



15 August 2022

ECC-R11-2208-0007

PROJECT DIRECTOR RAMON A. ARRIOLA III
Department of Public Works and Highways –
Flood Control Management Cluster (UPMO-FCMC),
DPWH 2nd St., Port Area, Manila

Subject: **ENVIRONMENTAL COMPLIANCE CERTIFICATE**

Dear **PD Arriola**:

This refers to your application for an Environmental Compliance Certificate (ECC) for the proposed **Project for Master Plan and Feasibility Study on Flood Control and Drainage in Davao City (Davao River)** to be located in Brgys. Bucana, 5-A, 1-A, 2-A, 3-A,8-A,19-B, Ma-a, Tigatto, Waan, Mandug, New Carmen, New Valencia and Callawa, Davao City.

After satisfying the requirements of Presidential Decree No. 1586 and its Implementing Rules and Regulation, this Bureau has decided to grant an ECC for the above-mentioned project.

In this regard, the proponent is expected to fully implement the measures presented in the Environmental Impact Statement (EIS), intended to protect and mitigate the project's predicted adverse impacts on community health, welfare, and the environment. Environmental considerations shall be incorporated in all phases and aspects of the project.

This certificate does not create any right nor can it be used as an authorization to implement or commence with the operation of the project.

This Office shall be monitoring the project periodically to ensure strict compliance with the stipulations cited in the attached ECC.
Please be guided accordingly.

Very truly yours,

MARIO N. BULACAN, PME, MPA
Regional Director

O.R. No. : 6001838
Processing Fee : 10,000
Date : August 1, 2022



Republic of the Philippines
Department of Environment and Natural Resources
ENVIRONMENTAL MANAGEMENT BUREAU XI
OFFICE OF THE REGIONAL DIRECTOR

3rd Avenue corner V. Guzman St., Brgy. 27-C, Sta. Ana, Davao City
Email address: embdavao@emb.gov.ph / website: r11.emb.gov.ph / Tel No.:(082)234-0061

ENVIRONMENTAL COMPLIANCE CERTIFICATE

(Issued pursuant to Presidential Decree No. 1586 and its IRR)
ECC-R11-2208-0007

THIS IS TO CERTIFY THAT THE PROPONENT, **DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS FLOOD CONTROL MANAGEMENT CLUSTER (UPMO-FCMC)**, represented by its Project Director, **RAMON A. ARRIOLA III** is granted this Environmental Compliance Certificate (ECC), for the proposed **Flood Control and Drainage Project in Davao City (Davao River)**, by the Department of Environment and Natural Resources (DENR), through the Environmental Management Bureau (EMB).

SUBJECT ONLY to the conditions and restrictions set in this ECC and in the attached document labelled as Annexes A and B.

This Certificate is issued with the following details:

PROJECT DESCRIPTION

The ECC covers the proposed Project for Master Plan and Feasibility Study on Flood Control and Drainage in Davao City (Davao River)

The said project is an environmental enhancement to alleviate flood in Davao City and shall have the following components:

Component	Barangays Covered	Description
<i>Component A: Dredging works</i>	Bucana 1-A 2-A 5-A 8-A 19-B Ma-a Tigatto Wa-an Mandug New Carmen	<i>Davao River (0+500 to 23 km upstream)</i>
<i>Component B: Cut-off works - cum-bridge</i>	19-B Ma-a Tigatto	<i>Sta. 6+500 – Sta. 12+700</i> <i>2 bridges located in Brgy. Ma-a</i> <ul style="list-style-type: none"><i>upstream bridge (near Crocodile Park) at Sta. 11+188</i><i>downstream bridge at Sta. 8+117</i>



Environmental Compliance Certificate
Project for Master Plan and Feasibility Study on Flood Control and Drainage in Davao City (Davao River)
Brgys. Bucana, 5-A, 1-A, 2-A, 3-A, 8-A, 19-B, Ma-a, Tigatto, Waan, Mandug, New Carmen, New Valencia and Callawa, Davao City
Department of Public Works and Highways Flood Control Management Cluster

<i>Component C: Three (3) Retarding ponds</i>	<i>Mandug New Carmen New Valencia Callawa</i>	Retarding Pond	Area (km²)	Service capacity (MCM)	Excavated Volume (MCM)
		<i>RP 08</i>	<i>0.75</i>	<i>4.7</i>	<i>6.3</i>
		<i>RP 09</i>	<i>0.37</i>	<i>2.2</i>	<i>3.0</i>
		<i>RP 11</i>	<i>0.67</i>	<i>4.5</i>	<i>6.2</i>

