance with the National Economic and Development Authority (NEDA) project guidelines and requirements. The VfM analysis is based on a range of government cost assumptions and not on actual data because actual data is not available. LCC is not practiced for most budget funded roads because there is only one person within DPWH that has the skill to undertake the analysis.

Value Engineering is also recognized by DPWH as having a substantial impact on the initial construction parameters and costs for roads and therefore the life cycle costs as well. A manual for Value Engineering is in place but the practice has not been adopted universally for projects, again because of the lack of suitably qualified staff to undertake the value engineering analysis.

DPWH is fertile ground to further develop the adoption of LCC, VfM and Value Engineering for all three categories of budget: Government budget, ODA budget and PPP budget. DPWH is a willing partner to develop these practices and skills to use these tools for building, operating and maintaining quality roads infrastructure.

DPWH is the leading organization within the government on procurement practices. The way forward is to develop a specific program with DPWH on these three issues and to commit to its development jointly over a program time frame and not on a completed project basis². If this approach is adopted then it will link with the capacity building needs that DPWH has identified and create sustainable practices, expertise and skills for quality infrastructure development and delivery.

Capacity Building

DPWH and the PPP Center have demonstrated substantial capacity and enthusiasm to measure their core practices based on the experiences of other economies. The PPP Center has, for example, undertaken consistent 'lessons learned' reviews of PPP projects within the

² The meaning of this phrase is to commit to a sustained 2 to 3 year program with DPWH on quality infrastructure and not treat the concept as a project that has a definite start and finishing point within a project time frame of 12 months or less. It is this sustained effort that will produce the systems and skills that DPWH is looking to acquire.

Philippines and continuously informed itself about PPP practices in other economies. Indeed, it has reviewed the Draft PPP Law that was prepared in 2013 based on its continuing review of the Philippine and other economies' performances.

DPWH also understands its position within the region and within its own economy. During workshops with DPWH it was clearly cognizant of its own shortcomings and needs and what was needed to progress to developing roads as quality infrastructure. It understands this concept with all forms of funding: Budget funded, ODA funded, PPP funded and hybrid funded.

Given this context, and the specific workshop that was conducted with each organization, the capacity building needs³ encompass the following concepts:

- Technical capacity building for the development of quality infrastructure: DPWH and the PPP Center (within their role for PPP Projects) are the clients. The capacity building should be scoped and developed as a program and cover a 2 to 3 year period, so that skills and resources are developed and systems change for an increased focus on quality infrastructure. The focus is LCC, VfM and value engineering
- A review of the PPP risk management approach of the government is needed combined with a capacity building program. DPWH and the PPP Center understand that risk identification and allocation with PPP arrangements is central to a quality project and a quality outcome. However, there are system and approach differences within the deciding bodies such as NEDA and the approach needed by DPWH. Those differences need to be resolved and implemented with capacity building programs⁴.
- Ex-post evaluation has been identified by DPWH and the PPP Center as a skill that needs to be developed. Capacity exists within both organizations now but the systems applied in the DPWH are largely ODA based approaches and oriented towards the external funding party. The PPP Center appraisal guidelines are already in place as approved by the PPP Governing Board. The concepts within that approach are appropriate, but again, skill and capacity to develop a system for both organizations are required.
- Capacity building for the PPP Center on reviewing the PPP Law. The need for the PPP Center is to develop a law that is competitive in the PPP investment environment and one that adapts to the regular changes within the structuring of PPP transactions. The outcome will be a PPP law that suits the Philippines and is drafted for the Philippines. It will embrace key elements of international practice, such as risk identification and allocation, structured financing with good flexibility, and investment certainty for the market. The capacity building would also extend to the development of revised Implementing Rules and Regulations.
- The interoperation and interconnection of toll roads was a special issue for DPWH. The
 interconnection and operation is between roads operated by different companies under
 different concession contracts. The proliferation of toll booths to manage toll collection
 will lead to significant traffic problems within the toll network and the adjoining road
 network. This Report demonstrates that both issues will become chronic within the next

³ Fully articulated in the Capacity Building Part of this Report.

⁴ The difference in approaches on risk management may also be addressed by requiring strict compliance of agencies to the issued policy guidelines on risk allocation i.e. the Generic Preferred Risk Allocation Matrix.

2 to 3 years as toll roads in metro Manila begin to connect and operate and they will adversely affect the quality of service⁵. DPWH as the road network manager needs to develop a capacity soon that will establish a policy and practice/standard and an enforcement regime for the interoperation of toll roads. There is a low level of knowledge within the Philippines and less in terms of practice in relation to these two issues. DPWH could benefit from additional technical resources and capacity building program to develop the interoperation arrangements. This is a medium term commitment to create sustained quality approaches to the management of roads and the road network.

• A cooperative approach between government agencies for promoting PPP projects has been identified as a major gap in the Philippines current structure. While there is substantial cooperation between DPWH and the PPP Center, other government organizations do not have the same rapport. While using DPWH as the 'ideal client' and developing that relationship further, the lessons from and the structuring of that relationship will have beneficial effects for the PPP while program.

As mentioned before, the review and assistance needs to be on a sustained program basis and not focused on individual projects. The delivery method of the capacity building should be based on the use of technology to undertake training and education through mediums such as webinar based training, an increase in certificated training and a change in structure from classroom lecture to problem-solution based training and education.

Major Issues for Review

The major issues for review are derived from discussions with both DPWH and the PPP Center and principally from the meeting on 15 December 2016. They are issues that the respective agencies consider to be central to their operation and capacity to deliver quality infrastructure.

<u>Toll Road Interoperation and Interconnection</u>: Interoperation is the seamless movement of vehicles between different toll roads. There is no existing policy on interoperation of toll roads within the Philippines. Against an international background where interoperation of toll roads is normal practice, the Philippines is lagging. There is no capacity to transit from one toll road to another without stopping at a toll booth. The current position is a direct result of undertaking toll roads on a project by project basis instead of seeing them as a major part of the road network and managing them on a network basis. As the road network manager, the DPWH should be stepping in to undertake the development of the policy, regulation and enforcement of an interoperation policy.

Future technical support can be to assist DPWH to establish a policy and practices for interoperation and interconnection of toll roads. This may also help prepare DPWH in evaluating interoperability projects, in the event an unsolicited proposal is submitted by a private sector company.

<u>Cooperative Infrastructure Arrangements with Local Government</u> was raised by DPWH to begin a program with local government to develop infrastructure that took a holistic approach at a regional level. One where the integration of projects and their planning, budget and delivery cycles are connected and developed and there is national government and local

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⁵ Note that NAIAX-CAVITEX-Skyway-MCX-SLEX-STAR and NLEX-SCTEX are working towards some form of interoperational arrangements.

government cooperation. Initial benchmarks to economies such as South Africa show a specific policy⁶ to be in place to establish cooperative and synchronous arrangements for infrastructure projects. The benchmark results showed that there was substantial economic benefit for programs and projects specifically designed for and targeted towards national/subnational cooperation and capacity development at the subnational level and to the allocation of resources toward the implementation of projects. The following questions are suggested for further work in this area:

- *The types of projects* to be the focus of cooperative approaches: Limited to major corridor development ⁷or a broad range of projects?
- *Potential to create a Special Purpose Vehicle (SPV)* for coordinated projects: Will cooperative arrangements need an SPV to be in place or simply a project leader/coordinator?
- **Blended funds** (pooling national and provincial funds) and separated funds (keeping fund streams but moved into a project in a coordinated method): Could the Philippines adopt a USA type approach for the issue of municipal bonds to fund coordinated infrastructure projects. What kinds of guarantees will need to be in place?
- *Linking projects* and not creating a 'whole project' with subcomponents. How would national and governments be able to create an environment that links projects and their timing and outcomes instead of creating project sub-components?

Review of the Draft PPP Law for the Philippines is a significant contribution to the opportunities for and the investment regime for PPP Projects. The predominant PPP projects are transport based and managed by either DPWH or the Department of Transportation (DOTr). The PPP Center has championed the review of the current BOT Law since 2013 and prepared a draft PPP Law that was deliberated during the 16th Congress⁸. The draft bill reached second and third reading in the Senate and House of Representatives, respectively, but fell short of enactment before the end of Congress ahead of the 2016 General Elections. The Draft PPP Law addresses many lessons learned from previous projects conducted in the Philippines and incorporates provisions from other economy Laws on PPP. It is highly specific and provides a detailed approach to PPP projects and the institutional arrangements of the PPP Center and a PPP project development and monitoring facility.

The Philippine Government wishes to pursue a revised PPP law (as opposed to a pure common law system that requires little or no parliamentary law). But the approach for that Law should be open for discussion and approach. The PPP market is constantly changing and the risk management approaches for PPP transactions as well as the funding approaches point to a need for the Philippines to adopt a more pragmatic and flexible approach to its PPP Law, rather than the highly specific approach it has now. Flexibility can be introduced through regulation and guidelines.

⁶ The Policy is explained in this Report in the Section: Cooperative Arrangements with Provinces.

⁷ As indicated in the Indonesia case study.

⁸ Note there are several Bills before Congress for amendment to the BOT Law. They have not been reviewed under this APEC project. Only the PPP Center Draft PPP Law has been reviewed.

⁹ Which now include blended funds and an increased use of availability payment arrangements for transport infrastructure.

To ensure flexibility, PPP transactions need to be defined more by risk and allocation of risk than by 'pigeon holing' into specifically described transactions. Blended finance or co-finance arrangements between government and the private sector could form a PPP transaction methodology, but there are constraints¹⁰ on the amount of funds the government can contribute to a project that may prevent well-structured projects from proceeding.

Assistance¹¹ in reviewing the Draft PPP Law from the existing policy base would be needed within the next 6 to 8 months, given the plan to represent a PPP Bill to the Congress in 2017.

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¹⁰ The BOT Law limits government subsidies in PPP projects to 50% of the project cost. This limit is in the context of not allowing the government to 'subsidise" a project to more than 50% of its cost. Potentially, a Project with government funds of 70% and private funds of 30% wrapped in an Availability Payment, could not proceed in the Philippines. This type of co-financing is occurring in the PPP market now.

¹¹ As mentioned earlier, the assistance would extend to the preparation of revised Implementing Rules and Regulations.

1. PEER REVIEW ON POLICIES AND PRACTICES

1.1 BENCHMARKING THE PHILIPPINES ROAD SECTOR

The project scope sought to undertake a benchmarking exercise for the Philippines to selected economies (economy benchmarking). It was agreed to select economies within the ASEAN membership.

The economies selected as comparators are competitor economies for road sector investment. Indonesia was chosen because it is a relatively sophisticated economy and experienced growth in the higher standard roads over the past decade, especially in expressway development mainly delivered through State Owned Enterprises (SOEs). Viet Nam was chosen because it is an emerging economy and one that is starting to embrace PPP as one of the delivery modes for infrastructure. Malaysia was chosen because of its movement to developed nation in the past 15 years and its successful use of PPP as a delivery method for road infrastructure.

As a general assumption economies within the OECD spend between 1% and 6% of GDP on transport infrastructure 12. Roads expenditure falls within the definition of transport infrastructure and thus national road expenditure as a percent of GDP was chosen as a measure to indicate the commitment of economies to a developed road plan. The other measure was PPP progress in the roads sector and the position of each of the economies in progressing PPP as a transaction method.

Despite substantial research, no indicator from an authoritative source was found for 'national road expenditure as a percent of GDP' for the comparator economies. Data from OECD for eight APEC economies mentioned that road investment ranges from 0.5% to 1.3% of GDP¹³.

Economy	2012	2013	2014
	% of GDP	% of GDP	% of GDP
Australia	1.33	1.10	1.02
Canada	1.04	0.95	NA
Japan	0.77	NA	NA
Korea	0.55	0.62	NA
Mexico	0.43	0.46	NA
New Zealand	0.49	0.53	0.63
Russian Federation	0.55	0.59	NA
United States	0.51	0.49	0.49

Source: ITF Transport Outlook 2017 - OECD.

¹³ The data remains irregular even for those economies and is current up to 2014 only for some.

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¹² International Transport Forum at the OECD 2013 Edition.

The benchmark on PPP as a road transaction method is contained in the following table:

Economy	PPP Progress
The Philippines	Restructure of PPP arrangements from 2010 to 2014, including the creation of a PPP Center ¹⁴ , Three successful tenders of toll roads from 2012 to 2015. PPP guidelines are in place. The current BOT Law has been reviewed and a draft PPP Law has been prepared to modernize the Government approach to PPP transactions.
Indonesia	Indonesia has implemented two successful PPP toll roads since 2004. Most are procured by SOEs. New Laws in 2014 for broader PPP options including the availability payment scheme. Government investment mechanisms are in place through PT Sarana Multi Infrastruktur, PT Indonesia Infrastructure Finance and project guarantee arrangements are in place through PT Penjaminan Infrastruktur Indonesia.
Viet Nam	Viet Nam has just commenced its PPP market. No sufficient data for market comparison. PPP laws and guidelines are in place.
Malaysia	Malaysia is a mature market of around 20-plus years for PPP. Numerous toll roads are in place. Interoperation systems and PPP guidelines are in place.

In relation to PPP transactions, the comparison shows:

- the Philippines has made substantial progress since 2010 against Indonesia and Viet Nam. The Philippines also indicates that it is willing to make changes and remain competitive as a PPP destination by undertaking a review of its law and regulations to bring them up to date with current market conditions. Indonesia has state owned infrastructure investment companies in place as well as state guarantee arrangements. Under its draft PPP Law, the Philippine Government is looking to establish government undertakings similar to those in Indonesia.
- Malaysia is a mature market and has been operating PPP arrangements for 20-plus years. It has a level of sophistication in providing quality infrastructure and operating its toll road system that is not reached by the Philippines.

The Philippines should also undertake its own benchmarking exercise using the OECD Transport Forum¹⁵ as a guide and accessing data through ASEAN on other ASEAN member economies.

It is suggested that both DPWH and the PPP Center establish a constant benchmarking program to test their position in a highly competitive market within a region that constantly has GDP growth between 6% and 9%. Benchmarking should not be confined to ASEAN, but include

¹⁴ Former BOT Center was renamed PPP Center in 2010. The Executive Order establishing the PPP Center was issued on 9 September 2010.

¹⁵ OECD International Transport Forum: http://stats.oecd.org/Index.aspx?DataSetCode=ITF GOODS TRANSPORT

other leaders such as India and another OECD member economy that DPWH and the PPP Center agree as appropriate benchmarks.

1.2 REVIEW OF CURRENT PRACTICES: DPWH AND PPP CENTER

Focus of the Review

The review was undertaken based on available literature and direct involvement of DPWH and the PPP Center. The review followed the APEC Guidelines and questionnaire approach.

The focus of the review included:

- Standard roads procurement and the issues faced by DPWH with indications from DPWH about the potential changes it sees as necessary to be more efficient and more effective in its procurement process.
- PPP procurement and the issues for the PPP Center for better procurement practices and better investment prospects. The literature review included a review of the proposed amendments to the PPP Law.

Process of the Review

Standard Road Procurement: DPWH completed the standard procurement part of the APEC questionnaire that was prepared by the project team. It was agreed with DPWH to contain the number of issues to around 12 to 15 so that the number of issues remained manageable and have the potential for implementation.

Those issues are divided into three categories ¹⁶:

- Issues requiring Law changes these are significant impediments to current procurement efficiency or could significantly improve procurement effectiveness for DPWH. It is recognized that these issues may well prove to be difficult to resolve but it is critical to identify them.
- Issues requiring regulation or guidelines changes these changes are within the control of DPWH to implement and require changes that are consistent with the Procurement Law but can bring about a good level of process change that leads to more efficient and transparent procurement. These issues will be easier to handle and have a higher chance of success.
- Issues requiring cooperation with another department or local government these issues are partly focused on the revised ToRs for examining arrangements with local governments and the institutional and process arrangements that may be required for implementing regional infrastructure projects. It also examined existing arrangements (for example the arrangements with the Toll Regulatory Board (TRB) for the implementation of toll roads).

PPP Procurement: PPP Center completed the PPP procurement part of the APEC questionnaire that was prepared by the project team. The PPP Center identified key issues it currently faces in implementing project procurement for PPP roads. The categorization of issues largely followed the same structure as for standard road procurement outlined immediately above.

The Philippine BOT Law has had changes prepared for it during an ADB TA from 2012 to 2014. Those Law changes have yet to proceed. A high-level review was undertaken of the

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¹⁶ As forecast in the Inception Report.

proposed changes and issues brought forward as appropriate. A general benchmark was adopted for the structuring of PPP projects as opposed a benchmark to PPP laws¹⁷.

It should be noted that the changes currently drafted to the Philippine BOT Law are to modernize it. However, since the time the changes were suggested, PPP transactions have continued to diversify and be more based on risk allocation that create 'types' of PPP transactions.

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¹⁷ There was no benchmark to PPP Laws because different jurisdictions have different laws for varying reasons. Some jurisdictions like Australia, Canada, India, and the United Kingdom do not have PPP laws but operate through Treasury based guidelines. These economies are common law based and do not require a law for PPP to operate successfully, and not civil law where a PPP law of some kind is generally needed because of the economy jurisprudence.

1.3 PEER REVIEW RESULTS

The Overall View

The Philippine Government, through DPWH and the PPP Center, has in place the right ingredients for developing quality roads infrastructure. Using the APEC Peer Review Questionnaire, both organizations set out detailed answers to each review question and identified where there were issues and what the potential action could be, including law and guideline changes, capacity building needs and better inter-agency cooperation.

Measuring the Philippines against other economies, it largely has in place the tools that it needs to plan, deliver and manage roads. The law, standards and specifications cover all needed areas such as roads quality, safety, standards, operation and maintenance, procurement and the decision process for constructing a road.

The detailed review is contained in Appendix 1 as a combined document between DPWH and the PPP Center. It is based on the premise that there is a Philippine law, regulations or a standard in place that controls the particular activity within the APEC Review Questionnaire.

A Summary Table of Appendix 1 was prepared and follows the APEC guidelines format. It summarizes each APEC review criteria and identifies the issues raised by either DPWH or the PPP Center.

Summary Table

APEC Criteria	Issue raised by DPWH or PPP Center	Relevant Agency
General – Public Procurement	No issues to address	
General – Legal System, including PPP	Foreign ownership limitations ¹⁸ hinder development of PPP projects/investment. The constitutional limitation on foreign ownership of firms still hinder potential growth in the Philippines' infrastructure. DPWH: especially on toll operator status Amend PPP law to reflect current business landscape on PPP. Specifically, supports are needed for the proposed PPP Law: streamlining of the PPP process; management of unsolicited proposals; ensure competitiveness and transparency, strengthening of governance structure (i.e. PPP Center, PPP Governing Board, Project Development and Monitoring Facility (PDMF)), among others. There is a need to strengthen the PPP Center institutional set up because of PPP demands.	DPWH

¹⁸ The PPP Center is investigating improvements to the PPP business environment to make it attractive for investors including foreign investors.

