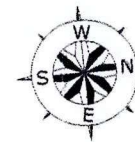




## REPAIR OF PORT LIGHTING SYSTEM

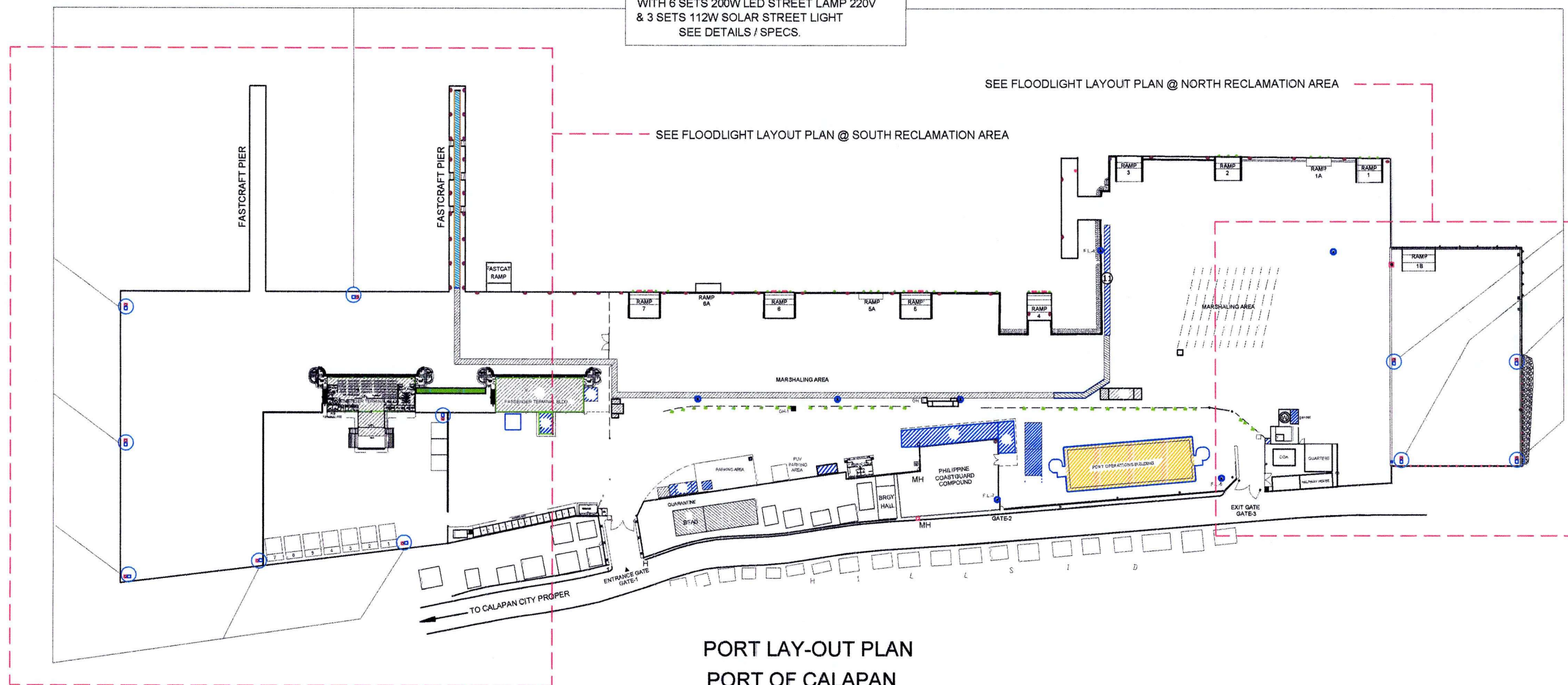
PORT OF CALAPAN, ORIENTAL MINDORO



PROP. HIGH MAST LIGHTING TOWER  
WITH 6 SETS 200W LED STREET LAMP 220V  
& 3 SETS 112W SOLAR STREET LIGHT  
SEE DETAILS / SPECS.

SEE FLOODLIGHT LAYOUT PLAN @ NORTH RECLAMATION AREA

SEE FLOODLIGHT LAYOUT PLAN @ SOUTH RECLAMATION AREA



PORT LAY-OUT PLAN  
PORT OF CALAPAN  
ORIENTAL MINDORO

SCALE : 1:1,500 M.



PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM  
PORT OF CALAPAN ORIENTAL MINDORO

PREPARED / SUBMITTED BY:

FERNANDO J. GALVEZO  
Engineering Assistant A

CHECKED / REVIEWED BY:

RONALD O. MAZIBAG  
Acting Supervising Engineer A

RECOMMENDING APPROVAL:

MARGARITO P. DIMAILIG  
Acting ESD Manager

APPROVED:

ARCIDI S. JUMAANI  
Acting Port Manager

SHEET CONTENTS:

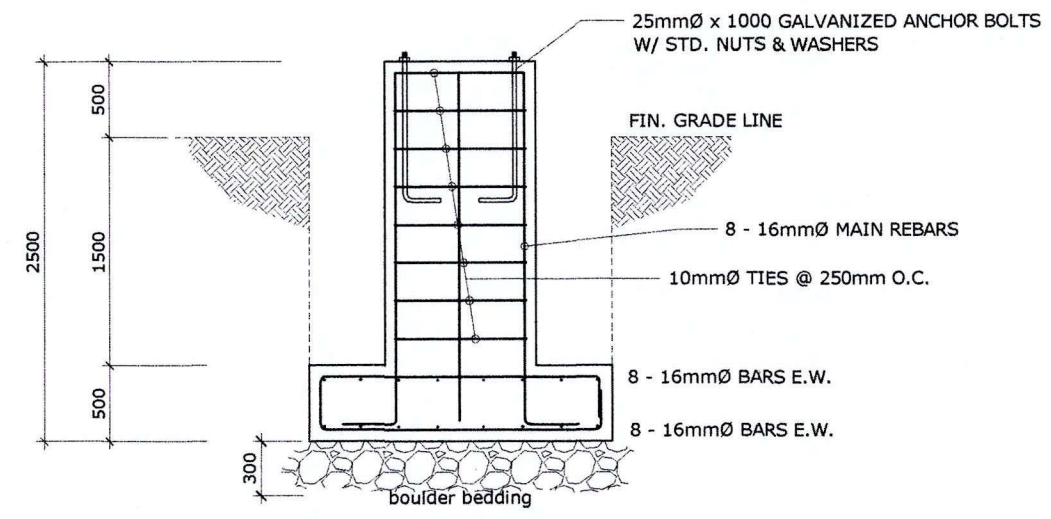
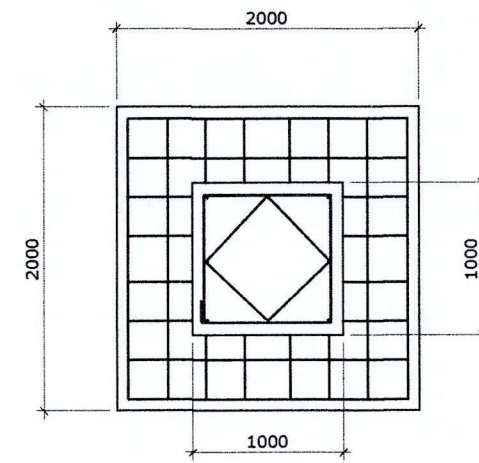
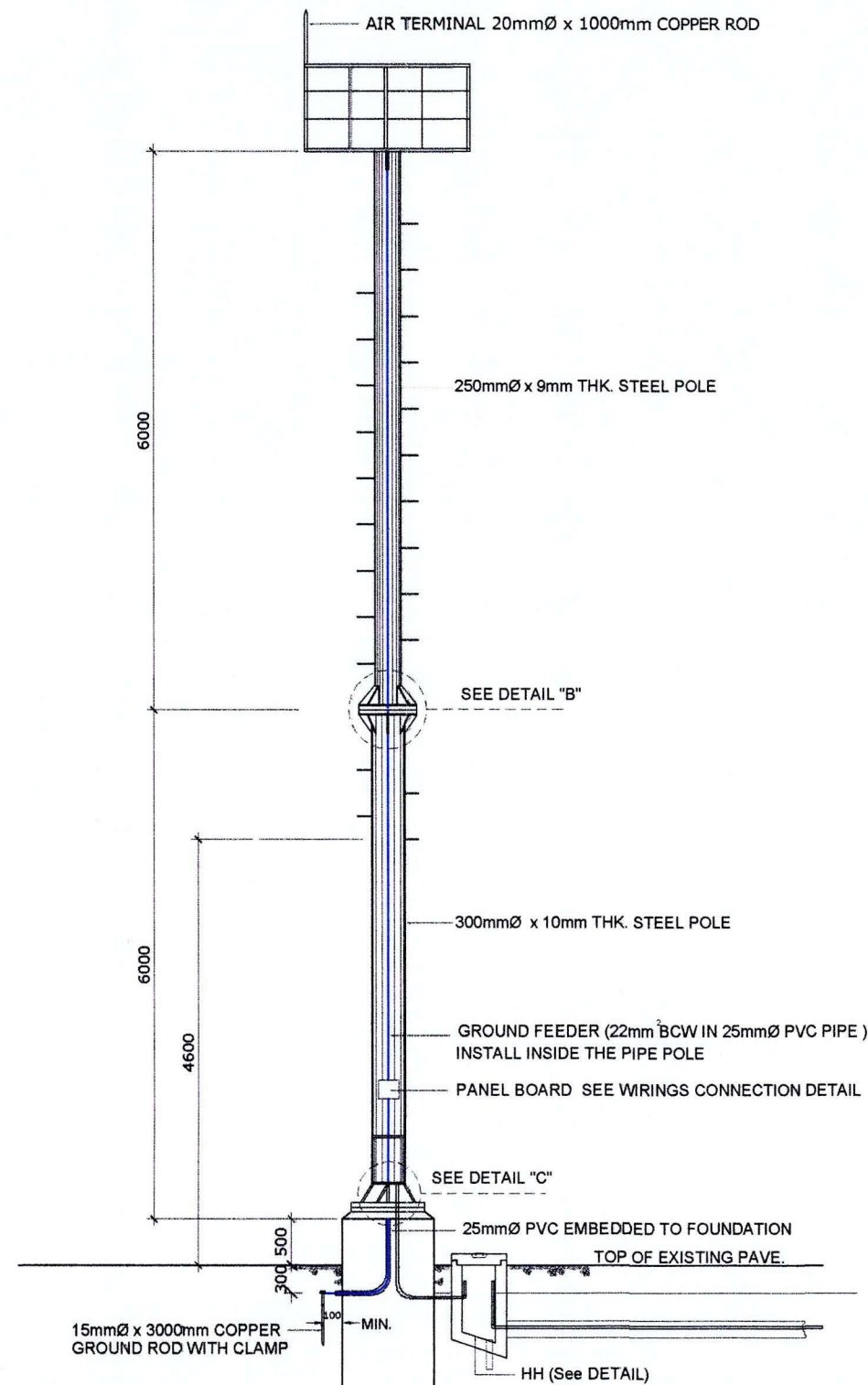
AS SHOWN

SCALE:  
AS SHOWN

SHEET NO.  
1 of 14

DATE:  
23 APRIL 2018





**FLOODLIGHT POLE FOUNDATION DETAIL**

SCALE 1 : 50 M.

