

TECHNICAL SPECIFICATIONS

TERMS OF REFERENCE

FOR THE MAINTENANCE OF LIGHTING SYSTEM AT MASAO PORT (MPF-AGS-11-2026) BRGY. LUMBOCAN, BUTUAN CITY, AGUSAN DEL NORTE

A. DESCRIPTION

The project is intended for the upkeep of the existing area lighting system. The work includes repainting street and high mast tower lamp post and platform, labeling/marketing of post, and replacement of busted lighting fixtures, wiring, and safety devices in order to provide well maintained lighting facilities.

B. SCOPE OF WORKS

1. The contractor shall undertake the project in accordance with the accepted industry standards and procedures.
2. Conduct ocular inspection and actual measurement at the site.
3. Supply of *materials, labor, and tools/equipment* for the following scope of works:

DESCRIPTION OF WORK	UNIT	QUANTITY
1. Maintenance of lighting system (supply of materials, labor, and tools/equipment)	Lot	1
2. Maintenance of Safety devices/wirings/accessories (supply and delivery only)	Lot	1

4. Supply of the following needed manpower:
 - a. Electrician
 - b. Painter
 - c. Laborer
5. Supply of the following tools/equipment:
 - a. 1-unit Electric Grinder
 - b. 1-unit Electric Drill
 - c. 10- sets Scaffolding
 - d. 2 units Ladder
6. Perform other reasonable tasks, including consultation with the ESD Technical Team, that relate to the foregoing repair, which the Authority or its authorized representative may direct.

C. TIMETABLE

The contractor shall commence the activities effective upon date of receipt of the *Notice to Proceed*. **The Maintenance of Lighting System at Masao Port** must be completed within **Sixty (60) calendar days** from the commencement of the activities.

D. FIRM AND STAFF REQUIREMENTS

The contractor shall be responsible for ensuring the timely completion of the project and shall have personnel complementation of adequate technical background, experience, and capability.

The contractor shall provide the minimum appropriate personal protective equipment (PPE) such as hard hat, vest, and safety belt for their staff and crew.

E. SCHEDULE OF PAYMENTS

All payments shall be processed only upon completion and issuance of the Certificate of Completion and Final Inspection Report, subjected to accounting and auditing rules and regulations.

F. BUDGET

The Approved Budget of the Contract for the project for the **Maintenance of Lighting System at Masao Port at Masao Port Brgy. Lumbocan, Butuan City, Agusan del Norte** is **Six Hundred Nine Thousand and Fifty-Two Pesos only (Php 609,052.00)**.

G. MODE OF PROCUREMENT/QUALIFICATION OF BIDDERS

The contract for the **Maintenance of Lighting System at Masao Port** shall be procured through Alternative Mode of Procurement (Small Value Procurement), in accordance with **Section 34.1 of the Implementing Rules and Regulation (IRR) of RA 12009**.

Interested bidders must submit their proposals at the address provided. Prospective bidders will be evaluated based on a non-discretionary "pass/fail" criterion, and shall submit the updated/renewed printed copies of the following documents as part of the technical/financial proposal/envelope:

• Technical Proposal	• Valid Mayor's Permit / Business Permit • PhilGEPS Registration Member • PCAB License, General Building/SP-EE- Category D • Income/Business Tax Return • Omnibus Sworn Statement
• Financial Proposal	• Duly accomplished, Request for Quotation

H. PERFORMANCE SECURITY

To guarantee the faithful performance by the winning Bidder of its obligations under the contract, it shall post a performance security within a maximum period of ten (10) calendar days from the receipt of the Notice of Award from the Procuring Entity and in no case later than the signing of the contract.

Under **Section 68.4, IRR of RA 12009**, the Performance Security shall be denominated in Philippine Pesos and posted in favor of the Procuring Entity in an amount not less than the percentage of the total contract price in accordance with the following schedule:

Form of Performance Security	Amount of Performance Security (Not less than the required percentage of the Total Contract)
(a) Cash or cashier's/manager's check issued by a Universal or Commercial Bank. <i>For biddings conducted by the LGUs, the Cashier's/Manager's Check may be issued by other banks certified by the BSP as authorized to issue such financial instrument.</i>	Goods and Consulting Services- Five (5%)
(b) Bank draft/guarantee or irrevocable letter of credit issued by a Universal or Commercial Bank: Provided, however, that it shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	Infrastructure Projects-Ten percent (10%)
(c) Surety bond callable upon demand issued by a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Thirty percent (30%)

(To protect/safeguard the interest of the government/Philippine Ports Authority, bond requirements from entities transacting with the Authority shall only be procured from PPA accredited surety companies.)

