



JUL 05 2023

DENR MEMORANDUM ORDER
No. 2023 - 03

SUBJECT : GUIDELINES IN THE ESTABLISHMENT, REHABILITATION, OPERATION, AND MAINTENANCE OF FOREST NURSERIES IN THE DENR FIELD OFFICES

Pursuant to Presidential Decree No. 705, as amended, or the "*Revised Forestry Code of the Philippines*," and the DENR Administrative Order (DAO) No. 2019-03, or the "*Revised Implementing Rules and Regulations of Executive Order No. 193, Series of 2015: Expanding and Enhancing the Coverage of the National Greening Program*," the following activities and strategies on the establishment, rehabilitation, operation, and maintenance of forest nurseries in the DENR Field Offices to support the sustainable management of developed plantations and protection of existing forests, and establishment of urban green spaces, are hereby prescribed:

I. FIELD OFFICES AND AREAS APPROPRIATE FOR ESTABLISHMENT AND REHABILITATION OF FOREST NURSERIES WITHIN THE DENR

All Community Environment and Natural Resources Offices (CENROs) and Implementing Provincial Environment and Natural Resources Offices (Implementing PENROs) and Regional Offices, in case of NCR, shall develop a forest nursery in or near their offices through the establishment of new nurseries and/or repair, rehabilitation, and improvement of existing DENR forest nurseries. The DENR Office concerned may also opt to establish multiple nurseries in strategic places.

A. DENR Office Premises

CENROs and Implementing PENROs may establish new forest nurseries within their office premises, provided that the seedling nursery should have at least a greenhouse or a preparation and germination area, a growing area, and a hardening area or seedling beds.

B. Other Locations

CENROs and Implementing PENROs which have no space to establish a forest nursery within the DENR office premises may identify strategic sites within their area of jurisdiction, provided that these nurseries will be functional and operational given the allotted funds. They may coordinate and partner with Local Government Units (LGUs), academe, community groups and non-government organizations in establishing and maintaining the same. They may engage through a

Memorandum of Agreement (MOA) to enumerate the roles and responsibilities of each party. The template for the MOA is provided under **Annex A** of this Order. The field office may add or revise the provisions of the MOA, as deemed necessary.

C. Repair, Rehabilitation, Improvement, Maintenance and Operations of Existing Nurseries

Existing forest nurseries being managed by the Field Offices may be rehabilitated, improved or repaired to achieve full capacity and production.

II. OPERATION OF DENR FOREST NURSERIES

A. NURSERY DESIGN AND LAYOUT

The recommended nursery design and layout is provided under **Annex B.1** while the estimated establishment cost and standard material to be used for the construction is provided under **Annex B.2** of this Order. The recommended nursery design and layout has an area of 120 m² and can store an estimated 8,000 seedlings in its full capacity including those in the greenhouse and growing area.

The DENR Field Offices may explore more economical materials, layout/design and size/specification based on their local set-up and availability of materials.

However, regardless of the specifications and number of nurseries, the seedlings to be produced shall conform with item II.C. of this Order.

B. PLANT SPECIES

Indigenous and endemic species should be given priority in support to the efforts of the Department to promote and conserve biodiversity. Moreover, the production of environmental and economically important bamboo species is highly encouraged in support of the Department's thrust to increase the productivity, supply and access to bamboo resources for the development of the Philippine Bamboo Industry. Ornamental plants and indigenous flowering tree species may also be produced but shall not exceed 10% of the minimum seedling requirement.

In the case of DENR-NCR, ornamental plants may be produced, provided that production of said plants shall not exceed 30% of the minimum seedling requirement.

C. SEEDLING REQUIREMENTS

For existing and fully operational nurseries, the minimum number of seedlings of indigenous and endemic species to be produced per Office, annually, shall be 15,000 seedlings. In case of the production of both indigenous/endemic species and bamboo, a minimum total of 10,000 planting materials shall be produced of which a minimum of 7,500 seedlings are indigenous and/or endemic species and a minimum of 2,500 are bamboo culms.

However, for newly established and rehabilitated nurseries, the seedling production requirement shall vary, to wit:

Table 1. Seedling requirement based on Nursery Status

Status	Minimum No. of Seedling to be produced per Office on the 1 st year
Newly Established Nursery	N/A
Rehabilitated, Restored, or Repaired Nursery	7,500*

* In case of the production of both indigenous/endemic species and bamboo, 25% of the planting materials shall be allocated for bamboo culms.