	Commission on Audit (COA) still has no clear- cut guidelines on the exercise of its auditing powers over PPP projects ¹⁹ . Tax Law: need to create clarity on the tax arrangements in the following areas: • Tax rates applicable to projects • Capital gains tax obligations for land acquisition for projects and which party is obliged to pay – government of the land owner • Tax exemptions for PPP investments Land acquisition Law: Land acquisition provisions require effective processes on Right-of- Way (ROW) and a range of technical issues for utilities relocation. These cause delays in the land acquisition process which delay the actual transfer of land for road projects, including clarifying the concept of 'just compensation'. Among the major issues in land acquisition is the relocation of informal settlers' families.	DPWH and PPP Center DPWH
General – Accounting System	No issues to address	
Environmental and Social Assessment	No issues to address	
Funds	No issues to address	
Structure of Project Procurement	No issues to address	
Land Acquisition	 A range of issues are mentioned for land acquisition that involve law and guideline changes: Certificate of Ancestral Domain Title (CADT). The law does not specify the person/s to whom the just compensation shall be paid (Law change) Lessen the documentary evidence for farmers obtaining land compensation for small holdings (rules and guidelines) Allow filing of expropriation cases based on tax declarations (Law change or regulation instruction to Office of the Solicitor General) Streamline the appointment of government appraisers for land valuations to produce a more efficient land acquisition process 	DPWH

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¹⁹ Asian Development Bank assistance to COA on its role for PPP projects is under preparation but has not yet commenced.

	• Create higher levels of certainty for land acquisition funding. Need to provide adequate appropriations that will allow implementing agencies to acquire ROW locations for national government infrastructure projects in advance of project implementation This issue is also raised in the Capacity Building section for additional specialist training on land acquisition process and management.	
Foreign Exchange	Need to clarify government obligations for the enforcement of foreign exchange differential provisions under both PPP and standard procurement arrangements. Clarifying rules are required.	DPWH
Poor and Socially Vulnerable	No issues to address	
Bribery and Corruption	No issues to address	
Project Planning – Policy and Master Plan	The Philippine Government has a range of unconnected master plans for roads and transport. Specific coordination study is needed to connect the plans at a national and regional level. Key is to convert the plans to a strategic implementation approach.	DPWH
Project Planning – Economic Evaluation	Project Economic Internal Rate of Return (EIRR) is established as the 'pass or fail' standard for road projects. Need to investigate other international benchmarks for infrastructure projects including positive Project Net Present Value.	DPWH
Project Planning – Environmental and Social Assessment	No issues to address	
Feasibility Study – Project Achievement	See capacity building discussion on LCC, VfM and Value Engineering.	DPWH and PPP Center
Implementation of Environmental and Social Assessment	No issues to address	
Feasibility Study – Safety (includes disaster management etc.)	No issues to address	

Feasibility Study – Risk Management	A risk plan is currently developed for all projects. Risk management and allocation require revision ²⁰ . The outcome of the revision will be included in contracts and standards and guidelines. There are system and approach differences within the deciding bodies such as Department of Finance (DOF) and the approach needed by DPWH. A review of the risk management approach of the government is needed but combined with a capacity building program ²¹ . Building the capacity and then developing a risk approach from that is critical to a sustainable reform process and outcome. Review risk allocations based on a broad international assessment to ensure internationally competitive risk arrangements.	DPWH with contributions by PPP Center and NEDA
Feasibility Study – Private Market Assessment	No Issues to address	
Feasibility Study - Procurement	This section includes VfM evaluations by government. The answered questions by DPWH and the PPP Center did not indicate an issue. During the discussion sessions, both agencies indicated additional assistance was needed to undertake VfM analysis based on factual data rather than assumptions VfM is required by Investment Coordination Committee (ICC, which is part of NEDA) for a positive project decision, but most government institutions do not have the raw data to develop a detailed VfM. Assumptions are used instead. Risk adjusted Public Sector Comparator results (based on assumptions) are generally favorable to PPP procurement. The role of VfM is already considered in the Project Appraisal Guidelines. Need to develop a specific VfM project to determine its role and structure. Need of PPP Center to establish baselines and bench marks on VfM analysis based on actual implementation of projects.	DPWH and PPP Center

²⁰ The Generic Preferred Risk Allocation Matrix has been developed to manage these issues but DPWH indicates that more work is needed. (http://ppp.gov.ph/wp-content/uploads/2017/02/GPRAM_2Aug2016.pdf).

²¹ PPP Center suggests that the NEDA Investment Coordination Committee also be included in capacity building for risk assessment and risk allocation.

Procurement – Process, Prequalification, Evaluation, management and Contract Monitoring	 Issues to address related to proposal evaluation. Key issues relate to: A consolidated list of blacklisted companies is needed to reinforce anti-corruption initiatives Develop assessment criteria for methodologies to achieve the stipulated service level in the tender The exposure of government to contingent liabilities The transition from approval to award as the current setup of contract drafting does not provide for a clear translation from the terms and the risk allocation approved by the relevant approving bodies to the final contract. A mechanism or guidelines for contract drafting may cover this. The issuance of environmental and construction permits in terms of coordination with Local governments in the Philippines (LGUs). There seems to be a need to integrate such exemptions or automatic permits once the project is awarded. This can be considered in the PPP Act to fast track the implementation of projects Include Environmental Risk Management as part of a bid evaluation Initiate an Ex-Post Evaluation Manual to standardize criteria, concepts, principles, methodologies and ratings system for public sector projects 	DPWH and PPP Center in a support role
Ex-post Evaluation	DPWH to discuss the issue of capacity needs on current projects. PPP Center monitors contract milestones and obligations to ensure they are being met. It has no direct role in contract management.	DPWH

LCC, VfM and Availability Payment Transactions

Introduction

VfM and LCC issues have not been raised by either DPWH or the PPP Center within the context of the Peer Review process. At present, DPWH undertakes a base level VfM analysis. VfM and LCC are important tools to ensure that funds invested in the road sector yield the highest possible benefits. They are also highly relevant if DPWH intends to adopt Availability Payment mechanisms (these mechanisms are explained later in this section).

DPWH has considerable experience with the development of expressways in collaboration with the private sector. To date, most of these expressways have been developed under build-operate-transfer (BOT) and BTO (Build Transfer Operate) arrangements, through which private investors finance, operate and maintain an access-controlled toll roads in return for the right to collect tolls during a pre-agreed concession period. Although DPWH has been

successful in attracting private investment in the road sector through BTO contracts, this has placed constraints²² on DPWH's ability to optimize the functioning of the national road network. This section of the report describes an additional method of mobilizing private financing for the roads infrastructure, known as availability payments. This method has the potential to capture the benefits of BOT contracts whilst avoiding some of its drawbacks.

This section describes availability payments, including the adoption of VfM assessments and LCC analysis. It then outlines the potential benefits of availability payments compared to BOT/BTO arrangements and concludes with an overview of capacity building needs in DPWH to operationalize the method.

What are Availability Payments?

<u>Definition of availability payments.</u> At its most basic level, an availability payment is a contractually agreed payment from the Government to a concessionaire in return for making infrastructure available in a pre-agreed quality and quantity (for example, a four-lane road with an International Roughness Index²³ not exceeding 2.0 in any segment of the road). Availability payments are paid on periodic basis during the contract period, which typically ranges from 15 to 25 years), and start upon completion of infrastructure facility.

<u>Key features of availability payment contracts</u>. Contracts normally include penalty clauses that trigger a reduction in the periodic payment if, during the relevant period, the infrastructure was not made available at the contractually agreed conditions²⁴. Some contracts for availability payments contain clauses for performance bonuses if the infrastructure is provided at better-than-agreed conditions, although this is not common. Because the party that makes the infrastructure available is responsible for both the financing construction and the operations and maintenance (O&M) of the infrastructure, availability payments cover both capital and O&M costs.

<u>Availability payments as risk allocation mechanism</u>. Availability payments are not widely known in the Philippines as a form of private sector participation in the road sector. They are used extensively in India, the United Kingdom and Canada. Australia is beginning to embrace availability payment transactions for road projects. They can be seen as a variation on two PPP mechanisms that are commonly used for expressways: (i) design-build-operate (DBO), and (ii) BOT/concession (i.e. the model currently favored by DPWH).

Under a DBO arrangement, the public sector pays a private sector party for the design, construction and subsequent operations and maintenance of an expressway. The private sector party will not be responsible for the financing of the road, which therefore may but does not need to be tolled (this is because the private sector party will be paid by the public entity and not by tolls from road users). Under a BOT arrangement, the private sector is not only responsible for design, construction and operations and maintenance, but also for financing and

²² The constraints mostly result from the lack of integration of the toll roads into the road network and the lack of interoperation between them to facilitate optimised traffic flow.

²³ The International Roughness Index (IRI) is a scale for roughness based on the simulated response of a generic motor vehicle to the roughness in a single wheel path of the road surface. (Source: http://www.dot.state.mn.us/materials/smoothnessdocs/IRIIntroduction.pdf).

²⁴ DPWH PPP Contracts already require the Concessionaire to comply with Minimum Performance Standards and Specifications and KPIs.

toll collection. Because the BOT contractor will need to recoup its investment from tolls from road users, it is exposed to traffic demand risk.

From a risk allocation perspective, availability payments lie between a DBO and BOT arrangement. Unlike a DBO contractor, a private sector party that enters an agreement for availability payments is responsible for financing the road, but then it will recoup its investments from the availability payments themselves, and not from toll revenue. An availability payment contractor is therefore not exposed to traffic demand risk, and the public sector may (but does not need to) toll the road. Refer to Table 1 for an overview of PPP arrangements in the expressway sector.

Table 1: Allocation of Responsibilities between Public and Private Sector Parties for Selected Expressway Contracts

Contractual Arrangement	Design and Construction	Operations & Maintenance	Project Financing	Toll Collection	Traffic Demand Risk
Design-Build	Private	Public	Public	Public (if any)	Public
DBO	Private	Private	Public	Public (if any)	Public
Availability Payment	Private	Private	Private or Public/Private	Private or Public (if any)	Public
BOT/Concession	Private	Private	Private	Private	Private

Source: Consultant, based on Availability Payment Mechanisms for Transit Projects (KPMG, 2009)

International Experience with Availability Payments for Expressways.

Availability payments for expressways are widely used in Canada, the US and the UK (usually for expressway, railways and public transit systems), and have more recently been introduced in Australia and continental Europe. India has a history that goes back to 2006 for Availability payment contracts (called annuity contracts) and several Southeast Asian economies, including Indonesia and Viet Nam, have recently amended their legal frameworks to allow for availability payments for infrastructure services provided by the private sector.

To date, availability payments have not been applied in the Philippines for expressways (but have been applied for the financing of social infrastructure such as school buildings). As stated in the Consultant's Inception Report of November 2016, the Department of Budget and Management has recently issued a circular (DBM National Budget Circular No. 564 of 2016) that permits the Government to provide various forms of support to PPP projects, including availability payments.²⁵

What are the Benefits of Availability Payments?

Both a BOT contract and a contract for availability payments offer two important benefits that are not provided by DBO or traditional design-build contracts. Both types of contracts: (i) enable the public sector to mobilize private sector financing for the design, construction and

²⁵ Peer Review and Capacity Building on APEC Infrastructure Development and Investment—Inception Report. AARC Ltd. November 2016.

Operations and Maintenance (O&M) cost of an expressway, and (ii) provide an incentive to minimize the LCC of the expressway (assuming that the contract duration closely matches the economic lifetime of the project, which is usually the case). At the same time, a well-structured contract for availability payments will capture certain additional benefits that a BOT arrangement does not offer (or does not offer to the same degree). The most important of these benefits are:

- Improved risk allocation, which is attractive to the private sector and has the potential to reduce the overall cost of a road.
- Reduced negative externalities, notably avoidable congestion.
- Improved road network management, which is possible because would be no separation in the management of toll roads and other roads in the national network.

Each of these benefits are discussed in turn.

<u>Improved Risk Allocation</u>. To minimize the cost of an infrastructure project undertaken in a public-private partnership, risks should be allocated to the party that is best able to manage the risk. This is the reason why, for example, the public sector usually assumes the responsibility for land acquisition and assumes the related risks for delays and cost overruns in acquiring the necessary land for an expressway.

Assigning traffic demand risk to the private sector, as is the case for expressway BOT contracts in the Philippines, has the important advantage of insulating government budgets from any adverse changes to traffic demand (if actual traffic is lower than expected traffic, this will affect the revenue projections of the private sector, not of the public sector). However, projected traffic demand is heavily dependent on factors that are outside the control of the private sector, such as the construction of non-tolled alternative roads by the public sector, increases in gasoline prices or taxes on the ownership or use of vehicles.

Because private sector parties will need to cover this risk in their bid prices for a BOT contract, these prices (and the resulting toll rates) will normally be higher for BOT expressway than for an expressway under an availability payment contract. At the same time, the use of availability payments continues to enable the public sector to attract private sector financing for the design and construction of the road (unlike design-build or DBO contracts, which are directly funded by the public sector).

<u>Reduced Negative Externalities.</u> Under a BOT arrangement, the full cost of an expressway will be recovered from tolls that are charged to road users for the duration of the contract period. In economies where electronic tolling is not feasible, such as the Philippines, tolled expressways are access-controlled. Road users normally collect a ticket when entering the road and pay a user fee at a toll booth when leaving the road. In density populated urban areas, such as Metro Manila, the time need for ticket collection and toll payment increases congestion (and thereby, indirectly, air pollution and noise pollution), which is therefore a negative external effect of charging tolls. Using an availability payment contract gives the public sector the option to forego tolls, either on the entire road or on segments where negative externalities are especially prevalent, in order to improve public welfare.

<u>Improved Road Network Management</u>. Even if individual expressways managed under a BOT contract would not cause negative externalities, expressways under a contract with availability payments would nonetheless provide DPWH with additional flexibility in the management of the national road network. This is because availability payments would provide DPWH with the options to forego tolls or set tolls at different levels than stipulated in a BOT contract, and

these options may be instrumental in optimizing the overall traffic flow in the network.

<u>Cost of securing the benefits from availability payments</u>. The realization of the benefits from availability payments comes at a cost. When compared to BOT contracts, the most important of these costs are: (i) higher public expenditure (especially in the short term), and (ii) higher risks to the public sector. Although the benefits of availability payments may outweigh the costs, this is not necessarily the case for all expressways. For example, inner city expressways in heavily congested areas are more suitable for availability payments than intercity expressways with relatively predictable traffic demand.

It is not argued that DPWH should consider replacing BOT contracts with contracts for availability payments. Instead, availability payments should be considered as an alternative mechanism that could be used instead of a BOT, DBO or other PPP arrangement, depending on the characteristics of the individual expressway project, but taking the wider economic impacts of the expressway into consideration.

Interoperation and Interconnection of Toll Roads

Introduction: Defining the Toll Road Problems

As the road network manager, DPWH needs to address interoperation and interconnection issues for the PPP toll roads, for those operating on Luzon Island now and for toll roads that are planned for implementation over the next 5 years or so. The fundamental reasons to address this issue are:

- There are different toll road owners who interconnect and interoperate, but there is no seamless arrangement for travelling the toll roads.
- There is proliferation of toll booths (for each completed toll road project) that interrupt the free flow of traffic to, on and off the toll roads because they are mostly fitted with toll booths and operate on a 'pay as you go' system.
- Toll roads need road system management and integration with the surrounding network and should be integrated as part of the road network and not separate from it.
- There is no interoperation arrangement in place between different toll road owners, and even between toll roads that are under a common owner. There are limited RFID arrangements for the automatic payment of tolls by users.
- The toll road interconnection policy is managed on a project-by-project basis, without a standing policy being in place.
- There are potential significant traffic problems in urban Manila with the absence of interoperation arrangements.

Management of Toll Roads Planning and Implementation

An Australian Aid Project under the PEGR²⁶ Program in 2007/08 identified the lack of consistency between the DPWH and the TRB on toll road management. The solutions that were brought about by that program are discussed below.

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²⁶ Philippine-Australia Partnership for Economic Governance Reforms Program.

The inconsistency issue had largely been resolved from 2008 to 2012/13 where two significant decisions were made:

- <u>Integrated Network Management</u>: The first decision was that all PPP roads were to proceed through DPWH and not through the TRB (through a Presidential Executive Order in 2007). The DPWH as the road network manager was given the responsibility for deciding PPP roads and managing the procurement and ongoing contract management. TRB's role was limited to existing franchise toll roads under the old Philippine National Construction Company franchise that expired in 2007.
- <u>Automatic Issue of Toll Operation Certificate and Toll Rate Adjustments</u>: In 2012/13, the TRB was controlled within new PPP contracts to the automatic issue of the required Toll Operation Certificate and the automatic adjustment of toll rates according to a parametric formula applied to toll rates bid by the winning Concessionaire.²⁷

These two policy stipulations are currently operating for all PPP roads. They operate to bring the Philippine system closer to international practice: under that policy, DPWH is the sole entry point for planning and determining the toll roads for the Philippines; and where the Concession agreement controls the operation and management of the PPP road there is to be no discretionary intervention by a third party.

That policy and arrangement has provided greater certainty in PPP Toll Road contracts within the Philippines.

The Interoperation Problem Defined

There are no government standards nor contractual measures in place for the interconnection and interoperation to work to international standards. The problem is compounded by the high number of pay-as-you-go toll booth transactions. With the continued introduction of PPP roads into the market and all being expressway standard, and with those PPP roads having different owners that interconnect and interoperate, traffic management and better integration with the road network needs attention by DPWH.

The problem of interoperation is best explained by diagram. Diagram 1 is the current network of PPP roads and how they do connect now or will connect when completed. The diagram shows the number of toll booths for each toll road. Diagram 2 shows the toll roads within Metro Manila and the areas where new toll booths are to be placed. It shows the mixed ownership and demonstrates the number of toll booths that are or will be in close proximity to each other.