I. WARRANTY SECURITY

In order to assure that defects for the **Maintenance of Lighting System at Masao Port** shall be corrected by the contractor, a warranty security shall be required from the contract awardee for a minimum period of one (1) year after acceptance by the Procuring Entity in accordance with **Section 90.2, Implementing Rules and Regulations of RA 12009.**

Prepared / Submitted by:

Recommending Approval:

(Original Signed)
AMALIA M. DUMANON
Acting Principal Engineer A

(Original Signed)
LEXTER-LOU V. SEVILLA
Division Manager A, ESD

Approved:

(Original Signed)
KAHLIL L. LAMIGO
Acting Port Manager

LEGEND:

- SL#  SOLAR STREET LAMP, 60W (DOUBLE ARM) - FOR REPAINTING
- SL#  SOLAR STREET LAMP, 60W (SINGLE ARM) - FOR REPAINTING
- SL#  EXISTING SOLAR STREET LAMP (SINGLE ARM)
- SL#  EXISTING SOLAR STREET LAMP (DOUBLE ARM)

-  EXISTING HIGH MAST TOWER
-  LED FLOODLIGHT, 50W - FOR INSTALLATION
-  EXISTING LED FLOODLIGHT, 200W

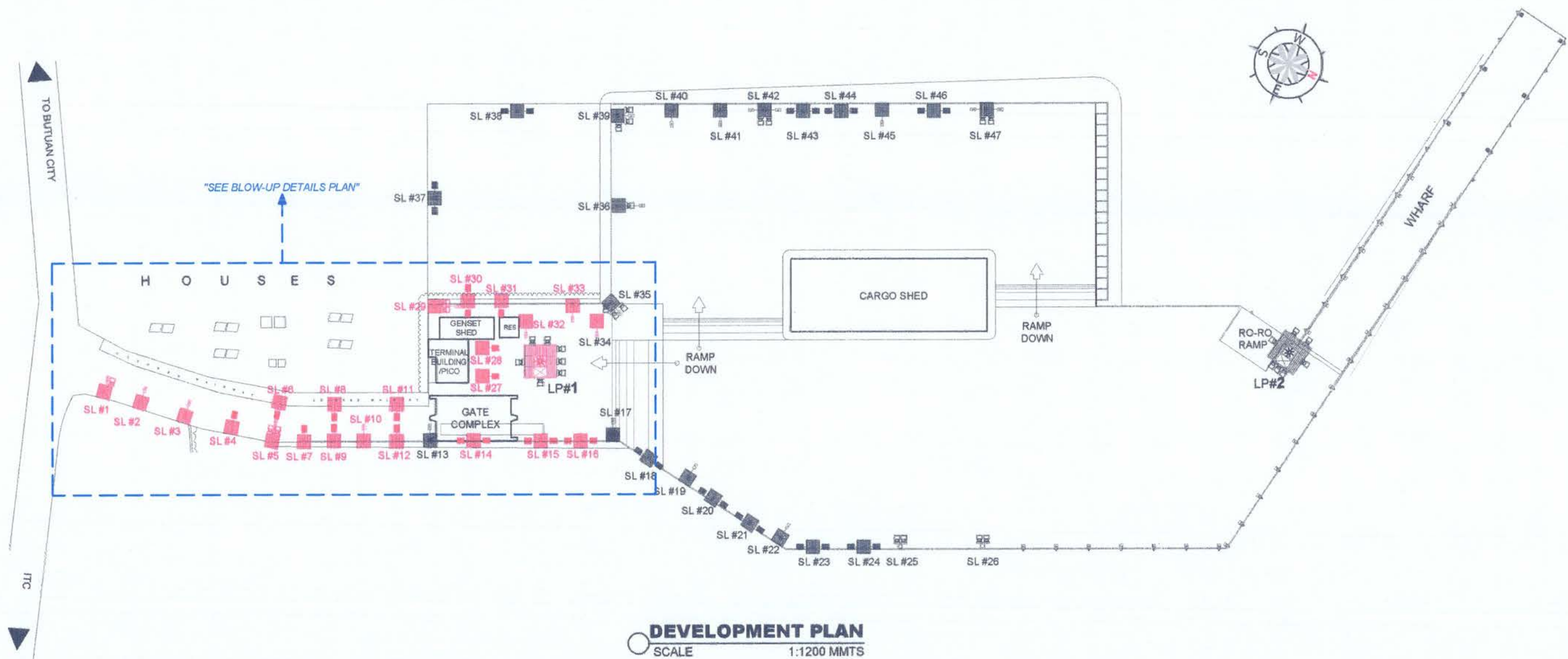
SCOPE OF WORKS:

1. MAINTENANCE OF AREA LIGHTING

- 1.01 Repainting of Street Lamp Post/bracket, 8.0m high.
- 1.02 Repainting of High Mast Tower Lamp Post/Platform, 12.0m high.
- 1.03 Maintenance of Street Lamp Post Concrete Pedestal, 500mmx500mmx200mm.
- 1.04 Maintenance of High Mast Tower Concrete Pedestal, 1000mmx1000mmx640mm.
- 1.05 Marking/Labeling of Street Lamp Post.
- 1.06 Supply and delivery of 50 Watts LED Flood light for Street Lamp

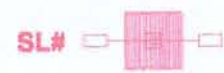
2. MAINTENANCE OF SAFETY DEVICES/WIRING/ACCESSORIES

- 2.01 Supply and delivery of Safety Devices/Wiring/Accessories



	Project / Location: MAINTENANCE OF LIGHTING SYSTEM PORT OF MASAO Brgy. Lumbocan, Butuan City, Agusan del Norte	Prepared by: (ORIGINAL SIGNED) REYNAN P. PENASO ENGINEER I	Checked by: (ORIGINAL SIGNED) MA. GEMMA MAE A. AGUILAR ARCHITECT I	Reviewed by: (ORIGINAL SIGNED) AMALIA M. DUMANON ACTING PRINCIPAL ENGINEER A	Recommending Approval: (ORIGINAL SIGNED) LEXTER-LOU V. SEVILLA DIVISION MANAGER A, ESD	Approved by: (ORIGINAL SIGNED) ATTY. KAHLIL L. LAMIGO ACTING PORT MANAGER	Sheet Contents: • LEGEND • DEVELOPMENT PLAN • SCOPE OF WORKS Sheet No. A-1 01 05 JANUARY 2026
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LEGEND:



SOLAR STREET LAMP, 60W
(DOUBLE ARM) - FOR REPAINTING



SOLAR STREET LAMP, 60W
(SINGLE ARM) - FOR REPAINTING



EXISTING SOLAR STREET
LAMP (DOUBLE ARM)



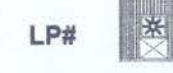
EXISTING SOLAR STREET LAMP
(SINGLE ARM)