Geographical Coordinates of the project

Component A: Coordinates of the Location of River Dredging works, DFCDMP, 2021

No.	Latitude	Longitude	No.	Latitude	Longitude
1	7° 10' 15.059" N	125° 34' 25.607" E	19	7° 6' 46.089" N	125° 35' 15.670" E
2	7° 10' 0.273" N	125° 34' 23.512" E	20	7° 6' 32.168" N	125° 35' 21.286" E
3	7° 9' 51.585" N	125° 34' 10.648" E	21	7° 6' 23.869" N	125° 35' 34.955" E
4	7° 9' 42.063" N	125° 34' 6.633" E	22	7° 6' 11.406" N	125° 35' 39.589" E
5	7° 9' 35.181" N	125° 34' 21.021" E	23	7° 5' 16.497" N	125° 35' 30.891" E
6	7° 9' 22.770" N	125° 34' 30.726" E	24	7° 5' 1.863" N	125° 35' 34.619" E
7	7° 9' 6.786" N	125° 34' 33.001" E	25	7° 4' 46.394" N	125° 35' 39.241" E
8	7° 8' 53.484" N	125° 34' 40.760" E	26	7° 4' 35.252" N	125° 35' 29.362" E
9	7° 8' 39.063" N	125° 34' 47.952" E	27	7° 4' 23.875" N	125° 35' 20.139" E
10	7° 8' 29.442" N	125° 35' 0.909" E	28	7° 4' 18.339" N	125° 35' 32.843" E
11	7° 8' 16.908" N	125° 34' 57.681" E	29	7° 4' 12.590" N	125° 35' 47.758" E
12	7° 8' 4.969" N	125° 34' 53.851" E	30	7° 4' 0.057" N	125° 35' 57.697" E
13	7° 7' 50.878" N	125° 35' 0.565" E	31	7° 3' 54.638" N	125° 36' 11.982" E
14	7° 7' 42.845" N	125° 35' 13.047" E	32	7° 3' 43.339" N	125° 36' 21.748" E
15	7° 7' 27.955" N	125° 35' 9.194" E	33	7° 3' 28.109" N	125° 36' 17.048" E
16	7° 7' 14.303" N	125° 35' 5.490" E	34	7° 3' 12.285" N	125° 36' 19.740" E
17	7° 7' 7.353" N	125° 34' 53.776" E	35	7° 2' 56.781" N	125° 36' 24.533" E
18	7° 6' 58.631" N	125° 35' 6.718" E	36	7° 2' 47.657" N	125° 36' 27.770" E

Component B : Coordinates of the Location of Cut-off works, DFCDMP, 2021

No.	Latitude	Longitude	No.	Latitude	Longitude
1	7° 6' 10.399" N	125° 35' 36.889" E	12	7° 5' 18.723" N	125° 35' 34.694" E
2	7° 6' 3.969" N	125° 35' 37.418" E	13	7° 5' 25.066" N	125° 35' 36.004" E
3	7° 5' 58.063" N	125° 35' 34.875" E	14	7° 5' 31.308" N	125° 35' 34.586" E
4	7° 5' 53.007" N	125° 35' 30.781" E	15	7° 5' 36.496" N	125° 35' 30.690" E



Environmental Compliance Certificate
Project for Master Plan and Feasibility Study on Flood Control and Drainage in Davao City
(Davao River)
Brgys. Bucana, 5-A, 1-A, 2-A, 3-A, 8-A, 19-B, Ma-a, Tigatto, Waan, Mandug, New Carmen,
New Valencia and Callawa, Davao City
Department of Public Works and Highways Flood Control Management Cluster

5	7° 5' 47.786" N	125° 35' 27.056" E	16	7° 5' 42.828" N	125° 35' 29.565" E
6	7° 5' 41.447" N	125° 35' 25.784" E	17	7° 5' 48.727" N	125° 35' 31.973" E
7	7° 5' 35.182" N	125° 35' 27.357" E	18	7° 5' 53.694" N	125° 35' 36.176" E
8	7° 5' 29.935" N	125° 35' 31.184" E	19	7° 5' 59.000" N	125° 35' 39.929" E
9	7° 5' 23.652" N	125° 35' 32.043" E	20	7° 6' 5.317" N	125° 35' 41.240" E
10	7° 5' 17.191" N	125° 35' 29.870" E	21	7° 6' 11.773" N	125° 35' 40.490" E
11	7° 5' 15.107" N	125° 35' 33.115" E			