Newly established nurseries are not required to produce the targeted number of seedlings on its first year of operations. However, for the succeeding years, it is assumed that the newly established and rehabilitated/restored/repared nurseries are already fully operational, hence, the annual seedling production requirement shall be 15,000 seedlings at the minimum.

D. OPERATION COST

The table below provides the breakdown of the operation cost of the DENR Office Nurseries on its full capacity. Activities and expenditure listed may vary depending on the local set up and the field offices may add or remove activities without entailing additional cost, if deemed necessary.

Table 2. Estimated Operation Cost of Forest Nurseries.

Activity/Expenses	UWM	Unit Cost (Php)	Target	Item Qty.	Total Cost
Procurement/ handling of seeds/culms	no./vol. of seeds	1 to 3	15,000 seeds	15,000	15,000 to 45,000
	bamboo culms	9		5,000	
Soil Mixture			12 m ³		25,900
- coir dust/ coco peat	sack (40L/sack)	50	5.72 m ³	143	7,150
- rice hull	sack (40L/sack)	300	1.48 m ³	37	11,100
- saw dust	sack (40 L/sack)	150	1.38 m ³	35	5,250
- garden soil	m ³	600	3.42 m ³	4	2,400
Fertilizer Application	sack	1,200		2	2,400

Pesticide	L	350		10	3,500
Fungicide	L	60		10	600
Hi-Q Vam 1 Mycorrhizal inoculant	sack (25kg/sack)	2,400		1	2,400
Procurement of Plastic bags	bundle (50 pcs)	13	25,000 pcs	500	6,500
Mandatories					24,000
- water	<i>per month</i>	1,000		12	12,000
- electricity	<i>per month</i>	1,000		12	12,000
OTHER EXPENSES					89,700
- Hauling and Logistics Cost - Repair and maintenance of facilities - Hiring of Nursery Staff/ Laborer - Tools - Miscellaneous	Per day (1 pax)	370		1	
TOTAL					200,000

Seeds may be sourced from Seed Production Areas (SPAs), Individual Plus Trees (IPTs) or from the Forest Tree Seed Centers (FTSC) being managed and maintained by the DENR or may also procure from accredited seed producers of good quality and from good provenance.

The cost of soil mixture is based on a 3:1:1:2 ratio of coco peat (50%), whole rice hull (12.5%), saw dust (12.5%) and soil (25%). However, the field offices may use other soil mixture ratios depending on the available medium. Fertilizer and mycorrhiza inoculant should be part of the potting media to ensure good nutrient supply and absorption.

Hauling and other logistic costs, tools and miscellaneous expenses in the nursery operations can be charged under item for OTHER EXPENSES. The field office may hire nursery staff or laborers if deemed necessary.

E. SEEDLING INVENTORY AND DISTRIBUTION/DISPOSITION

Seedlings shall not be sold to requesting parties, and shall be distributed to individuals, organizations, general public including government agencies, NGOs and other advocates, free of charge. However, the cost of hauling and other logistics shall be covered by the requesting party.

Prior to the distribution, relevant data shall be obtained and documented from the recipient of the seedlings. This shall include the name of recipient individuals,

organizations, institutions, businesses, or groups and their respective representative/s, the number and species of seedlings requested, the purpose of request or intended use, and the location/s where the seedlings shall be planted. A copy of a planting material disposal receipt shall be issued by the DENR to the requesting party as provided under **Annex C.1**. This information shall be documented in the report template provided under **Annex C.2** of this Order.

The CENROs and Implementing PENROs shall conduct a monthly inventory of seedlings raised and distributed from the nurseries established, developed, rehabilitated, restored, maintained and/or operated under this Order to be consolidated by the Regional Office. A summary report template is provided under **Annex C.3** of this Order.

Seedlings donated to the DENR as replacement for the trees cut should not be included in the seedling inventory report.

III. FUNDING

For CY 2022, initial funding amounting to Php 200,000.00 shall be allocated for each forest nursery established, rehabilitated or operated. All succeeding funding allocation shall be based on the approved Work and Financial Plans of the DENR Field Offices.

IV. SUPPLEMENTAL GUIDELINES

Supplemental guidelines in the establishment, rehabilitation, operation, and maintenance of the forest nurseries of DENR Field Offices shall be issued, if deemed necessary.

This order shall take effect immediately.