**DETAIL OF 12.00 METER HIGH FLOODLIGHT POLE**

SCALE 1 : 75 M.



PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM  
PORT OF CALAPAN ORIENTAL MINDORO

PREPARED / SUBMITTED BY:

FERNANDO J. GALVEZO  
Engineering Assistant A

CHECKED / REVIEWED BY:

RONALDO O. MATIBAG  
Acting Supervising Engineer A

RECOMMENDING APPROVAL:

MARGARITO P. DIMAILIG  
Acting ESD Manager

APPROVED:

ARCIDI S. JUMAANI  
Acting Port Manager

SHEET CONTENTS:

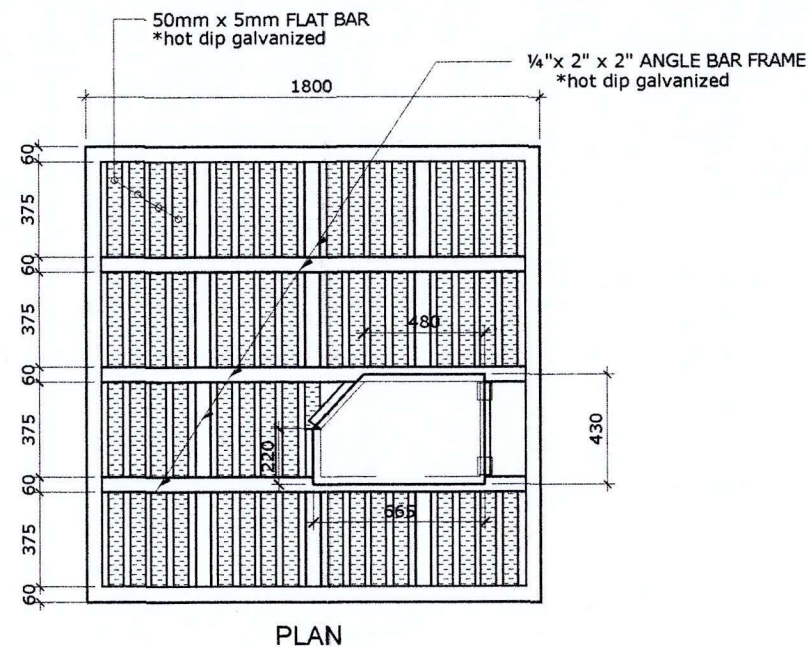
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SCALE:  
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SHEET NO.  
2 of 14

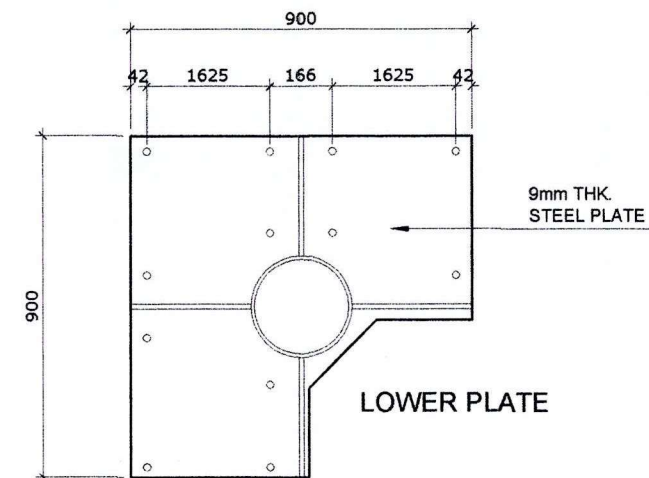
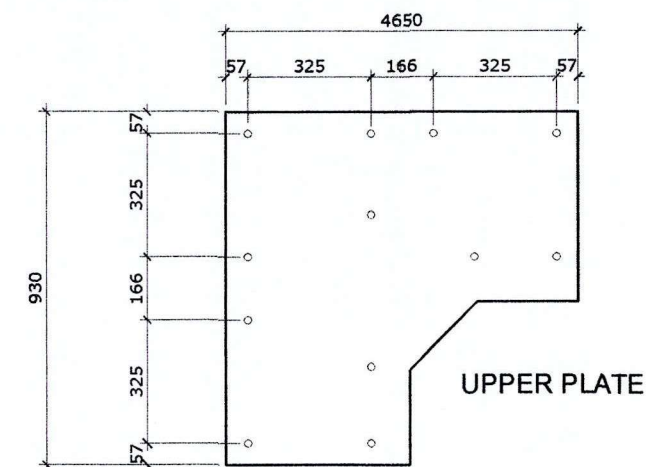
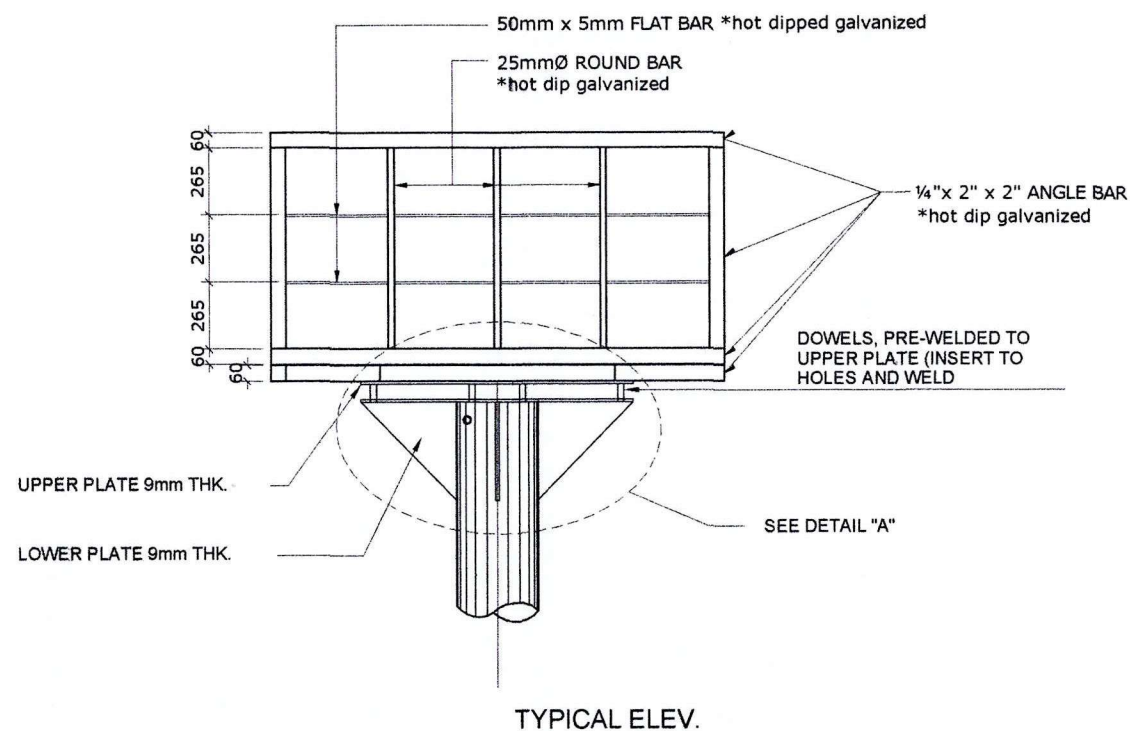
DATE :  
23 APRIL 2018





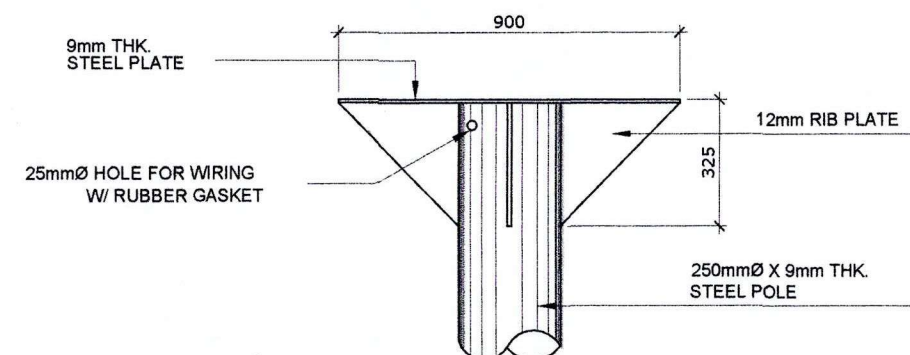
PLATFORM FRAME DETAIL

SCALE 1 : 30 M.



PLATFORM PLATES

SCALE 1:20 M



DETAIL "A"

SCALE 1:20 M



PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM  
PORT OF CALAPAN ORIENTAL MINDORO

PREPARED / SUBMITTED BY:

FERNANDO J. GALVEZO  
Engineering Assistant A

CHECKED / REVIEWED BY:

RONALD O. MATIBAG  
Acting Supervising Engineer A

RECOMMENDING APPROVAL:

MARGARITO P. DIMAILIG  
Acting ESD Manager

APPROVED:

ARCIDI S. JUMAANI  
Acting Port Manager

SHEET CONTENTS:

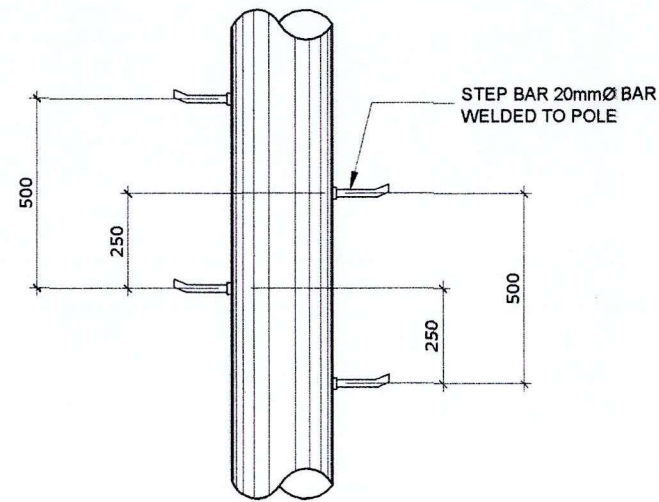
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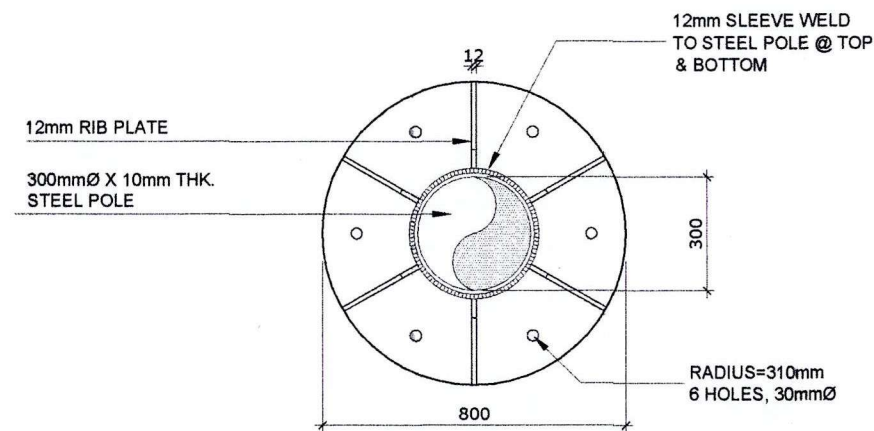
SHEET NO.  
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DATE:  
23 APRIL 2018