Component C: Coordinates of the location of retarding ponds, DFCDMP, 2021

No.	Latitude	Longitude	No.	Latitude	Longitude
RETARDING POND 8			RETARDING POND 11		
1	7° 11' 57.018" N	125° 33' 34.883" E	1	7° 10' 48.856" N	125° 33' 35.729" E
2	7° 12' 1.411" N	125° 33' 34.390" E	2	7° 10' 46.783" N	125° 33' 37.114" E
3	7° 12' 5.132" N	125° 33' 33.842" E	3	7° 10' 45.018" N	125° 33' 38.655" E
4	7° 12' 8.918" N	125° 33' 31.174" E	4	7° 10' 41.365" N	125° 33' 36.256" E
5	7° 12' 6.322" N	125° 33' 24.230" E	5	7° 10' 38.372" N	125° 33' 35.722" E
6	7° 12' 9.902" N	125° 33' 21.458" E	6	7° 10' 36.609" N	125° 33' 37.057" E
7	7° 12' 16.061" N	125° 33' 19.113" E	7	7° 10' 36.752" N	125° 33' 39.074" E
8	7° 12' 23.287" N	125° 33' 19.826" E	8	7° 10' 38.136" N	125° 33' 40.995" E
9	7° 12' 29.134" N	125° 33' 17.997" E	9	7° 10' 41.377" N	125° 33' 43.289" E
10	7° 12' 34.973" N	125° 33' 17.513" E	10	7° 10' 43.064" N	125° 33' 46.401" E
11	7° 12' 37.527" N	125° 33' 22.440" E	11	7° 10' 43.401" N	125° 33' 50.695" E
12	7° 12' 40.162" N	125° 33' 31.608" E	12	7° 10' 42.290" N	125° 33' 55.446" E
13	7° 12' 40.554" N	125° 33' 35.282" E	13	7° 10' 40.518" N	125° 33' 58.332" E
14	7° 12' 41.205" N	125° 33' 39.010" E	14	7° 10' 38.329" N	125° 34' 1.888" E
15	7° 12' 40.044" N	125° 33' 43.347" E	15	7° 10' 31.831" N	125° 34' 9.505" E
16	7° 12' 36.252" N	125° 33' 47.256" E	16	7° 10' 29.939" N	125° 34' 6.081" E
17	7° 12' 31.125" N	125° 33' 49.710" E	17	7° 10' 28.315" N	125° 34' 0.953" E
18	7° 12' 28.332" N	125° 33' 50.418" E	18	7° 10' 24.528" N	125° 33' 54.623" E
19	7° 12' 26.578" N	125° 33' 50.150" E	19	7° 10' 21.451" N	125° 33' 50.831" E
20	7° 12' 24.719" N	125° 33' 49.984" E	20	7° 10' 18.949" N	125° 33' 45.646" E
21	7° 12' 20.096" N	125° 33' 45.614" E	21	7° 10' 17.942" N	125° 33' 40.986" E
22	7° 12' 12.629" N	125° 33' 41.590" E	22	7° 10' 19.197" N	125° 33' 38.201" E
23	7° 12' 2.725" N	125° 33' 39.466" E	23	7° 10' 22.323" N	125° 33' 33.305" E
24	7° 11' 59.024" N	125° 33' 36.394" E	24	7° 10' 25.134" N	125° 33' 29.443" E
RETARDING POND 9			25	7° 10' 27.013" N	125° 33' 25.833" E
1	7° 12' 6.155" N	125° 33' 44.971" E	26	7° 10' 28.902" N	125° 33' 20.569" E
2	7° 12' 5.362" N	125° 33' 48.173" E	27	7° 10' 30.971" N	125° 33' 20.012" E
3	7° 12' 1.796" N	125° 33' 48.670" E	28	7° 10' 33.086" N	125° 33' 20.386" E
4	7° 11' 56.596" N	125° 33' 45.693" E	29	7° 10' 35.866" N	125° 33' 21.953" E
5	7° 11' 51.187" N	125° 33' 43.284" E	30	7° 10' 39.104" N	125° 33' 24.815" E
6	7° 11' 44.577" N	125° 33' 42.988" E	31	7° 10' 42.963" N	125° 33' 27.526" E
7	7° 11' 36.205" N	125° 33' 43.924" E			
8	7° 11' 30.067" N	125° 33' 42.596" E			



