	DEPARTMENT	Republic of th T OF PUBLIC CENTRAL Man	WORKS AND OFFICE	HIGHWAYS	097.13 DPWH 08.16.2022
AUG 1 2 2022 DEPARTMENT O 183 NOSeries of 2022	RDER)))) 8/14/2022	SUBJECT:	Amended Gu Submission Occurring Ma and Related F	of Updated aterials Sour	Naturally

In order to further optimize the utilization of available naturally occurring and marginal construction materials and production plants that manufacture construction materials such as aggregate processing and crushing plants, and concrete and asphalt batching plants nationwide, the guidelines in the annual updating and submission of all new and existing materials sources is hereby amended as prescribed in the attached Guidelines on the Annual Submission of Updated Naturally Occurring Materials Sources Maps and Related Reports (Annex "A").

The maps and reports shall be submitted by the District Engineering Offices (DEOs) to their respective Regional Offices (ROs) for consolidation by the end of November each year. The ROs shall forward the consolidated maps and reports to the Bureau of Research and Standards (BRS) on or before the end of January of the succeeding year.

This Order supersedes Department Order No. 41, Series of 2006 and shall take effect immediately.





Encl:

- 1.) Guidelines on the Submission of Updated Material Sources Maps and Data, Annex "A"
 - 2.) Naturally Occurring Material Sources Field Data Sheet, Annex "B"
 - 3.) Aggregate Processing (Crushing & Screening) Plants and Concrete/Asphalt Batching Plants Field Data Sheet, Annex "C"
 - 4.) Summary of Naturally Occurring Material Sources, Annex "D"
 - 5.) Summary of and Aggregate Processing (Crushing & Screening) Plants and Concrete/Asphalt Batching Plants, Annex "E"
 - 6.) Sample Format for Geotagged Photos, Annex "F"
 - 7.) Sample Format for Material Sources Map, Annex "G"
 - 8.) Instructions for Digital Compilation of Material Sources Maps and Reports, Annex "H"

14.1.4 RPF/MLC/MMB

GUIDELINES ON THE ANNUAL SUBMISSION OF UPDATED NATURALLY OCCURRING MATERIALS SOURCES MAPS AND RELATED REPORTS

- 1. The naturally occurring material sources and aggregate processing plants and concrete/asphalt batching plants within the area of jurisdiction of all District Engineering Offices (DEOs) shall be inspected on a yearly basis to ensure that the volume/quantity is sufficient and readily available for use. The concerned DEOs shall schedule the exploration works in such a manner that it will not disrupt their regular work activities.
- The DEOs shall accomplish the field data sheet for each source as stipulated in Annexes B-C. The field data sheets shall be maintained on file and be made available during field verification by the Bureau of Research and Standards (BRS). For uniformity in the submission of updated material sources, the information from the field data sheet shall be encoded and summarized using the attached form under Annexes D-E.
- 3. Each material source shall be geotagged (process of adding geographic data to various media such as photos) to identify the current and exact location of the source and shall be incorporated in the materials map (**Annexes F-G**).
- 4. The submission of additional documentary requirements such as Quarry Permits and/or Environmental Compliance Certificate (ECC) for river/mountain quarries and BRS Certificate of Accreditation for concrete/asphalt batching plants shall be included to ensure that extraction of construction materials in a particular area is legal and compliant with the existing rules and regulation of other government agencies (e.g., LGUs, DENR).
- 5. The material sources shall also undergo the following Quality Tests in accordance with DPWH Standard Specifications:

QUALITY TEST	MATERIALS TO BE TESTED
Sieve Analysis of Soils	
(AASHTO T 88)	
Liquid Limit and Plastic Limit of Soils	ž.
(AASHTO T 89 and T 90-16)	
Moisture Content (AASHTO T 265)	
Specific Gravity of Soil by Water Pycnometer	
(AASHTO T 100)	SOIL AND SOIL AGGREGATES
Shrinkage Limit of Soil (AASHTO T 92)	
Moisture Density Relation	
(AASHTO T 180)	
California Bearing Ratio	
(AASHTO T 193)	
AASHTO Soil Classification	i
Sieve Analysis of Coarse and Fine Aggregates (AASHTO T 27)	
Bulk Specific Gravity and Absorption	
(AASHTO T 84 and T 85)	
Abrasion (AASHTO T 96)	CONCRETE AND
Unit Weight (AASHTO T 19M)	ASPHALT AGGREGATES
Soundness (AASHTO T 104)	
Organic Impurities of Fine Aggregates (AASHTO T 21M)	
Clay Lumps and Friable Particles in Aggregate (AASHTO T 112)	