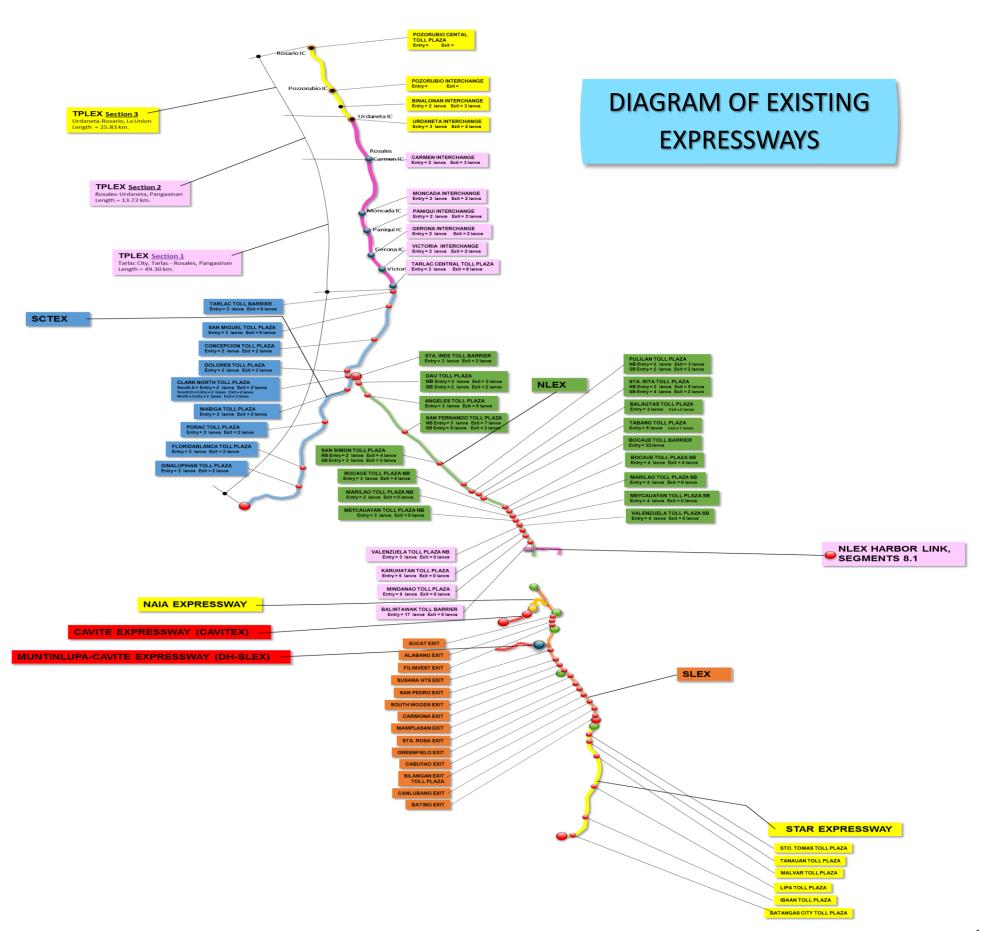
15

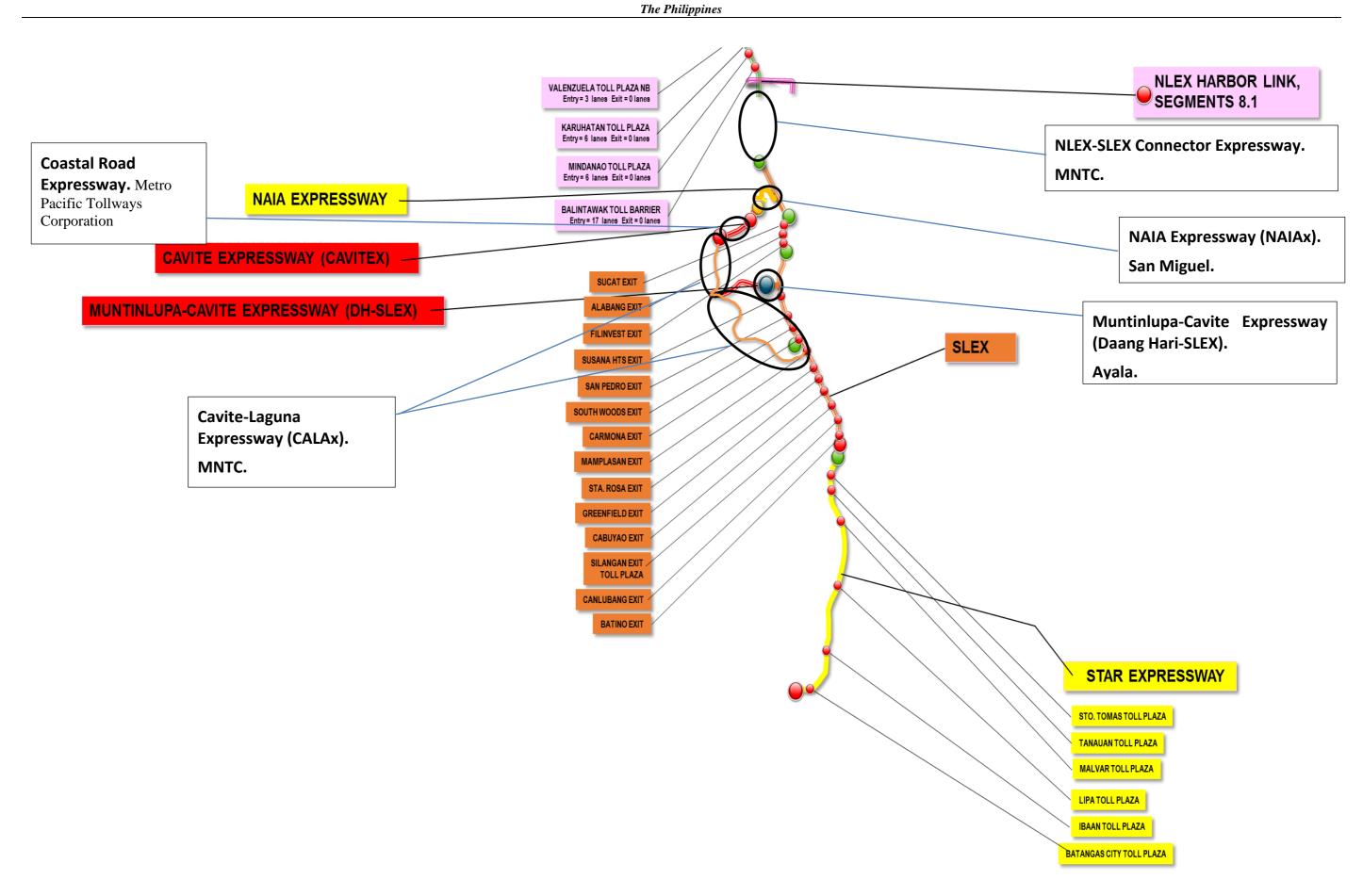
²⁷ This was done by incorporation into the Concession Contracts and a resolution of the TRB was appended to each Concession which showed the TRB resolution to automatically issue the TOC and adjust the toll rates according to a parametric formula.

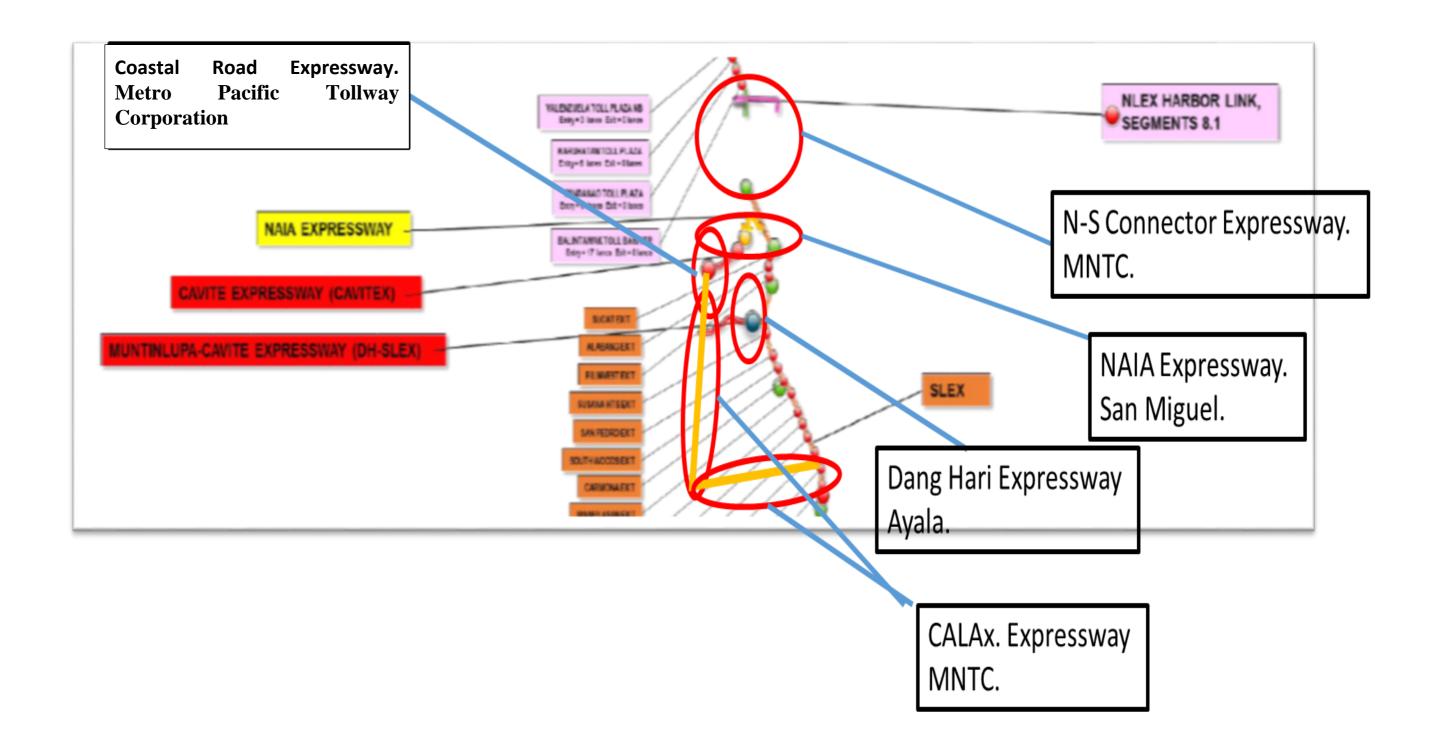
The diagram shows all current toll roads and the toll booths per toll road.

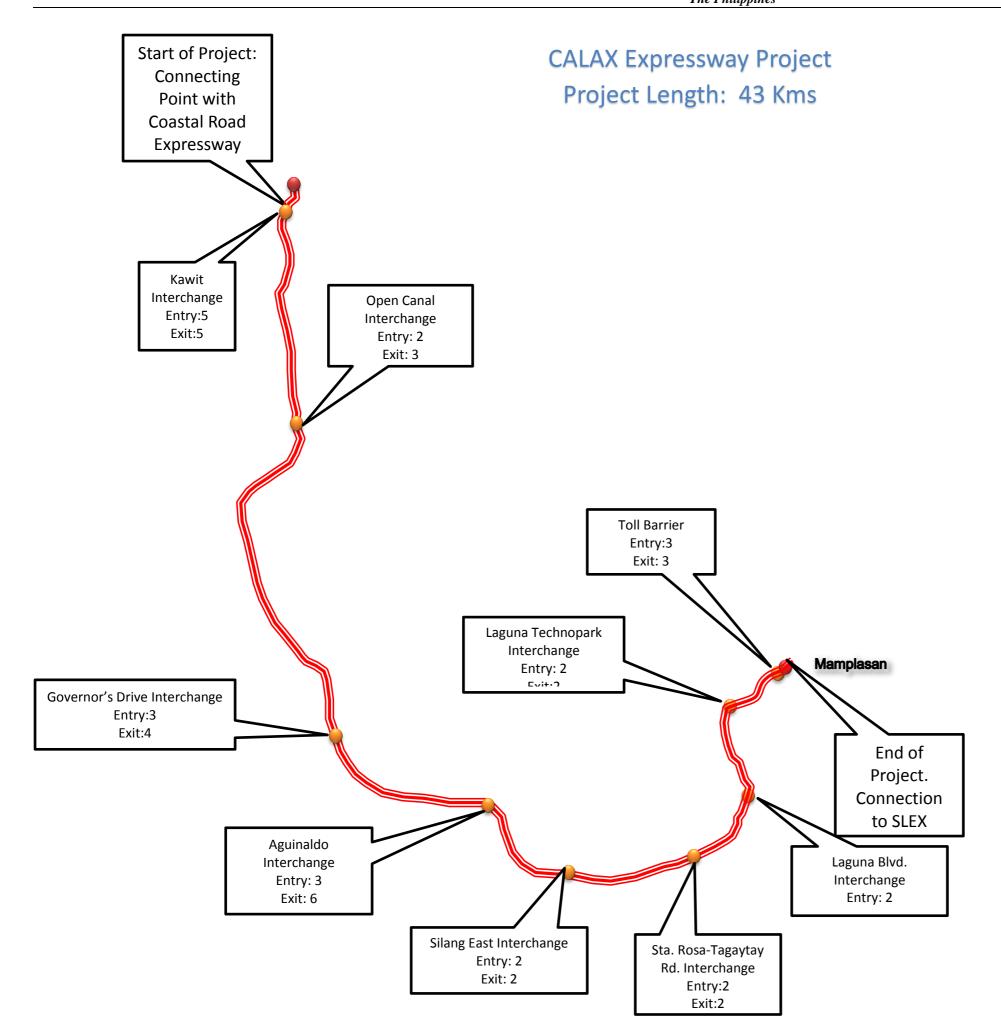
The diagram does not include:

- Metro Manila Skyway System (Existing Stages 1 and 2)
- Metro Manila Skyway Stage and C-6 Expressway (under construction)
- Proposed SLEX Extension
- CALAx (recently awarded)
- North-South Connector (NLEX to SLEX)
- Additional expressways planned by DPWH
- Recent Unsolicited proposal by MNTC for C5 Road
- Connecting C5 Road to Coastal Road Expressway









From the diagrams, the following conclusions can be drawn:

- There is a planned proliferation of toll booths that are likely to cause serious traffic problems within the expressway network. Toll booth delays are likely to become chronic.
- Toll booths are employed because there is no interoperation policy and there are now different owners connecting to each other's toll roads.
- The level of service expected of a PPP road will decrease.

As an example of the potential problem: on the NAIA expressway²⁸, there are three toll booths within 500 meters of each other even though the three connecting roads – Skyway and NAIA are owned by the San Miguel Corporation and the Coastal Road Expressway is owned by the Metro Pacific Tollway Corporation.

TRB controls the policy and requirements for toll booths but manages each toll road on a project basis and not on a network basis. This approach fails to consider the interoperation issues of a network. DPWH has a road network and connectivity role and needs to develop a set of standards for interoperation and interconnectivity that are based on international practice. This begins the process of managing the toll roads on a network basis.

The problem is likely to be compounded when the North-South Connector Road is built and the CALAx Expressway (which will be owned by MetroPacific) is connected to the San Miguel owned SLEX

This issue raises three significant questions that require policy decision and action:

- Structuring an interconnection policy and standard through DPWH for implementation in the next 18 months. One that gives DPWH as the road network manager sole responsibility for how it is structured and implemented;
- Structuring an interoperation policy and mechanism in the next two years. Again, that role should be allocated to DPWH with supporting standards and capacity building to undertake the role;
- The need to develop a plan to move most vehicles from the pay-as-you-go system to an automated system. Again, that involves DPWH creating an environment to establish an efficient way to gain that quantum change.

The impact on existing toll road concessions will require investigation. Discussions will be needed with existing concessionaires. The discussions should be led by DPWH and involve also the TRB and the Bases Conversion Development Authority (both of whom control some existing toll road concessions).

These issues also affect the toll road network in Jakarta. There is no interoperation policy and consequently no interoperation arrangements in place. This is creating and has created a position where there is substantial queueing for entry and exit to toll roads and at toll booths along differently owned sections of expressway.

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²⁸ More information about the NAIA expressway project is available in the following APEC document: Infrastructure Public-Private Partnership: Case Studies of APEC Member Economies (2014/FMM/019).

The Way Forward Including Capacity Building

DPWH needs a policy and strategy for interoperation of the toll roads and an effective mechanism to bring them into the road network and manage them and their performance on that basis. Two issues need addressing:

- Capacity building and knowledge building on interoperation and interconnection to understand what the Philippine needs will be and how to adapt solutions to the Philippines;
- A technical study on how to introduce these two issues into the operating standards for all toll roads.

Review of the Draft PPP Law

The Philippine Legal System

The legal system of Philippines has a legal system of Civil, Common, Islamic, and Customary law²⁹. This notion is supported research in 2014 published in the *Philippine Journal of Labor and Industrial Relations* that summarizes the Philippine Legal System as follows:

"In some recent international literature on comparative law and economics, the Philippines has been misclassified as a civil law family country. This paper provides a corrective to this view by tracing the foreign influences on the Philippine legal system as a whole, and on the development of labor law specifically, to demonstrate that American common law influence has far outweighed that of the Spanish civil law heritage. However, this is only part of the story, as in the post-colonial era, the law of the Philippines has progressively reflected local political and economic conditions and in many instances, has developed without any direct reference to external models. Hence, this paper argues that the Philippines is more rightly classified as a hybrid legal system dominated by common law traditions, but that such a classification will still not adequately describe the nature of the current system (emphasis added by Author)". 30

It is an important issue to assess the need for a Law in the Philippines. The legal system of the Philippines requires PPP transactions to be developed through Law. However, the way the Law is to be structured should be left open. It is the second part of this statement that forms the basis for the high-level review of the Draft Philippine PPP Law.

A Comparison to Other Economies

It is assumed that the Philippines will pursue a PPP Law.

The following table shows the position within several other economies. It shows that the approach to developing a PPP Law is not universal practice. It depends on the legal system of the particular economy.

²⁹LAWi Asian Encyclopedia of Law: http://lawi.asia/philippine-legal-system/

³⁰Classifying the Legal system of the Philippines: A Preliminary Analysis with Reference to Labor Law

Economy	Law ³¹ – Yes or No	Comments
Indonesia	Yes	New in 2014. A Presidential Decree. Prescribes transactions, risks and government decisions
Viet Nam	Yes	New 2015. A Decree. Prescribes transactions, risks and government decisions and industry sectors where PPP applies
European Economies	Yes (most)	Depends on whether the jurisdiction is civil or common law based.
Australia*	No. Guidelines (under National Public Private Partnerships Policy and Guidelines)	Comprehensive development, transaction, risk and monitoring guidelines
New Zealand*	 No. the following government publications mandate the consideration of PPP procurement. Cabinet Office Circular on Capital Asset Management – which sets out the government's expectations for the approval of, and assurances relating to, major capital projects. Government Rules of Sourcing – which govern the planning and execution of procurement by government agencies in New Zealand. 	As above
United Kingdom	No. Guidelines	As above
Canada*	No. Guidelines (under Financial Administration Act and Treasury Board Policy)	As above
South Africa	No. Guidelines	As above

Note: * Based on the Guidebook on PPP Frameworks in APEC Region, by APEC Investment Experts' Group, May 2015.

³¹ In this table the definition of Law includes Parliamentary Law and Presidential Decree.

The question is, what sort of PPP Law is needed to bring the current new international practices in PPP to the Philippines. The PPP Center has continuously reviewed the PPP approach in the Philippines and learned from international benchmarks. That learning is in part incorporated into the Draft PPP Law.

The Current Law and the Proposed Law

The current BOT Law³² and the Implementing Rules and Regulations³³ describe in detail the types of PPP transactions that can be undertaken within the Philippines and the way the procurement is to be undertaken. The Law and the Regulations also specify base level contract provisions that are to be included within any BOT arrangement that is entered into by the government.

The Draft PPP Law is meant to achieve:

- Amending the current BOT Law to PPP Law;
- Utilizing a VfM approach in determining projects to be undertaken through PPP;
- Defining in detail more types of PPP transactions what base level conditions will apply to those transactions;
- Establishing the PPP Center and the PPP Governing Board, and their respective roles;
- Creating a Project Development and Monitoring Facility (PDMF) and institutional arrangements;
- Creating a more structured approach for the PPP environment and creating an attractive and lower risk investment climate for PPP;
- Enabling the fast-tracking of PPP projects that have significant impact to the economy;
- Redressing critical investment issues such as tax obligations and where they fall in a PPP Transaction;
- Establishing basic processes for procurement of PPP transactions and fix a range of issues in the procurement process that have been identified through practice since 2011;
- Creation of a Risk Management Program Fund that will enable the National Government to manage its fiscal risks and enhance its credibility among PPP proponents.

The PPP Center has continuously reviewed the PPP approach in the Philippines and learned from international benchmarks. That learning is, in part, incorporated into the Draft PPP Law. The type and size of PPP transactions in the Philippines have been quite large and the interest by the private sector has been strong. These are laudable improvements since 2010 when there was little to no interest in PPP within the Philippines either from the government sector or the private sector.

The Focus of the Draft Law Review

It is proposed to limit this review to just two policy considerations: what should the Draft PPP Law contain and how can that be achieved.

³² Republic Act 7718 The Build Operate Transfer (**BOT**) Law

³³ The BOT Law Implementing Rules and Regulations

The Philippines needs a PPP Law for PPP transactions to be undertaken. However, the Philippine system could learn from practices in common law systems and the way PPP transactions have moved and developed over the past 5 years. The key factor in the PPP market, especially well practiced markets such as India, Australia, the United Kingdom, New Zealand and Canada, is the flexibility that government has to enter into contracts and the flexible structure of those contracts. This principle is the key element in this discussion.

The Draft Law - Types of PPP Transactions

The Draft PPP Law now contains detailed types of PPP transactions that can be undertaken by the government. It defines those transactions and their basic structure and risk allocation. It also defines issues such as government subsidy and how much the government can place into a contract before the transaction becomes contrary to the Law.