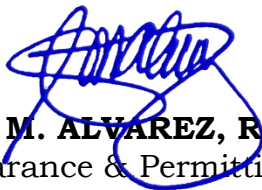
Environmental Compliance Certificate
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Brgys. Bucana, 5-A, 1-A, 2-A, 3-A, 8-A, 19-B, Ma-a, Tigatto, Waan, Mandug, New Carmen,
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9	7° 11' 24.587" N	125° 33' 43.600" E
10	7° 11' 21.629" N	125° 33' 46.014" E
11	7° 11' 15.790" N	125° 33' 46.498" E
12	7° 11' 10.425" N	125° 33' 45.486" E
13	7° 11' 8.158" N	125° 33' 44.387" E
14	7° 11' 12.011" N	125° 33' 38.927" E
15	7° 11' 13.840" N	125° 33' 35.111" E
16	7° 11' 15.803" N	125° 33' 34.915" E
17	7° 11' 17.924" N	125° 33' 34.461" E
18	7° 11' 18.588" N	125° 33' 35.654" E
19	7° 11' 27.462" N	125° 33' 37.359" E
20	7° 11' 31.956" N	125° 33' 37.177" E
21	7° 11' 46.691" N	125° 33' 34.415" E
22	7° 11' 50.201" N	125° 33' 34.797" E
23	7° 11' 53.593" N	125° 33' 37.867" E
24	7° 11' 59.713" N	125° 33' 42.349" E
25	7° 12' 3.115" N	125° 33' 43.558" E

This Certificate is issued in compliance with the requirements of Presidential Decree No. 1586, and its Implementing Rules and Regulations. Non-compliance with any of the provisions of this Certificate including the mitigating measures cited herein shall be a sufficient cause for its cancellation and/or imposition of a fine in an amount not to exceed Fifty Thousand Pesos (P50,000.00) for every violation thereof without prejudice to the imposition of fines and penalties under other environmental laws. The EMB, however, is not precluded from reevaluating and correcting any deficiencies or errors that may be found after issuance hereof.

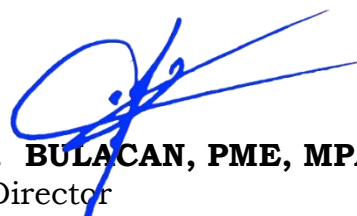
Issued at EMB-R11, 3rd Avenue cor. V. Guzman St., Brgy. 27-C, Sta. Ana, Davao City this 15 August 2022.

Recommending Approval:



ALNULFO M. ALVAREZ, RF, EnP, MENP
Chief, Clearance & Permitting Division

Approved:



MARIO N. BULACAN, PME, MPA
Regional Director



Environmental Compliance Certificate
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Brgys. Bucana, 5-A, 1-A, 2-A, 3-A, 8-A, 19-B, Ma-a, Tigatto, Waan, Mandug, New Carmen,
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Department of Public Works and Highways Flood Control Management Cluster

SWORN ACCOUNTABILITY STATEMENT

I, **RAMON A. ARRIOLA III**, Project Director, representing Department Of Public Works And Highways Flood Control Management Cluster (UPMO-FCMC), with office address located at DPWH 2nd St., Port Area, Manila takes full responsibility in complying with all conditions in this Environmental Compliance Certificate (ECC).

**DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS –
FLOOD CONTROL MANAGEMENT CLUSTER (UPMO-FCMC)**

By:

RAMON A. ARRIOLA III
Project Director

TIN No. _____

Subscribed and sworn before me this _____, the above-named
affiant taking oath presenting _____, issued on _
_____ at _____.

Notary Public

Doc. No. _____
Page No. _____
Book No. _____
Series of _____



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I. ENVIRONMENTAL MANAGEMENT

All commitments, mitigating measures and monitoring requirements, especially those contained in the Environmental Impact Statement Report, particularly in the Environmental Management and Monitoring Plan (EMMoP), shall be instituted to minimize any adverse impact to the environment throughout the project implementation including among others the following, *to wit*:

POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
A. Pre-Construction Phase		
Displacement and loss of livelihood especially sand and gravel concessionaire	<ul style="list-style-type: none"> - Develop and implement Information, Education and Communication (IEC) program - Compensation of sand and gravel concessionaire will be based on the existing government guidelines- Hiring of locally qualified labor. - Involve the community in the design, formulation and resettlement action plan 	<p>Full implementation of the project preparation activities of UPMO -DPWH and DPWH XIUPMO-DPWH in coordination with City LGU.</p> <p>Included in RAP</p> <p>100 % Secure tenurial instruments/ permits</p> <p>100% ROW/Land acquisition and compensation in compliance with RA 10752</p>
B. Construction and Operation Phase		
B.1 River Dredging		
Various earthmoving activities (e.g. road construction, embankment construction, etc), if not done properly could result in slope stability problems, as well as alteration of the topography, erosion and siltation.	<ul style="list-style-type: none"> - Geological investigation (e.g. landslide mapping); - geotechnical investigation; - hydrological investigation; - slope stability analysis of critical slopes; - reshaping of the slopes, - installation of retaining structures; - surface & subsurface drainage (e.g. diversion of 	<p>100 % compliance to DPWH-DENR-DILG-DOTR JMC No. 2019-01</p>



