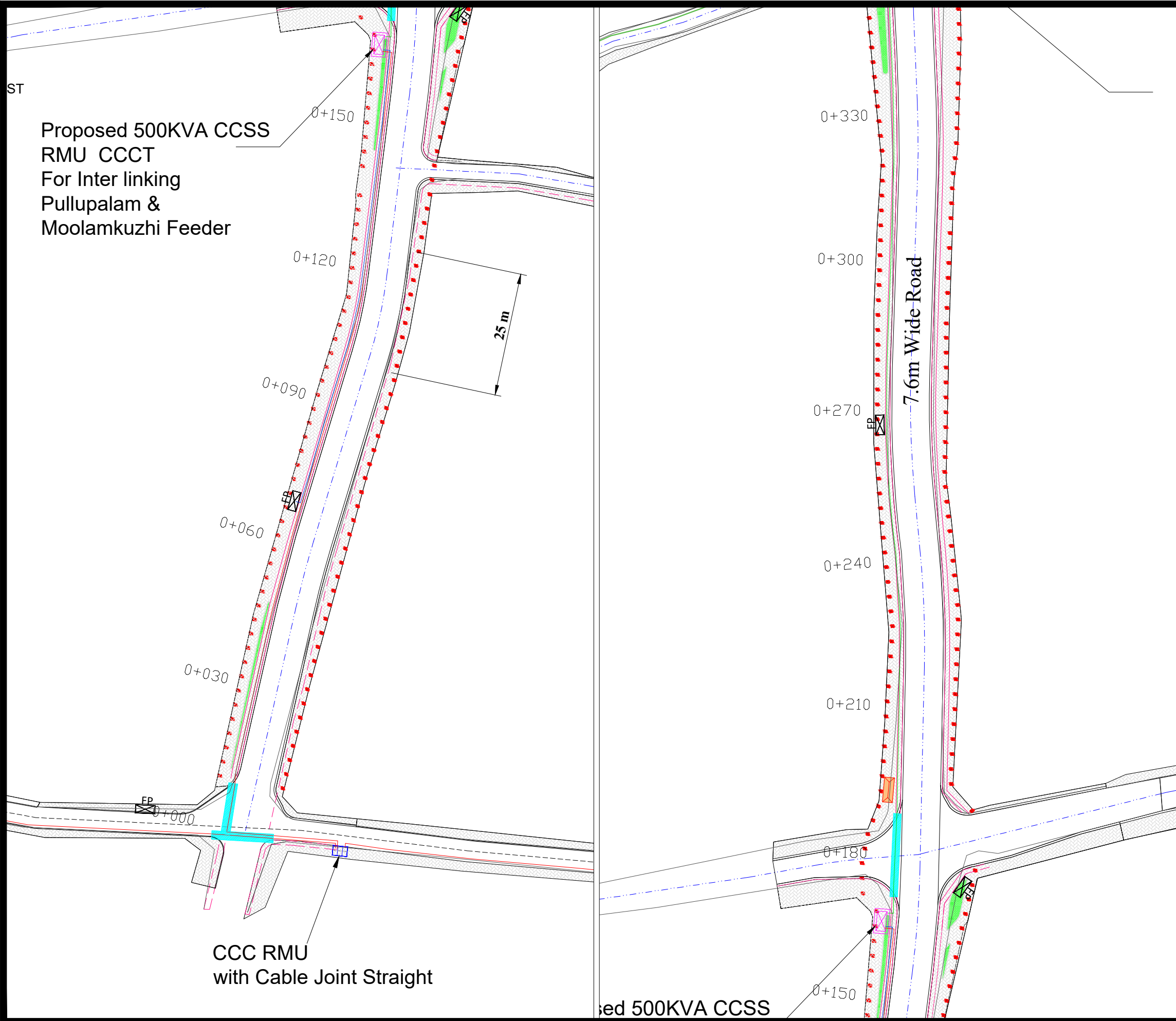


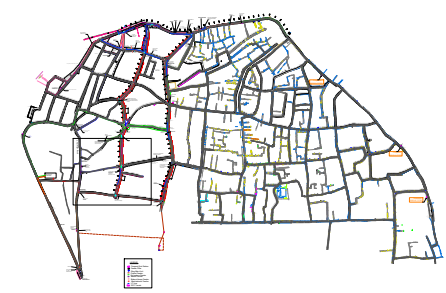
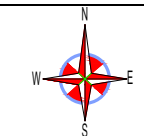
# **VOLUME-4-Drawings**