The list of PPP transactions is comprehensive. But the fact of having a list of transactions and their structure within the Law is problematic. Internationally, PPP transactions are being applied in different ways. As PPP is applied and becomes more flexible, a rigid approach through Law becomes quite problematic and transactions that might be beneficial to the Philippines can become excluded because of their structure and risk allocation does not comply with the proposed Philippine PPP Law

As an example:

In Australia, the Government of Queensland has recently commissioned an Availability Payment PPP for a road outside its capital city Brisbane. The government has provided 70% of the capital for the road and the private sector is financing 30% of the capital. The government will make an availability payment to the private sector that covers:

- The financing by the private sector.
- Design and construction of the road.
- The operation and maintenance of the road.
- The availability of the road.

This is a form of 'blended financing' of the infrastructure.

This type of PPP arrangement is unlikely to be available to the Philippines under the currently defined transactions. It is also possible that the government contribution could be seen as a subsidy and the PPP Law limits subsidy arrangements to 50% of the project value.

What kind of Law is Needed?

The PPP Law of the Philippines should be one that is flexible and adaptive to the changing methods of procuring PPP projects³⁴. The Law must be flexible to cope with a fast-changing transaction market, as indicated with the example above from Australia.

To ensure flexibility, the transactions need to be defined more by risk and allocation of risk than by 'pigeon holing' into specifically described transactions. Issues like government subsidy

³⁴ The Draft PPP Law contains a 'catch all' provision that the Investment Coordination Committee of NEDA may approve a variation of a specified PPP transaction. That may provide some assistance with flexibility but the variation must be within the parameters of the Law and cannot override fundamental issues such as government support limitations of 50% of project value.

need to be flexible or defined very narrowly so that a blended finance arrangement between government and the private sector can form a transaction methodology.

The proposed PPP Law has been refiled with Congress in 2017. It is recommended that the Draft Law be reviewed (prior to its refiling with Congress) to establish a more flexible approach to PPP and one that can be competitive and focus on risk allocation and investment structures.

1.4 CAPACITY BUILDING

Capacity Building - a Key Pillar for Change

Capacity building is one of the key pillars in the review of the road infrastructure management arrangements for the Philippines. In that context, DPWH and the PPP Center undertake their own capacity building programs and have received substantial capacity building assistance. Over the past decade, DPWH capacity building has concentrated on road management from a policy and strategy perspective and from a technical perspective, including road feasibility analysis, PPP project development, value engineering which includes LCC and VfM. The PPP Center, since its formal establishment in 2012, has concentrated on developing its capacity based on international benchmarks in PPP transactions. It has also undertaken substantial training in contract and project management and understanding the fiscal and financial aspects of PPP transactions.

Capacity Building - Developing a Practical Approach

This aspect of the project is focused on the practical approaches that could be developed for DPWH and the PPP Center to enhance their skills and knowledge. The section concentrates on what each has put forward as a basis for a program that meets their needs over the next 2 to 3 years and will provide substantial assistance to meet the government's program to develop much improved infrastructure for the Philippines.

The delivery of the capacity building program also requires a more imaginative approach. The method needs to be both targeted and cost effective. It needs to change the standard approach of 'class lessons' and use more modern techniques that are problem solving based approaches³⁵ and as well as adopting webinar based delivery from training organizations.

To target capacity building that is both practical and desired by DPWH and the PPP Center, two workshops were held to review the initial assessments provided by both organizations. They were held on 16 and 17 January 2017 respectively. The format was structured around the APEC questionnaire and discussed openly with the participants. The assessment is based on three principles:

- the topic within the APEC questionnaire,
- the reason for the capacity building to give some scope to future terms of reference for capacity building programs; and
- an outline of the capacity building need to provide a focus for the development of the program.

The following tables are the result of the two workshops.

DPWH Capacity Building

The DPWH capacity building review was limited to raising no more than 8 to 10 issues to keep the needs within 'doable' boundaries. The focus therefore was on:

³⁵ Training Sessions for the PPP Center under an ADB TA used problem solving techniques for financial assessments, contract management and contract negotiations and disputes. Training assessments by participants indicated that the method was preferred to 'class lesson' type training.

- developing quality projects and enhancing the use of tools such as VfM, LCC and Value Engineering;
- structuring PPP expressway transactions to international benchmarks; and
- improving management tools for planning and evaluation of the road network and road projects.

Capacity Building Topic What is Required Topic: Legal and Guideline Amendments to **Broad Requirements:** facilitate policy changes in PPP Capacity Building on Project Development, Construction Supervision, and O&M. Need to Reason: develop a Capacity Building program with the The PPP Unit has many new staff as a result of PPP Center. the DPWH rationalization plan. Knowledge and capacity building in PPP transactions needs substantial investment. It is at the coalface of the PPP transactions: designing, procuring, monitoring construction and managing implementation. Topic: Land acquisition provisions require **Broad Requirements:** effective processes on ROW and utilities Complete training in the legal issues related to relocation land acquisition and briefing the Solicitor Reason: General in cases filed in the Courts. DPWH legal staff have no specialized training in Develop a system to lessen the backlog of cases ROW acquisitions, so they learn by practice. In held by the Solicitor General that cause land general, they do workshops, read manuals. acquisition delays for projects. Specialized training is needed for land Develop a coordinated database among agencies acquisition laws. for utility locations. There is lack of systems and coordination with utility providers for land acquisition in terms of utilities relocation. **Topic:** Ex-post evaluation – implementation **Broad Requirements:**

Topic: Ex-post evaluation – implementation by agencies and capacity building

Reason:

ODA projects are required to undertake an expost evaluation but budget funded projects are not. For ODA, this is standard practice, but budget funded projects have no evaluation criteria. Criteria needs to be developed for budget funded projects.

Need to focus on adaptive and mitigation measures as per Climate Change Commission. At the moment, this is taken at a Post-Evaluation level, because DPWH does not have a common measurement for M&E.

Develop post-evaluation guidelines, practices and increase Capacity Building on post-evaluation mechanisms. Use ODA funded project guidelines and practices as the benchmark, but not adopted because of differing requirements.

Facilitate the development of budget funded evaluation criteria. Further assistance is needed to institutionalize Post-Evaluation.

Capacity Building for infrastructure climate change compliance. The need for a Climate Change Office (or equivalent) for DPWH that

can consolidate all measures being undertaken for compliance.
Broad Requirements:
delivery. Note: this concept is supported by the PPP Center from its Workshop.
Broad Requirements:
Develop accredited experts in Value Engineering and LCC analysis. Continuous training is required. A core group within DPWH is required. Note: If Availability Payment expressways are developed then value engineering, LCC and VfM will be important assessment tools.
Broad Requirements :
Include within the training the development of a decision approach for DPWH and NEDA on the weighting for VfM as a part of the decision criteria.

Capacity Building Topic	What is Required	
Topic: Toll Road Interconnection and Interoperation Issues Reason: DPWH and the TRB need a higher level knowledge of how to develop and implement a policy for the interoperation of toll roads ³⁶ . A complete policy is needed to institutionalize interoperation and interconnection of toll roads. Interoperation and interconnection policy and arrangements will be critical inputs to an effective expressway management system within Metro Manila.	Knowledge based training is needed on how develop an interoperation system and monitor implementation. Consider the inclusion of all the industry in to capacity building program. This approase potentially provides a foundation for an agree implementation approach and standard.	
Topic: Risk Identification and allocation approaches for types of road transactions. Reason: Risk analysis and allocation is being undertaken now for PPP roads. Risk assessment and allocation is undertaken using NEDA formats but they need to recognize different transactions. ³⁷ If availability payments are considered, risk allocation will be different. Training is needed to address this issue.	Broad Requirements: Revision training on risk identification and allocation on a project transaction basis. Revision of risk assessment documentation.	

PPP Center Capacity Building

The PPP Center capacity building review focused more on the overarching issues for PPP in line with its mandate. The key capacity building issues were:

- developing a PPP law that was flexible and internationally competitive;
- ex-post evaluation approaches for the PPP Center; and
- practices in PPP project promotion, especially with Departments that have little experience in PPP projects.

³⁶ Interoperation work for NAIAX-CAVITEX-Skyway-MCX-SLEX-STAR and NLEX-SCTEX is under progress now.

³⁷ A review of the Generic Preferred Risk Allocation Matrix has been suggested in this Report.

Capacity Building Topic

What is Required:

Topic: Legal and Guideline Amendments to facilitate policy changes in PPP

Reason:

Review of the draft PPP law revision. The draft is based on lessons learned, facilitate those lessons learned to formulate guidelines, laws, and regulations.

The PPP Center wish to implement a Law and legal structure that reflects modern practice and is competitive for PPP investment. The law, regulations and guidelines need flexibility to be adaptive for types of PPP transactions.

Broad Requirements:

Review the law to determine which legal level for policy and how to structure and identify which policies are laws, regulations, or guidelines.

Capacity Building on what transactions are and what conflict currently exists between the PPP laws and implementing organizations.

Topic: Ex-post evaluation – implementation by agencies and capacity building

Reason:

The PPP Center has the concept of lessons learned and has been using this approach but requires formal training on ex-post evaluation approaches and systems. This is a similar issue with DPWH.

Note: The Department of Education Availability Payment PPP granted in 2014 has a monitoring system in place for the project implementation and quality management.

Broad Requirements:

A system for ex-post evaluation is required. Capacity Building in both system development and system use is required. The training should incorporate contract management training.

Topic: Risk Identification and allocation approaches for types of road transactions

Reason:

The standard Government risk assessment approach and documentation managed through NEDA requires major updating to take incorporate international standard project transactions – e.g. Availability Payment risk allocations, analysis and mitigation.

Need to ensure that the transaction risks and their management are clear and approved by NEDA and reflected in the transaction documents. Currently PPP Center advise that the position is not clear.

Broad Requirements:

Capacity Building for benchmarked transaction risks and a regular update of international practices on risk definition, allocation and management.³⁸

Include identification and management of contingent liabilities within the scope of the risk capacity building program.

³⁸ Note earlier recommendation to include the NEDA Investment Coordination Committee in the capacity building program.

Capacity Building Topic

Topic: Promotion of PPP projects requires greater interagency cooperation

Reason:

There is good cooperation with DPWH because it has a dedicated PPP Unit and understands the process. DOTr manages PPP on a per project basis. Institutional knowledge is not retained and continuity between project development and implementation is lost.

Need better management of PPP projects where there is more than one relevant agency. For example, co-granting by the DOTr and the Light Rail Transit Authority (LRTA).

What is Required:

Broad Requirements:

Benchmarking exercise first on good international practice. Develop a set of promotion protocols/guidelines and then undertake capacity building program.

Specific risk training in the practice of co-grantors of PPP Contracts. Endeavor to eliminate the current Philippine practice.

1.5 COOPERATIVE ARRANGEMENTS WITH PROVINCES

Introduction

The subject of cooperative arrangements was introduced by DPWH at the initial project meeting in September 2016.

DPWH is undertaking an expanded role in infrastructure provision and development. There have been recent Government decisions under infrastructure approval procedures that provide for an increased focus on infrastructure provision at local government level. This provides DPWH with a challenge in several respects, including establishing road projects that incorporate connectivity between infrastructure modes and regional development as major component of their purpose. Cohesive integrated rational plans will be required and that aspect is an area where DPWH does require assistance and options for creating a better project planning system, which will include institutional issues and capacity building.

The methodology for examining cooperative arrangements included the following steps:

- An international benchmark (based on available literature) for cooperative delivery mechanisms of infrastructure between national and sub-national governments. The benchmark will be based on funding arrangements, institutional arrangements and procurement process;
- An analysis of current policy in the Philippine national government for establishing cooperative arrangements;
- A potential approach for establishing cooperative arrangements, including funding mechanisms, types of projects, establishing special purpose vehicles, and changes to procurement policy and practice.

The Provincial Cooperation Benchmarking Exercise

This section is focused on how national Governments interact with regional, provincial, and municipal (local) Governments in the context of infrastructure implementation. Some commonalities between different economies are indicated, with an emphasis on successfully implemented projects and programs. This discussion is focused on the delivery of road projects. It is reasonable to extrapolate many of the presented data to other project types.

Some broad commonalities are evident from the research. Capital and large secondary cities in many developing nations have been subject to focused capacity development efforts for the past few decades, with broad success. Capacity exists in most developing economies to successfully finance, plan, and implement beneficial infrastructure in urban centers. For the purposes of this discussion, these large urban centers and associated representatives are assumed to take the "national" role in national/subnational cooperation.

Manila's National Capital Region is a good example, with many large-scale infrastructure projects successfully placed in recent years - toll expressways, commuter rail expansion, and airport developments for some examples. While there are issues with planning, scaling, usage, etc. these may be more related to political and demographic forces than to the actual capacity for implementation. Rapid expansion in subnational urban centers is observed worldwide, particularly in cities of 1-5 million population, with commensurate pressure on infrastructure quality.

Substantial deficits in infrastructure service are observed in national urban centers worldwide, particularly with respect to transport networks. Few large urban centers efficiently manage traffic flows to the satisfaction of commuters. Utilities networks tend to have a restricting and inertial effect on other infrastructure systems, and suffer from obsolescence due to access problems and high access costs. With some exceptions, similar deficits are observed with subnational governments' capacity to successfully finance, administer, and maintain road networks and other infrastructure to acceptable service levels. Manila is widely regarded as having the worst traffic congestion in the world, though metadata is limited from some likely competitors such as Nairobi and Dhaka.

It is noteworthy that the USA has both some of the worst (Los Angeles, DC) and best (Phoenix) commuter satisfaction indices in the world, indicating that some municipalities are more capable of planning, financing, and procuring infrastructure than others under the same national umbrella. This reality indicates that some subnational entities are better than others at managing their own infrastructure and/or cooperating with national entities for long term success.

Appendix 2 contains the reference material for the provincial cooperation benchmarking exercise.

Analysis of Current Policy in the Philippines

Local Government Structure

LGUs are divided into three levels – provinces and independent cities; component cities and municipalities; and barangays. Section 17 of the Local Government Code stipulates that LGU's are responsible for the provision of infrastructure, including roads. In general, the nationally-administered Department of Public Works and Highways is responsible for national/subnational coordination of infrastructure implementation in the Philippines.

The Department of the Interior and Local Government (DILG) is commonly assigned coordination and oversight responsibility for federally funded infrastructure, and assumes a coordination role for projects funded by international donors. DPWH, DILG, and other agencies maintain regional offices economy-wide, though capacity to implement infrastructure varies widely between regions.

DPWH Policy and Powers

The declared State policy for the DPWH in the Philippines Revised Administrative Code (1987) states:

"The State shall maintain an engineering and construction arm and continuously develop its technology, for the purposes 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. The planning, design, construction and maintenance of infrastructure facilities, especially national highways, flood control and water resources development systems, and other public works in accordance with national development objectives, shall be the responsibility of such an engineering and construction arm. However, the exercise of this responsibility shall be decentralized to the fullest extent feasible (emphasis added).

Powers and Functions of DPWH

The Department, in order to carry out its mandate, shall: (1) Provide technical services for the planning, design, construction, maintenance, or operation of infrastructure facilities; (2) Develop and implement effective codes, standards, and reasonable guidelines to ensure the safety of all public and private structures in the country and assure efficiency and proper quality in the construction of public works; (3) Ascertain that all public works plans and project implementation designs are consistent with current standards and guidelines; (4) Identify, plan, secure funding for, program, design, construct or undertake prequalification, bidding, and award of contracts of public works projects with the exception only of specialized projects undertaken by Government corporate entities with established technical capability and as directed by the President of the Philippines or as provided by law; (5) Provide the works supervision function for all public works constructions and ensure that actual construction is done in accordance with approved government plans and specifications; (6) Assist other agencies, including the local governments, in determining the most suitable entity to undertake the actual construction of public works projects; (7) Maintain or cause to be maintained all highways, flood control, and other public works throughout the country except those that are the responsibility of other agencies as directed by the President of the Philippines or as provided by law; (8) Provide an integrated planning for highways, flood control and water resource development systems, and other public works; (9) Classify road and highways into national, regional, provincial, city, municipal, and barangay roads and highways, based on objective criteria it shall adopt; provide or authorize the conversion of roads and highways from one category to another; and (10) Delegate, to any agency it determines to have the adequate technical capability, any of the foregoing powers and functions; and (11) Perform such other functions as may be provided by law (Section 3, Ibid.).

DPWH Delegation of Powers

DPWH's mandate, policies and functions comprehensively address the nation's infrastructure requirements, particularly with respect to national/subnational cooperation. In practice, DPWH has delegated a substantial portion of infrastructure budget and administrative responsibility over time, notably the Departments of Agriculture, Transportation and Communications, Tourism, Education, and other departments. DPWH has delegated approximately 52% of infrastructure spending to other agencies, largely without the commensurate increase in oversight and control necessary for an integrated approach.

Parallel and often insufficient oversight structures along with perceived accountability for success have accompanied the budget transfers. In particular, the Department of Agriculture has struggled to deliver the quantity and quality of farm-to market roads indicated by their portfolio of planned infrastructure. The 12 or so agencies that deliver infrastructure in the Philippines are all generally responsible for their own financing, procurement, supervision, and maintenance programs – resulting in duplication of use and counterproductive competition for scarce financial, management and technical resources.

ROW issues cause substantial delays for transport projects in the Philippines. RA 10752 ("Right-of-Way Act", 2016) may streamline the process. Importantly, LGU's are authorized to exercise RA 10752 for local eminent domain purposes (ref 10).

Multi-year, integrated planning is less robust in the Philippines than in most other ASEAN economies. This is particularly detrimental to the implementation of subnational infrastructure. Asynchronous national/subnational planning cycles can leave funds and other resources for

subnational projects stranded, and can lead to the implementation of obsolete, disconnected, or low priority projects.

National/Subnational Cooperation in the Philippines

National/Subnational cooperation in the Philippines is a complex topic indeed and does not appear to be structured in accordance with any federal legislation.

The Priority Development Assistance Fund (PDAF) was a discretionary fund available to members of congress established in 1990, with precursor programs as early as 1922. Many western governments have used a similar 'legislator lobby' model for funding subnational projects with national funds. PDAF was designed to allow legislators to fund small-scale infrastructure or community projects which fell outside the scope of the national infrastructure program, based on project funding requests from LGU's in their district. As a lump-sum appropriation distributed to congressmen for discretionary spending, there is little government oversight on how the funds are used after appropriation. PDAF has been the subject of numerous investigations into alleged misuse of funds in recent years. In 2013 a Supreme Court Moratorium prevented any further release of PDAF funds and declared PDAF unconstitutional.

The Bottom-Up Budgeting (BuB) program, initiated in 2012, was a coordinated attempt to drive programming and procurement from the LGU level. While not explicit, it appears that BuB was implemented to fill the vacuum created by the PDAF moratorium. In concept BuB is commendable. The BuB website states that "anyone can take part in the FY2017 budget", with procurement items originating at the provincial level for programming and budget allocation at the national level.

The BuB has been unsuccessful, most likely because BuB was not encoded in law as a requirement for federal funding and has been executed as a cooperative agreement by BuB supporters. Efforts to train subnational staff were underfunded and many proposals did not meet the minimum requirements to understand, program, fund and implement needed projects. The list of successfully implemented projects resembles that of an international donor's program, indicative of the abstract availability of national funds without the commensurate applied expert capacity to assure implementation. In July 2016, the Budget Secretary announced that BuB, with a P24.7B PhP budget for FY 2016, would be discontinued.

It is not clear how formal national/subnational cooperative infrastructure projects will be initiated, programmed, financed, and implemented in the near term (most likely an adaptation of the discretionary fund approach). The 2017 budget does include an aggressive national and subnational infrastructure program that substantially exceeds infrastructure budgets from previous years.