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POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
	clear water, subsurface drains beneath stockpiles on slopes if seepages are present); - Construction of silt traps.	
Degradation of water quality(siltation)	- Installation of silt curtain	100% no soil erosion/ siltation
Generation of dredged materials	- Handling and disposal should be in accordance with DPWH DO 139 -2014 and JMC 01 -2019 - Formulation of dredging master plan for Davao River - Identify sufficient and suitable disposal site	100% no spoil materials will be left unattended and no mud/dirt shall be transferred in the road
Emission from heavy equipment	- Use new less emission models	100% compliance to RA 8749
Noise generation	- Provision of muffler to lessen noise - Day time work schedule, if possible	100% Noise within standard (NPCC MC 002 Series of 1980)
Dredging debris	- Clean debris and dispose properly: solid waste according to RA 9003, used oil according to RA 6969	100% no spoil materials will be left unattended and no mud/dirt shall be transferred in the road
B.2 Cut-off works		
Removal of vegetation including economically and ecologically important species	- Prioritize ecologically and economically important species in the conservation initiatives - Establish a nursery - Practice tree balling of endemic tree species and facilitate immediate transfer to open areas - Propagate endemic plant species	100 % Secure tenurial instruments/ permits
Destruction and fragmentation of wildlife habitat	- Establish buffer zone	100 % compliance to DENR -FMB/BMB



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POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
Generation of vegetative wastes	- Re-use vegetative waste as compost, and growing plant medium	100% compliance of RA 9003
Generation of construction debris	- Proper disposal of construction debris and implement integrated Solid Waste Management Plan (SWMP)	100% compliance of RA 9003
Generation of land pollutants (excavated materials)	- Identify sufficient and appropriate/suitable disposal site of excavated soil. The location, capacity, etc will be designed in the next stage, i.e. Detailed Engineering Design (DED)	100% no spoil materials will be left unattended and no mud/dirt shall be transferred in the road
Change in land use	- Implement appropriate land use zoning	UPMO-DPWH in coordination with the City Government on the re-zoning of the site
Soil erosion	- Proper engineering design of permanent facilities - Provide buffer zone - Conduct geotechnical study - Stabilize riverbanks	100% no soil erosion/siltation
- Siltation of Davao River (downstream) - Sedimentation of Davao Gulf	- Provision of silt curtains and siltation ponds - Proper scheduling of works - Provision of temporary sewerage system for workers	100% no soil erosion/siltation 100% compliance to RA 9275
Increase in the concentration of PM10, PM2.5, NO2, SO2 and CO	- Use new model low emission vehicles - Regular maintenance of hauling trucks and heavy equipment - Regular watering of dust generating mounds - Install cover of hauling trucks - No overloading of hauling vehicles - Tree planting in open areas	100% compliance to RA 8749



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POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
Noise disturbance	<ul style="list-style-type: none"> - Provision of muffler - Establishment of buffer zones - Close coordination with the CLGU and BLGU 	100% Noise within standard (NPCC MC 002 Series of 1980)
Damage to roads and bridges	<ul style="list-style-type: none"> - No overloading of vehicles - Regular maintenance of roads, e.g. re-graveling, pothole patching, scraping of droppings 	100% compliance to the existing guidelines
Accidents and Congestion of traffic	<ul style="list-style-type: none"> - Reroute access - Putting up of traffic warning signs - Establishment of construction buffer and containment barriers - Proper scheduling of hauler trucks in reference of the truck ban schedule - Provision of sufficient sidewalks and access routes-Coordinate with CTMO and BLGUs - Conduct road safety campaign Provision of road safety equipment 	UPMO-DPWH in coordination with traffic division of the City implement measures to avoid traffic congestion
Construction debris	<ul style="list-style-type: none"> - Dispose in accordance with RA 9003 	100% no spoil materials will be left unattended and no mud/dirt shall be transferred in the road
B.3 Retarding Ponds		
Removal of vegetation including economically and ecologically important species	<ul style="list-style-type: none"> - Prioritize ecologically and economically important species in the conservation initiatives - Propagate endemic plant species - Establish a nursery 	100 % Secure tenurial instruments/ permits
Destruction and fragmentation of wildlife habitat Disturbance/ displacement of wildlife	<ul style="list-style-type: none"> - Establish buffer zone - Practice tree balling of endemic tree species and facilitate immediate transfer to open areas 	100 % compliance to DENR -FMB/BMB