(Electrical drawings)



**SMART ROAD ELECTRICAL EQUIPMENT LAYOUT K B JACOB ROAD**

- NOTE:**
1. ALL DIMENSIONS ARE IN M UNLESS MENTIONED OTHERWISE
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  3. THIS DRAWING IS TO BE READ ALONG WITH ALL REFERENCED OR MENTIONED DRAWINGS.
  4. NECESSARY CLARIFICATIONS MIGHT BE OBTAINED FROM CSML DEPARTMENT
  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Chariad Feeder
- Pullupalam Feeder
- Balach Feeder
- Bishop House Feeder
- Moolamkuzhi Feeder
- LT Line
- RCC Trench

**CLIENT : COCHIN SMART MISSION LIMITED**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
 Development of Smart Roads & Other Roads in West Kochi  
 under Smart City Mission, Kochi

**TITLE :** K B JACOB ROAD ELECTRICAL EQUIPMENT LAYOUT (1 of 3)

<b>DRG NO.</b> CSML/M4/SMR/WK/EL-051	<b>SCALE :</b> NTS(A3)	
	<b>DATE :</b> 10-07-2018	

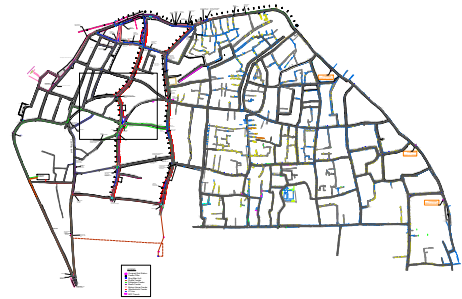
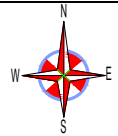
Drawn BY	Design BY	Checked BY	REVISION
Jalish Kumar M	Karunakaran M N	Ajaya Kumar S	<b>RO</b>

**SIGNATORY ARCHITECT:**  
 SIGNATORY CSML:

**TENDER PURPOSE ONLY**

**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT K B JACOB ROAD**

- NOTE:**
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**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Charles Feeder
- Pullupalam Feeder
- Bishop Feeder
- Bishop House Feeder
- Moolamkuzhi Feeder
- I.T Line
- RCC Trench

**CLIENT :** COCHIN SMART MISSION LIMITED  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM :** IPE Global & Royal HaskoningDHV  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