International Benchmark

The Philippines Compared to ASEAN and Others

The Philippines has underspent substantially on infrastructure related to long term goals, budgetary planning, and by comparison to other ASEAN economies. Philippines infrastructure ranked 91st of 144 economies in the 2014-2015 World Economic Forum Global Competitiveness Index. It is important to observe that the Philippines has improved 50 places in the same index in the "institutions" category since 2010, and 54 places in the ethics and

corruption index (ref 7). These are all positive signs that recent Government reforms are working, and that investment in subnational institutions is likely to bear similar fruit.

According to the IMF 2015 study, the Philippines has the lowest percentage of GDP invested in public infrastructure of all ASEAN economies (2.5% as compared to the ASEAN average of 6.5%)) and the lowest capital stock (35% vs 72% average) (ref 9). The latest figure of infrastructure investment in the Philippines is 4.3% of GDP as stated in the Philippine Development Plan 2017-2022 (NEDA).³⁹ A report by PwC on the outlook of South East Asian Infrastructure Spending by 2025, provides the following figures of projected annual growth.

Table: Projected annual growth of infrastructure spending by 2025

Economy	Projected annual growth, 2013-2025 (%)
Indonesia	7.0
The Philippines	10.0
Malaysia	9.0
Viet Nam	9.0

Source: A Summary of South East Asian Infrastructure Spending: Outlook to 2025, by PwC (2014).

South Africa's Situation, Methodologies, and Case Studies

South Africa has been confronted with obstacles to development similar to those in the Philippines. South Africa declared national independence in 1910 after centuries of colonial rule. A new constitution was adopted in 1993. In 1994, the government was transformed to majority rule via social action.

The national government is working to integrate diverse regions with millennia of traditional tribal rule into a comprehensive system of governance. The new constitution recognizes the status and roles of traditional leadership. Rural infrastructure services in South Africa lag significantly behind urban services, similar to the Philippines. National road networks are considered excellent by most international standards, subnational road networks are typically evaluated as poor or non-existent in rural areas.

Numerous scholars have recognized that national/subnational cooperation is essential to successful development of impoverished regions in South Africa, with many similarities to the economies and demographics of the Philippines. Given that South Africa does have the largest economy on the continent and has demonstrated notable development success in the past few decades, South Africa may be described as a reasonable benchmarking choice for this discussion – an interim nation somewhere between the Philippines and the most developed Western nations. South Africa's Global Competitive Index Rank is 56 (infrastructure 60), the Philippines is ranked 52 (infrastructure 91). South Africa has taken notable steps to improve national/subnational cooperation for infrastructure planning and implementation.

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³⁹ A recent report from USAID (2017), noted that the Philippines has successfully reached financial closure on 59 projects representing US\$ 31.1 billion in the last ten years (data from World Bank's PPI Database).

The South African Department of Public Works has undertaken an aggressive Expanded Public Works Program (EPWP) since 2004, specifically targeted at creating subnational capacity for infrastructure implementation by engaging workers in rural areas on infrastructure projects. An important component of EPWP's success was new labor legislation that permitted the national government to employ workers on a short term temporary basis, common labor conditions for construction projects.

Developing and strengthening monitoring and evaluation processes and resources at the national level and implementing the system at the subnational level has also been crucial to the program's success. Large scale contractor and worker training programs have resulted in noticeably better quality of life from in-place infrastructure, immediate employment benefits, and long term skills development in the subnational workforce and at DPW. The EPWP is funded by a single budgeting process, with funds allocated to the Department of Provincial and Local Government which identifies, programs, and implements infrastructure projects in the provinces. A Targeted Procurement System specifies, monitors, and audits a set of socioeconomic indicators throughout the program life cycle, applying objective criteria to the project selection and acceptance processes (ref 14).

A good example of national/subnational cooperation in South Africa is the Municipal Property Rates Act (2004), which provides a nationally uniform property tax framework for provincial governments and municipalities. Municipalities are responsible for imposing and levying the taxes themselves, applying simple formulae based on property class and use to the value of the property. This legislation provides reliable revenue and supports subnational development, using subnational funds. The national government is precluded, by law, from collecting tax on properties covered by the MPRA. This arrangement is typical of SA government structure, in that the national government provides a framework and monitors compliance, leaving subnational entities to develop and implement policy within the framework.

Some example projects for inter-government cooperation:

The South African Alexandra Renewal Project (ARP) has been successful in the past fifteen years. Starting in 2001, ARP addresses urbanisation issues with an integrated approach across all three tiers of government and community-based organizations, building housing, roads, sanitation. and other necessary infrastructure. ARP has successfully attracted private investors to relocate to the area.

Johannesburg, Jakarta, Bogota, and 183 other cities have implemented Bus Rapid Transit (BRT) systems over the past 40 years or so, extending lines well into rural areas in some cases. In essence, BRT's emulate train systems for a fraction of the cost, utilising dedicated bus lanes on the median with prepaid stations that facilitate rapid loading.

The success of BRT systems is a good example of municipal/national cooperation, with centralized control over bus lines and streamlining routing using modern traffic analysis technology. Manila, Cebu, Davao, and other urban centers in the Philippines appear to be good candidates for BRT. In medium or small municipalities, subnational entities may be more able

to overcome lobbies from entrenched, often duplicated, competitive transportation companies in the local context.

Municipal Bonds in the USA and the Philippines

Subnational governments in the USA frequently lack the liquid funds to finance necessary infrastructure. The process of selling a bond begins with a local government that designs a bond offering. A rating agency evaluates the government's fiscal condition and prior history of debt repayment, and assigns a summary risk rating to the bond. The bond is then sold to an underwriting firm or group of firms, who resell the bonds to investors at a profit. The underwriters may be selected through a competitive bid or chosen through negotiations.

It is important to note that municipal bonds have a long and uninterrupted history in the USA, starting around 1812. Thus surrounding legislation, risk history, regulation, etc. have been in place and mature for quite some time. Interest income from municipal bonds is often exempted from federal tax, a cooperative arrangement that provides significant incentive for investors. Bankruptcy protection for municipal bond holders is afforded by the US constitution and enshrined in federal law. While Public-Private Partnerships have seen some increased interest in recent years, the vast majority of publicly owned subnational infrastructure is funded by municipal bonds.

PPPs typically bear higher financing costs than bonds, and are risk-rated on a by-project/program basis. Thus PPPs are not supported by long term market strategy as bonds are. PPP is not attractive for small scale projects of the type often required by municipalities.

The long success of the bonds industry in the USA and elsewhere can largely be attributed to investors' trust in the cooperative arrangements between the national government and subnational municipalities, and the resulting stability of the market. In the USA, approximately USD 200Bn in municipal bonds was issued in 2014 alone (ref 15). Permitting reform is proposed as one strategy to further enhance the efficiency and Return of Investment (ROI) of municipal bonds.

While substantial regulated private resources exist in the developed Western economies to support the subnational bond industry, this is typically not the case in the Philippines subnational context. The 1991 Local Government Code does permit LGU's to issue bonds, subject to the regulations of the Central Bank and Securities Exchange Commission. However only a handful of municipal bonds have been issued nationwide, with mixed success. Notable projects funded by bond issues include Caticlan's Jetty Port, Tagaytay City Convention Center, and the Antipolo City Commercial Complex.

Research indicates that there is no national rating agency for municipal bonds in the Philippines, presenting a substantial opportunity for improvement. There is no regulated secondary market for bonds, another substantial cooperative opportunity. Pension funds, mutual funds, and similar entities would benefit from a stable secondary bond market, regulated at the national level. National tax exemptions would similarly promote the development of a stable bond market.

Potential Approach and Case Studies

An opportunity for a double benefit exists in national/subnational cooperation in that subnational needs may be better satisfied, simultaneously reducing population pressure on urban infrastructure in national centers. Demand for intercity travel and thus pressure on road

networks may be reduced if residents are more satisfied with the infrastructure in their home province. For paid services, revenue sharing between origin and destination is possible.

Iloilo City is generally considered a success story in Philippine municipal development and national/subnational cooperation. Iloilo uses a Local Governance Performance Management System to monitor performance metrics, promote transparency, and attract investment and national funding for infrastructure. Iloilo City's Development Plan appears to reasonably balance infrastructure investment with anticipated environmental and social demands. A critical element of success is the level of cooperation amongst barangay and business factions, streamlining eminent domain and planning processes. Iloilo City does experience traffic and other infrastructure pressure as a result of rapid population growth. An opportunity exists here for demonstrating sustainable, prudent development practices that may be transferable to other similar cities.

Pilots in subnational urban centers, aimed at demonstrating the feasibility of infrastructure programs at smaller scale. Jakarta, Johannesburg, Bogota, and 183 other cities have implemented Bus Rapid Transit (BRT) systems over the past 40 years or so. In essence, BRT's emulate train systems for a small fraction of the cost, utilizing dedicated bus lanes on the median with prepaid stations that facilitate rapid loading. The success of BRT systems is a good example of municipal/national cooperation in many regional cities, assuming centralized control over bus lines and streamlining routing using modern traffic analysis technology. Manila, Cebu, Davao, and other urban centers in the Philippines appear to be good candidates for BRT. Subnational entities may be more able to overcome lobbies from entrenched, often duplicate, competitive transportation companies in the local context, as Manila has been unable to do thus far.

Programs and projects specifically designed for and targeted towards national/subnational cooperation and capacity development at the subnational level. Promote the allocation of resources toward the implementation of projects, not the entrenchment of institutions. Acknowledge the need for permanent, sustainable maintenance infrastructure with conservative and realistic budget allocation.

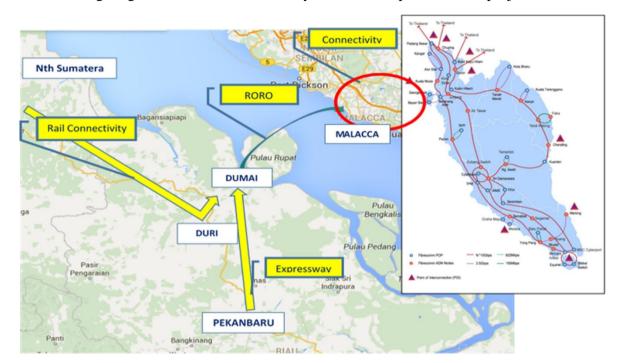
Some initial key actions have been developed for further investigation:

- Phase out/reduce infrastructure procurement and implementation for some redundant agencies as in Indonesia (ref 12).
- LGU's adopt and ratify the new ROW Act (2016) to streamline land acquisition and reduce project risk (ref 10).
- Reformed, comprehensive, normalized zoning laws and strengthened enforcement mechanisms for integrated planning, revenue generation, and public safety.
- National Governments and particularly ODA's should recognize the historical importance of local government in the Philippine context.

Indonesia as a Case Study

The Dumai- Malacca Corridor

Indonesia is about to pilot a cooperative project which has received ASEAN's approval as one of its Major Projects under the Master Plan on ASEAN Connectivity (MPAC). The project is based in northern Sumatera and it creates connectivity between Indonesia and Malaysia, access to the Singapore-Kunming rail route and to the Asia Highway Network (AHN).



The following diagram shows the connectivity for each component of the project

From Indonesia, the project involves:

- Department of Highways Ministry of Public Works and Housing (MPWPH) for the expressway;
- Department of Rail Ministry of Transportation (MoT) for the rail link to Dumai;
- Department of Water Transport MoT for the RORO and port connections between Dumai to Malacca;
- Department of Customs international connectivity for value added into the corridor for the movement of goods;
- City governments of Dumai and Pekanbaru for land planning, and complementary development.

Project Coordination is managed through Bappenas – Ministry of National Development Planning, Indonesia.

The project comprises several elements, some of which are existing projects and others are to be developed. The concept is to bring the projects together and have them work to achieve a higher level of economic impact and form part of the existing trade relationship between the economies of Indonesia and Malaysia. Key project development issues were:

- Establish a connected project timetable between three major projects: an expressway to the Dumai Port, a rail link to the Dumai Port and a port and RORO facility between Dumai and Malacca Malaysia;
- Enhance Indonesia's transport infrastructure connectivity to Malaysia: part of the value chain is to introduce bonded arrangements and customs arrangements that facilitate more efficient trade logistics between Indonesia and Malaysia;

- Create connectivity for Indonesia to the Kunming⁴⁰ rail link and greater access to the AHN.
- Create transport and goods movement options for Indonesia that does not involve Singapore as the main terminus for either rail or road.

The Institutional and Coordination Arrangements

The arrangements proposed for this corridor plan fit within the current governmental structure of Indonesia. There is no special government agency in place to deliver the project. The structure is basic and relies on Bappenas to play a coordination role and a role specifically targeted at developing the value-added components⁴¹ of the project. The structure is:

- **Institutional Arrangements**: Bappenas to lead the development of the value add components for the project.
- Coordinated Development: Develop an action plan to schedule and coordinate the infrastructure project components and the value add priorities. Rail freight facilitation to form part of the value add.
- **International Connectivity**: Create a counterpart arrangement with Malaysia (a two-nation protocol) to facilitate the value add components, combined with an investment plan.
- Funding Arrangements: Each agency retains its funds and applies its budget to the project. Bappenas monitors and manages issues and connectivity and budget spending arrangements to ensure project delivery is coordinated and on time.

Focus of Further Work for DPWH

To set out the potential opportunity for the Philippines to undertake cooperative road and infrastructure development projects with local governments, the following basic questions should be addressed:

- *The types of projects* to be the focus of cooperative approaches: would the coordination be limited to major corridor development as indicated in the Indonesia case study or a broad range of projects?
- *Potential to create an SPV* for coordinated projects: Will cooperative arrangements need an SPV to be in place or simply a project leader/coordinator like the Indonesia example?
- *Blended funds* (pooling national and local government funds) and separated funds (keeping fund streams but moved into a project in a coordinated method): Could the Philippines adopt a USA type approach for the issue of municipal bonds to fund coordinated infrastructure projects. What kinds of guarantees will need to be in place?
- *Linking projects:* Should projects be linked and not created a 'whole project' with subcomponents, like the Indonesian example.

To answer these questions, a benchmarking study that focuses on specific delivery approaches should be undertaken. An initial analysis is provided in the following table. The table indicates the benchmarks to be examined and the detail that is needed to develop implementable options.

⁴⁰ People's Republic of China.

⁴¹ Facilitating more efficient trade logistics between Indonesia and Malaysia.

	Table B1: National/Subnational Benchmarking Data					
Comparison Measure	The Philippines	Indonesia	USA	South Africa		
Administration Method - Subnational institutions that implement programs and projects	Municipal Development Fund (MDF) DILG (national) Provincial and Municipal LGU's (subnational) Ombudsman (oversight, national/subnational)	State Ministries Indonesia Infrastructure Guarantee Fund (World Bank supported PPP appraisals)	State/county/municipal road departments Office of Inspector General (national oversight) Ombudsman (subnational oversight)	Department of Cooperative Governance and Traditional Affairs Municipalities South African Local Government Association		
National/Subnational Finance/Funding Arrangements -Methods of connecting funding sources to programs and projects	DPWH (48%) and 11 other departments +/- (national) Local Government Unit Guarantee Corporation (LGUGC) Subnational VAT sharing and turnover tax ODA funding, typically nationally administered Public/Private Partnerships	MPWPH, MOT, Ministry of Energy and Mineral Resources (MOEMR) (92%, up from 54% in 2014) ODA funding, typically nationally administered Property Taxes Public/Private Partnerships	Municipal Bonds Property Taxes Income taxes (Federal and Subnational)	Government Loans Benefit Taxation Public/Private Partnerships Income taxes (Federal and Subnational)		
Infrastructure compliance criteria - Legislated requirements for acceptable, safe, sustainable infrastructure	National Building Code Non-integrated regulations, Decrees, Acts, and codes. Some ODA projects require compliance with the International Building Code (IBC). No formalized safety code. Particularly fragmented system of environmental requirements.	National Building Law 28/2002 Model building Codes Local Buildings Act 2005 (450 regions)	National, State, and Municipal Building Codes (adopted from IBC model code) Zoning Regulations	National Building Regulations Zoning Regulations City Council Requirements "Local Authorities"		
Procurement methods -How projects are commonly contracted	Approved budget for contract	Approved budget for contract	Lowest technically qualified bid	Lowest technically qualified bid		

	Table B1: National/Subnational Benchmarking Data					
Comparison Measure	South Africa					
for construction, typically at the project level						
Inspection Criteria -How projects are permitted and approved for occupancy	Local Authority Having Jurisdiction	Regional Government	"Local Authorities"	"Local Authorities"		

2. PROJECT IMPLEMENTATION

Project Meetings

The following table shows the meetings and discussions held during the project to date:

Date	Meeting/Discussion With	Subject
29 September 2016	APEC PSU	Discussions with DPWH for ToRs restructuring
30 September 2016	APEC PSU and DPWH and DTI	Restructuring project ToRs and timing
24 October 2016	APEC Project Team and DPWH	Completion of Questionnaire; facilitating formal access to PPP Centre via DPWH; Dates for December meeting with APEC Secretariat
28 October 2016	PPP Centre	Completion of Questionnaire, discussion on issues for PPP and proposed amendments to the Philippine BOT Law
14 November 2016	DPWH	APEC Review matrix. Additional issue for toll road interoperation policy review
15 December 2016	APEC, DPWH, DTI and PPP Centre	Progress and review of project. Presentation by APEC consultants
16 and 17 January 2017	DPWH and PPP Centre	Two workshops on Capacity Building requirements

Timetable

Since the meeting with DPWH, the project timetable has changed substantially. The project time-table is as follows:

Activity	Completion By
Literature review of current practices (DPWH assistance with review)	End October 2016
Research on provincial infrastructure development, institutional and capacity building	End November 2016
First Draft Report for DPWH and APEC	Mid December 2016
Draft Final Report in time for the APEC meeting in March 2017	End February 2017

Team Tasks

Project Team Member	Tasks Assigned
Peter Benson	Team Leader and review of PPP Procurement issues for DPWH. Review of the Draft PPP law for the Philippines. Report Preparation
Michelle Aguas	Preliminary research of online sources for the literature review and matrix; coordinated meetings and data requested with the stakeholders
Andre Oosterman	VfM Review with emphasis in LCC. Final report quality review
Ron Hunter	Benchmark on provincial and national government cooperation

APPENDICES

APPENDIX 1: COMPLETED APEC MATRIX - DPWH AND PPP CENTER

Criteria	Type	Name	Details	Issues	Action/s Needed
General - Public Procur	ement				
Is there a legal system in place on public procurement?	Law	Republic Act (R.A.) No. 9184 - "Government Procurement Reform Act"	- Public procurement in the Philippines is governed by Republic Act No. 9184 and the revised IRR-RA No. 9184 - RA No. 9184 applies to all procurement activities of the national government to include Infrastructure Projects, Goods and Services, and Consulting Services. This includes all departments, bureaus, offices, agencies and also State Owned Colleges and Universities, LGUs, GOCCs and government financial institutions.	None	
	Law	The revised IRR-RA No. 9184 - "Revised Implementing Rules and Regulations of Republic Act (R.A.) No. 9184"	- The revised IRR's scope includes all local and foreign funded procurement activities (with exceptions, i.e. treaties or international / executive agreements). However, the IRR cannot be applied to the following: 1. Procurement funded from Foreign Grants covered by RA No. 8182 as amended by RA No. 8555 (Official Development Assistance Act of 1996).	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
			2. RA No. 8974 (An Act to		
			Facilitate the Acquisition of Right-		
			of-Way Site or Location for		
			National Government		
			Infrastructure Projects and for		
			Other Purposes).		
			3. "Public-private sector		
			infrastructure or development		
			projects and other procurement"		
			under RA No. 6957 as amended by		
			RA No. 7718 (An Act Authorizing		
			the Financing, Construction,		
			Operation and Maintenance of		
			Infrastructure Projects by the		
			Private Sector and for other		
			purposes).		
General - Legal System	related to PPP				
Is there a legal system	Law	Republic Act	- Identifies the role of the private	1. PPP Law needs to	Amendment to the
in place related to		(R.A.) No.	sector in national growth and	be amended to clarify	law
PPP?		6957 - "The	development.	certain issues such as	
		Act	- It gives the private sector the	but not limited to the	
		Authorizing the	opportunity to build and develop	following:	
		Financing,	infrastructures that are financed by		
		Construction,	the government. It also "provided	a. After the statutory	
		Operation and	a more focused framework in PPP	review, amendment	
		Maintenance of	infrastructure development".	in the draft contract,	
		Infrastructure		if warranted due to	
		Projects by the		perceived violation of	
		Private Sector,		law, with due notice	