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POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
	<ul style="list-style-type: none"> - Re-establish vegetation in the ponds during non-flood period in order to recolonize faunal species 	
Change in land use	<ul style="list-style-type: none"> - Implement appropriate land use zoning 	UPMO-DPWH in coordination with the City Government on the re-zoning of the site
Soil Erosion	<ul style="list-style-type: none"> - Proper engineering design of permanent facilities - Provide buffer zone - Conduct geotechnical study 	100% no soil erosion/ siltation
Generation of vegetative wastes	<ul style="list-style-type: none"> - Re-use vegetative waste as compost, and growing plant medium 	100% compliance to RA 9003
Generation of construction debris	<ul style="list-style-type: none"> - Proper disposal of construction debris and implement integrated Solid Waste Management Plan 	<p>100% collected/hailed construction debris</p> <p>100% compliance to RA 9003</p>
Generation of land pollutants (excavated materials)	<ul style="list-style-type: none"> - Identify sufficient and appropriate/suitable disposal site of excavated soil. The location, capacity, etc will be designed in the next stage, i.e Detailed Engineering Design (DED) 	100% no spoil materials will be left unattended and no mud/dirt shall be transferred in the road
<p>Siltation of Davao River (downstream)</p> <p>Sedimentation of Davao Gulf</p>	<ul style="list-style-type: none"> - Provision of silt curtains and siltation ponds - Proper scheduling of works - Provision of temporary sewerage system for workers 	<p>100% no siltation</p> <p>100% compliance with RA 9275</p>
Increase in the concentration of PM10, PM2.5, NO2, SO2 and CO	<ul style="list-style-type: none"> - Use new model low emission vehicles - Regular watering of dust generating mounds - Install cover of hauling trucks - No overloading of hauling vehicles - Regular maintenance of hauling trucks and heavy equipment 	<p>100% compliance to DAO 2000-81 and no dust emission</p> <p>100% compliance to RA 8749</p>



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POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
	- Tree planting in open areas	
Noise disturbance	<ul style="list-style-type: none"> - Provision of mufflers - Limit the construction time to given standard hours or limit night work to avoid the distraction of nearby establishments like residential areas - Close coordination with the CLGU and BLGU - Establishment of buffer zones 	<p>100% Noise within standard (NPCC MC 002 Series of 1980)</p> <p>100% compliance to RA 8749</p>
Damage to roads and bridges	<ul style="list-style-type: none"> - No overloading of vehicles - Regular maintenance of roads, e.g. re-graveling, pothole patching, scraping of droppings 	100% compliance to the existing guidelines
Congestion of traffic	<ul style="list-style-type: none"> - Reroute access - Putting up of traffic warning signs - Establishment of construction buffer and containment barriers - Proper scheduling of hauler trucks in reference of the truck ban schedule - Provision of sufficient sidewalks and access routes - Coordinate with CTMO and BLGUs - Conduct road safety campaign - Provision of road safety equipment 	UPMO-DPWH in coordination with traffic division of the City to implement measures to avoid traffic congestion
Generation of construction debris	- Dispose in accordance with RA 9003	100% collected/hailed construction debris
Possible collapse of Retarding Ponds and Cut off Works banks	- Conduct a regular monitoring and maintenance	100% compliance of the existing structure guidelines
<i>B.2. Construction Installation, and operation of temporary site facilities (field offices and barracks)</i>		
Generation of solid Wastes	- Segregation of wastes and provision of waste storage facility	100% conformance to RA 9003