- 6. Once completed, **the DEOs shall submit by the end of November each year** the updated field data sheets, materials maps, geotagged photos, laboratory test reports and other additional documentary requirements to their respective Regional Offices (ROs) for consolidation. The ROs shall compile the submitted data in digital format (**Annex H**).
- 7. The ROs shall then forward to the BRS the Memorandum signed by the Regional Director and the consolidated documents thru Google Drive by accessing the link (<u>https://drive.google.com/drive/folders/1UbDrQk5m_WeWNJfFRK3aV4wYrfZj0eZd?usp=sharing</u>) on or before the end of January of the succeeding year.
- 8. The BRS shall conduct field verification to validate the accuracy of the submitted materials sources map/information whenever necessary prior to final inclusion in the materials sources databank.



DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **BUREAU OF RESEARCH AND STANDARDS**

Doc. Code Revision No. Page No.

DPWH-QMSP-26-01 1 00 : Page 1 of 1 :

NATURALLY OCCURRING MATERIAL SOURCES FIELD DATA SHEET

REGIONAL OFFICE DISTRICT ENGINEERING OFFICE	:
NAME OF SOURCE	¢
LOCATION	:
 a. Distance from the source to the nearest National/Provincial Road b. Geographic Coordinates c. Station (Kilometer Post) 	:
d. Barangay e. Municipality/City f. Province	

TYPE OF SOURCE:

() River () Mountain Quarry () Beach () Cutting () Natural Exposure

MATERIAL TYPE DESCRIPTION ESTIMATED QTY. (m³) 1. Sand 2. Gravel 3. Cobbles/Boulders 4. Soft Rock 5. Hard Rock 6. Others

POTENTIAL USE/S:

- () Borrow/Fill/Selected Fill () Sub-Base [Item 200] () Base Course [Item 201]
- () Crushed Aggregate Base Course [Item 202] () Aggregate Surface Course [Item 300]
- () Riprap [Item 505] () Stone Masonry [Item 506] () Gabions [Item 511]
- () Fine/Coarse Aggregates for Bituminous Mix [Item 306/307/310]
- () Fine/Coarse Aggregates for Concrete Mix [Item 311 and Item 405]

GENERAL REMARKS:

() Plant on Site (Grizzly, Screen and Conveyors, Crusher etc.):

() Quarry Permit (indicate name of owner/permittee): ____

() Renewable Source (replenishable during heavy rains / high floods)

-) Non-renewable Source (if considered depleted, to be removed from materials map)
-) Means of Access (indicate the type of access road, etc.):_____

() Others:

Assessed/Verified: _____ Date and Time Verified: _____





DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS **BUREAU OF RESEARCH AND STANDARDS**

Doc. Code Revision No. Page No.

DPWH-QMSP-26-02 : 00 : : Page **1** of **1**

AGGREGATE PROCESSING (CRUSHING & SCREENING) PLANTS AND CONCRETE/ASPHALT PLANTS

FIELD DATA SHEET

REGIONAL OFFICE : DISTRICT ENGINEERING OFFICE :		:	
NAME OF PLAI	NT FICE ADDRESS	:	Фж 272.9
LOCATION, OF			
a.	Street Address	;	
b.	Barangay	:	
	Municipality/City)	
	Geographic Coordinates	;	
e.	Station (Kilometer Post)	÷	· · · · · · · · · · · · · · · · · · ·

LIST OF PRODUCT AND PRODUCTION OUTPUT

(e.g., G1 aggregate, 3/8 aggregate, S1 aggregate, Ready mix concrete, Hot-mix asphalt, etc.)