Criteria	Type	Name	Details	Issues	Action/s Needed
		and for Other		to the approving	
		Purposes"		body.	
	Law	Republic Act	- Enhanced the coverage of other		
		(R.A.) No.	government agencies that can	b. Term/period of and	
		7718 - "Build-	venture into PPP projects. This	Original Proponent	
		Operate and	also broadened the schemes,	Status	
		Transfer (BOT)	arrangements and modalities in		
		Law"	implementing PPP projects as well	c. Clear cut criteria	
			as the eligible types of PPP	to require Special	
i			projects.	Purpose Company	
	Law	The 2012	- "seek to identify specific		
		Implementing	incentives, support and	d. More clear	
		Rules and	undertakings, financial or	definition of direct	
		Regulations	otherwise, that may be granted to	government guaranty,	
		(IRR) for	Project Proponents, provide a	subsidy, equity	
		Republic Act	climate of minimum Government		
		(R.A.) No.	regulations, allow reasonable	e. Clarifying whether	
		7718 - "Build-	returns on investments made by	or not the review of	
		Operate and	Project proponents, provide	the Concession	
		Transfer (BOT)	procedures that will assure	agreement in solicited	
		Law"	transparency and competitiveness	project and option, if	
			in the bidding and award of	necessary, in	
			projects, ensure that Contractual	unsolicited project by	
			Arrangements reflect appropriate	DOF is mandatory	
			sharing of risks between the		
			Government and the Project	f. Approval of	
			Proponent, assure close	Variations	
			coordination between national	(Additional works)	
			government and Local	initiated by the	

Criteria	Type	Name	Details	Issues	Action/s Needed
			Government Units (LGUs), and	Concessionaire and	
			ensure strict compliance by the	complying with the	
			Government and the Project	conditions in Section	
			Proponent of their respective	12.11.	
			obligations and undertakings and		
			the monitoring thereof, in	2. Authority of the	
			connection with or relative to	PPP Center to look	
			Private Sector Infrastructure or	into the propriety of	
			Development Projects to be	granting an Original	
			undertaken under this Act and	Proponent Status by	
			these Revised IRR".	the implementing	
	Executive	Executive	- Enabled PPP to be the "central	agency	
	Order	Order (E.O.)	coordinating and monitoring		
		No. 8 (series of	agency for all PPP projects in the		
		2010) and	Philippines".		
		Executive	- The PPP Center coordinates with		
		Order (E.O.)	the various Implementing		
		No. 136 (series	Agencies (IA), National		
		of 2013)	Government Agencies (NGAs),		
			Government Owned and		
			Controlled Corporations (GOCCs),		
			Government Financial Institutions		
			(GFIs), State Universities and		
			Colleges (SUCs) and Local		
			Government Units (LGUs) to		
			facilitate, advise, monitor and		
			empower agencies "through		
			various capacity building"		
			mechanisms.		

Criteria	Type	Name	Details	Issues	Action/s Needed
General - Accounting S	System	•			
Is there an accounting system in place?	Departmental Order	DPWH Department Order (D.O.) No. 176 (series of 2015)	- Provides the guidelines and procedures to be followed for Infrastructure Assets as per required by COA.	None	
	Departmental Order	DPWH Department Order (D.O.) No. 70 (series of 2011)	- Provides guidance on monitoring mechanisms to use such as eNGAS and eBUDGET.	e-Budget and e-NGAS Version 2 need to be rolled out in 199 offices but only 54 offices had implemented the system.	
	Guidelines	COA Annual Audit Reports	- Annual Audit Reports are provided by the Commission on Audit (COA) for each NGA (National Government Agency).	None	
General - Tax Law Is there a tax law in place?	Law	Republic Act (R.A.) No. 8424 - "Tax Reform Act of 1997"	- States the rate of Income Tax to be imposed	A formula for the computation of the Documentary Stamp Tax (DST) is provided for in RA No. 8424. However, no such formula can be found within its IRR.	Revise supporting guidelines

Criteria	Type	Name	Details	Issues	Action/s Needed
	Guidelines	NGA PPP	- BOI Incentives availed may be of	Under RA No.	Amendment to the
		Manual	the following:	10752, if a property	law
		Volume 1 from	1. Income tax holiday – BOI	affected by a project	
		the PPP Center	registered enterprises will be	is acquired through	
			exempt from Income Taxes based	negotiated sale, the	
			on their status (pioneer, non-	Capital Gains Tax	
			pioneer, expansion).	(CGT) shall be paid	
			2. Additional deduction for labor	by the government. If	
			expense.	the same is acquired	
			3. Tax credit for taxes and duties	through	
			on raw materials – may be granted	expropriation, the	
			to a registered enterprise.	CGT shall be paid by	
			4. Tax exemptions: imported spare	the property owner.	
			parts, - registered enterprise will	However, the law is	
			be exempt from taxes for	silent as to who shall	
			importing spare parts and supplies.	pay the CGT in the	
			wharfage dues, export tax, duties,	event that the	
			imposts and fees – all IPP	government and the	
			registered enterprises will be	property owner reach	
			exempt for 10 years for non-	a compromise during	
			traditional export products.	the pendency of the	
			- And other incentives as per list of	expropriation	
			the BOI.	proceedings.	

Criteria	Type	Name	Details	Issues	Action/s Needed
	Executive	Executive	- Public and private entities will be	It is not clear from	Amendment to the
	Order	Order (E.O.)	subject to tax. However, private	the law whether legal	law
	No. 226 (series		entities registered with the BOI	interest on just	
		of 1987) will be entitled to incen		compensation is	
		·	Incentives availed may be in the	subject to CGT.	
			following forms: Tax Exemptions,		
			Tax Credits, Additional deductions		
			from taxable income, zero-rated		
			VAT and other non-fiscal		
			incentives.		
General - Environment	al and Social Ass	essment			
Are there laws and	Law	Republic Act	- Before the project could be	None	
guidelines in place		(R.A.) No.	undertaken, provisions of RA No.		
that stipulate the		10752 - "The	7160 (Local Government Code of		
implementation of an		Right-of-Way	1991) shall be considered. The		
environmental and		Act" an	LGU will provide the necessary		
social assessment for		amendment of	data or information for these		
implementing		Republic Act	assessments.		
infrastructure		(R.A.) No.			
projects?		8974			
	Departmental	DPWH	- Environmental Impact	Funds for the conduct	Revise
	Order	Department	Assessment (EIA) for DPWH	of an EIA should be	Guidelines/Directive
		Order (D.O.)	Infrastructure Projects and Tree	included in the yearly	
		No. 157 (series	Cutting Permit Application.	GAA.	
		of 2016)			

Criteria	Type	Name	Details	Issues	Action/s Needed
General - Funds	Report	World Bank: Philippines: Country Framework Report for Private Participation in Infrastructure (2000)	- Projects that may affect the environment also need to secure ECC (Environment Compliance Certificate) from DENR. In securing the ECC, certain conditions must be met such as a report of impact assessment to show possible effects of the project to the environment and if this is line with sustainable development. An endorsement from the LGU is also needed for ECC consideration. It also includes other applicable environmental laws and regulations for compliance by the investor.	None	
Is there a structure in place for providing funds (e.g., funds for conducting a FS) for	Guidelines	DPWH Infrastructure Development Cycle (website)	- The annual funding requirements for the conduct of FS are being considered and included in the GAA each year.	None	
infrastructure projects?	Report	NEDA Annual Report for 2015	- NEDA was tasked to administer the fund for Feasibility Studies for non-PPP projects. This fund aims to "support pre-investment activities or feasibility studies for government projects".	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
Is there a structure in			Note: The Philippines does not	None	
place for providing			guarantee projects at this stage,		
funds necessary for			e.g. demand guarantees or Forex		
promoting PPP			guarantees.		
projects and for					
providing government					
guarantee?					
General - Structure for	Project Promotio	n			
Are there	Guidelines	PhilGEPS (for		None	
organizations in place		all GOP			
for promoting		projects) and			
infrastructure projects		DPWH (for			
or PPP projects?		road projects)			
General - Others					
Is there a system in	Law	IRR-RA No.	- Arbitrary policies and changes in	There is an issue with	Revise supporting
place for protecting		9184 -	the system is in favor of the	regard to adherence	guidelines
the private sector		"Revised	Government. It says that "the head	to contractual	
from arbitrary policies		Implementing	of the procuring entity may	stipulations,	
or changes in the		Rules and	terminate a contract for the	specifically, in	
system?		Regulations of	convenience of the government" if	connection with the	
		Republic Act	the changes in national law and	enforcement of	
		(R.A.) No. No.	policies will make the project lose	additional costs	
		9184"	its viability.	covered by applicable	
			- The private sector, on the other	contracts (such as	
			hand, may also terminate its	those resulting from	
			contract if the project is stopped	subsequent	
			for a continuous period of sixty	legislation). While	
			(60) days for reasons such a	these are covered by	
			security risks and failure of the	applicable contracts	

Criteria	Type	Name	Details	Issues	Action/s Needed
			counterpart to provide for its	and may be addressed	
			obligations as per contract.	by the DPWH itself,	
				incidents have	
			Note:	occurred wherein the	
			There are change in Law	said claims are	
			provisions as well to allow	mistakenly	
			compensation to the private sector.	characterized as	
			More detailed assessment to be	against the	
			provided.	government and	
				wrongly referred to	
				the Commission on	
				Audit (COA).	
Is there a system in	Law	Republic Act	- States that the National	There are cases	Amendment to the
place relating to land		(R.A.) No.	Government may acquire real	wherein the property	law
acquisition?		10752	property for right-of-way site or	affected by a project	
		"The Right-of-	location for national government	is covered by a	
		Way Act" an	infrastructure projects through	Certificate of	
		amendment of	donation, sale, expropriation or	Ancestral Domain	
		Republic Act	any mode of acquisition as	Title (CADT). The	
		(R.A.) No.	provided by law.	law, however, does	
		8974	-RA No. 10752 mandates that the	not specify the	
		"An Act to	replacement costs of	person/s to whom the	
		Facilitate the	improvements on affected	just compensation	
		Acquisition of	landholdings are to be determined	shall be paid or how	
		Right-of-Way	by (i) the implementing agency,	it is to be utilized.	

Criteria	Type	Name	Details	Issues	Action/s Needed
		Site or	(ii) a GFI with adequate	There are instances	Amendment to the
		Location for	experience in property appraisal,	when the amount of	law
		National	and (iii) an independent property	just compensation for	
		Government	appraiser accredited by the	affected properties	
		Infrastructure	Bangko Sentral ng Pilipinas	consist of small	
		Projects and for	(BSP). The use of the conjunction	amounts, as in the	
		Other	"and" clearly indicates that the	case of farmers and	
		Purposes"	said replacement costs must be	their crops. Yet	
			determined jointly by the said	despite the small	
			three (3) entities, instead of just	amount of money	
			one (1) of them.	involved, numerous	
				requirements are	
				required from them	
				such as tax	
				identification	
				numbers (TIN) and	
				birth certificates.	
				Given the	
				socioeconomic	
				conditions of these	
				small claimants,	
				obtaining these	
				documentary	
				requirements can be a	
				challenge for them.	

Criteria	Type	Name	Details	Issues	Action/s Needed
				RA No. 10752	Amendment to the
				mandates that the	law
				determination of just	
				compensation for	
				crops affected by the	
				projects are to be	
				determined with the	
				aid of government	
				financial institutions	
				(GFIs), such as the	
				Development Bank of	f
				the Philippines	
				(DBP). Such entities,	
				however, by their	
				own admission, do	
				not possess the	
				resources and	
				expertise to conduct	
				such valuations.	
				Despite the express	Amendment to the
				provision found in	law
				the IRR of RA No.	
				10752 allowing the e	
				General (OSG)	
				refuses to initiate	
				such cases.	

Criteria	Type	Name	Details	Issues	Action/s Needed
				Despite the express	Amendment to the
				objective of RA No.	law
				10752 of expediting	
				the implementation of	
				projects, the	
				procurement of	
				appraisers, despite	
				being a government	
				to government	
				transaction, is still	
				required to undergo	
				the rigid process laid	
				out in RA No. 9184.	
				Hence, the noble goal	
				of RA No. 10752 is	
				being hindered.	

Criteria	Type	Name	Details	Issues	Action/s Needed
				Consequently, the	Amendment to the
				requirement of the	law
				law, as stated,	
				necessarily entails	
				undue difficulties,	
				such as additional	
				costs and having to	
				get all three (3) to	
				agree on a common	
				determination of	
				replacement costs.	
				Hence, there is a	
				tendency for delays	
				to occur in project	
				implementation.	
				Moreover, the	
				DPWH is already	
				well-equipped with	
				the manpower and	
				expertise to	
				determine	
				replacement costs,	
				without having to	
				seek the aid of other	
				entities.	

Criteria	Type	Name	Details	Issues	Action/s Needed
				RA No. 10752	Amendment to the
				mandates that the	law
				government shall	
				provide adequate	
				appropriations that	
				will allow	
				implementing	
				agencies to acquire	
				right-of-way	
				locations for national	
				government	
				infrastructure projects	
				in advance of project	
				implementation.	
				Consequently, there	
				have been cases	
				wherein biddings	
				were allowed despite	
				the unavailability of	
				right-of-way and	
				funding, in violation	
				of the requirements	
				during pre-	
				procurement	
				conferences, which	
				emphasize the need	
				for the prior	
				availability of right-	
				of-way and funding.	

Criteria	Type	Name	Details	Issues	Action/s Needed
Is there a system in	Regulations	BSP Foreign	- These are the legal basis	There is an issue with	Revise
place relating to		Exchange	concerning the need for	regard to adherence	Guidelines/Directive
foreign exchange?		Regulations	registration and approval of	to contractual	
			foreign loans and other related	stipulations,	
			transactions.	specifically, with	
				regard to the	
				enforcement of	
				foreign exchange	
				differential	
				provisions. There	
				have been some	
				instances in which	
				the said claims have	
				been mistakenly	
				characterized as	
				against the	
				government and	
				wrongly referred to	
				the COA.	
	Law	Section 20,	- "pertaining to the authority of the	In case of conflict	Amendment to the
		Article VII and	President to incur and guarantee	between the terms	law
		Section 21,	foreign loans on behalf of the	and conditions of	
		Article XII	Republic of the Philippines with	foreign loans	
		Philippine	prior concurrence of the Monetary	contracted by the	
		Constitution	Board (MB), and subject to such	President and	
			limitations as provided by law".	domestic laws, it is	
				unclear as to which	
				will prevail.	

Criteria	Type	Name	Details	Issues	Action/s Needed
	Law	Republic Act (R.A.) No. 4860 - "Foreign Borrowings Act" dated 8 September 1966, as amended	- "authorizing the President to obtain, on behalf of the Republic of the Philippines, foreign loans and credits, among others".	None	
	Law	Republic Act (R.A.) No. 7653 - "The New Central Bank Act" dated 14 June 1993	- Provides, among others, that the BSP shall maintain international reserves adequate to meet any foreseeable net demands on the BSP for foreign currencies. The law also mandates the MB to provide written opinion on the monetary implications of a proposed credit operation of the government including its political subdivisions and instrumentalities before undertaking said credit operation".	None	
	Administrative Order	Letter of Instructions No. 158 dated 21 January 1974, as clarified by Administrative	- "requires all foreign borrowing proposals of the government, government agencies and financial institutions to be submitted for approval-in-principle by the MB before commencement of actual negotiations, or before issuing a	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
		Order No. 99	mandate of commitment to foreign		
		dated 28	funders/arrangers".		
		November			
		1993			
	Guidelines	Part Two,		None	
		Chapter I of the			
		FX Manual			
		issued under			
		Circular No.			
		645 dated 13			
		February 2009,			
		as amended.			
	Regulations	BSP Foreign	- Updated in June 2016 for foreign	None	
		Exchange	exchange transactions.		
		Regulations	- Foreign loans need prior		
			approval and registration from the		
			BSP. Projects eligible for foreign		
			financing are also listed.		
	Guidelines	Generic	- BSP has relaxed forex	None	
		Procurement	transactions to encourage		
		Manual	investors. Exchange rates by		
		(Volume 3)	authorized agencies are take into		
			account. Both local and foreign		
			currency requirements are shown-		
			In the same manual, it is advised		
			to include a currency valuation		
			adjustment factor to hedge against		
			any fluctuations in the rates		
			between the planning and actual		

Criteria	Type	Name	Details	Issues	Action/s Needed
			procurement phase. BSP may provide guidance on this.		
	Guidelines	BSP (website)	- Policy amendments have also been introduced such as private sector loans not needing prior BSP approval and allowing documents concerning foreign loans, deferred payment and other foreign currency-related documents to be notarized.	None	
Are there policies and systems in place taking account of the poor, socially vulnerable, gender gap, etc.?	Law	Republic Act (R.A.) No. 7279 - "Urban Development and Housing Act of 1992"	- Wherein the government through the National Housing Authority and LGU shall provide resettlement sites for "underprivileged and homeless citizens". This is for lands that will be used for infrastructure projects. (This does not apply to so-called "professional squatters and squatting syndicates' as such parties are not qualified for benefits and subject to penalties).	None	
	Law	Republic Act (R.A.) No. 10651 - General Appropriations Act of 2015	 DPWH is mandated to abide by gender provisions and promote gender-responsive programs. DPWH complied with implementing projects that would address the needs of senior citizens and PWDs. 	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
Are there laws and guidelines in place for preventing bribery and corruption?	Law	Republic Act (R.A.) No. 3019 - "Anti- Graft and Corrupt Practices Act"	- Provides guidelines and appropriate penalties for people and parties involved in bribery and corruption.	None	
	Law	IRR-RA No. 9184 - "Revised Implementing Rules and Regulations of Republic Act (R.A.) No. No. 9184"	- The provision of "three-strike" policy is also being enforced. Encounters with erring officials are encouraged to be reported.	None	
	Guidelines	DPWH (website)	- They have taken some measures to mitigate problems in bribery and corruption. For one, initiatives in the procurement process were taken to digitize and make an electronic database of contracts, contractors, and other related documents so that these may be tracked. - Regular assessment of projects is also being implemented as well as increased accreditation of companies involved in construction (testing, engineers,	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
			and materials) to ensure that the		
			right people are used for the right		
			projects.		
			- Electronic means of procurement		
			are also being developed to		
			minimize any corrupt practices		
			and collusion. The public is also		
			being encouraged to report any		
			dubious contracts and action		
			encountered. IRR-RA 9184 is		
			advocated and implemented.		
Project Planning - Cons	istency between	Policy/Master Plan	1		
Are the current	Departmental	DPWH	- States that projects should be part	None	
projects specified in	Order	Department	of Multi-Year Programming and		
the master plan and		Order (D.O.)	Scheduling application (MYPS) as		
infrastructure		No. 245 (series	the official system for asset		
development plan?		of 2004)	preservation and network		
			development projects.		
In case the current	Guidelines	Highway	The Multi Year Programming and	None	
projects are not		Planning	Scheduling Application (MYPS) is		
specified in the master		Manual,	a computer application that		
plan or the		Volume 1,	interfaces with the other		
infrastructure		Section 7.1	applications in order to produce		
development plan, has			the Annual and Medium Term (six		
it been confirmed that			years) Programs. With projected		
the project will			road and traffic data, MYPS		
contribute to			applies Multi Criteria Analysis		
achieving the			incorporating economic evaluation		
			results, environmental and social		

Criteria	Type	Name	Details	Issues	Action/s Needed
objectives of policies			aspects, Government policy on		
or goals?			targeted poverty reduction,		
			tourism, agricultural development,		
			law and order issues, etc. in a		
			complex scoring system.		
In case the current	Departmental	DPWH	- Mandates the use of Project IDs	None	
project is not	Order	Department	and Project Component IDs as a		
specified in the master		Order (D.O.)	monitoring mechanism.		
plan or the		No. 153 (series			
infrastructure		of 2016)			
development plan,					
have necessary					
measures been taken					
such as the					
amendment of the					
master plan or the					
infrastructure					
development plan?					
Project Planning - Econ	•				
Is it stipulated that the	Guidelines	Highway	- States the different indicators that	Is the EIRR a	
project's economic		Planning	are commonly used to evaluate the	pass/fail criterion?	
performance be		Manual,	economic return of each project	What if a project has	
quantitatively		Volume 1,	under study: economic internal	a low EIRR (<10%)	
measured using		Chapter 4,	rate of return (EIRR), net present	but can be justified	
measures such as		Section 4.5	value (NPV), benefit/cost ratio	by qualitative	
EIRR?		Economic	(B/C), NPV/Cost ratio, Sensitivity	benefits?	
		Evaluation	indicator and Switching value.		