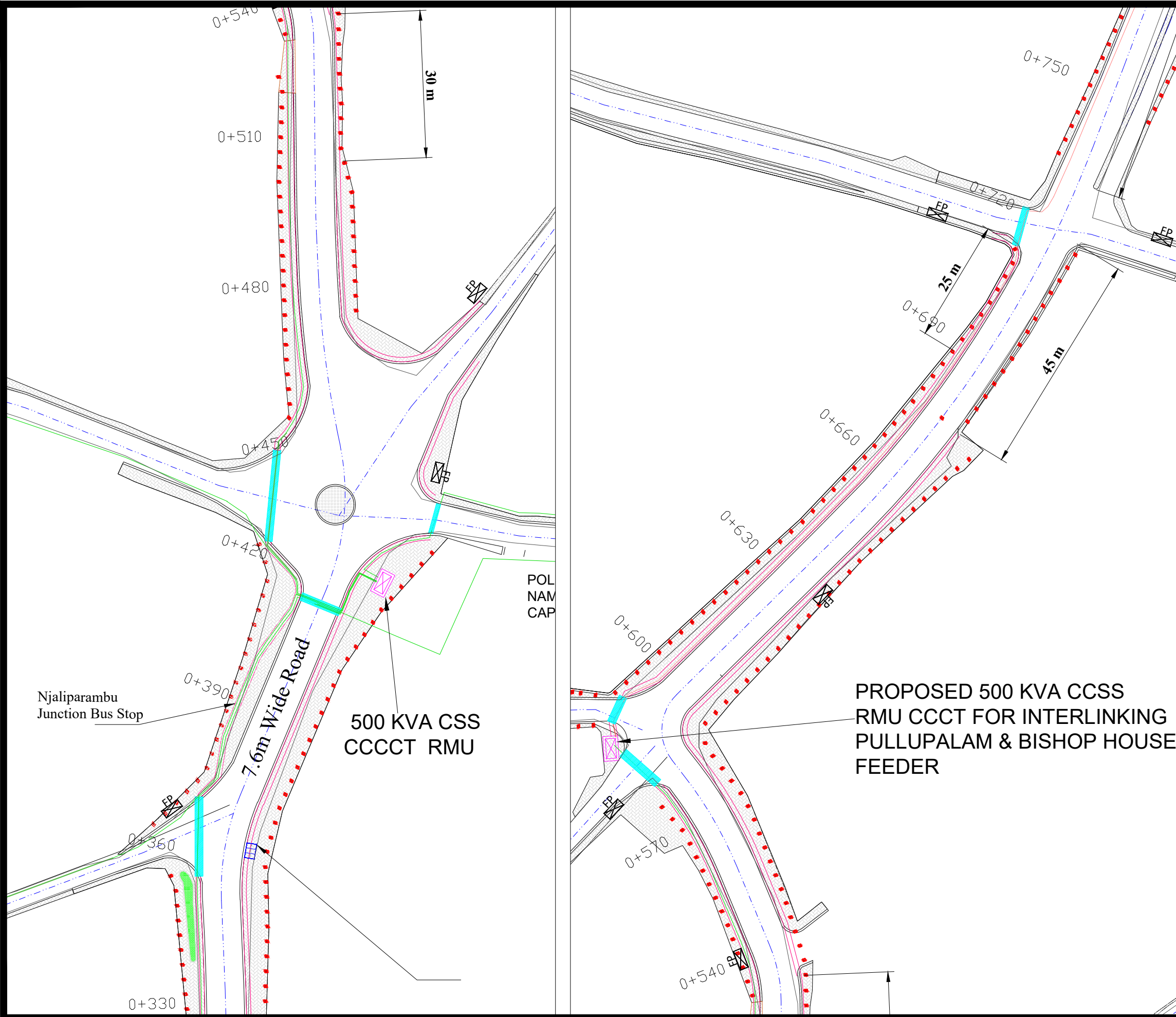
**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE :** K B JACOB ROAD ELECTRICAL EQUIPMENT LAYOUT (2 of 3)

DRG NO. CSML/M4/SMR/WK/EL-052		SCALE: NTS(A3)		N
		DATE: 10-07-2018		
Drawn BY	Design BY	Checked BY	REVISION	
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	RO	