MARIA ANTONIA YULO LOYZAGA
Secretary



ANNEX A.

**MEMORANDUM OF AGREEMENT FOR THE ESTABLISHMENT OF
FOREST NURSERIES**

KNOW BY ALL MEN THESE PRESENTS:

This Memorandum of Agreement made and entered into this (Day) of (Month) (Year) in (Address), Philippines, by and among the following:

The **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**, a government entity created and existing by virtue of the laws of the Republic of the Philippines, represented in this agreement by (NAME OF DENR REGIONAL EXECUTIVE DIRECTOR/PENRO/CENRO), with office address at _____.

-and-

The **MUNICIPALITY OF (NAME OF MUNICIPALITY)**, Province of (Name of Province), a municipality created and existing by virtue of the laws of the Republic of the Philippines, herein represented by (Name of Governor/Mayor).

WITNESSETH:

WHEREAS, the 1987 Constitution of the Republic of the Philippines mandates the protection and advancement of the right of Filipino People to a healthful and balanced ecology, provides for the promotion of social justice, guarantees the right of the people and their organization to reasonable participation at all levels of social, political and economic decision making;

WHEREAS, Section 17 of Republic Act No. 7160 known or the Local Government Code (Code) of 1991 mandates the establishment of infrastructure facilities which are funded out of provincial funds including, but not limited to, provincial roads and bridges, inter-municipal waterworks, drainage and sewerage, flood control, and irrigation systems; reclamation projects and other similar facilities;

WHEREAS, Executive Order 192 mandates the DENR as the primary government agency responsible for the conservation, management and protection, and proper use and sustainable development of the country's environmental and natural resources and the LGUs, who have likewise the responsibility for sustainable management and development of forest resources and watersheds within their territories, mutually commit themselves to pursue such objectives under a multiple and sustainable use, demand driven and participation, development approach;

WHEREAS, Executive Order No. 26, Series of 2011, mandates the implementation of the National Greening Program (NGP) of which Section 5 include some partner agencies/stakeholders, whose responsibilities include nursery establishment and seedling production;

WHEREAS, Executive Order No. 193, Series of 2015, extends the implementation of the National Greening Program and on its revised implementing rules and regulations through DAO 2019-03, shall continue to produce and use quality planting materials and provide other support mechanisms to the Program;

WHEREAS, both parties recognize the importance of collaboration and partnership in order to achieve the objectives of the NGP and have agreed to work together for the establishment of a forest nursery consistent with the requirements of their respective mandates and programs;

NOW THEREFORE, in consonance of the above premises, the PARTIES hereby agree as follows:

Section 1. ROLE AND RESPONSIBILITIES

The First Party: The DENR through its Implementing PENROs and CENROs shall:

1. Allocate and provide funds for the construction, maintenance and/or operation of the forest nurseries based on approved work and financial plan, subject to existing accounting and auditing laws, rules and regulations;
2. Conduct seed sourcing, collection, processing and storage as well as establishment of the forest nursery;
3. Provide technical assistance in nursery operation including the selection of species to be produced;
4. Oversee the establishment, maintenance, and operation of the forest nursery; and
5. Prepare and submit monthly inventory reports to the DENR Central Office.

The Second Party shall:

1. Provide the site where the forest nursery shall be established;
2. Provide manpower assistance in nursery operation;
3. Provide for water system, electricity and other necessary equipment for the nursery; and
4. Using its network and in coordination with the Second Party, assist in the distribution and outplanting of planting materials raised in the nurseries.

Both Parties shall:

1. Identify available and suitable area for the establishment of forest nursery;
2. Use the funds allocated and released by the First Party solely for the construction, maintenance and/or operation of the forest nursery;
3. Conduct monthly monitoring and inventory of the production, distribution and disposition of seedlings in the nursery;
4. Mobilize its employees/students/volunteers in conducting some nursery activities; and
5. Promote the use of indigenous and endemic forest tree species in the reforestation initiatives of volunteers and advocates within their jurisdiction.

Section 2. MISCELLANEOUS PROVISIONS

- A. Settlement of Disputes.** Parties agree that any conflicts, controversies, issues or disputes which may arise regarding the interpretation or performance within or during the effectivity of this Agreement shall, in their best efforts, try to settle the same among themselves.