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POTENTIAL IMPACT PER PROJECT ACTIVITY PER PROJECT PHASE	MITIGATING MEASURES	RATING/ PERFORMANCE OF MITIGATING MEASURES
	<ul style="list-style-type: none"> - Provision of an MRF including composting area - Hauling of solid wastes by third party hauler with permit/clearance from LGU 	
Degradation of air quality due to use of generator set (if any)	Regular maintenance of the generator set	100% compliance to RA 8749
Generation of hazardous materials	<ul style="list-style-type: none"> - Provision of centralized storage facility/area and collected by hazardous wastes DENR accredited 3rd party haulers/treaters. - Hazardous waste generation ID shall be secured from EMB. 	100% compliant to RA 6969
Degradation of surface water quality due to contamination from domestic wastewater	<ul style="list-style-type: none"> - Provision of portalets for construction workers <p><i>Note: at least one (1) portalet for 25 workers where the number of male workers exceeds 100 (as per IRR-Industrial Hygiene, PD 856 Amending Administrative Order 111 Series of 1991)</i></p> <ul style="list-style-type: none"> - Provision of septic tank or wastewater collection system for workers - Hauling of wastewater from portalets/ septic tank by third party contractor with licensed/permit from LGU and with valid Discharge Permit for wastewater treatment facility 	100% no discharge of domestic wastewater to nearby bodies of water

II. GENERAL CONDITIONS

1. The proponent shall Comply with all the provisions of **RA 9275, the Philippine Clean Water Act of 2004 and its Implementing Rules and Regulations;**
2. The proponent shall Install and maintain air pollution control devices to minimize dust and gas emissions from different sources. Impose speed limit and conduct daily road watering. Likewise, the proponent shall



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ensure that emissions at all times comply with the DENR standards and with all the provisions of **RA 8749, the Philippine Clean Air Act of 1999 and its Implementing Rules and Regulations;**

3. The proponent shall install, operate, and maintain collection, handling, treatment, storage and disposal facilities or any system serving different sources of hazardous waste. The system shall be properly operated to ensure compliance with all the provisions of **RA 6969, the Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990 and its Implementing Rules and Regulations;**
4. The proponent shall install, operate and maintain collection, handling, treatment, storage and disposal facilities or any system serving different sources of solid waste. The system shall be properly operated to ensure compliance with all the provisions of **RA 9003, the Ecological Solid Waste Management Act of 2000 and its Implementing Rules and Regulations;**
5. The proponent shall submit **Compliance Monitoring Report (CMR)** semiannually, July and January of every year, together with the operation's extraction rate reports of dredging activity;
6. Planting of appropriate tree species shall be undertaken in coordination with DENR CENRO in support to National Greening Program of the DENR to compensate for the loss of vegetation. Replacement of trees shall follow the following ratio: 50 trees for one (1) planted tree cut and 100 trees for one (1) naturally growing tree cut;
7. Proponent shall conduct an effective **Information, Education and Communication (IEC) Program** to inform and educate all stakeholders, especially its contractors, workers, and local residents about the mitigating measures embodied in its EIS, the conditions stipulated in this Certificate and the environmental and human safety features of the project for greater awareness, understanding and sustained acceptance of the project;
8. The proponent shall designate a **Pollution Control Officer (PCO) or any equivalent designation** and secure accreditation at DENR-EMB XI within six (6) months from the issuance of this ECC who shall take charge of the environmental concerns of the project;
9. That the proponent shall conduct **Engineering Geological and Geohazard Assessment** duly endorsed by MGB prior to project implementation and shall implement proper engineering mitigating measure as recommended especially for the cut of works and retarding ponds;
10. The proponent shall ensure that all affected properties and stakeholders shall be justly compensated based on the existing guidelines of DPWH. The proponent shall submit a report containing compensation based on the result of the survey in the CMR;



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11. That stockpile of spoils from civil works and construction debris shall be placed away from drainage routes and proper disposal of the same shall be effected. The same should not in any manner cause nuisance and hazards to the public during its disposal/hauling. Likewise, appropriate measures shall be undertaken for the avoidance of noise, water, land and dust pollution during construction;
12. The proponent shall ensure not to damage private or public structure/utilities (i.e. electric post, water supply pipes, etc.). In the event that such accident occurs, proper and immediate restoration and/or compensation should be undertaken;
13. The proponent shall provide warning devices/signs and construction site shall be illuminated during night time to avoid accidents. The retention pond must also be provided with appropriate and adequate railings in order to prevent accidents;
14. That the proponent shall conduct **soil test for the dredged materials** to ensure no contamination of heavy metals and shall properly disposed thereafter;
15. That the proponent shall establish water quality monitoring sampling station for **Total Suspended Solids (TSS)** in Davao Gulf;
16. The proponent shall ensure that its contractors and sub-contractors strictly comply with the relevant conditions of this Certificate;
17. The proponent shall submit an Abandonment Plan to DENR-EMB XI at least six (6) months prior to project abandonment. The plan shall include rehabilitation measures/clean-up, remediation of areas affected by the project and proposed alternative projects in the area;
18. Close monitoring of the project should be undertaken by the proponent to maintain a high level of safety and efficiency during operation;
19. That the DENR-EMB XI is not accountable to any untoward incident that may happen to the project caused by *force majeure*, structural defects or non-implementation of any requirement based on existing laws or whatever cause;
20. That the Proponent shall see to it that copy of this ECC shall be furnished to all agencies/offices and Local Government Unit (LGU) concerned within one (1) month from receipt thereof. A certification shall be submitted by the Proponent to DENR-EMB XI that said copy has been delivered and duly stamped as received by the concerned agencies/offices;