**SIGNATORY ARCHITECT:** \_\_\_\_\_  
**SIGNATORY CSML:** \_\_\_\_\_

**TENDER PURPOSE ONLY**



**500 KVA CSS  
CCCCT RMU**

**PROPOSED 500 KVA CCSS  
RMU CCCT FOR INTERLINKING  
PULLUPALAM & BISHOP HOUSE  
FEEDER**

Njaliparambu  
Junction Bus Stop

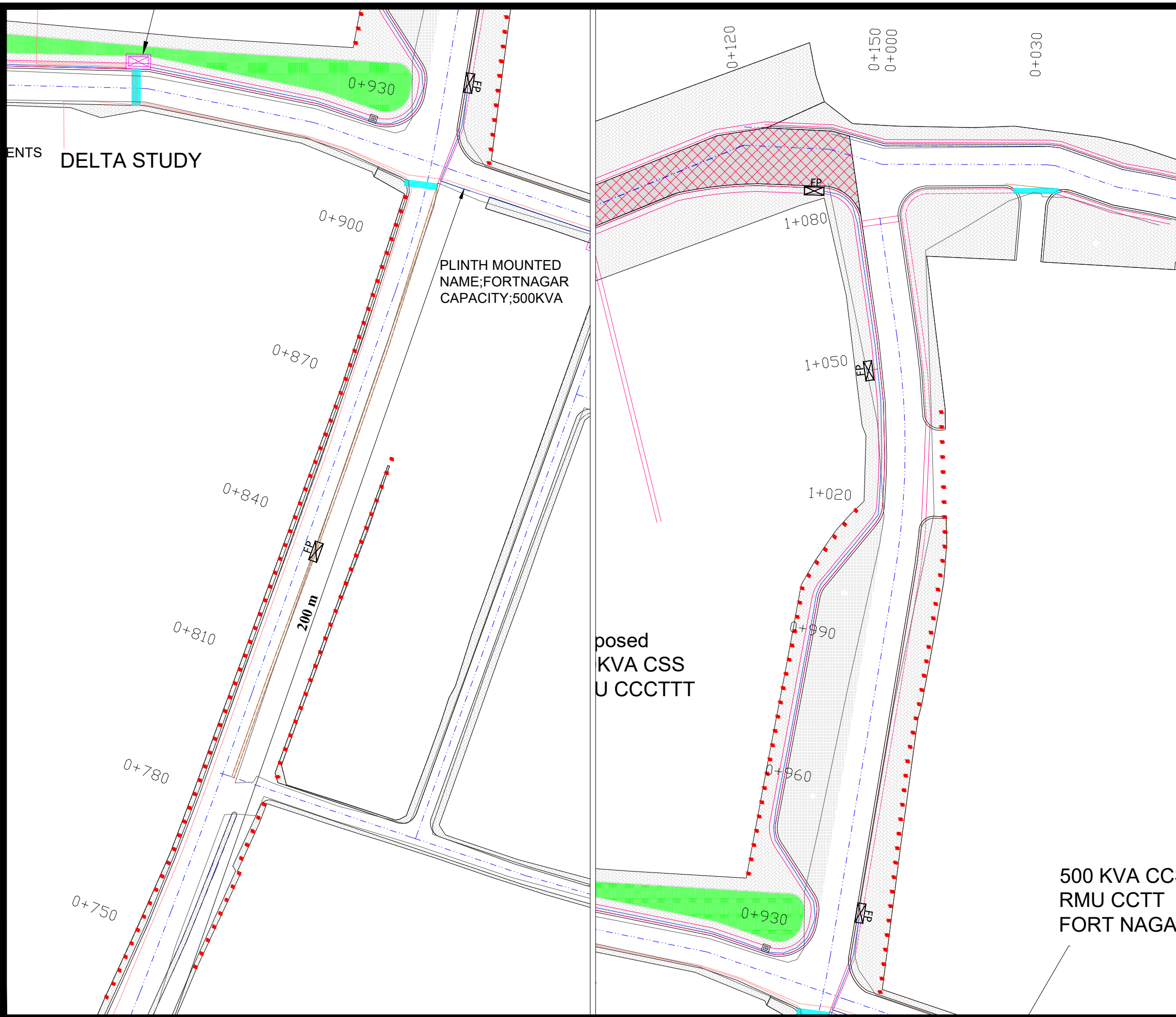
**7.6m Wide Road**

POL  
NAM  
CAP

0+540  
0+510  
0+480  
0+450  
0+420  
0+390  
0+360  
0+330

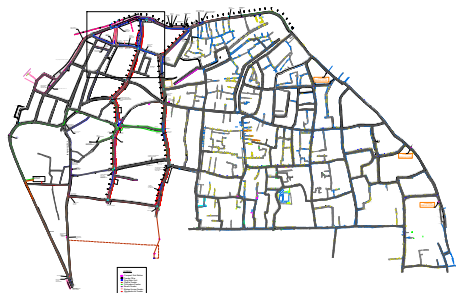
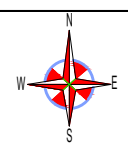
0+750  
0+720  
0+690  
0+660  
0+630  
0+600  
0+570  
0+540





**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT K B JACOB ROAD**

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  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Charial Feeder
- Pullupalath Feeder
- Bleach Feeder
- Bishop House Feeder
- Moolamkuzhi Feeder
- LT Line
- RCC Trench

**CLIENT : COCHIN SMART MISSION LIMITED**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE :** K B JACOB ROAD ELECTRICAL EQUIPMENT LAYOUT (3 of 3)

DRG NO. CSML/M4/SMR/WK/EL-053	SCALE : NTS(A3)	DATE : 10-07-2018	
Drawn BY	Design BY	Checked BY	
Jathish Kumar M	Karunakaran M N	Ajaya Kumar S	RO

SIGNATORY ARCHITECT: SIGNATORY CSML:

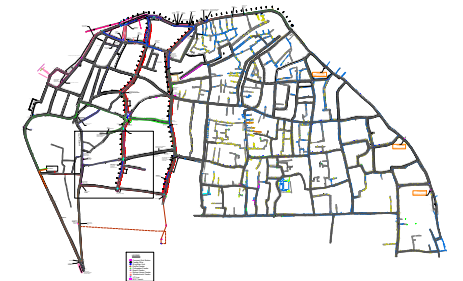
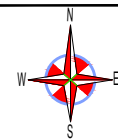
**500 KVA CC  
RMU CCTT  
FORT NAGA**

**TENDER PURPOSE ONLY**



**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT AMARAVATHY ROAD**

- NOTE:**
1. ALL DIMENSIONS ARE IN M UNLESS MENTIONED OTHERWISE
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  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Piller
- Ring Main Unit
- Cherial Feeder
- Pullupalam Feeder
- Beach Feeder
- Bishop House Feeder
- Modankuzhi Feeder
- LT Line
- RCC Trench

**CLIENT : COCHIN SMART MISSION LIMITED**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

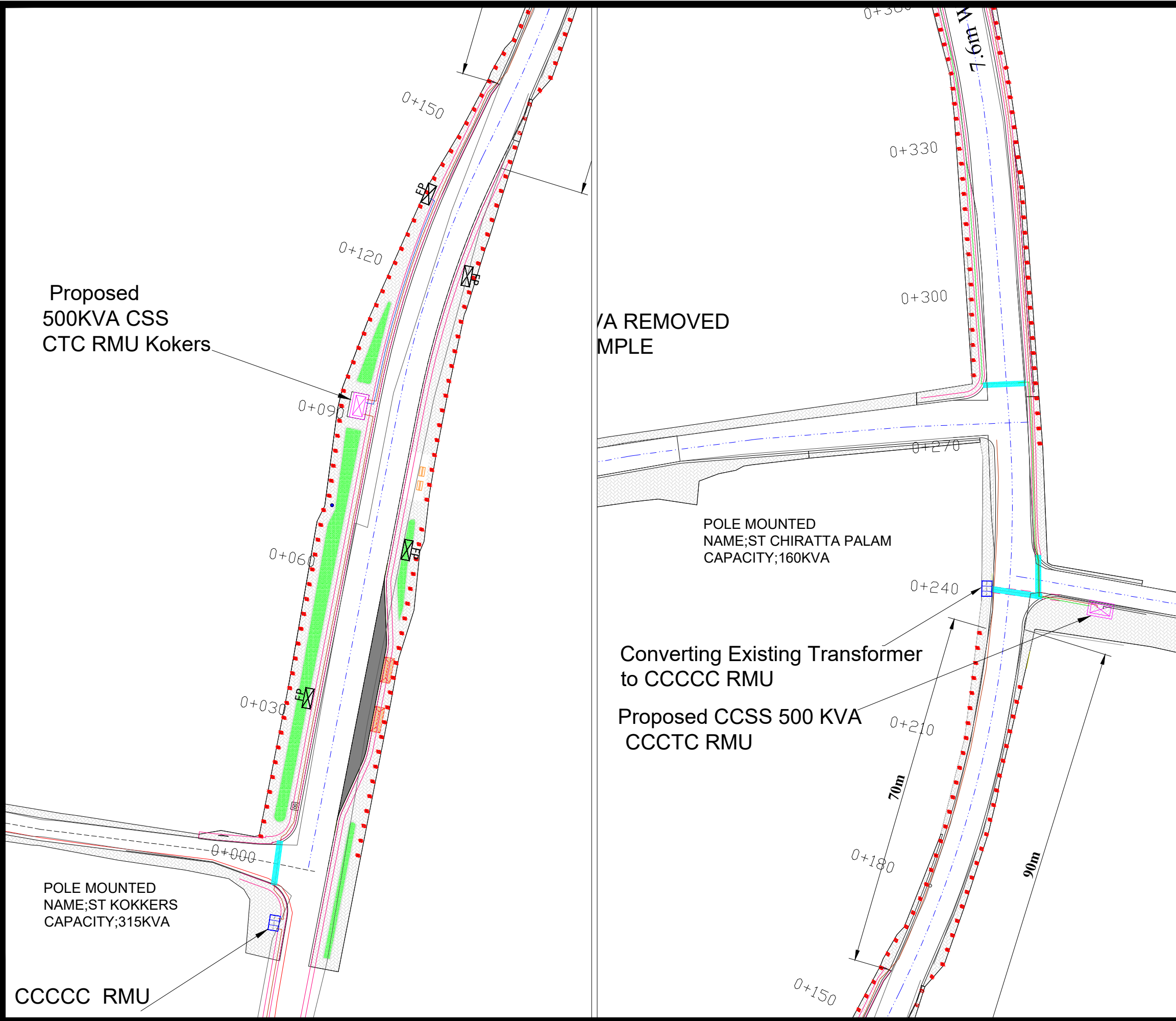
**T I T L E : AMARAVATHY ROAD ELECTRICAL EQUIPMENT LAYOUT (1 of 3)**