Criteria	Type	Name	Details	Issues	Action/s Needed
Criteria Is it stipulated that alternatives be considered and the better method adopted through comparing economic performance?	Type Guidelines	Name Highway Planning Manual, Volume 2, Chapter 12, Section 12.2	- "Alternative evaluation and ranking is an activity consisting of (i) normalizing evaluation indicators values to insure that each indicator has the same range of values; (ii) providing a weighting system associated to the evaluation indicators associated to each scenario, road section and alternative (this weighting system	Issues None	Action/s Needed
			results in developing an overall evaluation indicator that is easy to use)13; (iii) calculating the values of the overall evaluation indicator associated to each alternative summing the products of indicators and their weights; and (iv) finally summing the overall indicators associated to each alternative composing the		
			scenario. This assigns a score to each alternative/scenario allowing a ranking structure among them".		
Project Planning - Envi	ronmental and S	ocial Assessment	Considerations		
Are considerations of environmental and			Note: To be discussed with DPWH on	None	
social assessment stipulated?			exact policy and process, including obtaining the Environmental		

Criteria	Type	Name	Details	Issues	Action/s Needed
			Clearance Certificate (ECC) and		
			responsibility for that.		
Feasibility Study - Clar	ification of the P	roject's Level of A	chievement		
Is the minimum required level stipulated in accordance with relevant laws and regulations?	Guidelines	Department Order No. 102, series of 1988, Calibrated Actions on Contracts with Negative Slippages	The guideline instructs all concerned Project Managers, Regional Directors, and District Engineers to undertake calibrated actions whenever contracts for infrastructure projects reach the levels of negative slippage (attributable to the contractor) to ensure timely and effective remedial steps in response to delays in project implementation.	The Department Order no. 145, series of 2016, Prescribing a Consultant's Performance Evaluation System (ConsPES) for locally-funded infrastructure projects provided a consistent method of evaluating, measuring and rating a Consultant's performance, as compared with the previous years. There will be a database which shall include, among other things, the findings and performance ratings of the consultants evaluated for future references.	

Criteria	Type	Name	Details	Issues	Action/s Needed
				Delays due to reasons	
				of force majeure	
				should be well	
				documented,	
				accounting the exact	
				days that the	
				activities were	
				withheld. These	
				should be supported	
				by the involved	
				District Engineering	
				Offices and Regional	
				Offices. These delays	
				should be considered	
				in the calculation of	
				accomplishment.	
Are specific levels of	Guidelines	Revised IRR of	The S-curve, PERT/CPM and	Sometimes, the	
achievement specified		RA 9184, Rule	other acceptable tools of project	Consultants do not	
using quantitative		XI, Section 37	scheduling are required to be	give traceable/	
indicators?			submitted by the winning bidder to	auditable copies of	
			form part of the contract, which	their S-curve. Hence,	
			shall then be the basis for the	the submitted/	
			management of the project.	claimed %	
				accomplishment	
				cannot be verified.	
				The Implementing	
				Office, thus,	
				determines %	
				accomplishment	

Criteria	Type	Name	Details	Issues	Action/s Needed
				based on the	
				deliverables	
				submitted by the	
				Consultant.	
Is the lifecycle cost (LCC) calculation model specified?	Guidelines	Highway Planning Manual, Volume 1, Chapter 5, Section 5.2	The DPWH assess investments in asset preservation and road network development through the calculation and evaluation of costs of road construction, maintenance and rehabilitation, road user costs, and all other external or exogenous costs or benefits that can be directly attributed to the road project for a specified analysis period.	None	
	Guidelines	DGCS 2015, Volume 4 - Highway Design, page 2- 37	The Highway Design guideline states that a period of 20 years is widely used as a basis for design of roads, for which the usual traffic increase on a highway improvement is in the range of 50 to 150%.	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
Is it stipulated that the	Departmental	DOLE	- "Ensures the protection and	None	
treatment of workers	Order	Department	welfare" of workers and the		
and working		Order (D.O.)	general public as well as provide		
conditions be		No. 13 (series	guidelines of best industry		
considered in the		of 1998)	practices and other government		
environmental and			requirements.		
social assessment?					
Is it stipulated that the	Departmental	DENR	Art. I Sec. 3	None	
Environmental	Order	Administrative	Environmental Risk Assessment		
contamination		Order No. 37 S.	(ERA) involves the use of		
prevention/reduction		1996	scientific methods and information		
and measures in case			to define the probability and		
of contamination be			magnitude of potentially adverse		
considered in the			effects which can result from		
environmental and			exposure to hazardous materials or		
social assessment?			situations.		

Criteria	Type	Name	Details	Issues	Action/s Needed
Is it stipulated that the	Departmental	DENR	Art. V Sec. 4 Environmental	None	
Local community's	Order	Administrative	Guarantee Fund (EGF)A		
sanitation/safety be		Order No. 37 S.	significant public risk may be		
considered in the		1996	presumed by the DENR if anyof		
environmental and			the following conditions exists:a.		
social assessment?			Presence of toxic chemicals and		
			hazardous wastes as defined		
			inRepublic Act No. 6969;b.		
			Extraction of natural resources that		
			requires rehabilitate		
			orrestoration;c. Presence of		
			structures that could endanger life,		
			property, andthe environment in		
			case of failure; ord. Presence of		
			processes that may cause pollution		
			as definedunder Pres. Decree No.		
			984, or other related pollution		
			laws.		

Criteria	Type	Name	Details	Issues	Action/s Needed
Is it stipulated that the	Guidelines		To address these concerns all	None	
Land acquisition and			projects that require Infrastructure		
inhabitants' relocation			Right-of-Way acquisitions,		
be considered in the			irrespective of being local or		
environmental and			foreign-funded, must have Land		
social assessment?			Acquisition Plans and		
			Resettlement Action Plans		
			(LAPRAPs) formulated and		
			prepared in accordance with the		
			procedures in the Department's		
			IROW Procedural Manual.		
			The LAPRAP document describes		
			the project, expected impacts and		
			mitigating measures, socio-		
			economic profile of project		
			affected persons, compensation		
			package, time-table of		
			implementation, institutional		
			arrangements, monitoring and		
			evaluation arrangements,		
			participation, consultation and		
			grievance procedures.		

Criteria	Type	Name	Details	Issues	Action/s Needed
Is it stipulated that the	Departmental	DENR	Art. I Sec. 3	None	
Conservation of	Order	Administrative	The Environmental Impact		
biological diversity		Order No. 37 S.	Statement (EIS) System assesses		
and sustainable		1996	the significance of the effects of		
control of natural			any project or undertaking on the		
resources be			quality of the physical, biological		
considered in the			and socio-economic environment,		
environmental and			and designing appropriate		
social assessment?			preventive, mitigating and		
			enhancement measures.		
Is it stipulated that the	Departmental	DENR	Art. 3 Sec. 9 Contents of the EIS	None	
Respect for	Order	Administrative	For projects located in ancestral		
indigenous people and		Order No. 37 S.	lands or domains, as definedunder		
protection of cultural		1996	DAO No. 2, series of 1993, or		
heritage be considered			subsequently by law, ofindigenous		
in the environmental			communities, a specific chapter in		
and social			the socioeconomicimpact		
assessment?			assessment shall be devoted to a		
			discussion ofindigenous peoples'		
			concerns and possible socio-		
			economic, political and cultural		
			impacts of the proposed project on		
			suchpeople.		

Criteria	Type	Name	Details	Issues	Action/s Needed
Is it stipulated that the	Law	IRR-RA No.	- In certain appendices, economic	None	
Economic benefits		9184 -	benefits in terms of job creation		
(e.g., job creation for		"Revised	are defined such as the kind of		
local residents),		Implementing	labor needed as well as the		
enhance resilience		Rules and	appropriate incentives and		
against disasters,		Regulations of	guidelines to be followed (i.e.		
building local		Republic Act	wage, hiring system).		
residents' capacity be		(R.A.) No.			
considered in the		9184"			
environmental and					
social assessment?					
Feasibility Study - Safe	ty Consideration	S			
Are appropriate	Departmental	Department	Establishment of Highway Safety	None	
construction	Order	Order No. 41	Design Standards		
management and		Series of 2012	_		
maintenance &		(Annex "1")	The Highway Safety Design		
operation			Standards (Manuals Part 1: Road		
management			Safety Design and Part 2: Road		
stipulated in terms of			Signs and Pavement Markings		
safety?			Manual) were aimed to address the		
·			engineering aspect in the design of		
			national roads and are strictly		
			directed to be adopted in the		
			planning, design and maintenance		
			activities of the Department.		

Criteria	Type	Name	Details	Issues	Action/s Needed
	Departmental Order	Department Order No. 13, Series of 2008 (Annex "2")	Guidelines in the Procurement and Installation of Road Safety Devices and Facilities This Department Order was created to improve road safety in the national road network, Manuals Parts 1 and 2 are prescribed for all road safety projects, road construction and maintenance activities.	None	
	Departmental Order	Department Order No. 94, Series of 2014 (Annex "3"	Technical Manuals and Guidelines on Road and Bridge Maintenance and Inspection that includes Road Project Management and Supervision Manual, 2nd Edition, Volume I which provides safety provision on Road Safety Devices.	None	
Are Safety control for users and residents in neighboring area stipulated in terms of safety?	Departmental Order	Department Order No. 223, Series of 2001 (Annex "4")	Revised Guidelines in the Procurement of Road Maintenance and Traffic Control and Safety Products/DevicesThe revised guidelines were formulated/ issued to prevent possible delays by decentralizing the procurement of road maintenance and traffic control and safety products/devices.	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
	Departmental Order	Department Order No. 135, Series of 2015 (Annex "5"	Strict compliance to Road Works Safety and Traffic Management and Construction Safety and Health Requirements During Construction and Maintenance of Roads and Bridges Non-complying contractors shall be issued full work suspension with no entitlement of a time extension.	None	
	Departmental Order	Department Order No. 99, Series of 2016 (Annex "6"	Creation of Roadworks Safety Assessment Teams to conduct periodic roadworks safety assessment on ongoing DPWH projects	None	
	a.) Buildings				

Criteria	Type	Name	Details	Issues	Action/s Needed
Are Resilience against disasters stipulated in terms of safety?	Memorandum Circular	Joint DENR-DILG-DND-DPWH-DOST Memorandum Circular No. 2014-01 dated November 05, 2014 - Adoption of Hazard Zone Classification in Areas Affected by Typhoon Yolanda (HAIYAN) and Providing Guidelines for Activities Therein (Annex "7")	Classification of hazard zones susceptible to the onslaught of typhoons, flooding, landslides, and other hydro-meteorological hazards to promote safety and protection of the people, particularly in the Yolanda (Haiyan) affected areas	None	12000015 1 voucu
	Law	Republic Act (R.A.) 386 - Civil Code of the Philippines (Annex "8")	Art. 638 - The banks of rivers and streams, even if they are of private ownership, are subject throughout their entire length and within a zone of three meters along their margins, to the easement of public use in the general interest of	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
			navigation, floatage, fishing, and		
			salvage.		
	Law	P.D. No. 1067 -	The banks of rivers and streams	None	
		Water Code of	and the shores of the seas and		
		the Philippines	lakes throughout their entire length		
		(Annex "9")	and within a zone of three (3)		
			meters in urban areas, twenty (20)		
			meters in agricultural areas, and		
			forty (40) meters in forest areas,		
			along their margins, are subject to		
			the easement of public use in the		
			interest of recreation, navigation,		
			floatage, fishing, and salvage.		
	Law	P.D. No. 1096 -	Sect. 105 - Site Requirements. The	None	
		National	land or site upon which will be		
		Building Code	constructed any building or		
		of the	structure, or any ancillary or		
		Philippines	auxiliary facility hereto, shall be		
		(Annex "10")	sanitary, hygienic, or safe.		
	Law	P.D. No. 705 -	Sect. 16 - Areas needed for forest	None	
		Revised	purposes. The following may not		
		Forestry Code	be classified as alienable and		
		of the	disposable lands:		
		Philippines	a. 20-meter strips of land along the		
		(Annex "11")	edge of normal high waterline of		
			rivers and streams with channels		
			of at least 5-meter wide		
			b. Strips of mangrove or		
			swamplands at least 20-meter		

Criteria	Type	Name	Details	Issues	Action/s Needed
			wide, along shorelines facing		
			oceans, lakes, and other bodies of		
			water, and strips of land at least		
			20-meter wide facing lakes.		
	Law	Republic Act	Sect. 2 (g) - Mainstream disaster	None	
		(R.A.) 10121 -	risk reduction and climate change		
		Philippine	in development processes such as		
		Disaster Risk	policy formulation, socio-		
		Reduction and	economic development planning,		
		Management	etc.		
		Act of 2010			
		(Annex "12")			
	Law	National	Chapter 2 - Minimum Design	None	
		Structural Code	Loads		
		of the	Zone I (High Wind Zone) - basic		
		Philippines 6th	wind speed of 250 kph. Covers		
		Ed. Vol. 1 -	mainly the eastern part of Luzon		
		2010 (Annex	and Visayas.		
		"13")	Zone II (Mid-wind Zone) - has		
			basic wind speed of 200 kph.		
			Covers the rest of Luzon and		
			Visayas.		
			Zone III (Low Wind Zone) - basic		
			wind speed of 150 kph. Covers		
			Palawan and the rest of Mindanao.		
	b.) Flood C	Control			

Criteria	Type	Name	Details	Issues	Action/s Needed
	Departmental Order	DPWH Memorandum dated June 21, 2011 - Upgrades on Flood Control and Road Drainage Standards (Annex "14")	Guidelines to be adopted in the design of flood control and road drainage facilities/structures.	None	
	Guidelines	Design Guidelines, Criteria and Standards: Volume 3 - Water Project Design (Annex "15")	Sect. 9.2.4.1 Changes to Extreme Rainfall Suggested Approach for Incorporating Changes to Extreme Rainfall. Sect. 9.2.4.2 Sea Level Rise Suggested Approach for Incorporating Sea Level Rise.	None	
	c.) Roads and I	_			
	Guidelines	Design Guidelines, Criteria and Standards: Volume 4 - Highway Design (Annex "16")	Sect. 3.6.3.1 Gradient - In areas subject to inundation, grades should be established 0.50 m above maximum water level. Grades should be at least be above pipe culverts by 0.60 m. Grades of bridges should allow 1.50 m free board above the maximum flood water elevations to the bottom of	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
			girders for streams carrying debris		
			and 1.00 m for others.		
	Departmental	Department	Prescribing minimum design	None	
	Order	Order No. 40,	standard for PCCP in Arterial and		
		S. 2014 (Annex	Secondary National Roads and		
		"17")	Access Roads Leading to Ports.		
	Departmental	Department	Minimum Pavement Thickness	None	
	Order	Order No. 22,	and Width of National Roads.		
		S. 2011 (Annex			
		"18")			
	Departmental	Department	Regular Pruning/Trimming and/or	None	
	Order	Order No. 93,	Cutting of Trees within the Road		
		S. 2014 (Annex	Right of Way of our National		
		"19")	Roads to preclude accidents to		
			motorists and pedestrians.		
Are Response in times	Departmental	Department	Guidelines to Ensure Disaster	None	
of disaster or	Order	Order No. 15,	Preparedness of DPWH Field		
emergency stipulated		Series of 2015	Offices in Promptly Responding to		
in terms of safety?		(Annex "20")	Typhoons and Other Calamities		
			Including Criteria in the Release if		
			Calamity Funds.		
	Departmental	Department	Timely Submission of Calamity	None	
	Order	Order No. 96,	Damage Report on Infrastructure		
		Series of 2014	for Request for Calamity Funds.		
		(Annex "21")			

Criteria	Type	Name	Details	Issues	Action/s Needed
	Departmental	Department	Creation of an Inter-Agency	None	
	Order	Order No. 18,	Technical Working Group for		
		Series of 2012	Water Sector (TWG-WS) in		
		(Annex "22")	Relation to National Disaster Risk		
			Reduction and Management		
			Council (NDRRMC) Work Plan		
			on Whole of Society Large Scale		
			Disaster Response Planning,		
			Strengthen Continuity of Essential		
			Operations and Services		
	Departmental	Department	Creation of a Committee to Study	None	
	Order	Order No. 69,	and Formulate Action Plans to		
		Series of 2010	Strengthen the DPWH Disaster		
		(Annex "23")	Preparedness and Response		
			Mechanism		
	Departmental	Department	DPWH Disaster Preparedness and	None	
	Order	Order No. 38,	Response Mechanism During		
		Series of 2010	Typhoons and Other Natural		
		(Annex "24")	Calamities		
	Departmental	Department	DPWH Calamities and Disaster	None	
	Order	Order No. 36,	Preparedness and Control Plan		
		Series of 1998	(CDPCP)		
		(Annex "25")			

Criteria	Type	Name	Details	Issues	Action/s Needed
Are Appropriate		NGA PPP	Risk assessment is considered as a	As an example:	Revise
identification of risks		Manual	component of a properly prepared		Guidelines/Directive
assumed for		Volume 1 from	PPP project.	The use of the facility	
individual projects		the PPP Center		/ project site over the	
stipulated?			Both the government and private	contract term has	
			sector are encouraged to	resulted in significant	
			brainstorm expected risks and	environmental	
			properly allocate who is best to	liabilities (clean up or	
			manage the possible risks.	rehabilitation	
			Usually, the private sector is	required to make the	
			responsible for the commercial	site fit for future	
			risks while the government is in	anticipated use).	
			charge of legal and political risks.		
				During procurement,	
				private partner must	
				demonstrate financial	
				capacity or support to	
				deliver the site in the	
				state required by	
				government at the	
				end of the contract;	
				The government can	
				require sinking funds	
				if it is to resume the	
				site and its use is	
				liable to result in a	
				significant clean	
				up/rehabilitation cost;	
				and conduct periodic	

Criteria	Type	Name	Details	Issues	Action/s Needed
				environmental audit	
				during the contract	
				period (e.g.	
				environmental audit	
				every three or five	
				years) by the project	
				management team of	
				the agency or LGU	
				concerned.	
Are Method for		NGA PPP	Both the government and private	As an example:	Needs agreement
prioritizing identified		Manual	sector are encouraged to	Difficulties or	with the PPP Center
risks stipulated?		Volume 1 from	brainstorm expected risks and	impossibility of	
		the PPP Center	properly allocate who is best to	acquiring part of the	
			manage the possible risks.	site.	
			Usually, the private sector is		
			responsible for the commercial	Government should	
			risks while the government is in	define ROW as early	
			charge of legal and political risks.	as possible and	
				allocate necessary	
				funds and time to	
				complete acquisition	
				of the project site.	