In the event of failure to arrive to an amicable settlement, the parties agree to resort the abovementioned to any modes of alternative dispute resolution pursuant to Republic Act No. 9285, otherwise known as the "Alternative Dispute Resolution Act of 2004" in relation to Sections 66-67 of Book IV, Chapter XIV of Executive Order No. 292, as amended or the "Administrative Code of 1987".

- B. Amendment or Modification.** Any amendments, revisions and/or modifications in this Agreement shall require the prior written approval of both Parties.
- C. Separability Clause.** In the event that any provision of this Agreement is held invalid or contrary to law, the validity of the other terms and conditions hereof shall not be affected.

Section 3. Effectivity. This Memorandum of Agreement shall take effect upon signing of the parties herein.

IN WITNESS WHEREOF, the parties have affixed their respective signatures on this (Day) of (Month) (Year) at (Address).

(SIGNATURES)

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

By:

Regional Executive Director/PENRO/CENRO

**LOCAL GOVERNMENT UNIT/ACADEME/COMMUNITY GROUP/NON-
GOVERNMENT ORGANIZATION**

By:

Name of Representative

ACKNOWLEDGEMENT

Republic of the Philippines)
_____) S.S.

BEFORE ME, a Notary Public for and in the above jurisdiction, personally appeared the following:

NAME (NAMES)	GOVERNMENT-ISSUED ID	DATE/PLACE ISSUED
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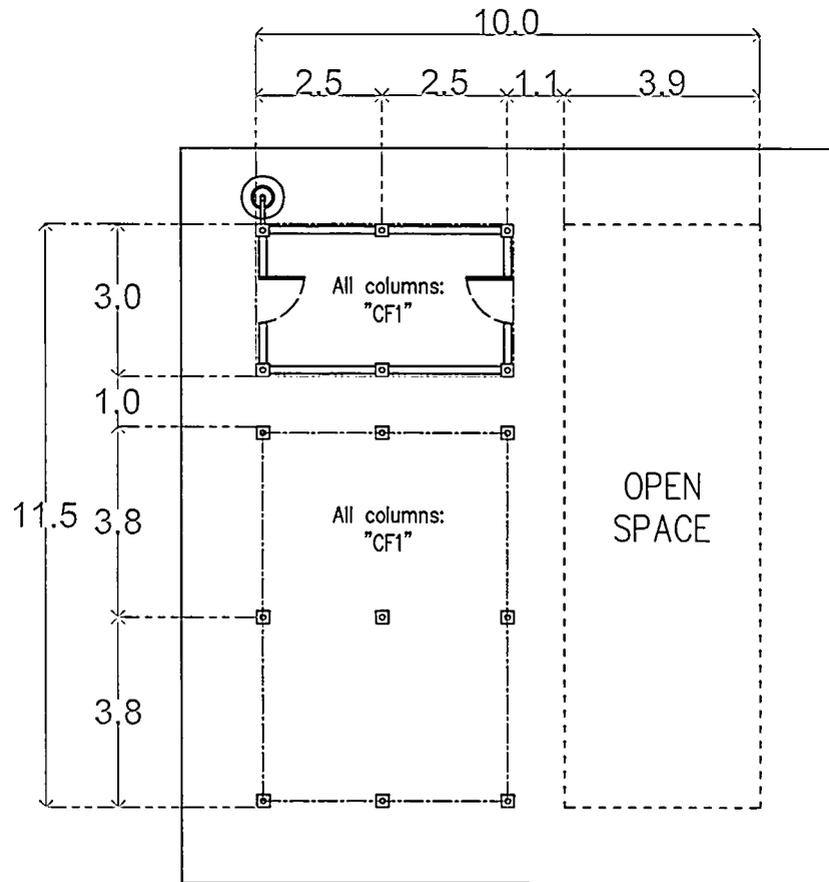
Known to me and to be the same persons who executed the foregoing instrument and they acknowledge to me that the same is their true act and voluntary deed and that of the entities, which they respectively represent.

This instrument, denominated as a Memorandum of Agreement by and among the Department of Environment and Natural Resources, (name of all parties), consists of (number of pages) including this page where this acknowledgement is written and has been signed by the parties and their instrumental witnesses on each and every page thereof.