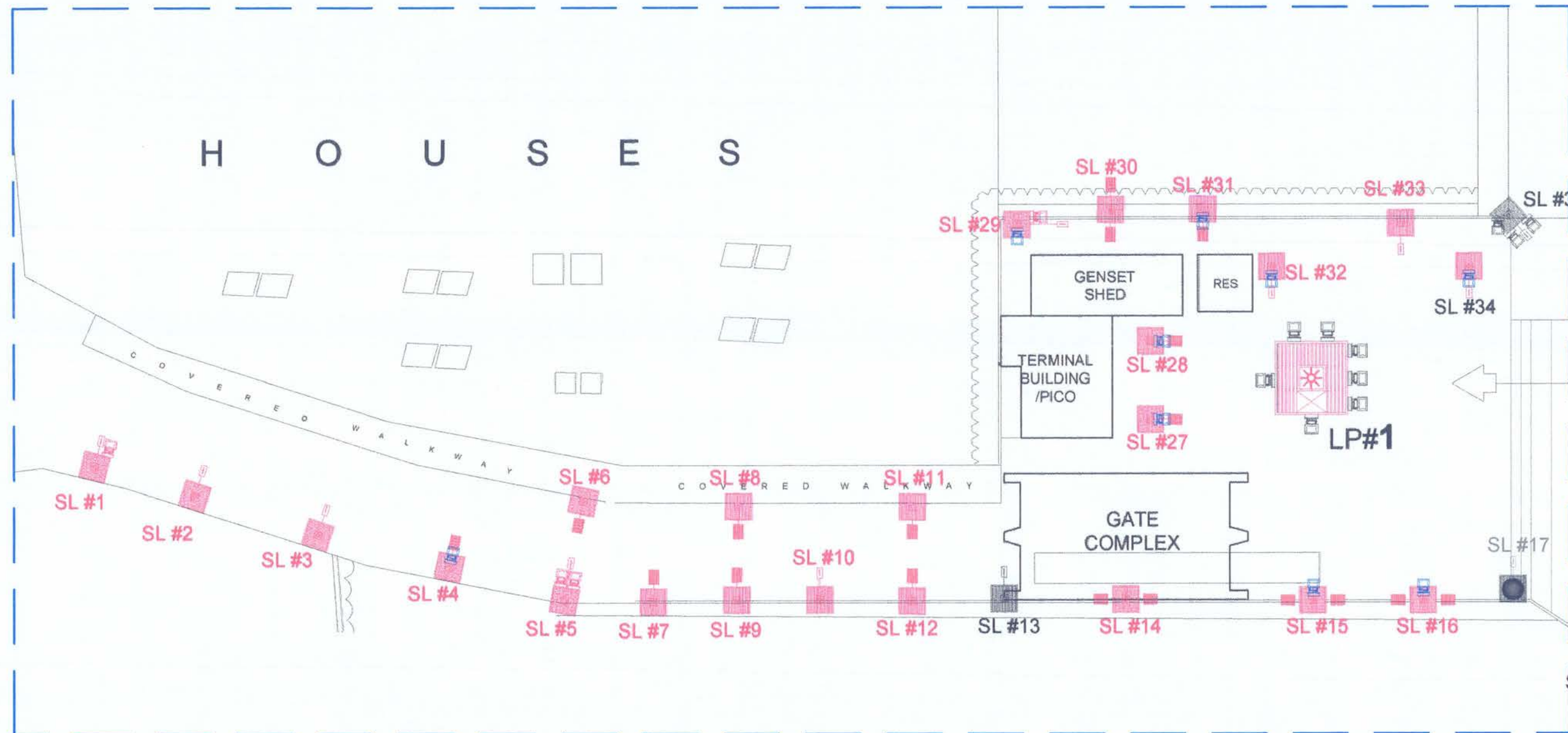
LED FLOODLIGHT, 50W - FOR
INSTALLATION



EXISTING LED FLOODLIGHT, 200W

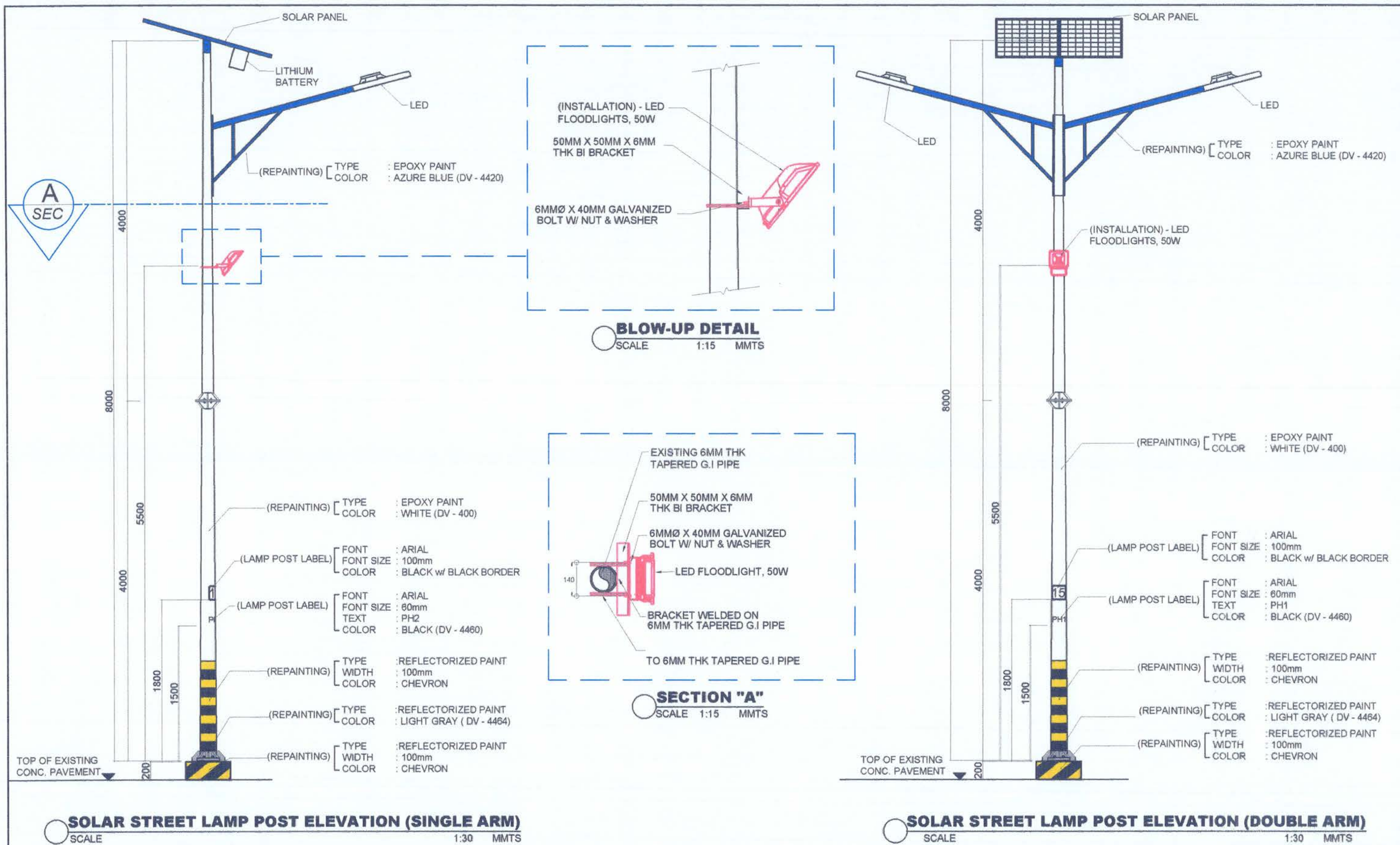


EXISTING HIGH MAST TOWER

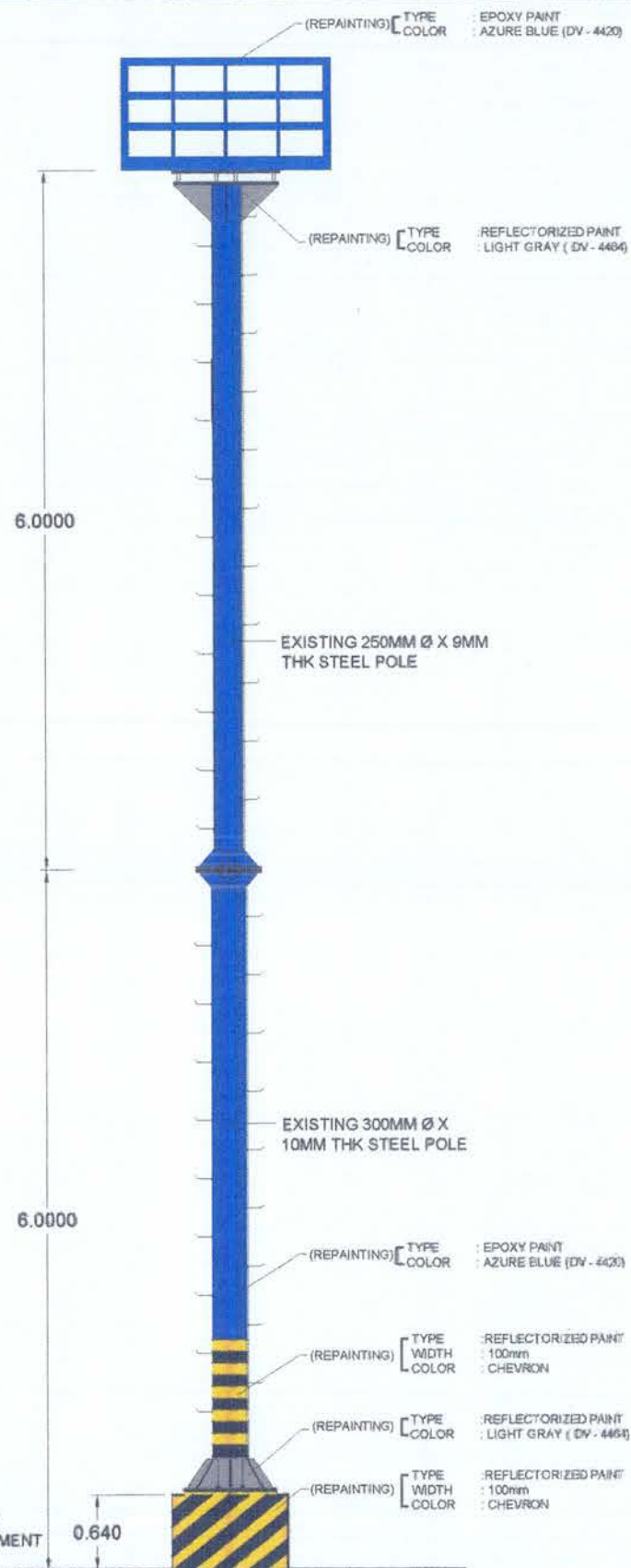


BLOW-UP PLAN
SCALE 1:450 MMTS

	Project / Location:	Prepared by:	Checked by:	Reviewed by:	Recommending Approval:	Approved by:	Sheet Contents:	Sheet No.
	MAINTENNANCE OF LIGHTING SYSTEM	(ORIGINAL SIGNED) REYNAN P. PENASO	(ORIGINAL SIGNED) MA. GEMMA MAE A. AGUILAR	(ORIGINAL SIGNED) AMALIA M. DUMANON	(ORIGINAL SIGNED) LEXTER-LOU V. SEVILLA	(ORIGINAL SIGNED) ATTY. KAHLIL L. LAMIGO	• LEGEND • BLOW-UP PLAN	A-2
	Port of Masao	ENGINEER I	ARCHITECT I	ACTING PRINCIPAL ENGINEER A	DIVISION MANAGER A, ESD	ACTING PORT MANAGER		02 05
	Brgy. Lumbocan, Butuan City, Agusan del Norte							JANUARY 2026



	Project / Location: MAINTENANCE OF LIGHTING SYSTEM PORT OF MASAO Brgy. Lumbocan, Butuan City, Agusan del Norte	Prepared by: (ORIGINAL SIGNED) REYNAN P. PENASO ENGINEER I	Checked by: (ORIGINAL SIGNED) MA. GEMMA MAE A. AGUILAR ARCHITECT I	Reviewed by: (ORIGINAL SIGNED) AMALIA M. DUMANON ACTING PRINCIPAL ENGINEER A	Recommending Approval: (ORIGINAL SIGNED) LEXTER-LOU V. SEVILLA DIVISION MANAGER A, ESD	Approved by: (ORIGINAL SIGNED) ATTY. KAHLIL L. LAMIGO ACTING PORT MANAGER	Sheet Contents: • LEGEND • BLOW-UP DETAIL • SECTION A	Sheet No. A-3 03 05 JANUARY 2028