DRG NO. CSML/M4/SMR/WK/EL-054  
SCALE: NTS(A3)  
DATE: 10-07-2018

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	<b>RO</b>

SIGNATORY ARCHITECT: SIGNATORY CSML:

**TENDER PURPOSE ONLY**



Proposed  
500KVA CSS  
CTC RMU Kokers

VA REMOVED  
MPLE

POLE MOUNTED  
NAME;ST CHIRATTA PALAM  
CAPACITY;160KVA

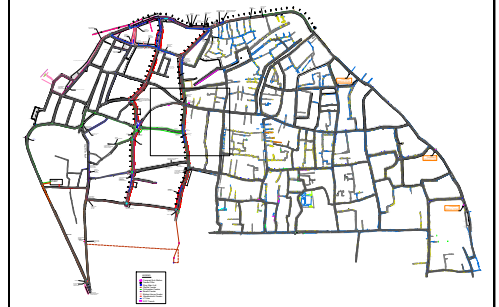
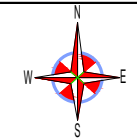
Converting Existing Transformer  
to CCCCC RMU  
Proposed CCSS 500 KVA  
CCCTC RMU

POLE MOUNTED  
NAME;ST KOKKERS  
CAPACITY;315KVA

CCCCC RMU

**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT AMARAVATHY ROAD**

- NOTE:**
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  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHT TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Chertal Feeder
- Pulluplam Feeder
- Beach Feeder
- Bishop House Feeder
- Nooramkuzhi Feeder
- LT Line
- RCC Trench

**CLIENT : COCHIN SMART MISSION LIMITED**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

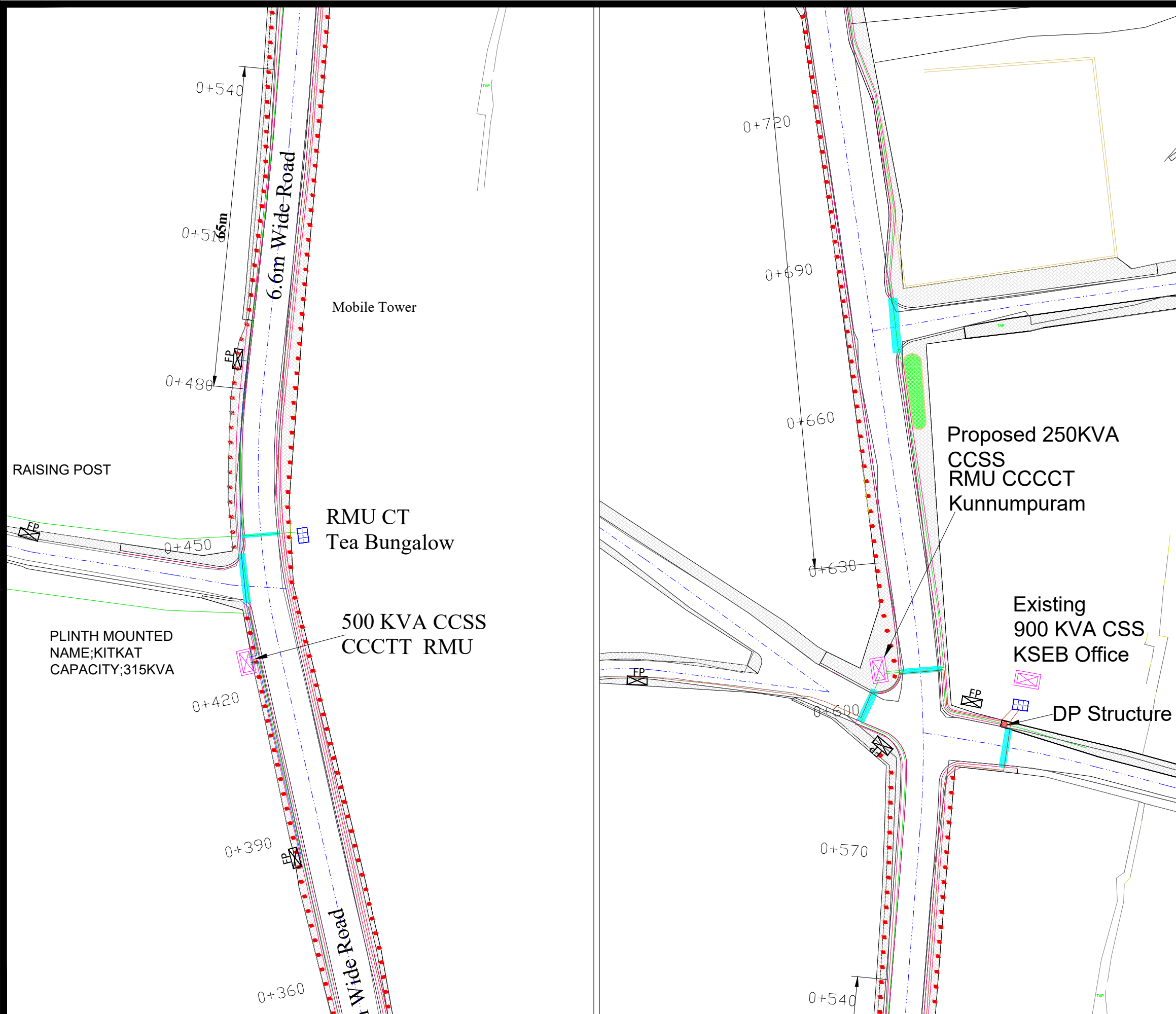
**TITLE : AMARAVATHY ROAD ELECTRICAL EQUIPMENT LAYOUT (2 of 3)**