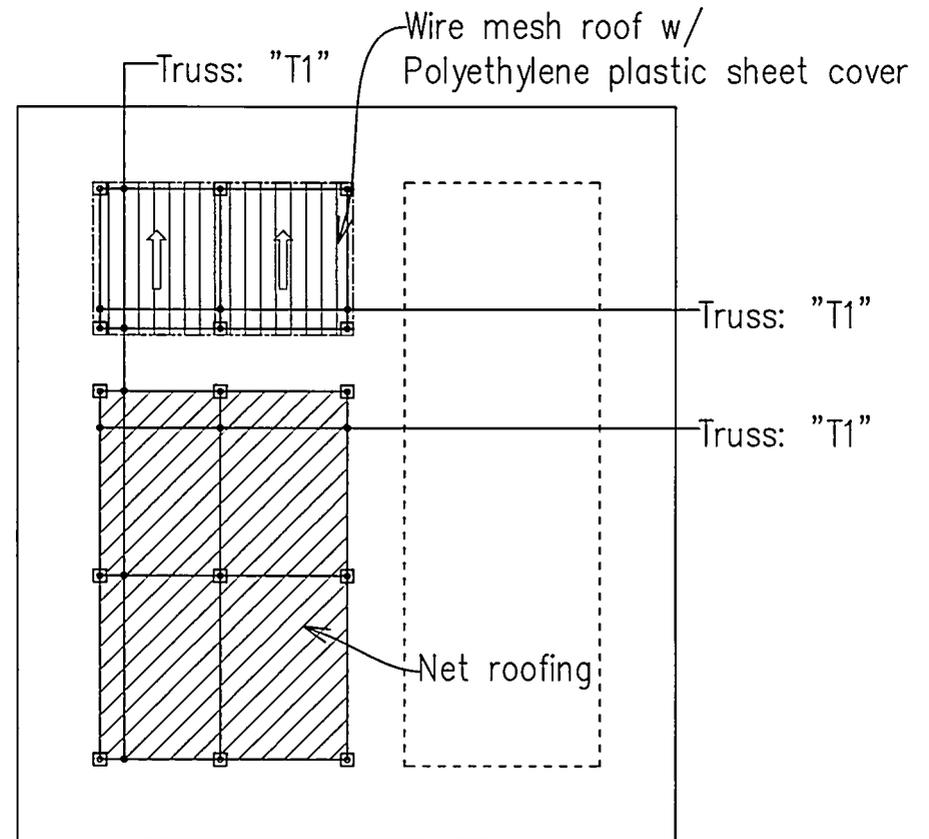
WITNESS MY HAND AND SEAL on the date and place first above written.