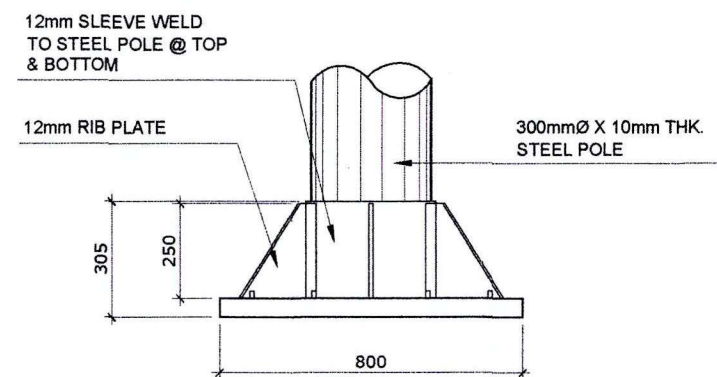




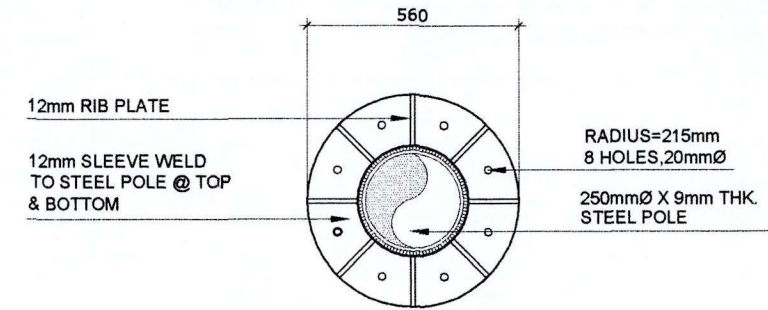
**STEP BAR DETAIL**  
SCALE 1:20 M



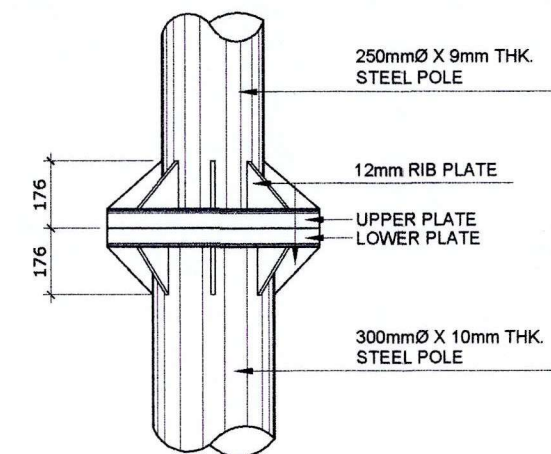
**BASE PLATE**  
SCALE 1:20 M



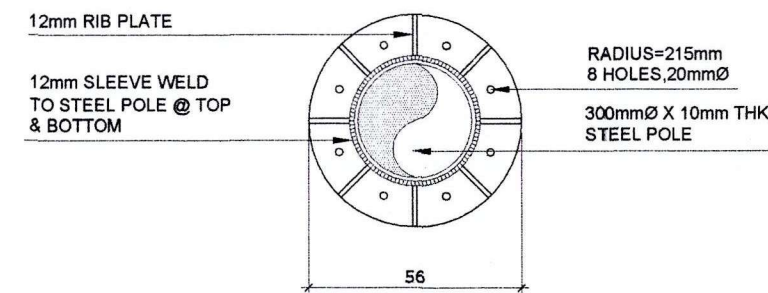
**DETAIL "C"**  
SCALE 1:20 M



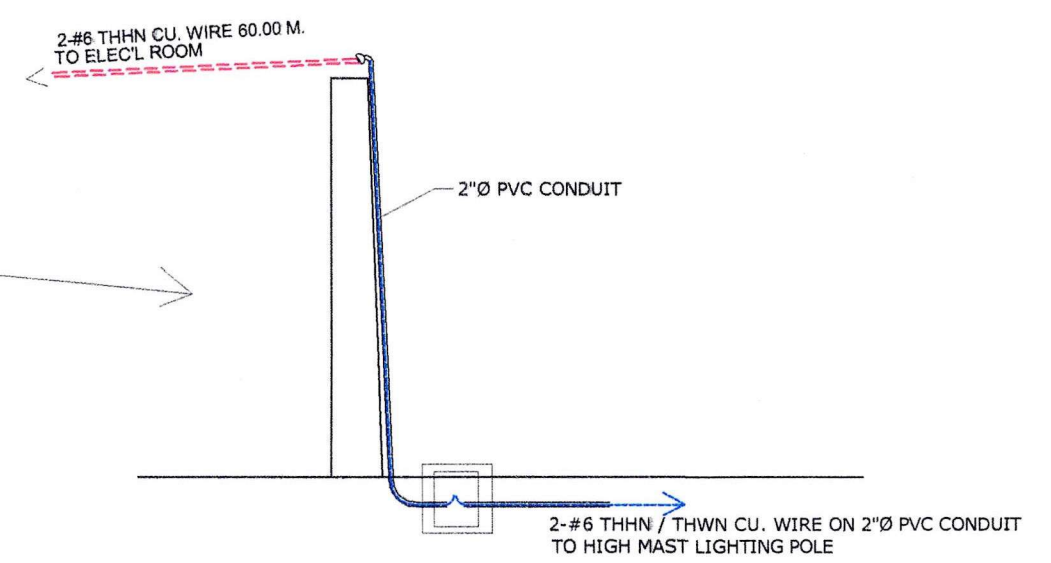
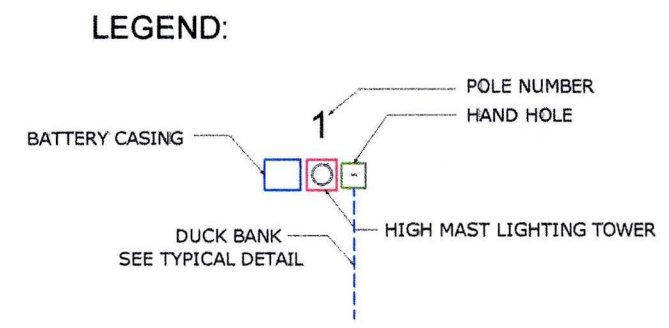
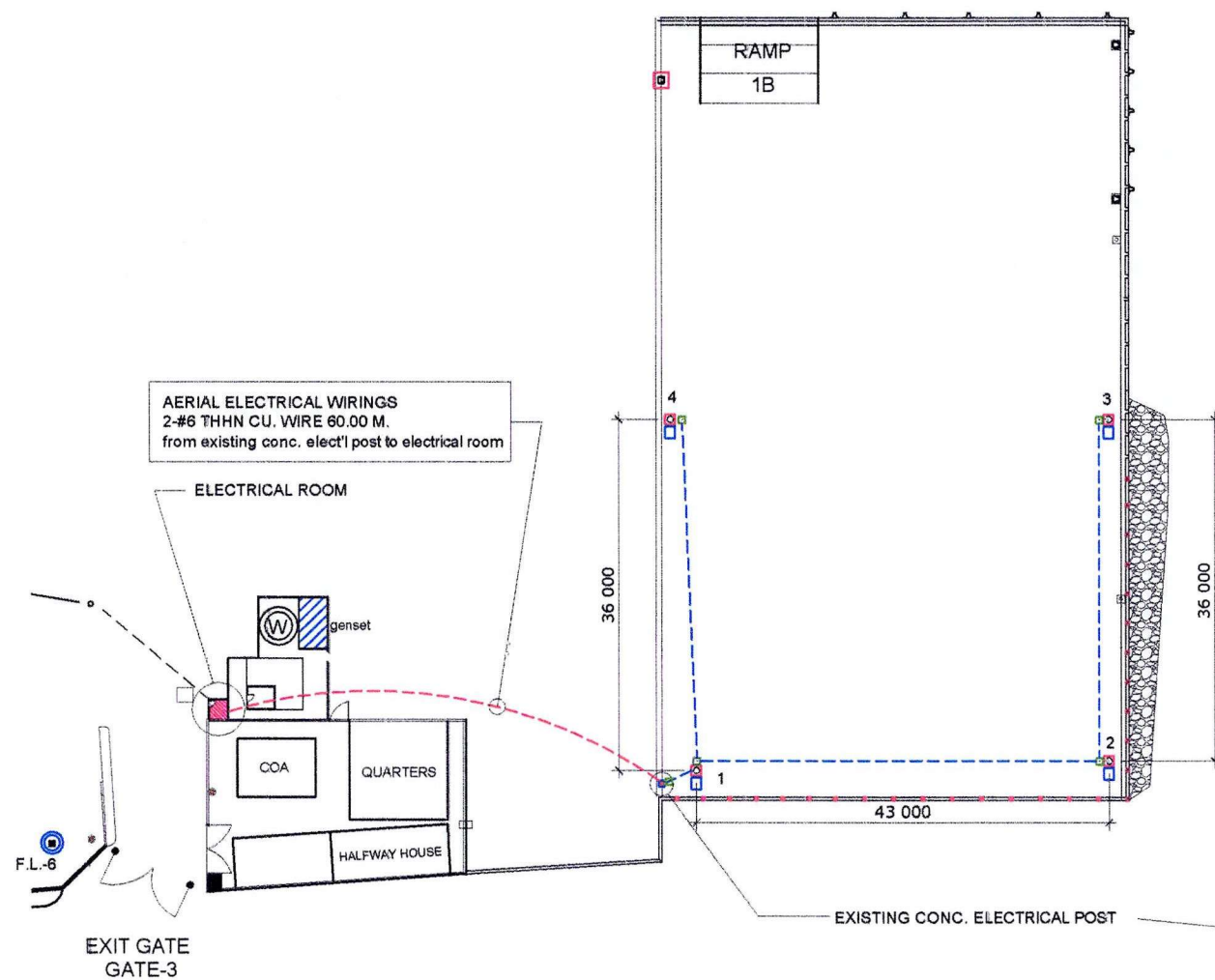
**UPPER PLATE DETAIL**  
SCALE 1:20 M