Criteria	Type	Name	Details	Issues	Action/s Needed
Are Measures against		NGA PPP	Both the government and private	As an example:	Needs agreement
identified risks		Manual	sector are encouraged to	Substandard or	with the PPP Center
stipulated?		Volume 1 from	brainstorm expected risks and	unsafe design	
		the PPP Center	properly allocate who is best to	incapable of	
			manage the possible risks.	delivering an	
			Usually, the private sector is	intended level of	
			responsible for the commercial	service and Failure in	
			risks while the government is in	passing required	
			charge of legal and political risks.	physical and	
				operational tests.	
				Liabilities (designer)	Needs agreement
				derived from design	with the PPP Center
				defects. Define a	
				detailed schedule for	
				all design activities	
				and employ firms	
				with relevant job	
				experience and will	
				be subjected to	
				consequences for	
				failure to deliver the	
				project as agreed.	
				Where the design of	Needs agreement
				the project or facility	with the PPP Center
				turns out to be	
				defective or incapable	
				of delivering the	
				intended services at	
				anticipated costs and	

Criteria	Type	Name	Details	Issues	Action/s Needed
				a specified level of	
				service, the	
				concessionaire shall	
				be responsible for	
				any additional cost	
				required to remedy	
				the defective design	
				and/or shall be liable	
				for the resulting	
				damages.	
				Designate an	Needs agreement
				acceptable (for both	with the PPP Center
				Government and	
				Concessionaire) third	
				party to check	
				significant elements	
				in the project.	

Criteria	Type	Name	Details	Issues	Action/s Needed
In case of a PPP		PPP (website)	Guided by Generic Preferred Risks	As an example:	Needs agreement
project, is the			Allocation Matrix (GPRAM) for	Any change in law or	with the PPP Center
appropriate risk-			"consideration by the proponent	policy of the	
sharing between the			agencies in the development and	Government, which	
public and private			implementation of their	could not have been	
sectors stipulated?			projects". The matrix provides the	anticipated at the	
			preferences and measures to be	time of the signing of	
			considered.	the contract, which	
				would have been an	
				adverse capital	
				expenditure or	
				operating costs	
				consequences for the	
				concessionaire.	
				Concessionaire to	Needs agreement
				determine which	with the PPP Center
				entity/entities (such	
				as local government	
				units or national	
				government) have	
				jurisdiction over the	
				infrastructure to	
				minimize the project's	
				exposure to the risk.	

Criteria	Type	Name	Details	Issues	Action/s Needed
				The concessionaire to	Needs agreement
				factor in the	with the PPP Center
				additional cost in the	
				tariff/toll rate and	
				pass on the additional	
				cost to the end users	
				but subject to the	
				approval of the	
				regulator.	
				The project should be	Needs agreement
				structured such that	with the PPP Center
				the financial returns	
				on the project up to a	
				certain threshold	
				would still be	
				sufficient	
				notwithstanding any	
				change in law or	
				policy. Further, the	
				project must be	
				flexible to adopt	
				certain changes to	
				minimize the adverse	
				financial effect on the	
				Government.	

Criteria	Type	Name	Details	Issues	Action/s Needed
				Require the private	Needs agreement
				firm to conduct full	with the PPP Center
				financial diligence on	
				both traffic demand	
				and scope for toll	
				tariff (including any	
				regulatory	
				requirements for	
				setting/adjusting	
				tolls).	
Feasibility Study - Study	ly on the Priv	ate Market			
Is it stipulated that				There are some	
consideration be				suggestions from	
given to the				private sector that	
competitive				PPP projects should	
environment based on				consider some	
hearings conducted on				improvements and	
private entities				dynamism.	
regarding the contents				1. Inviting or adding	
of the project?				more partners	
				whether domestic or	
				foreign that might,	
				among others, be co-	
				founders or co-risk	
				takers.	
				2. Current PPP	
				projects can be a	
				platform to future	
				projects	

Criteria	Type	Name	Details	Issues	Action/s Needed			
Feasibility Study - Selection of the Procurement Method								
Is it stipulated that review and selection of the project's procurement method be based on criteria such as VFM?	Guidelines	Generic Procurement Manual (GPM) Volume 1	- In preparing the PPMP (Project Procurement Management Plan), VFM should be considered but not necessarily be restricted to price. It may cover other relevant cost aspects as well (i.e. acquisition, LCC, and the like). Note: VFM is not a fully used concept within the Philippines as yet.	None				
Procurement - General		•						
Is it stipulated that the quality aspects of the project are to be focused in the procurement such as output specifications and/or service level specifications.	Law	IRR-RA No. 9184 - "Revised Implementing Rules and Regulations of Republic Act (R.A.) No. No. 9184"	Evaluation of quality is done during post-qualification. Here they verify the technical documents which includes the competence, experience, quality of equipment and work as per contract plan and specification.	The technical specifications of the project are issued as part of the bidding document which is to be implemented during construction stage.				

Criteria	Type	Name	Details	Issues	Action/s Needed
Is the use of appropriate incentives for procurement stipulated, such as applying performance based approach to contracts (e.g., contingency fee)?	Law	Section 42.5 of IRR of RA 9184	- States that "no incentive bonus, in whatever form or for whatever purpose, shall be allowed".	None	
Is consideration for an appropriate riskallocation in procurement specified?	Guidelines	Generic Procurement Manual (GPM) Volume 1	- In preparing the PPMP (Project Procurement Management Plan), the PMO or end user unit is encouraged to develop a risk assessment and management plan to address any risks that may be identified.	None	
Do laws and guidelines stipulate that not only the price be the basis of evaluation in tenders but the quality also be evaluated appropriately?	Law	IRR-RA No. 9184 - "Revised Implementing Rules and Regulations of Republic Act (R.A.) No. No. 9184"	- The Approved Budget of Contract (ABC) is the basis of evaluation. The evaluation of quality is done during post- qualification. Here they verify the technical documents which includes the quality of work as per contract plan and specification.	None	
Is there a standard form of an agreement to be executed; Does it reflect best practices?			The Standard Bidding Document provides the standard template of a contract agreement.	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
Is it stipulated a	Law	IRR-RA No.	RA 9184	None	
competitive dialogue		9184 -	It is the State policy that		
or similar procedures		"Revised	procurement of infrastructure		
be taken as		Implementing	projects, goods, and consulting		
appropriate?		Rules and	services shall be competitive and		
		Regulations of	transparent, and therefore shall go		
		Republic Act	through public bidding.		
		(R.A.) No. No.			
		9184"	Rule VII Sec. 20		
			Prior to the advertisement or the		
			issuance of the Invitation to		
			Bid/Request for Expression of		
			Interest for each procurement		
			undertaken through a public		
			bidding, the BAC, through its		
			Secretariat, shall call for a pre-		
			procurement conference. The pre-		
			procurement conference shall be		
			attended by the BAC, the		
			Secretariat, the unit or officials,		
			including consultants hired by the		
			procuring entity, who prepared the		
			Bidding Documents and the draft		
			Invitation to Bid/Request for		
			Expression of Interest for each		
			procurement.		

Criteria	Type	Name	Details	Issues	Action/s Needed
In developing an	Law	IRR-RA No.	- In certain appendices, economic	None	
evaluation method,		9184 -	benefits in terms of job creation		
are economic benefits		"Revised	are defined such as the kind of		
(e.g., job creation for		Implementing	labor needed as well as the		
local residents),		Rules and	appropriate incentives and		
enhancing resilience		Regulations of	guidelines to be followed (i.e.		
against disasters and		Republic Act	wage, hiring system).		
building local		(R.A.) No.			
residents' capacity		9184"			
taken into account?					
Procurement - Prequali	fication				
Are the Financial	Guidelines	Generic	- Financial documents are also	None	
appropriateness		Procurement	required that would show the		
clearly stipulated in		Manual (GPM)	financial capability of the		
the evaluation criteria,		Volume 3	prospective bidder (i.e. assets and		
to be			liabilities) as accredited and		
evaluated/confirmed?			authorized by counterpart		
			institutions such as the BIR		
Are the Track record	Law	IRR-RA No.	- Section 23 requires technical	None	
in sufficiently similar		9184 -	documents that would include		
projects clearly		"Revised	statements of the prospective		
stipulated in the		Implementing	bidder of all its ongoing projects		
evaluation criteria, to		Rules and	and its single largest completed		
be evaluated/		Regulations of	contract. A Philippine Contractors		
confirmed?		Republic Act	Accreditation Board (PCAB)		
		(R.A.) No.	license and registration is also		
		9184"	required for infrastructure projects.		

Criteria	Type	Name	Details	Issues	Action/s Needed
Are Keeping to construction schedule and appropriate cost control clearly stipulated in the evaluation criteria, to be evaluated/ confirmed?	Guidelines	DPWH Manual Volume 3	- Construction schedule is part of the Program of Works (POW) using a Program Evaluation Review Technique / Critical Path Method (PERT/CPM) diagram and in post-qualification a check on the construction schedule is done to see if it is consistent with the contract duration.	None	
Are Environmental impacts clearly stipulated in the evaluation criteria, to be evaluated/ confirmed?	Guidelines	DPWH Manual Volume 3	- An environment impact statement is prepared if a project is defined by DENR to be in a critical area before An ECC can be issued.	None	
Are Prevention of bribery (e.g., use of World Bank Listing of Ineligible Firms and Individuals) clearly stipulated in the evaluation criteria, to be evaluated/ confirmed?	Guidelines	Generic Procurement Manual (GPM) Volume 3	- Prospective bidders must submit a statement that it is not "blacklisted" by the government and not included in the consolidated blacklisting report by the GPPB. This statement is part of the class A legal documents.	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
In confirming the	Guidelines	DPWH	- Implements the Project and	None	
above evaluation		Department	Contract Management Procedures		
criteria, does the		Order (D.O.)	and Application (PCMA) to		
ordering party		No. 6 (series of	manage and monitor all civil		
systematically		2016)	works (infrastructure) projects for		
accumulated data of			2016 onwards. This replaces the		
past records			Project Monitoring System (PMS)		
(preferable to have a			and Project Management Office		
database set up)?			Monitoring System (PMOMS) but		
			this will continue to monitor		
			projects in 2015 and previous		
			years.		
Procurement - Proposal	Evaluation				
Do evaluation criteria	Law	IRR-RA No.	The award of a contract is	None	
use methods such as		9184 -	recommended to the lowest		
LCC, so that the most		"Revised	calculated responsive bidder. This		
economical proposal		Implementing	means that the eligible bidder with		
over the project		Rules and	the lowest Bid Price in comparison		
period can be		Regulations of	to the Approved Budget for the		
prioritized?		Republic Act	Contract (ABC) that passed the		
		(R.A.) No. No.	post qualification criteria takes the		
		9184"	contract. The ABC is the ceiling of		
			bid prices. Bid Prices above ABC		
			are automatically rejected.		

Criteria	Type	Name	Details	Issues	Action/s Needed
In terms of the evaluation criteria, is the method for achieving the required service level stipulated? In terms of the evaluation criteria, are keeping to construction schedule and appropriate cost	Туре	Name	The IRR of RA 9184 does not provide evaluation criteria on the method of achieving the required service level; however, one of the required documents in the completion of contract is the construction methodology. The IRR of RA 9184 does not provide evaluation criteria on construction schedule and appropriate cost control to the bid. However, part of the issued	Evaluation criteria do not include assessment of methodologies to achieve the required service level. Evaluation criteria do not include provisions to which bidders will be required to comply	Revise supporting guidelines Revise supporting guidelines
control stipulated?			Bidding Documents to the bidders is the General Conditions of Contract and Special Conditions of Contract which contains standard terms and conditions such as Liquidated Damages and Variation Orders.	with Construction Schedule.	
In terms of evaluation criteria, is environmental impact stipulated?			During the detailed engineering stage of infrastructure projects, Environmental Impact Statement is required by the DENR for critical projects.	Environmental Risk Management is not considered during bid evaluation	Revise supporting guidelines
In terms of evaluation criteria, is appropriate risk management stipulated?			One of the eligibility requirements is the Net Financial Contracting Capacity which must be at least equal to the ABC.	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
In the proposal	Law	IRR-RA No.	- Stipulates the 2-envelope	None	
evaluation, are		9184 -	method. Bidders will submit the		
technical aspects in		"Revised	forms in 2 separate sealed bid		
the proposal also		Implementing	envelopes at the same time. One		
appropriately		Rules and	envelope to contain the technical		
evaluated, in addition		Regulations of	component, the other the financial		
to the price (e.g.,		Republic Act	component.		
comprehensive		(R.A.) No.			
evaluation, 2-		9184"			
envelope method)?					
Procurement - Manager	ment of Contract	and Monitoring			
Are contract	Departmental	DPWH	- The use of Project and Project	As the current state of	Revise
management and	Order	Department	Component IDs	affair stand, there is	Guidelines/Directive
method of monitoring		Order (D.O.)		yet no determination	
stipulated?		No. 153 (series		as to whether the	
		of 2016)		mere delivery of	
				materials to	
				construction sites,	
				without the same	
				being installed or	
				utilized, would	
				already be deemed an	
				accomplishment for	
				the purpose of	
				computing slippages	
				and processing the	
				progress billing of the	
				contractor of such	
				materials.	

Criteria	Type	Name	Details	Issues	Action/s Needed
	Departmental	DPWH	- The use of ePLC (electronic	None	
	Order	Department	project life cycle) as a monitoring		
		Order (D.O.)	mechanism.		
		No. 82 (series			
		of 2013)			
	Departmental	DPWH	- The multi-year programming and	None	
	Order	Department	scheduling application (MYPS) as		
		Order (D.O.)	the official system for asset		
		No. 245 (series	preservation and network		
		of 2004)	development projects.		
	Departmental	DPWH	- Implements the project and	None	
	Order	Department	contract management procedures		
		Order (D.O.)	and application (PCMA) to		
		No. 6 (series of	manage and monitor all civil		
		2016)	works (infrastructure) projects for		
			2016 onwards.		
Are penalties and			During the competitive stage of	This is not consistent	Amendment to the
incentives stipulated			project procurement, efforts to	with the IRR of RA	law
for management of			disqualify or blacklist contractors	No. 9184 since,	
contract and			for submitting spurious documents	instead of the DPWH	
monitoring?			are plagued by the uncertainty as	CWR, it is the	
			to which Bids and Awards	Philippine	
			Committee (BAC) has the	Government	
			jurisdiction to initiate such action.	Electronic	
			Prior to the actual bidding process,	Procurement System	
			documentary requirements	(PhilGEPS) which is	
			submitted by contractors are	processing the Class	
			maintained in the Civil Works	A documents of	
			Registry (CWR) databank	bidders and issues a	

Criteria	Type	Name	Details	Issues	Action/s Needed
Ex Post Evaluation			maintained in the head office and consequently, outside the control of BACs. Hence, jurisdiction over actions involving spurious documents kept in the said databank cannot be ascertained.	certificate of registration to the contractor(s). If the documents in support of the registration issued by the PhilGEPS turn out to be spurious, it is the particular BAC where such certificate of registration is submitted which should initiate the blacklisting proceedings against the concerned contractor.	
Is the method for expost evaluation stipulated?	Law	IRR-RA No. 9184 - "Revised Implementing Rules and Regulations of Republic Act (R.A.) No. 9184"	- The lowest calculated bid / highest rated bid shall undergo post-qualification to check its compliance to all the conditions and regulations as per the bidding documents. In the post-qualification, documentary requirements will be submitted to the BAC and these shall be verified and validated based on certain criteria and requirements	None	

Criteria	Type	Name	Details	Issues	Action/s Needed
			(i.e. legal, technical, and		
			financial). The next bidder will		
			undergo the same process if the		
			initial bidder fails the criteria for		
			post-qualification.		
	Departmental	DPWH	- There are requirements before	None	
	Order	Department	the CoC (Certificate of		
		Order (D.O.)	Completion) and CoA (Certificate		
		No. 99 (series	of Acceptance) can be issued.		
		of 2015)	Once the contractor notifies		
		ŕ	DPWH of project completion, an		
			inspection team will inspect the		
			project to check for any defects		
			and if it was completed based o		
			contract and design. A final		
			inspection report will be released		
			but this is subject to any repairs		
			seen during inspection.		
			- The certificate of acceptance will		
			be issued after the one year defects		
			liability period and repairs (if any)		
			have been done and found to be		
			satisfactory by the inspectorate		
			team. They will then make the		
			final acceptance report, after		
			which the CoA will be issued to		
			the contractor.		

Criteria	Type	Name	Details	Issues	Action/s Needed
	Report	NEDA Annual Report for 2015	- A plan has been initiated for an Ex-Post Evaluation Manual to standardize criteria, concepts, principles, methodologies and ratings system for public sector projects and programs two to three years after completion.	None	
	Guideline	DPWH Post Evaluation Guideline	A Post Evaluation Guideline was prepared by a unit in Planning Service in 2009. The Manual was based on Development Assistance Criteria (DAC) and the Benefit Monitoring and Evaluation Report prepared by a consultant of ADB and it serves as the basis in the conduct of Post Evaluation and in the preparation of Post Evaluation Report.	Several Post Evaluation Reports were prepared by Development Planning Division, Planning Service based on the prepared Manual where lessons Learned and recommendations were identified. Limited reports were prepared because of limited staffs and insufficient knowledge in the conduct of Post Evaluation. This activity is undertaken by four (4) personnel, three (3) permanent staffs and one (1) Job	The prepared Post Evaluation Manual and Post Evaluation Reports need to be reviewed for its veracity and modify if necessary. The staffs need to be trained in the conduct of Post Evaluation and in the preparation of Report including but not limited to the following: Tools in the conduct of Post Evaluation (Log Frame, Performance Indicators, Cost Benefit and Social Analysis), Data Gathering/Survey,

Criteria	Type	Name	Details	Issues	Action/s Needed
				Order. Two out of 4	Data Analysis and
				staffs only have the	Technical Writing,
				experience in the	etc.
				conduct of post	
				evaluation. Coaching	
				and mentoring was	
				conducted since this	
				is a new activity for	
				the other two staffs as	
				they were involved in	
				other discipline	
				before.	
Is it stipulated that	Guidelines	Highway	The DPD should consolidate both	None	
objective data be		Planning	ex-post and ex-ante costs and		
accumulated in the		Manual,	scheduling data from CMS, and		
project's ex-post		Volume 1,	road and traffic data from RBIA.		
evaluation to be used		Chapter 13	They should calculate KPIs based		
in the project of the			on similar time criteria through		
next term?			runs of the HDM-4. PD, BOC,		
			BOM assist, approximately one		
			year after project completion. In		
			addition, the DPD should prepare		
			evaluation indicators for each PRS		
			in the project and for the project as		
			such as well as cost flows and		
			scheduling for the consolidated		
			Post-Evaluation Report.		

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