NOTARY PUBLIC

Doc. No. : _____
Page No. : _____
Book No. : _____
Series of 2023




SITE DEVELOPMENT PLAN
TYPICAL SATELLITE NURSERY
 SCALE 1:180 MTRS



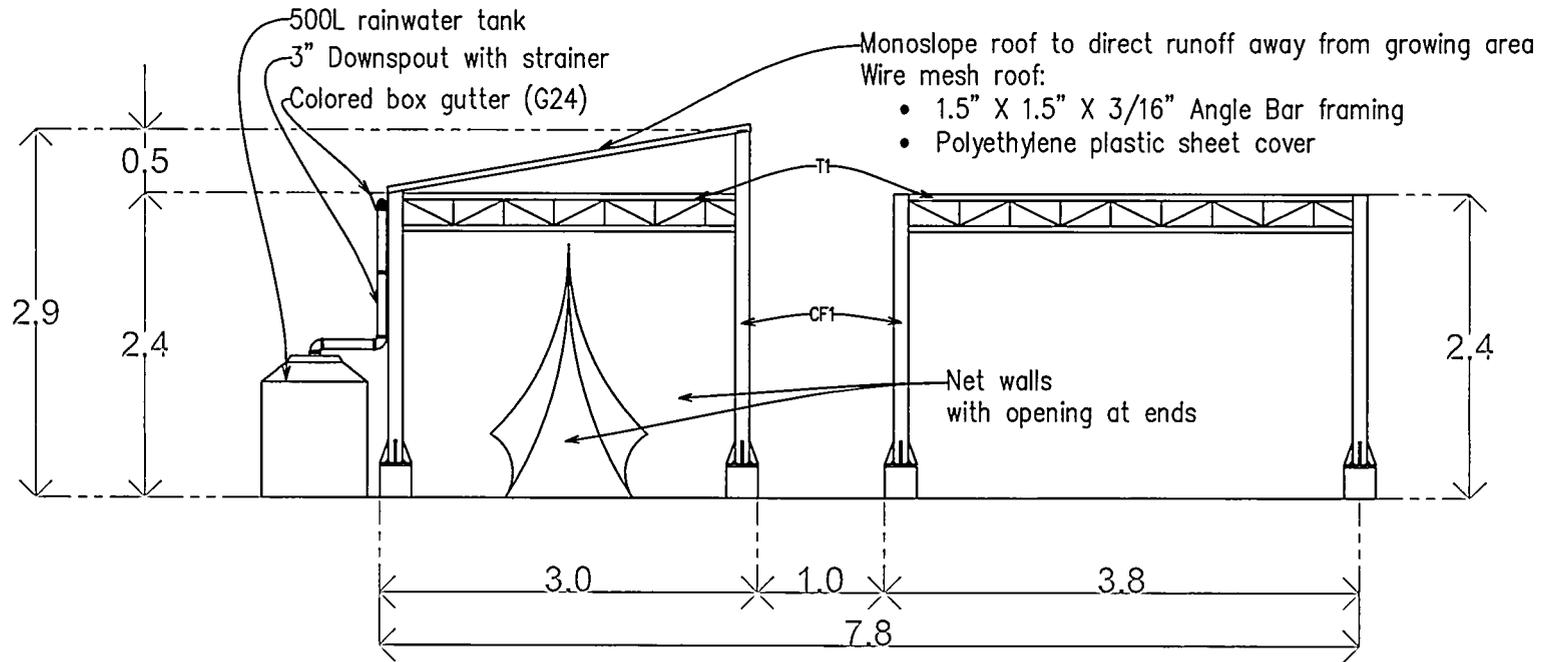

ROOF FRAMING PLAN
TYPICAL SATELLITE NURSERY
 SCALE 1:180 MTRS



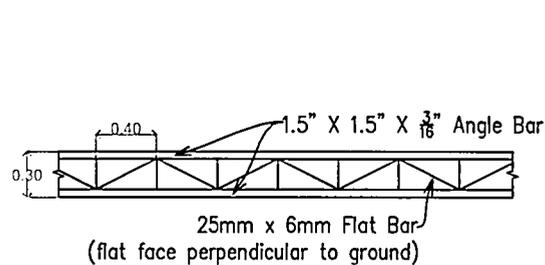
FOREST MANAGEMENT BUREAU
 DENR Building, Visayas Avenue, Diliman,
 Quezon City, 1100, Metro Manila

PROJECT TITLE:
SATELLITE NURSERY

SHEET NO.
1
2

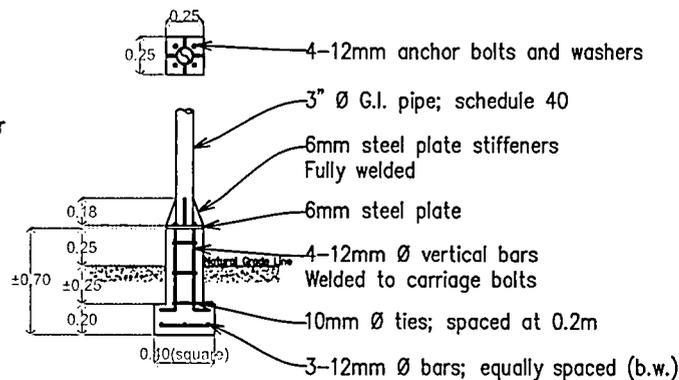


ELEVATION VIEW
 TYPICAL SATELLITE NURSERY
 SCALE 1:60 MTRS



Truss "T1"

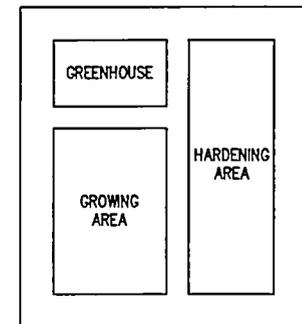
STRUCTURAL DETAIL
 TRUSSES, COLUMNS, FOUNDATIONS
 SCALE 1:50 MTRS



Column-foundation
 "CF1"

Nursery Components

- Greenhouse
 - Preparation Area
 - Germination Area
- Growing Area
- Hardening Area



FOREST MANAGEMENT BUREAU

DENR Building, Visayas Avenue, Diliman,
 Quezon City, 1100, Metro Manila

PROJECT TITLE:

SATELLITE NURSERY

SHEET NO.