PRODUCT	PRODUCTION OUTPUT (m ³ /month)

NAME OF SOURCE OF AGGREGATES/RAW MATERIALS

(e.g., river, mountain quarry, crushing plant, cement plant etc.)

RECORD	OF OW	NERSHIP
--------	--------------	---------

() Priv	ate	Name of Owner: Contact Information:

1	() Government	Name of Office/Head:		
(Contact Information:		

REMARKS:

() BRS Certificate of Accreditation (if concrete/asphalt batching plant):

- () Environmental Compliance Certificate (ECC): _____
- () Others:

Assessed/Verified: _____ Date and Time Verified: _____

Annex "D"



Republic of the Philippines DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS [OFFICE NAME]

Doc. Code	:	DPWH-QMSP-26-03
Revision No.	:	00
Page No.	:	Page 1 of 1

SUMMARY OF NATURALLY OCCURRING MATERIAL SOURCES FOR C.Y. [YEAR]

NAME OF SOURCE	LOCATION	GEOGRAPHIC COORDINATES	KINDS OF MATERIALS (e.g., Sand, Gravel, Limestone etc.)	TYPE OF SOURCE (e.g., River Quarry, Mountain Quarry etc.)	ESTIMATED QUANTITY (m ³)	POTENTIAL USE (e.g., Item 200, Item 311 etc.)	GENERAL REMARKS (e.g., Plant on Site, Quarry Permit etc.)
1. Lawa River	Approx. 4.0 km along barangay road, left of Lawayan-Panig National Road, Km. 1853+300, Brgy. Ramos, Roxas, Zamboanga Del Norte	8.46861111 N 123.365678 E	Dark gray, fine-grained SAND and sub-rounded to rounded GRAVEL with few COBBLES and BOULDERS.	River	39,000	Sub-base [Item 200] and Base courses [Item 201]; Fine and coarse aggregates (to be washed and screened) for Concrete mix [Item 311/405]	With grizzly screener on site; Quarry Permit (QP-13-19); Renewable source; Can be accessible by barangay road; Currently utilized in vertical and road construction projects.
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Prepared:

Checked:

Approved:

[NAME] [POSITION] [NAME] [POSITION] [NAME] [POSITION]

Annex "E"



Republic of the Philippines			
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			
[OFFICE NAME]			

Doc. Code	:	DPWH-QMSP-26-04
Revision No.	:	00
Page No.	:	Page 1 of 1

SUMMARY OF AGGREGATE PROCESSING (CRUSHING & SCREENING) PLANTS AND CONCRETE/ASPHALT PLANTS FOR C.Y. [YEAR]