**DETAIL "B"**  
SCALE 1:20 M



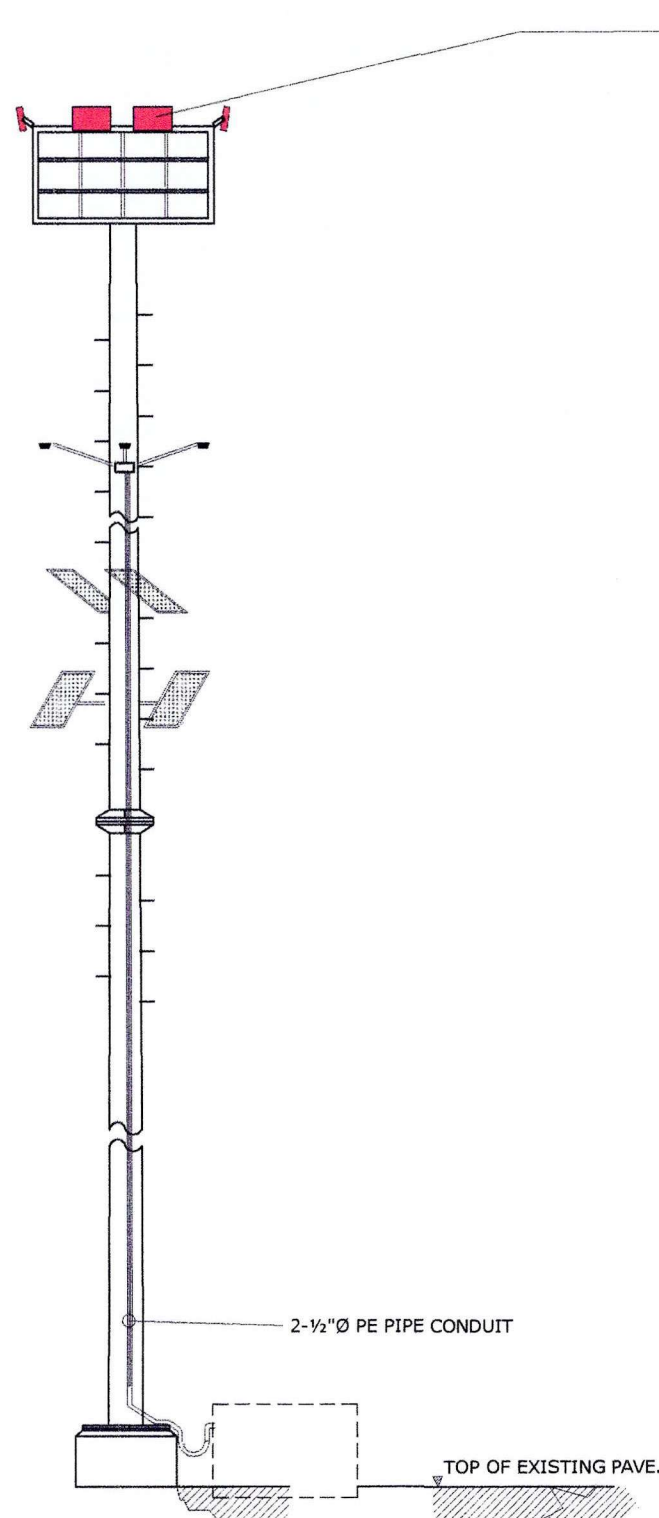
**LOWER PLATE DETAIL**  
SCALE 1:20 M



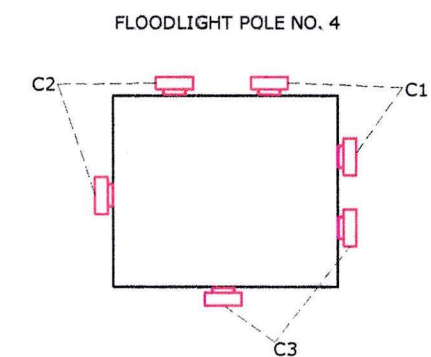
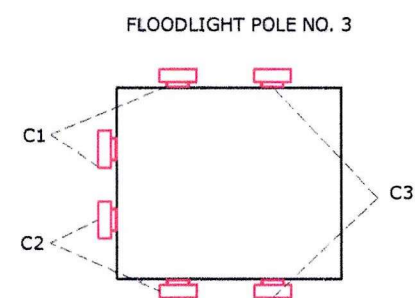
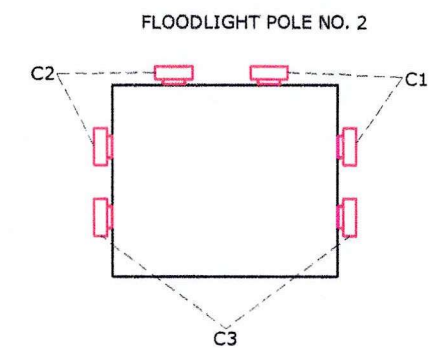
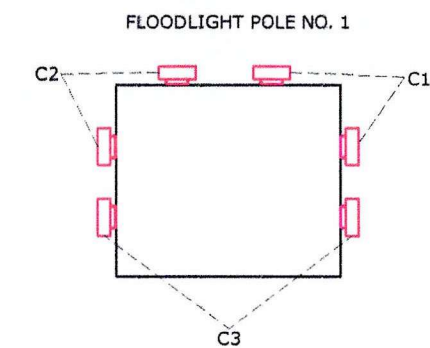
**LAYOUT PLAN OF FLOODLIGHT POLE ( High Mast )  
BATTERY CASING, HAND HOLE & DUCT BANK  
@ NORTH RECLAMATION AREA**

	PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM PORT OF CALAPAN ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
	PREPARED / SUBMITTED BY:	CHECKED / REVIEWED BY:	RECOMMENDING APPROVAL:	APPROVED:	AS SHOWN	SHEET NO. 5 of 14
	FERNANDO J. GALVEZO Engineering Assistant A	RONALD O. MATIBAG Acting Supervising Engineer A	MARGARITO P. DMAILIG Acting ESD Manager	ARCIDI S. JUMAANI Acting Port Manager		DATE: 23 APRIL 2018



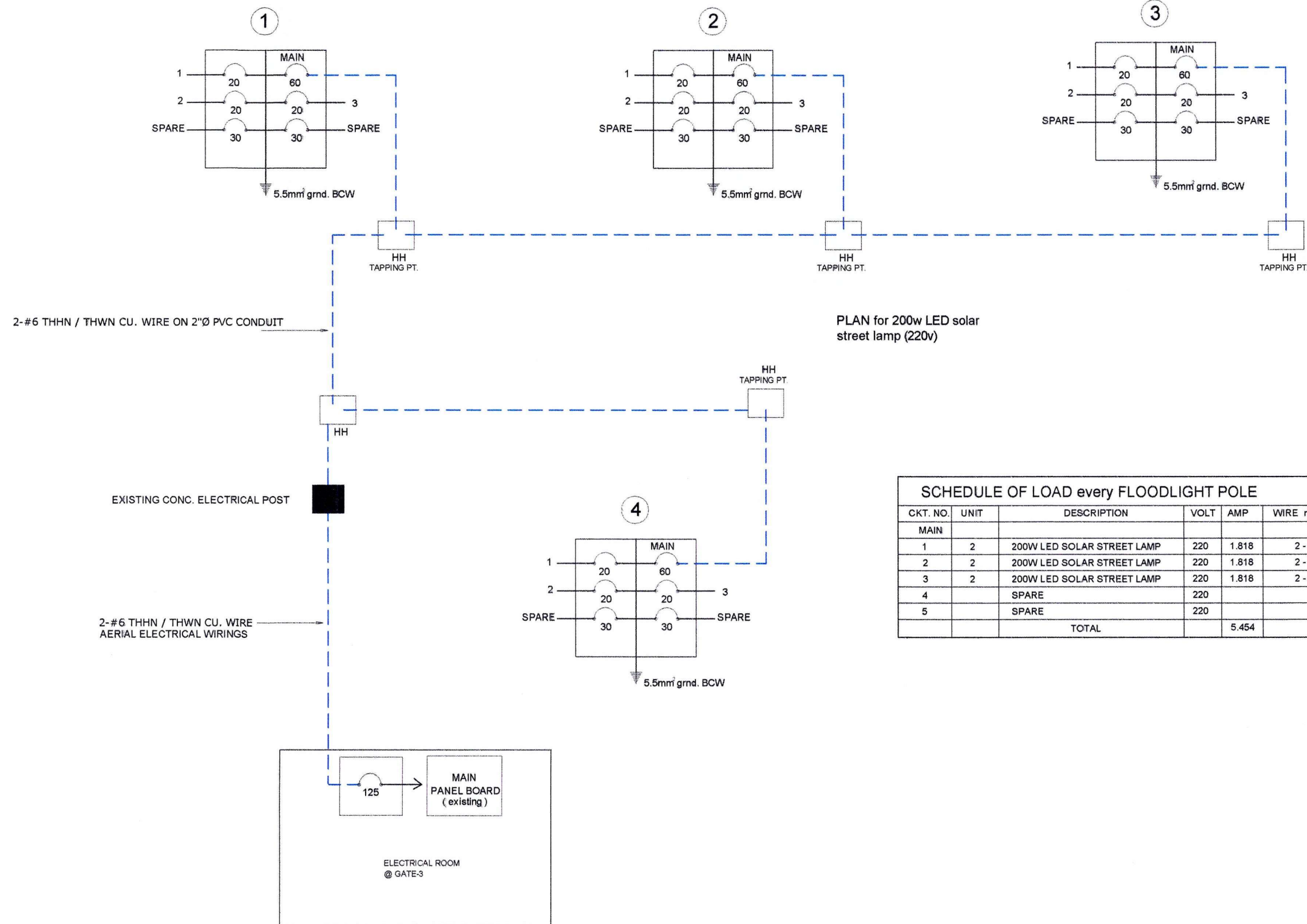


DESCRIPTION
<b>200W LED Solar Street Lamp (220V)</b> Warm White - 160lumens/watt - Meanwell driver - 220V AC - 2800-3500K color temperature - 90 degree lighting angle



○ LIGHTING LAYOUT

DETAIL OF 6 SETS 200W LED STREET LAMP 220V  
@ HIGH MAST TOWER NO. 1-4 ( North Reclamation )



SCHEDULE OF LOAD every FLOODLIGHT POLE						
CKT. NO.	UNIT	DESCRIPTION	VOLT	AMP	WIRE mm <sup>2</sup> ( THW )	CKT. PROTECTION
MAIN						60 AT - 2P
1	2	200W LED SOLAR STREET LAMP	220	1.818	2 - 5.5	20 AT - 2P
2	2	200W LED SOLAR STREET LAMP	220	1.818	2 - 5.5	20 AT - 2P
3	2	200W LED SOLAR STREET LAMP	220	1.818	2 - 5.5	20 AT - 2P
4		SPARE	220			20 AT - 2P
5		SPARE	220			30 AT - 2P
TOTAL				5.454		30 AT - 2P

## WIRINGS / PANEL BOARD LAYOUT FOR FLOODLIGHTS NO. 1-4 @ NORTH RECLAMATION



PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM  
PORT OF CALAPAN ORIENTAL MINDORO

PREPARED / SUBMITTED BY:

FERNANDO J. GALVEZO  
Engineering Assistant A

CHECKED / REVIEWED BY:

RONALDO O. MAIBAG  
Acting Supervising Engineer A

RECOMMENDING APPROVAL:

MARGARITO P. DIMAILIG  
Acting ESD Manager

APPROVED:

ARCIDI S. JUMAANI  
Acting Port Manager

SHEET CONTENTS:

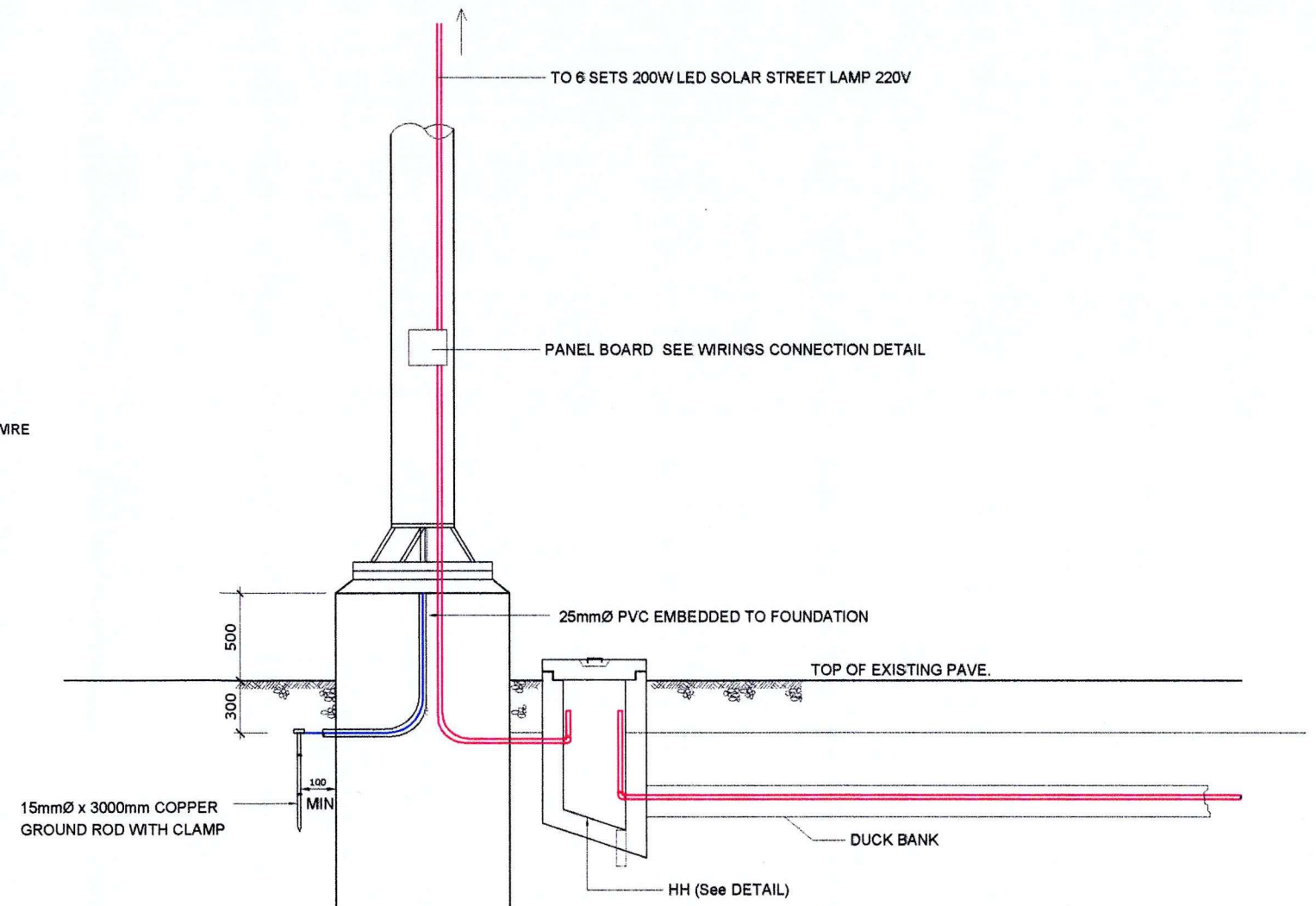
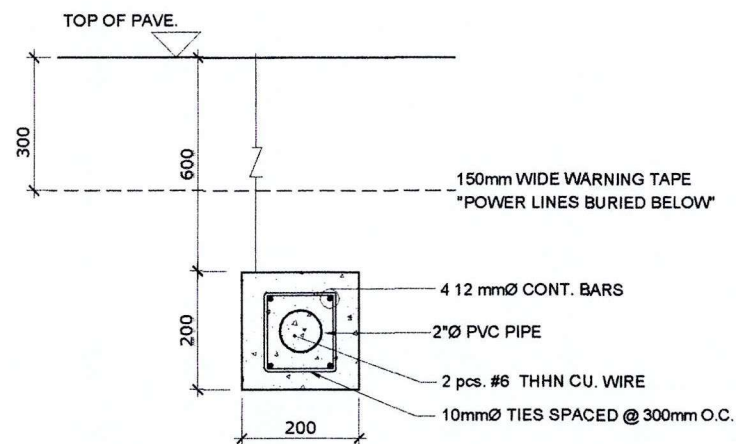
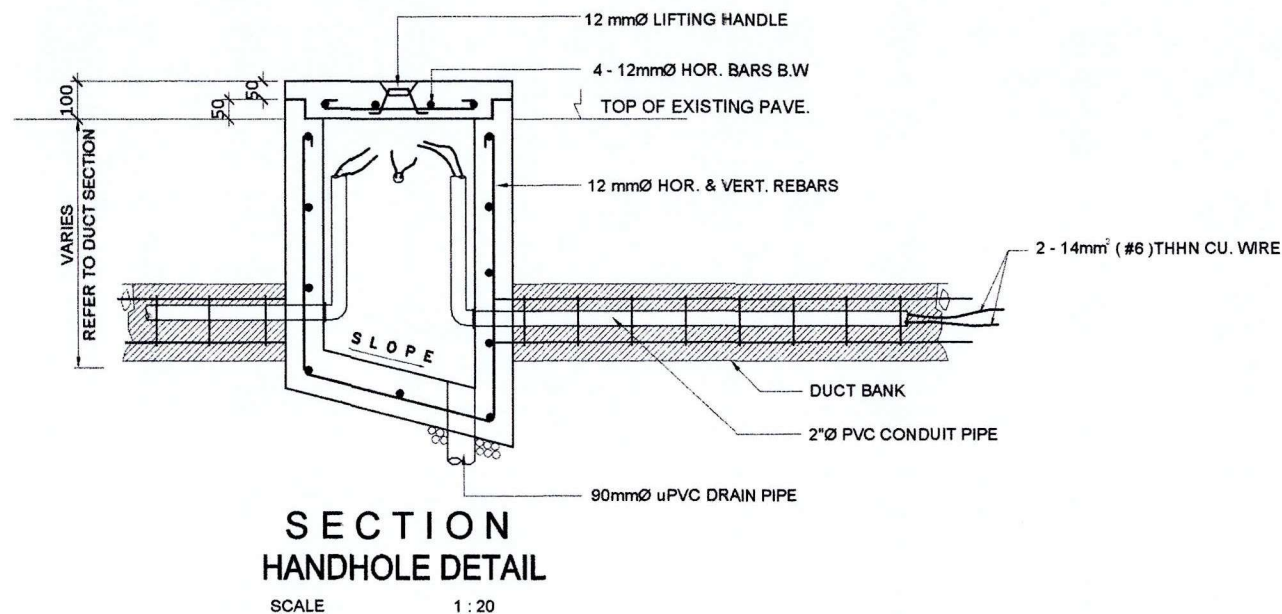
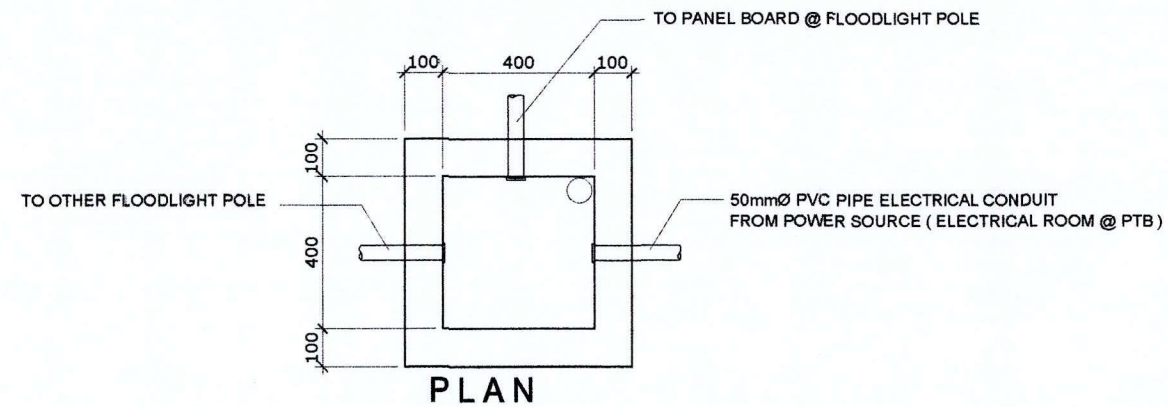
AS SHOWN

SCALE:  
AS SHOWN

SHEET NO.  
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DATE:  
23 APRIL 2018





**TYPICAL DETAIL OF DUCT BANK & HANDHOLE**



PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM  
PORT OF CALAPAN ORIENTAL MINDORO

PREPARED / SUBMITTED BY:

FERNANDO J. GALVEZO  
Engineering Assistant A

CHECKED / REVIEWED BY:

RONALD O. MATBAG  
Acting Supervising Engineer A

RECOMMENDING APPROVAL:

MARGARITO P. DIMAILIG  
Acting ESD Manager

APPROVED:

ARCIDI S. JUMAANI  
Acting Port Manager

SHEET CONTENTS:

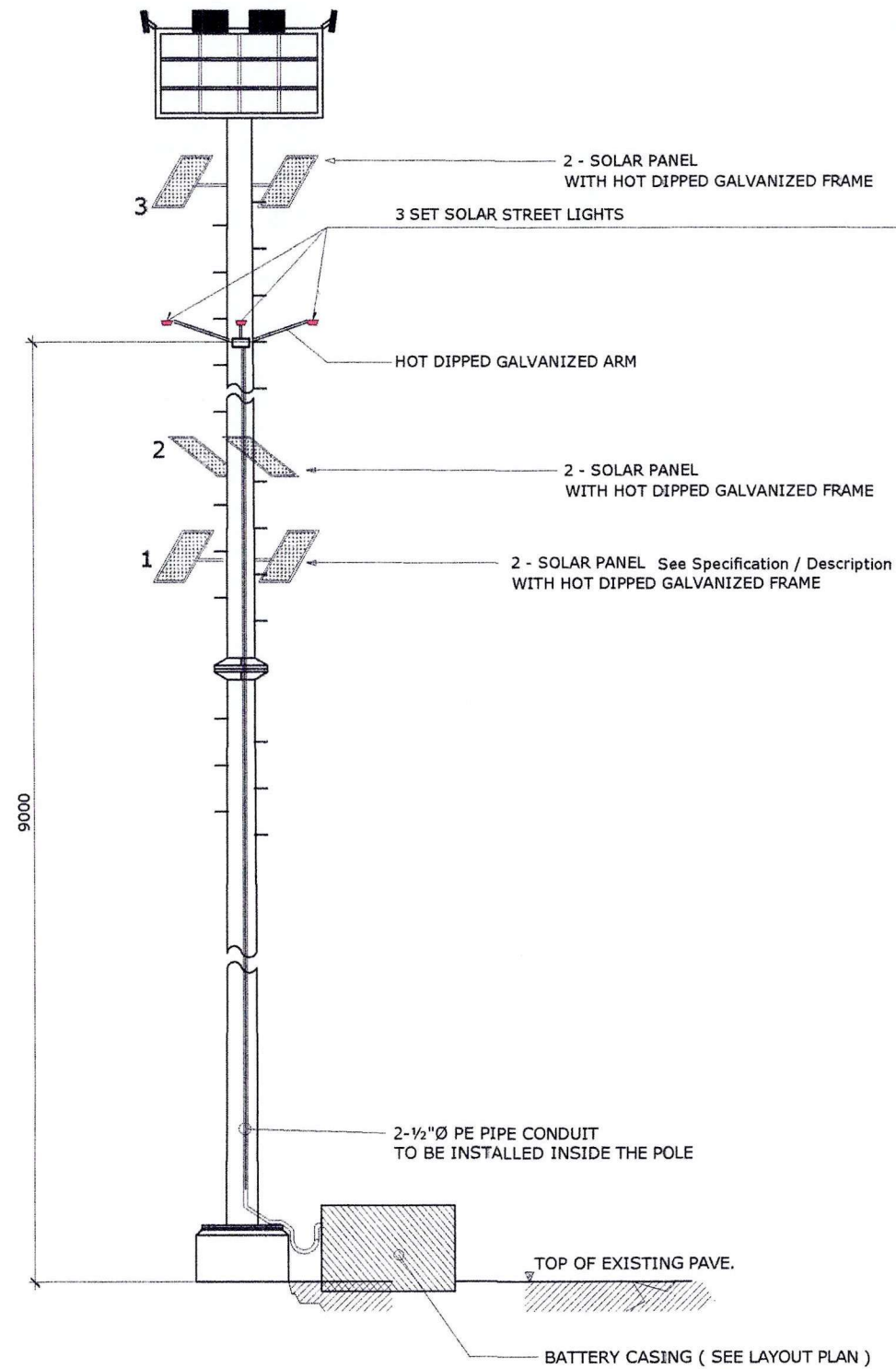
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SHEET NO.  
8 of 14