2
 2



PROJECT:	OFFICE/SATELLITE SEEDLING NURSERY ESTABLISHMENT AND/OR REHABILITATION				
LOCATION:	DENR OFFICE COMPOUNDS				
SUBJECT:	ESTABLISHMENT COST ESTIMATES				
ITEM	COMPONENT/ACTIVITY	QTY.	UNIT	UNIT COST	AMOUNT (Php)
A.	NURSERY INFRASTRUCTURE				
A.I	Columns, Walls, Foundations				
	Cement	11.1	bags	230	2,553.00
	Sand	0.45	cu.m.	1,500.00	675
	Gravel	0.6	cu.m.	2,100.00	1,260.00
	GI Pipe 3", Sch. 40 (6m)	6	pcs	7,000.00	42,000.00
	10mm Ø Rebar (6m)	8	pcs	150	1,200.00
	12mm Ø Rebar (6m)	30	pcs	195	5,850.00
	No. 16 Tie Wire	1.95	kg	85	165.75
	M12 Anchor Bolt (150mm)	60	pcs	235	14,100.00
	Mild Steel Plate (6mm)	1.61	sq.m.	2,100.00	3,386.25
	Paint Works (materials)	8.31	sq.m.	80	665.12
	Sub-total				71,855.12
A.II	Roofs and Trusses				
	1-1/2" x 1-1/2" x 3/16" Angle Bar (6m)	23	pcs	615	14,145.00
	Flat Bar (25mm x 6mm x 6m)	21	pcs	410	8,610.00
	Galvanized Wire Mesh 2mm	15	sq.m.	560	8,400.00
	Polyethylene Plastic Sheet (150 microns)	15	sq.m.	50	750
	Safety/Garden Net	71	sq.m.	180	12,780.00
	Sub-total				44,685.00
A.III	Rainwater Catchment System				
	500L Polyethylene Plastic Water Storage Tank	1	pcs	3,800.00	3,800.00
	Colored Box Gutter (G24, 8")	2	pcs	400	800
	3" Ø Downspout Stainless Steel Strainer	1	pcs	40	40
	3" Ø PVC Pipe (3m)	1	pcs	475	475
	3" Ø PVC Elbow	2	pcs	80	160
	Sub-total				5,275.00
A.III.	Miscellaneous				
	Consumables	1	lot	2,500.00	2,500.00
	Simple Electrical Lighting System	1	lot	1,500.00	1,500.00
	Simple Rotating Sprinkler System	1	lot	1,000.00	1,000.00
	Sub-total				5,000.00
A.IV.	Summary				
	Total Materials Cost				126,815.12
	Labor Cost				35,000.00
	Total Direct Cost				161,815.12
	Contractor's Profit and OCM				16,756.31
	Total Indirect Cost				16,756.31
	VAT (12% DC and IC)				21,428.57
	TOTAL INFRASTRUCTURE COST*				200,000.00
	Notes: 1. Actual construction and operational costs will vary depending on the nursery site location, local situation, and other factors 2. Ideal nursery area is 12m X 10m (120 sq.m.), which can hold 8,000 seedlings at a time 3. Refer to plan drawings for further details				

Annex C.1

	Department of Environment and Natural Resources (NAME OF NURSERY) PLANTING MATERIAL DISTRIBUTION RECEIPT	Document ID	Region__-ENGP. ####
		Date Issued (MM/DD/YR)	March 3, 2023
		Page No.	1

ORDER OF RELEASE

NAME OF RECIPIENT: _____ Date: _____

PURPOSE:

- Production
 Protection
 Urban
 Others (specify) _____

LOCATION TO WHERE THE SEEDLINGS WILL BE PLANTED (BARANGAY & MUNICIPALITY):

- Please check (✓) the corresponding category of the requested species.

SPECIES	SPECIES CATEGORY			QUANTITY
	Indigenous Species	Other Forest Tree Species	Fruit Tree Seedlings	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
Total quantity of planting materials released:				

RECOMMENDED BY:**APPROVED FOR RELEASE BY:**

Signature over printed name
Nursery In-Charge

Signature over printed name
(Position)

AGREEMENT

The undersigned recipient hereby promises that the received seedlings from _____ shall be planted properly in the areas designated for the tree planting activity and shall be maintained regularly. The recipient is hereby authorized to assist the DENR personnel in monitoring the planting as well as gathering data on the planted species for research purposes.