NAME OF PLANT	LOCATION	GEOGRAPHIC COORDINATES	LIST OF PRODUCTS AND PRODUCTION OUTPUT	NAME OF SOURCE	RECORD OF OWNERSHIP	BRS CERTIFICATE OF ACCREDITATION	ENVIRONMENTAL COMPLIANCE CERTIFICATE
1. Rock Bolts, Inc.	36 Sunset Blvd., Km. 1830+778, Brgy. Dimayo Roxas, Zamboanga del Norte	8.65861111 123.420000	G1, 3/4, 3/8. S1, Base course, Boulders, Armor Rock - 100 m ³ /hr.	Dimayo Mountain Quarry (G1, 3/4, 3/8); Lawa River (S1, Base course, Boulders, Armor Rock)	Owner: Michael Ross, 0995956776, rockbolts@g mail.com	Not applicable (aggregate crushing plant)	ECC-OL-RXI-2020- 0772
2. AAA Construction Corp.	104 Dewey Road, Km. 1845+900, Brgy. Ramos, Rizal, Zamboanga del Norte	8.54531111 123.362500	Ready Mix Concrete - 80 m ³ /hr	Rock Bolts, Inc (Coarse aggregates: G1, 3/4,3/8); Lawa River (S1); Minerva Cement (Type I cement)	Owner: Ma. Rosario Samonte, 0917999884 4, aaaconscorp @yahoo.com	Date Issued: January 30, 2021; Valid until: January 29, 2023	ECC-OL-RXI-2021- 0778
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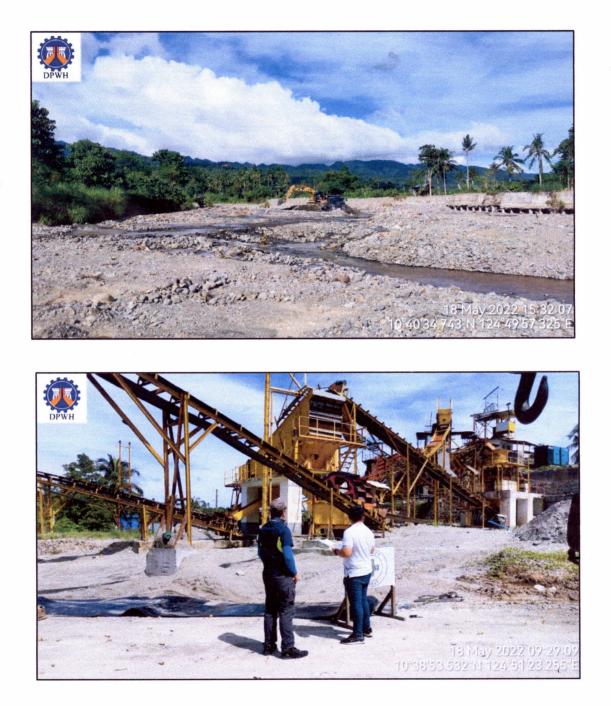
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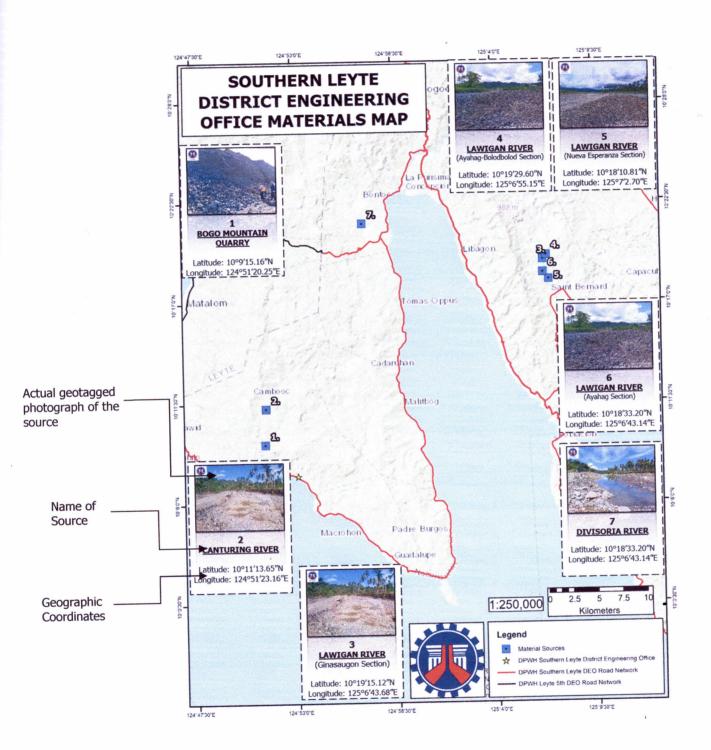
Approved:

[NAME] [POSITION] [NAME] [POSITION] [NAME] [POSITION]

SAMPLE FORMAT FOR GEOTAGGED PHOTOS



The timestamp, location tag, and geographic coordinates must be embedded in the actual photograph.



SAMPLE FORMAT FOR MATERIAL SOURCES MAP

The materials map shall be produce using AutoCAD/GIS software and shall indicate the following information:

- 1. Name of Source
- 2. Actual Geotagged Photo of the Source
- 3. Geographic Coordinates

INSTRUCTIONS FOR THE DIGITAL COMPILATION OF MATERIAL SOURCES MAPS AND REPORTS

The Regional Offices (ROs) shall consolidate/compile and upload the digital copies of the material sources reports and maps thru Google Drive link (<u>https://drive.google.com/drive/folders/1UbDrQk5m_WeWNJfFRK3aV4wYrfZj0eZd?usp=sharing</u>) as shown below:

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III Trash	5. DPWH Region IV-A	me	3:17 PM		
Storage	6. DPWH Region IV-B	me	3:17 PM		
159 KB of 15 GB used	7. DPWH Region V	me	3:17 PM		
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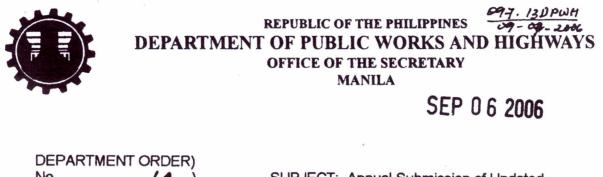
BRS-TSD Google Drive for Naturally Occurring Material Sources Database consisting of all DPWH Regional Offices

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Google Drive folder showing the different District Engineering Offices (DEOs) per Regional Office

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Sample Google Drive folder of a DEO showing the consolidated/compile digital copies of Summary of Naturally Occurring Material Sources, Summary of Aggregate Processing Plants & Concrete/Asphalt Batching Plants, Geotagged Photos, Material Sources Map, Copies of Additional Documentary Requirements, and Quality Test Reports.



No. Series of 2006 41)

SUBJECT: Annual Submission of Updated Naturally Occurring Materials Sources Maps and Other Related Reports to the Bureau of Research and Standards (BRS)

It has been observed that the submission of updated materials map in compliance with Ministry of Public Works and Highways (MPWH) Memorandum Circular No. 69, Series of 1982 has not been diligently complied with by most of the Regional and District Offices of the Department. What were submitted were mostly reproduction of the old materials map containing the same statistical information. There are some instances that new materials sources are being utilized in DPWH projects that are not reflected in the submitted materials map.

In view of the foregoing and in order to optimize the utilization of available naturally occurring and marginal construction materials nationwide, all Regional and District Offices of the Department are hereby directed to conduct an extensive exploration of all existing naturally occurring and marginal materials sources within their area of responsibility. The concerned offices should schedule the exploration works in such a manner that it will not disrupt the regular work activities and implementation of infrastructure projects and should be included in the yearly program of activities to ensure that it will be carried out accordingly.

In order to have uniformity in the submission of updated materials sources map, it must indicate the following information for each source:

- A. Naturally Occurring Materials
 - 1. Name and location of sources (referred to road stationing)
 - 2. Kind of materials available (e.g. Sand, Gravel, Cobbles, Limestone, etc.)
 - 3. Approximate quantity available (m³)
 - 4. Accessibility of sources
 - 5. Record of ownership of sources
 - 6. Potential use (e.g. Base Course, Sub-base)
- B. Production Plants that manufacture construction materials, Aggregates Processing and Crushing Plants and Concrete and Asphalt Plants
 - 1. Name of office/plant address or location
 - 2. List of product and production output
 - 3. Record of ownership (private and government)
 - 4. Location and name of source (sources of raw materials, aggregates, etc.)

C. Field data containing the following information:

- 1. Region
- 2. District
- 3. Name of Source
- 4. Location
 - 4.1 Distance from source to nearest National/Provincial Road
 - 4.2 Station (km post)
 - 4.3 Municipality/City
- 5. Type of Source (River, Quarry, Beach, Pit, Cutting and Natural Exposure)
- 6. Plant on Site (Grizzly, Screen and Conveyors, Crusher, None, if any specify
- 7. Kind of Material/Deposit and Estimated Quantity in m³
- 8. Potential use/s (Selected Fill, Base Course, Subbase Course, etc.)
- 9. General Remarks (name of project utilizing the source, distance from the project and other pertinent information)

The district materials exploration team shall submit at the end of November each year the updated materials map containing the aforecited information including the accomplished field data sheets to the Regional Office for consolidation and evaluation.

The Regional Office shall then forward the consolidated reports and other pertinent documents on or before the end of January of each year to BRS. The BRS will conduct field verification/validation of the submitted materials sources map/information whenever necessary prior to final inclusion in the materials sources data bank to ensure the accuracy of data.

For strict compliance.

HERMOGENE Acting Secre