III. RESTRICTIONS

21. That the **Dredging Master Plan and Detailed Engineering Design** pursuant to DPWH-DENR-DILG-DOTR JMC No. 2019-01 shall be submitted to this Office prior to project implementation;



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22. The proponent shall coordinate with other concerned Government Agencies in the management of the project and shall implement only after securing all the necessary and relevant permits from other pertinent Government Agencies;
23. No other activities shall be undertaken other than what was stipulated in the EIS document. Any expansion or modification of the Project beyond the project description or any change in the activity or transfer of location, or realignment, shall be subject to a new EIA study;
24. In case of transfer of ownership of this Project, these same conditions and restrictions for which written notification must be made by herein grantee to EMB within fifteen (15) working days from such transfer; and
25. No cutting of trees specially banned species shall be done along the route without proper clearance from authorities and be subjected to Forestry laws, rules and regulations. Permit to Cut from the nearest DENR CENRO shall be secured prior to cutting of trees. Burning of waste generated from land clearings such as leaves and branches shall be strictly prohibited.



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PROJECT ASSESSMENT PLANNING TOOL

For the assistance and guidance of the Proponent and Government agencies concerned in the management of the Project and for better coordination in mitigation of the impacts of the Project on its surrounding areas and the environment, the following recommendations are forwarded to the parties and authorities concerned for appropriate action.

<i>Environmental Planning Recommendations and Regulatory Requirements for the Proponent</i>
Local Government Unit (LGU)
<ol style="list-style-type: none"> 1. The proponent shall give priority employment to qualified local residents. Adequate public information for jobs available to local residents in the affected areas shall be provided; 2. The proponent shall coordinate with the concerned LGU for the implementation of Solid Waste Management Plan; 3. The proponent shall comply with the Building Code and Sanitation Code of the Philippines; 4. The proponent shall maintain the drainage ways along with the road grading; 5. The proponent shall coordinate with the concerned LGU(s) in the implementation of traffic management plan 6. The host communities will be kept informed of the duration and timing of any noisy construction 7. That the proponent shall coordinate with the concerned LGU for the appropriate use of the project after construction.
DENR- Mines and Geosciences Bureau (for bridge projects/retarding ponds)
8. The proponent shall implement the recommendation in the Geohazard Identification Report (GIR) / Geohazard Assessment Report (GAR) and proper mitigating measure on the identified possible geologic hazards in the project area
DENR / PCA
9. The proponent shall secure tree cutting permit
DOLE - Bureau of Working Condition
10. The proponent shall comply with the Labor Code of the Philippines



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11. The proponent shall provide safety measures and appropriate PPE to workers

DENR - Biodiversity Management Bureau (BMB)

12. The proponent shall coordinate with BMB for the preparation and implementation of the Biodiversity and Monitoring Systems pursuant to Technical Bulletin Nos. 2016-05 and 2019-04

Environmental Planning Recommendations for the Proponent

13. That a 2' X 4' billboard containing this message: **“Notice to the Public, This Project for Master Plan and Feasibility Study on Flood Control and Drainage in Davao City (Davao River) has been issued an Environmental Compliance Certificate (ECC-R11-2208-0007) by the Environmental Management Bureau of the Department of Environment and Natural Resources, Region XI on 15 August 2022.** This signage must be installed in areas where the components are located to inform the general public prior and during the operation.

14. That proponent shall implement a health and safety program of its workers and shall comply to the Health Protocol mandated by the Department of Health (DOH)

15. That the proponent shall observe cleanliness and orderliness during the construction and operation of the projects to prevent accidents

16. Strict implementation of Right-Of-Way (ROW) Action Plan (RAP).

For the dissemination and proper action of the agencies concerned.


ALNULFO M. ALVAREZ, EnP, RF, ME nP
Chief, Clearance and Permitting Division


MARIO N. BULACAN, PME, MPA
Regional Director



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