This is to certify that the above planting materials are all in good quality and condition upon receipt from the _____ nursery.

RECIPIENT:

Signature over printed name

Address: _____

Contact No.: _____

Date Received: _____

Agency/Company/Group (if any): _____

CONTROL NO.: 2023- _ _ _

**DENR Office Seedling Nursery
Status of Seedling Production and Distribution
for the month of _____**

Sample Inventory Record

*seedlings that are ready for hardening off is the one considered as seedlings produced

Office/Nursery Location			Species		Beginning	PRODUCTION			AVAILABLE SEEDLING			SEEDLING DISPOSITION			Intended Use of Seedlings	Total No. of Seedlings	Remarks				
Region	PENRO	CENRO	Common Name	Scientific Name	Seed Source	No. of Sdgs Produced*	No. of Participating Employees		Month Produced	Mode of Disposition	No. of Seedlings	Recipient/s		Date of Disposition/				Location of Plantation			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	Male	Female	Total	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)		
REGIONAL TOTAL																					
PENRO I					100	165															
CENRO I					0	= (sum of Species 1, 2, 3)															
Species 1																					
Species 1					Species 1 Sci Name																
Species 2																					
Species 2					Species 2 Sci Name																
Species 3																					
CENRO II					100	165															
White Lauan					Shorea contorta	100	115					170		95							
White Lauan					Shorea contorta	100	115			10	4	14	Mar-22	120	Distributed	50 Philippine Army	CPL Rudy Serenio	March 20, 2022	Tambo	Ayungon	Negros Oriental
White Lauan					Shorea contorta									45	PENRO Bohol	Charlie Fabre	March 28, 2022	Danao		Bohol	Replanting of INREMP Plantations
White Lauan					Shorea contorta																
White Lauan					Shorea contorta																
Species 2							50					50		0							
Bagtikan					Parashorea malc	0	50			10	4	14	Mar-22	50							

a) Region - Regional jurisdiction of office nursery, in Roman Numeral (Region I to XIII, CAR, NCR, MIMAROPA)

b) PENRO - provincial jurisdiction of office nursery

c) CENRO - municipal jurisdictions of office nursery, please write "implementing PENRO" if it is an implementing one

d) Common Name - please identify the common name of the species produced/lodged in the office nursery

e) Scientific Name - please specify the scientific name of the species produced/lodged in the office nursery

f) Beginning Seedling Stock - number of seedlings already available/lodged in the nursery before the production for the month

g) Seed Source - please specify where the seeds are sourced (i.e. SPA, FTSC, procured, etc.)

h) No. of seedlings produced* - Monthly count of seedlings produced and/or donated - To date - cumulative count of seedlings produced for the year

i) No. of participating employees - summary count of the number of employees that participated in the seedling production activities disaggregated by sex

j) Month Produced - indicate the month when the seedlings were produced*

k) Available seedling stock - total number of seedlings available in the nursery (k = f + h)

l) No. of seedlings planted per species per month - count of seedlings used for planting activities of the Field Office, enhancement planting and other office reforestation initiatives conducted for the month

m) Intended use of seedlings planted - specified activity the seedlings were used (i.e. World Bamboo day, Arbor Day, Local tree planting activity, CENRO tree planting activity, enhancement of NGP sites, etc.)

n) Location of the sites to be planted - exact location of the sites where the seedlings were planted/or to be planted

o) Mode of disposition - specify whether the seedlings were distributed to requesting entities or planted by admin/DENR field office

p) No. of seedlings distributed per species per month - Count of seedlings distributed for the month

q) No. of seedlings distributed/planted per species per month - Count of seedlings distributed/planted for the month

Recipients

r) Name of PO/LGU/Office - specify name of organizations/groups/office that have received the seedlings

s) Representative/ Private Individual - specify name of the representative or individual recipient of the seedlings

t) Date of Disposition/Planting - specify the date when the seedlings were distributed/planted

u) Location of the sites to be planted - exact location of the sites where the seedlings were planted/or to be planted

v) Intended use of seedlings distributed - specified activity the seedlings were used (i.e. World Bamboo day, Arbor Day, Local tree planting activity, CENRO tree planting activity, school activity, etc.)

w) Remarks - other concerns and relevant information that are deemed significant

x) Total no. of seedlings planted/distributed - total count of the distributed seedlings and planted seedlings for the month

* Please note that seedlings considered as produced are those already transferred to the hardening-off beds/area