DATE:  
23 APRIL 2018





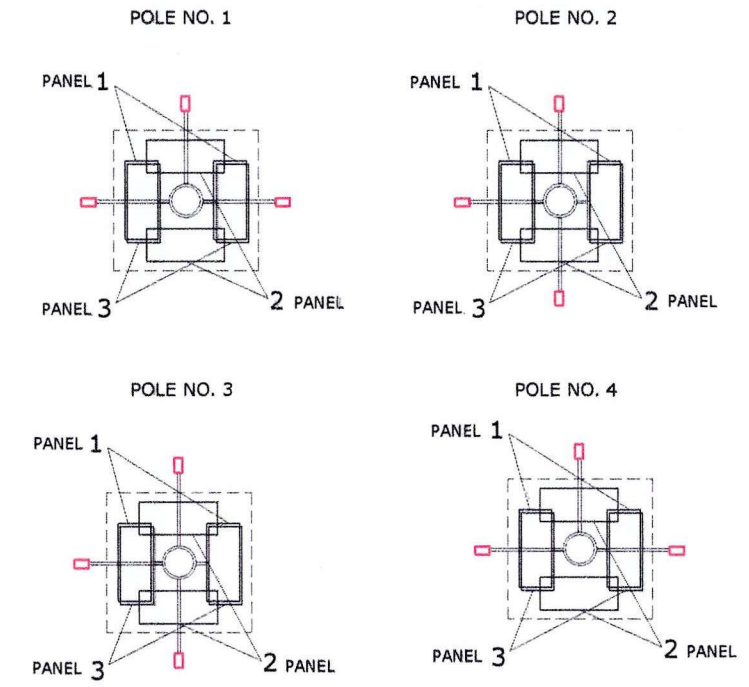
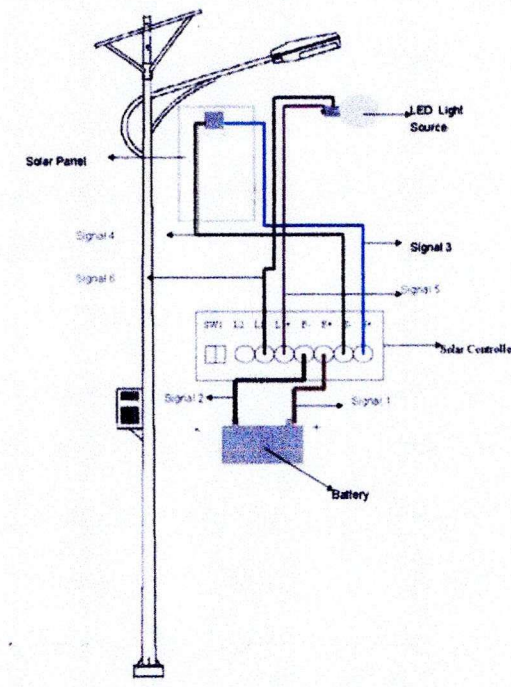
DETAIL 3 SETS 112W SOLAR STREET LIGHT  
@ HIGH MAST TOWER NO. 1-4 ( North Reclamation Area )

SOLAR SOLUTION FOR 112W LED Streetlight

Set Includes:

Picture	Name	Description
	112W LED Streetlight	110lm/watt Meanwell driver DC24V Power Input
	Gel Type Battery (52.2x24x21.6cm; 56kg)	200AH/12V per set x 2 sets Material : Made of UL94HB and UL94V-0 ABS plastic High quality AGM separator PbCa grids minimize corrosion and prolong life
	Solar Panel (158x99x4cm; 19.8kg)	225W/30V per set x 2 sets Aluminum Frame Body Cell efficiency: 15.41% Maximum power voltage: 30.03V Maximum power current: 7.50A Open circuit voltage: 36.30V Short circuit current: 8.19A
	Solar Charge Controller OUTDOOR IP68	12V-24V 7.5A-15A Lumiax Smart DC Series
	Battery Box	Double 200AH Waterproof Battery Box
Working Hours Per Day		12H (full brightness during the first 8 hours and half brightness during the last 4 hours) 36 hour power reserved
Continuous Working Hours when Battery is fully charged		3 days/72 hours
Ambient Temperature		-40°C ~ 55°C

SCHEMATIC DIAGRAM SOLAR STREET LIGHT / FLOODLIGHT

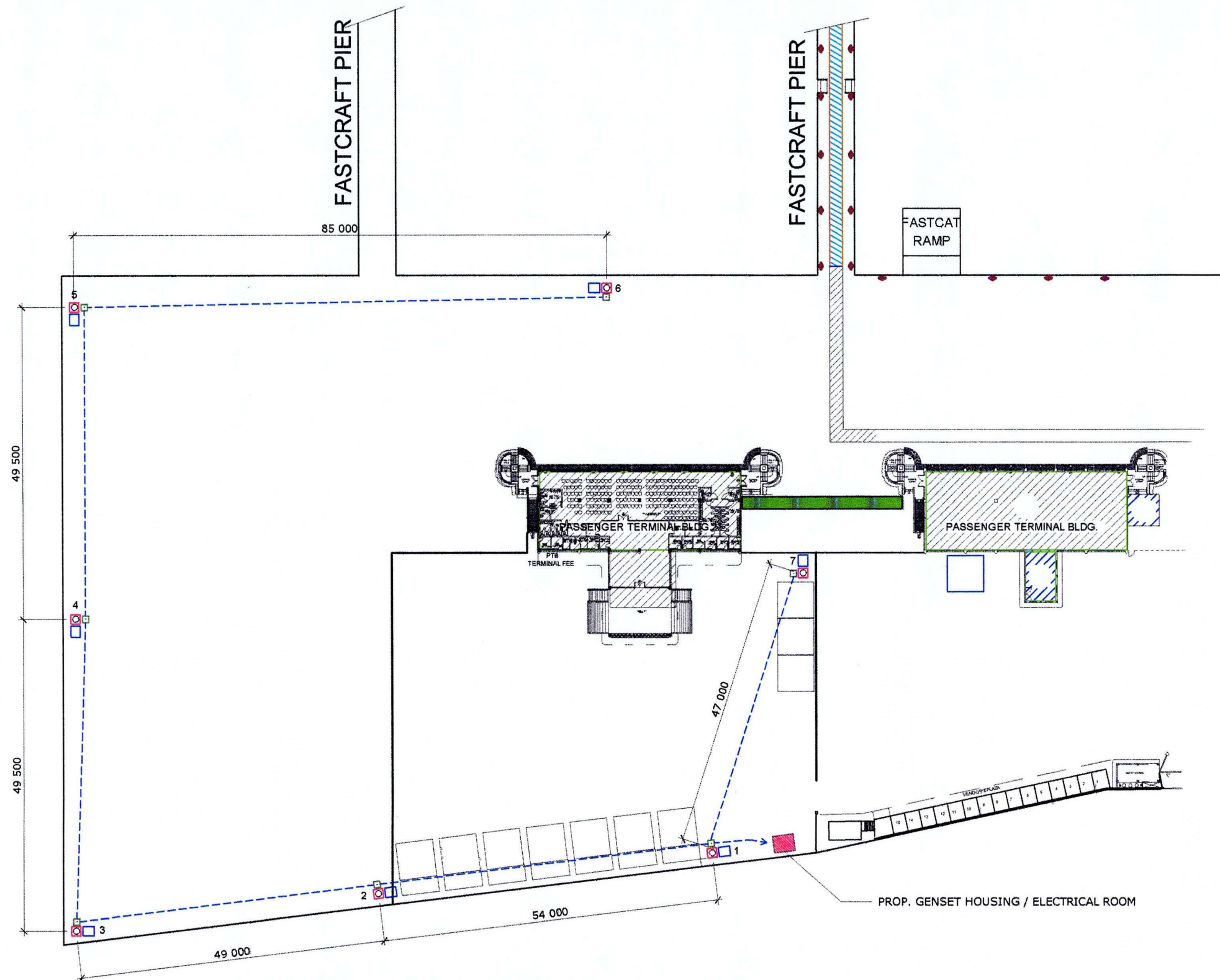


PLAN / TOP VIEW OF HIGH MAST LIGHTING TOWER 1-4 @ NORTH RECLAMATION AREA  
SHOWING THE LAYOUT PLAN OF SOLAR STREET LIGHTS  
\*NOTE: The orientation is based on the high mast layout plan  
page 5 of 14



PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM PORT OF CALAPAN ORIENTAL MINDORO				SHEET CONTENTS:	SCALE: AS SHOWN
PREPARED / SUBMITTED BY:  FERNANDO J. GALVEZO Engineering Assistant A	CHECKED / REVIEWED BY:  RONALD O. MATIBAG Acting Supervising Engineer A	RECOMMENDING APPROVAL:  MARGARITO P. DIMAILIG Acting ESD Manager	APPROVED:  ARCIDI S. JUMAANI Acting Port Manager	AS SHOWN	SHEET NO. 9 of 14
					DATE: 23 APRIL 2018





LAYOUT PLAN OF FLOODLIGHT POLE ( High Mast )  
BATTERY CASING, HAND HOLE & DUCT BANK  
@ SOUTH RECLAMATION AREA



PROJECT TITLE: REPAIR OF PORT LIGHTING SYSTEM  
PORT OF CALAPAN ORIENTAL MINDORO

PREPARED / SUBMITTED BY:

FERNANDO J. GALVEZO  
Engineering Assistant A

CHECKED / REVIEWED BY:

RONALD O. MATIBAG  
Acting Supervising Engineer A

RECOMMENDING APPROVAL:

MARGARITO P. DIMAILIG  
Acting ESD Manager

APPROVED:

ARCIDI S. JUMAANI  
Acting Port Manager

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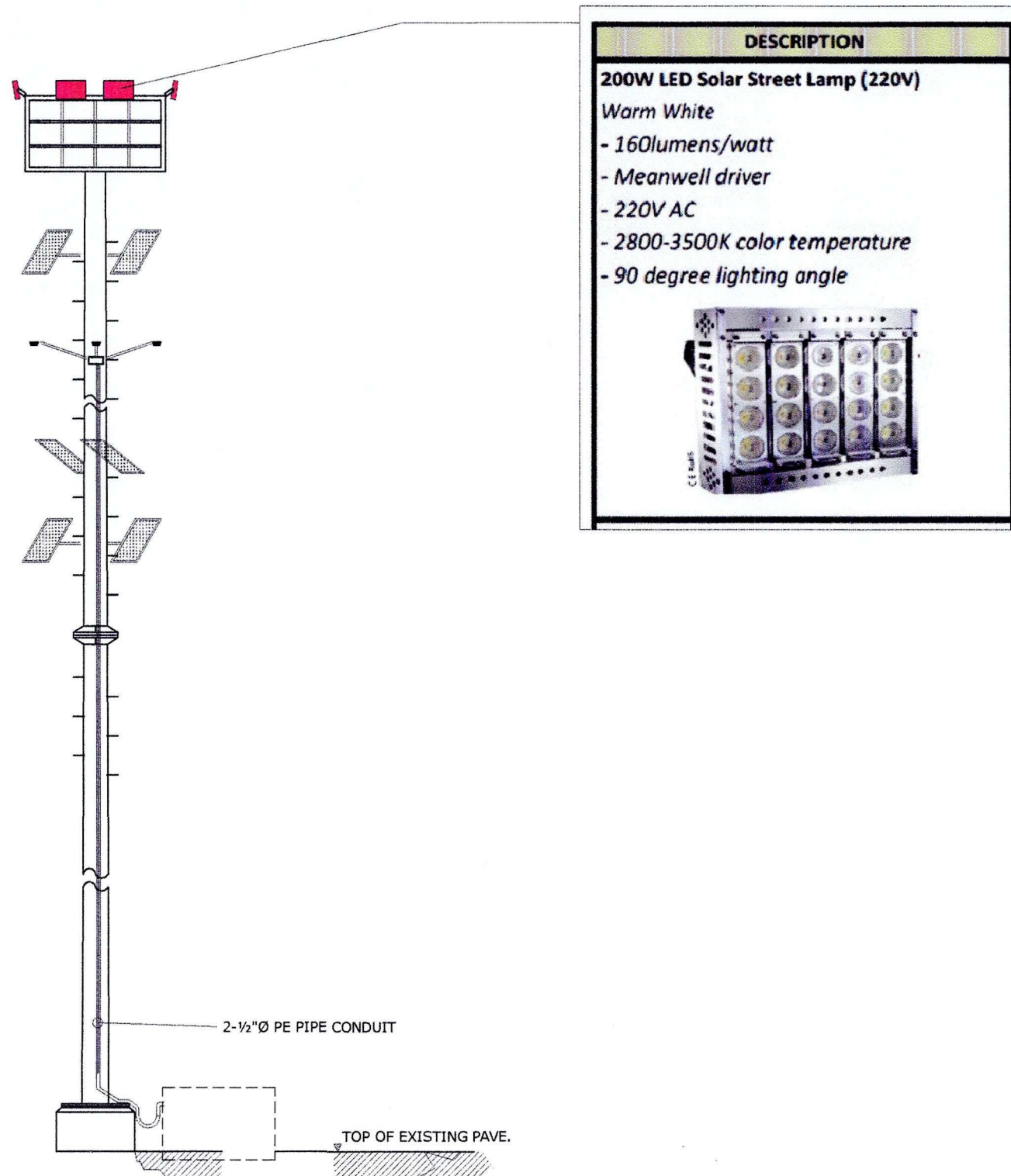
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SCALE:  
AS SHOWN

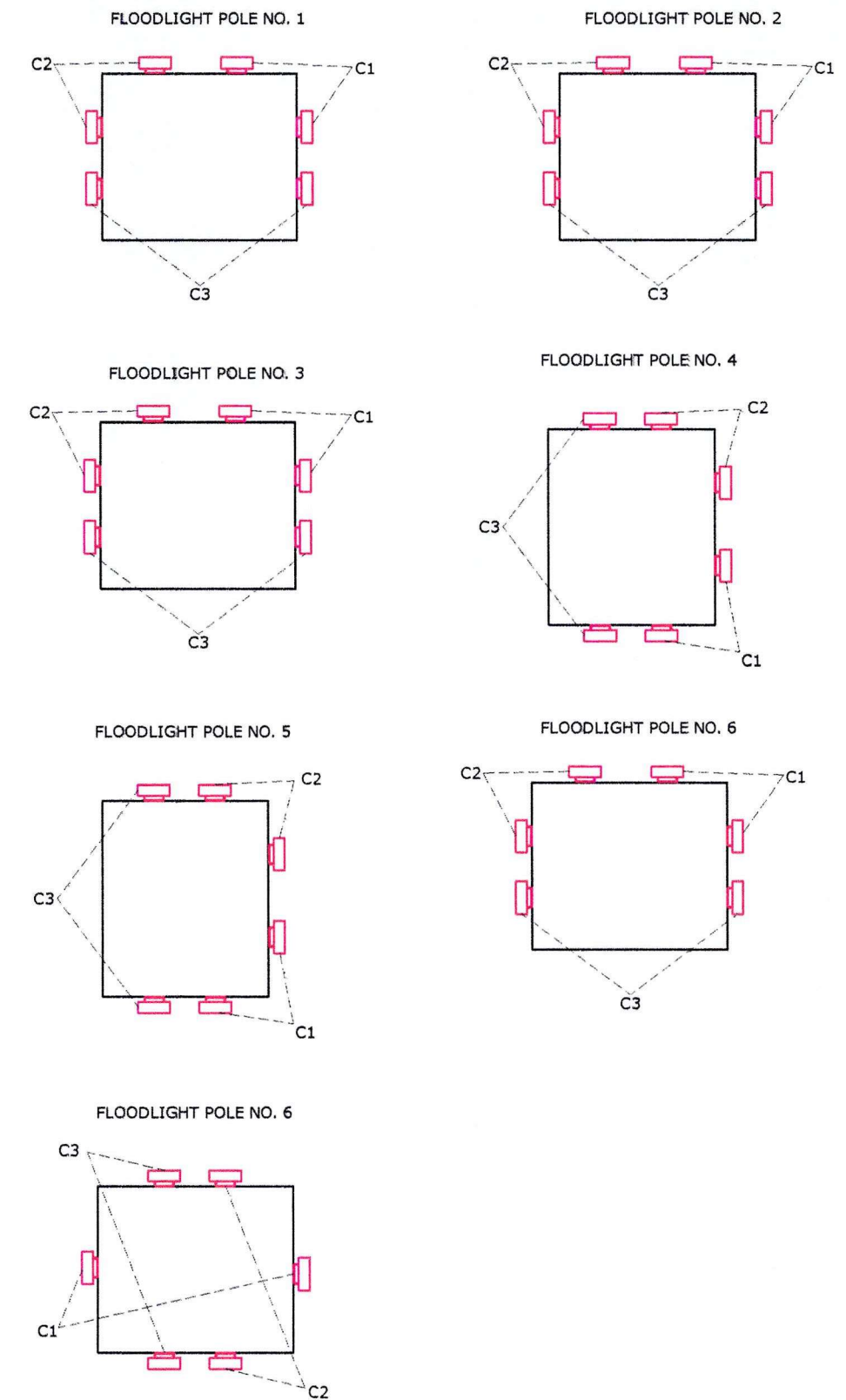
SHEET NO.  
10 of 14

DATE:  
23 APRIL 2018





DETAIL OF 6 SETS 200W LED STREET LAMP 220V  
 @ HIGH MAST TOWER NO. 1-7 ( South Reclamation Area )