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HIGH MAST TOWER ELEVATION
SCALE 1:60 MMTS

SCHEDULE OF REPAINTING FOR STEEL POST

No.	Description	Location	Concrete Base (Dimension in mm)	Concrete Base Paint (Type)	Concrete Base (Color)	Steel Post (Height in mm)	Steel Post Paint (Type)	Steel Post (Color)
LP1	High Mast Tower, Seven (7) units LED Flood lights, 200W (Aneco)	Near Gate Complex, in front of Port Terminal Building of Masao	1000mm x 1000mm x 640mm	ReflectORIZED	See attached plan	12000 mm	Industrial	See attached plan
SL1	Street Lamp Post, Single Arm. (Aneco)	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL2	Street Lamp Post, Single Arm. (Aneco)	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL3	Street Lamp Post, Single Arm. (Aneco)	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL4	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL5	Street Lamp Post, Single Arm. (Aneco)	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL6	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL7	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL8	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL9	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL10	Street Lamp Post, Single Arm. (Solar Powered)	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL11	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL12	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Access Road	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL14	Street Lamp Post, Double Arm. (Solar Powered) - Newly Installed	Gate Complex	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL15	Street Lamp Post, Double Arm. (Solar Powered) - Newly Installed	Gate Complex	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL16	Street Lamp Post, Double Arm. (Solar Powered) - Newly Installed	Gate Complex	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL27	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Beside Port Terminal Building	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL28	Street Lamp Post, Single Arm. (Solar Powered) - Newly Installed	Beside Port Terminal Building	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL30	Street Lamp Post, Double Arm. (Solar Powered) - Newly Installed	Beside PowerHouse	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL31	Street Lamp Post, Single Arm. (Solar Powered)	Beside PowerHouse	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL32	Street Lamp Post, Single Arm. (Solar Powered)	Vehicle Parking Area	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL33	Street Lamp Post, Single Arm. (Solar Powered)	Vehicle Parking Area	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
SL34	Street Lamp Post, Single Arm. (Solar Powered)	Vehicle Parking Area	500mm x 500mm x 200mm	ReflectORIZED	See attached plan	8000 mm	Industrial	See attached plan
TOTAL	23 units of Street Lamp Post							