DRG NO. CSML/M4/SMR/WK/EL-055	SCALE: NTS(A3)	N
	DATE: 10-07-2018	

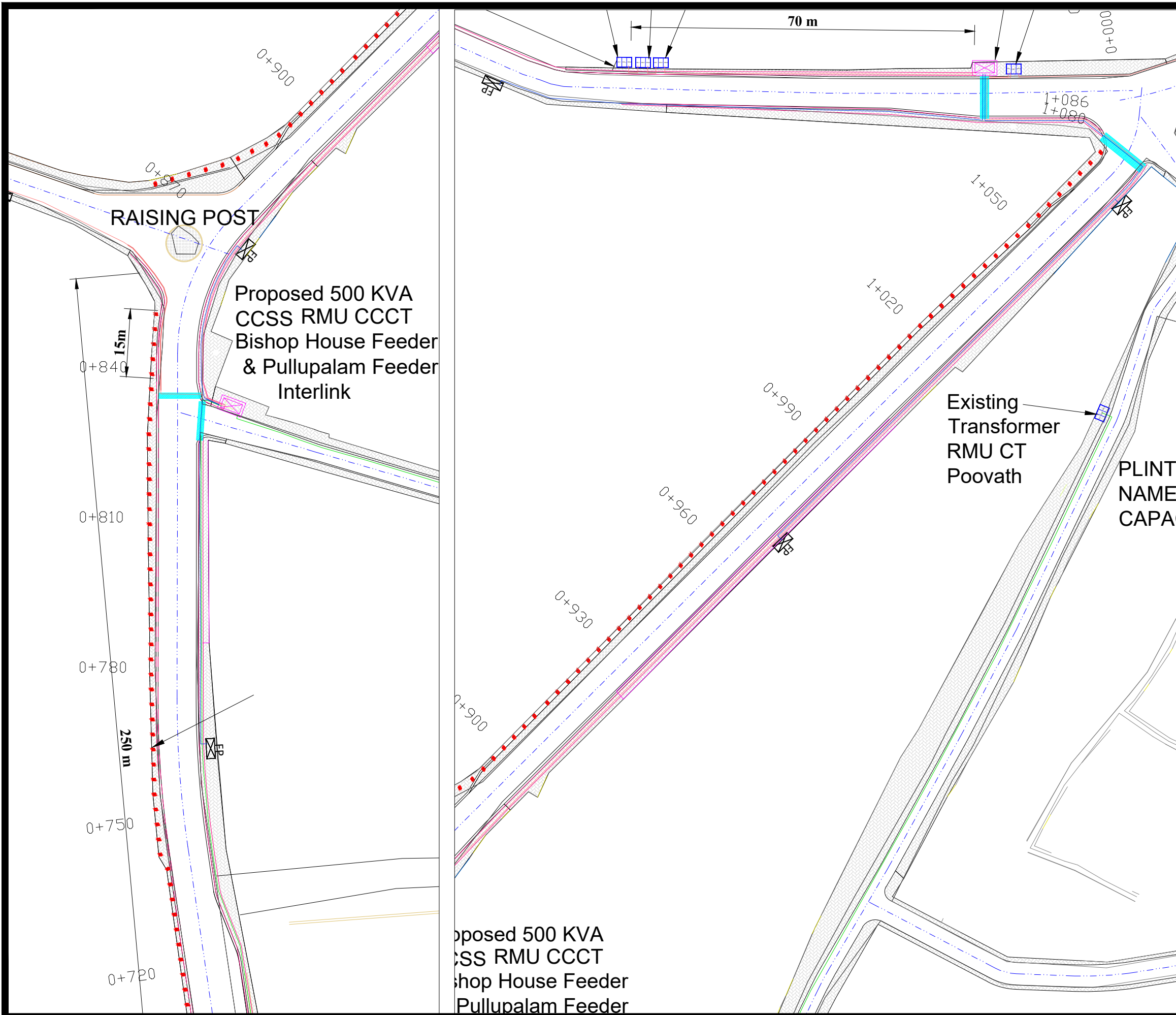
Drawn BY	Design BY	Checked BY	REVISION
Jathish Kumar M	Karunakaran M N	Ajaya Kumar S	RO