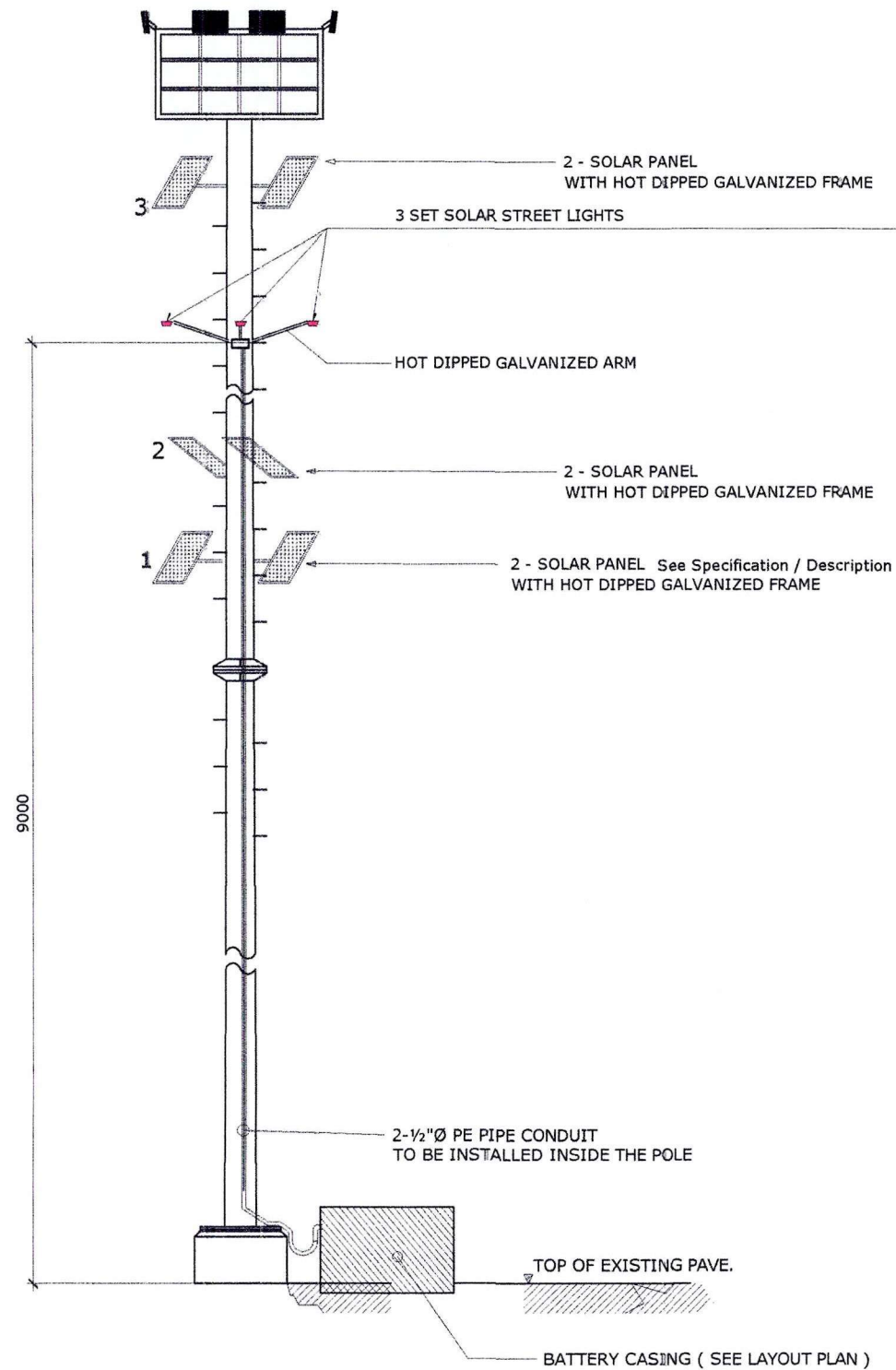


LIGHTING LAYOUT









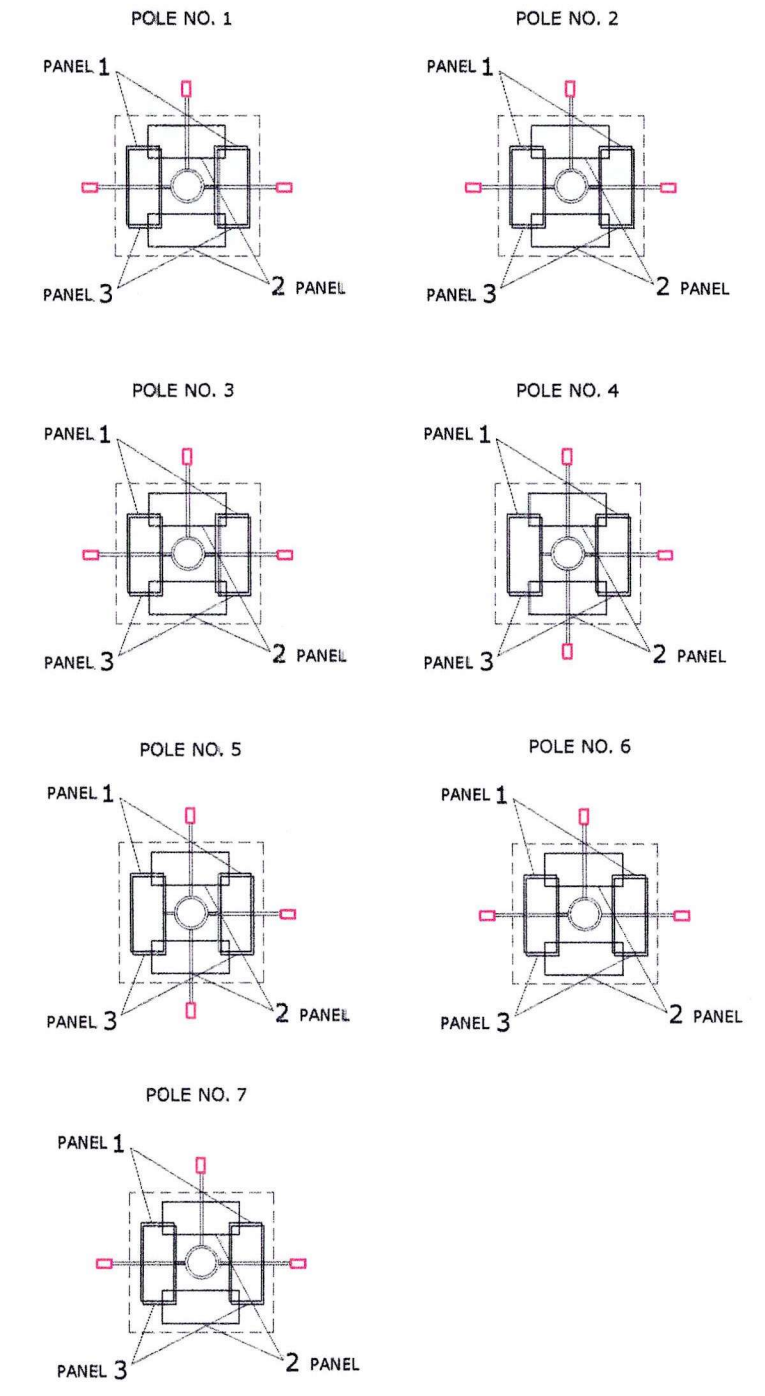
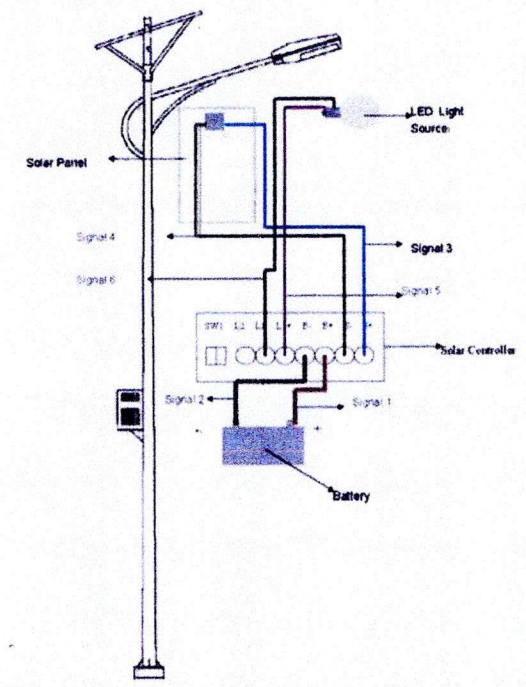
**DETAIL 3 SETS 112W SOLAR STREET LIGHT  
@ HIGH MAST TOWER NO. 1-4 ( North Reclamation Area )**

**SOLAR SOLUTION FOR 112W LED Streetlight**

Set includes:

Picture	Name	Description
	112W LED Streetlight	110lm/watt Meanwell driver DC24V Power Input
	Gel Type Battery (52.2x24x21.6cm; 56kg)	200AH/12V per set x 2 sets Material : Made of UL94HB and UL94V-0 ABS plastic High quality AGM separator PbCa grids minimize corrosion and prolong life
	Solar Panel (158x99x4cm; 19.8kg)	225W/30V per set x 2 sets Aluminum Frame Body Cell efficiency: 15.41% Maximum power voltage: 30.03V Maximum power current: 7.50A Open circuit voltage: 36.30V Short circuit current: 8.19A
	Solar Charge Controller OUTDOOR IP68	12V-24V 7.5A-15A Lumiax Smart DC Series
	Battery Box	Double 200AH Waterproof Battery Box
Working Hours Per Day		12H (full brightness during the first 8 hours and half brightness during the last 4 hours) 36 hour power reserved
Continuous Working Hours when Battery is fully charged		3 days/72 hours
Ambient Temperature		-40°C ~ 55°C

**SCHEMATIC DIAGRAM SOLAR STREET LIGHT / FLOODLIGHT**



**PLAN / TOP VIEW OF HIGH MAST LIGHTING TOWER 1-7 @ SOUTH RECLAMATION AREA  
SHOWING THE LAYOUT PLAN OF SOLAR STREET LIGHTS**  
\*NOTE: The orientation is based on the high mast layout plan  
page 10 of 14



**PROJECT TITLE:** REPAIR OF PORT LIGHTING SYSTEM  
PORT OF CALAPAN ORIENTAL MINDORO

**PREPARED / SUBMITTED BY:**  
  
**FERNANDO J. GALVEZO**  
Engineering Assistant A

**CHECKED / REVIEWED BY:**  
  
**RONALD O. MATBAG**  
Acting Supervising Engineer A

**RECOMMENDING APPROVAL:**  
  
**MARGARITO P. DIMAILIG**  
Acting ESD Manager

**APPROVED:**  
  
**ARCIDO S. JUMAANI**  
Acting Port Manager

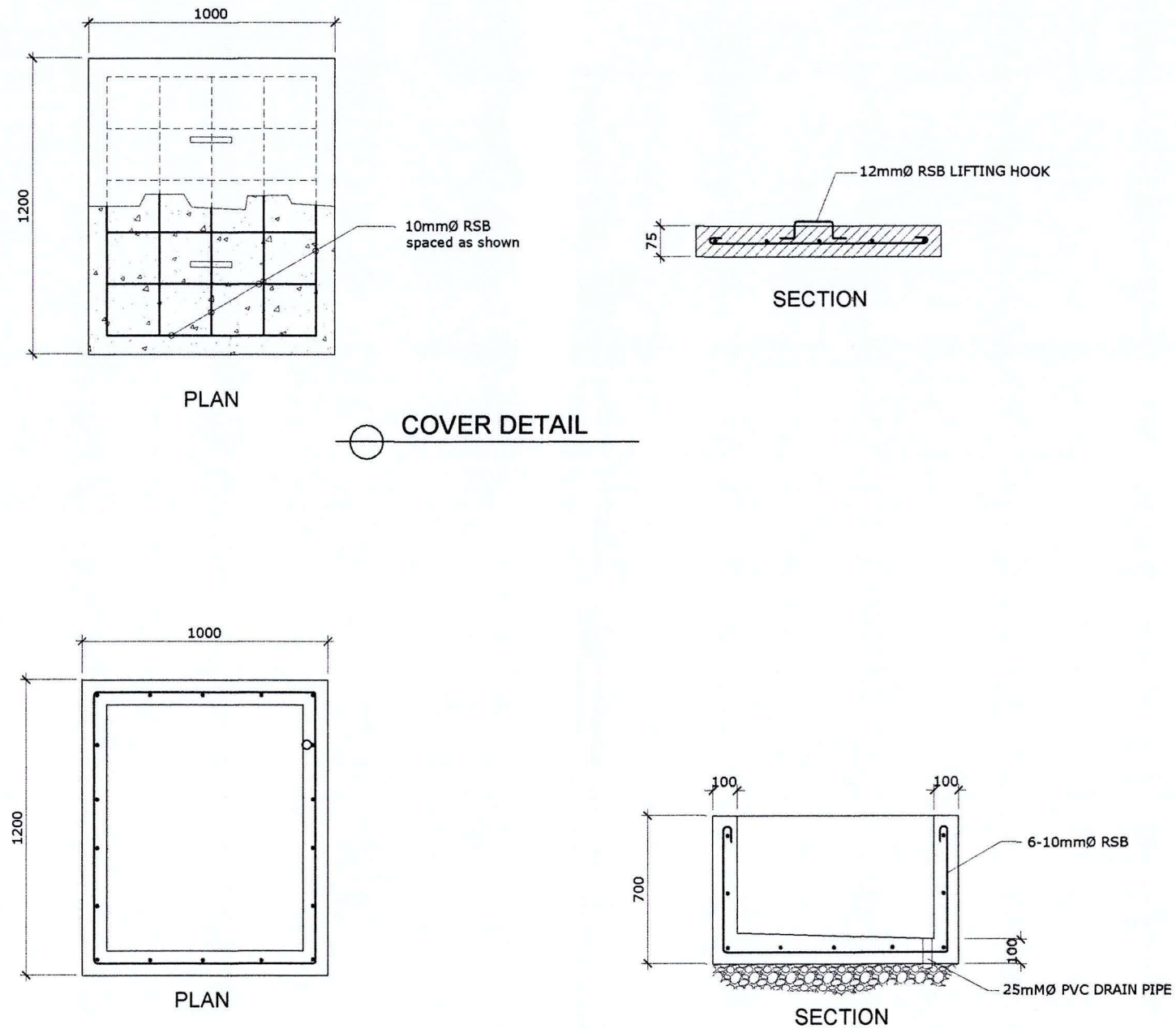
**SHEET CONTENTS:**  
AS SHOWN

**SCALE:**  
AS SHOWN

**SHEET NO.**  
13 of 14

**DATE:**  
23 APRIL 2018





TYPICAL DETAIL OF CONCRETE BATTERY CASING  
FOR FLOODLIGHTS NO. 1 - 7 @ SOUTH RECLAMATION AREA  
& FLOODLIGHTS NO. 1-4 @ NORTH RECLAMATION AREA