SCHEDULE OF REPAINTING
SCALE NTS



Project / Location:	Prepared by:	Checked by:	Reviewed by:	Recommending Approval:	Approved by:	Sheet Contents:	Sheet No.
MAINTENANCE OF LIGHTING SYSTEM PORT OF MASAO Brgy. Lumbocan, Butuan City, Agusan del Norte	(ORIGINAL SIGNED) REYNAN P. PENASO ENGINEER I	(ORIGINAL SIGNED) MA. GEMMA MAE A. AGUILAR ARCHITECT I	(ORIGINAL SIGNED) AMALIA M. DUMANON ACTING PRINCIPAL ENGINEER A	(ORIGINAL SIGNED) LEXTER-LOU V. SEVILLA DIVISION MANAGER A, ESD	(ORIGINAL SIGNED) ATTY. KAHLIL L. LAMIGO ACTING PORT MANAGER	- LEGEND - HIGH MAST TOWER ELEVATION - SCHEDULE OF REPAINTING	A-4 04 05 JANUARY 2028

THREE (3) PHASE SYSTEM, 230V

MDP - POWER HOUSE

GUARDHOUSE

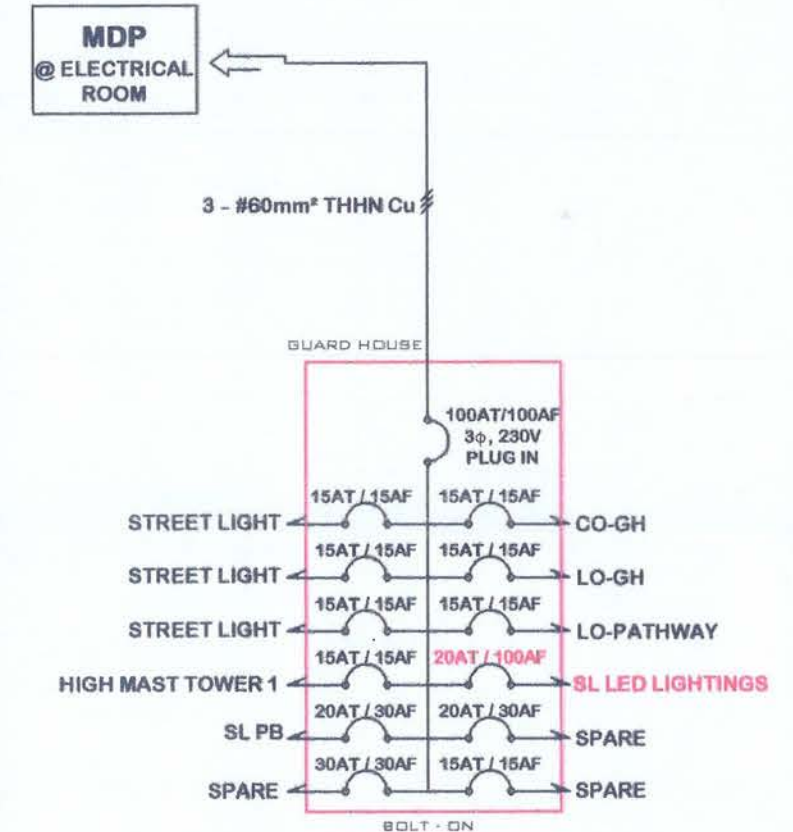
ON GRID SUPPLIED - (ANECO)

OFF GRID
(SOLAR POWERED)

No.	ITEM/DESCRIPTION	Panel Board Code	Circuit Number	LIGHTING LUMINAIRES					#SW	CKT- RUN (mtrs)	DEMAND FACTOR	VA	VOLT	AMPERE LOAD				OVER CURRENT PROTECTION				CONDUCTORS mm ² , Cu-B/W			CONDUIT SPEC		VOLTAGE DROP COMPUTATION			LED 120 WATTS	LED 80 WATTS	LED 60 WATTS	REMARKS
				EXISTING LED FLOODLIGHT 200WATTS	LED 80 WATTS	LED FLOODLIGHT 50WATTS	SPECIAL PURPOSE	TOTAL						ØAB	ØBC	ØCA	3Ø	AT	AF	P	kAIC	SIZE	TYPE	Ø1305mm	SIZE (Ø)	TYPE	GRD WIRE	VD	%VD				
LP1	Street Lamp Post, Single Arm. (8m)	GH	C9	7		1		8		150	0.8	1450	230		6.30			20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		5.02	2.18				
SL1	Street Lamp Post, Single Arm. (8m)	GH	C3	1	1					150	0.8	280	230			1.22		15	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.00	0.00				
SL2	Street Lamp Post, Single Arm. (8m)				1																												
SL3	Street Lamp Post, Single Arm. (8m)				1																												
SL4	Street Lamp Post, Single Arm. (8m)	GH	C3			1				150	0.8	50	230			0.22		15	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1	Newly installed (Phase IV)
SL5	Street Lamp Post, Single Arm. (8m)	GH	C3	1						150	0.8	200	230			0.87		15	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.69	0.30			1	
SL6	Street Lamp Post, Single Arm. (8m)																															1	Newly installed (Phase IV)
SL7	Street Lamp Post, Single Arm. (8m)																															1	Newly installed (Phase IV)
SL8	Street Lamp Post, Single Arm. (8m)																															1	Newly installed (Phase IV)
SL9	Street Lamp Post, Single Arm. (8m)																															1	Newly installed (Phase IV)
SL10	Street Lamp Post, Single Arm. (8m)																															1	
SL11	Street Lamp Post, Single Arm. (8m)																															1	Newly installed (Phase IV)
SL12	Street Lamp Post, Single Arm. (8m)																															1	Newly installed (Phase IV)
SL14	Street Lamp Post, Single Arm. (8m)																															1	
SL15	Street Lamp Post, Single Arm. (8m)	GH	C8		1			1	180	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		
SL16	Street Lamp Post (8m)	GH	C8		1			1	150	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		
SL27	Street Lamp Post, Single Arm. (8m)	GH	C8		1			1	180	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		Newly installed (Phase IV)
SL28	Street Lamp Post (8m)	GH	C8		1			1	150	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		Newly installed (Phase IV)
SL29	Street Lamp Post, Single Arm. (8m)	GH	C8		1			1	150	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		
SL30	Street Lamp Post, Double Arm.																														1		Newly installed (Phase IV)
SL31	Street Lamp Post, Single Arm. (8m)	GH	C8		1			1	180	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		Newly installed (Phase IV)
SL32	Street Lamp Post, Single Arm. (8m)	GH	C8		1			1	150	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		
SL33	Street Lamp Post, Double Arm.																														1		
SL34	Street Lamp Post, Single Arm. (8m)	GH	C8		1			1	180	0.8	50	230			0.22		20	100	2	6	2w-8.0mm	THHN	0.809	20mm	PVC		0.17	0.08			1		Newly installed (Phase IV)
TOTAL				9	10	8	8	40	0.8	2380	230	0.00	8.04	2.30		100	225	3	10	3w-60.0mm	THHN	0.101	50mm	PVC		0.21	0.09	4	1	15			

SCHEDULE OF LOADS
SCALE NTS

SINGLE LINE DIAGRAM
SCALE NTS



Project / Location:
**MAINTENANCE OF
LIGHTING SYSTEM
PORT OF MASAO**
Brgy. Lumbocan, Butuan City, Agusan del Norte

Prepared by:
(ORIGINAL SIGNED)
REYNAN P. PENASO
ENGINEER I

Checked by:
(ORIGINAL SIGNED)
MA. GEMMA MAE A. AGUILAR
ARCHITECT I

Reviewed by:
(ORIGINAL SIGNED)
AMALIA M. DUMANON
ACTING PRINCIPAL ENGINEER A

Recommending Approval:
(ORIGINAL SIGNED)
LEXTER-LOU V. SEVILLA
DIVISION MANAGER A, ESD

Approved by:
(ORIGINAL SIGNED)
ATTY. KAHLIL L. LAMIGO
ACTING PORT MANAGER

Sheet Contents:
• SCHEDULE OF
LOADS
• SINGLE LINE
DIAGRAM
Sheet No.
E-1
05 05
JANUARY 2026