**SIGNATORY ARCHITECT:** \_\_\_\_\_  
**SIGNATORY CSML:** \_\_\_\_\_

**TENDER PURPOSE ONLY**

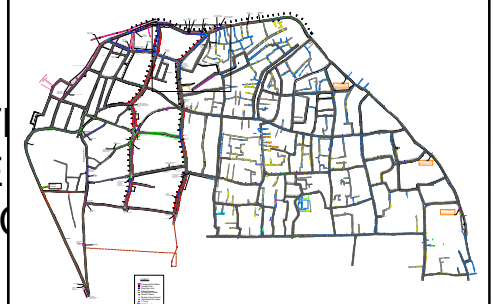
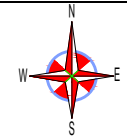






**SMART ROAD ELECTRICAL EQUIPMENT LAYOUT AMARAVATHY ROAD**

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  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

Compact Sub Station
Feeder Pillar
Ring Main Unit
Cherial Feeder
Pullupalam Feeder
Beach Feeder
Bishop House Feeder
Moolamkuzha Feeder
LT Line
RCC Trench

**CLIENT : COCHIN SMART MISSION LIMITED**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
 Development of Smart Roads & Other Roads in West Kochi  
 under Smart City Mission, Kochi

**TITLE : AMARAVATHY ROAD ELECTRICAL EQUIPMENT LAYOUT (3 of 3)**

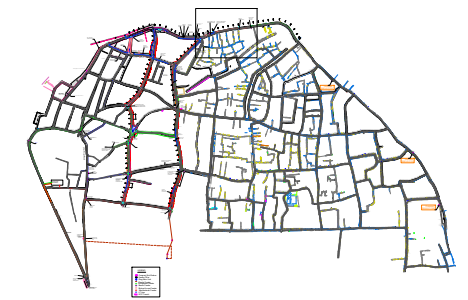
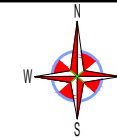
<b>DRG NO.</b> CSML/M4/SMR/WK/EL-056	<b>SCALE: NTS(A3)</b> DATE: 10-07-2018	<b>N</b>
<b>Drawn BY</b> Jalish Kumar M	<b>Design BY</b> Karunakaran M N	<b>Checked BY</b> Ajaya Kumar S
<b>SIGNATORY ARCHITECT:</b>		<b>REVISION</b> <b>RO</b>
<b>SIGNATORY CSML:</b>		

**TENDER PURPOSE ONLY**



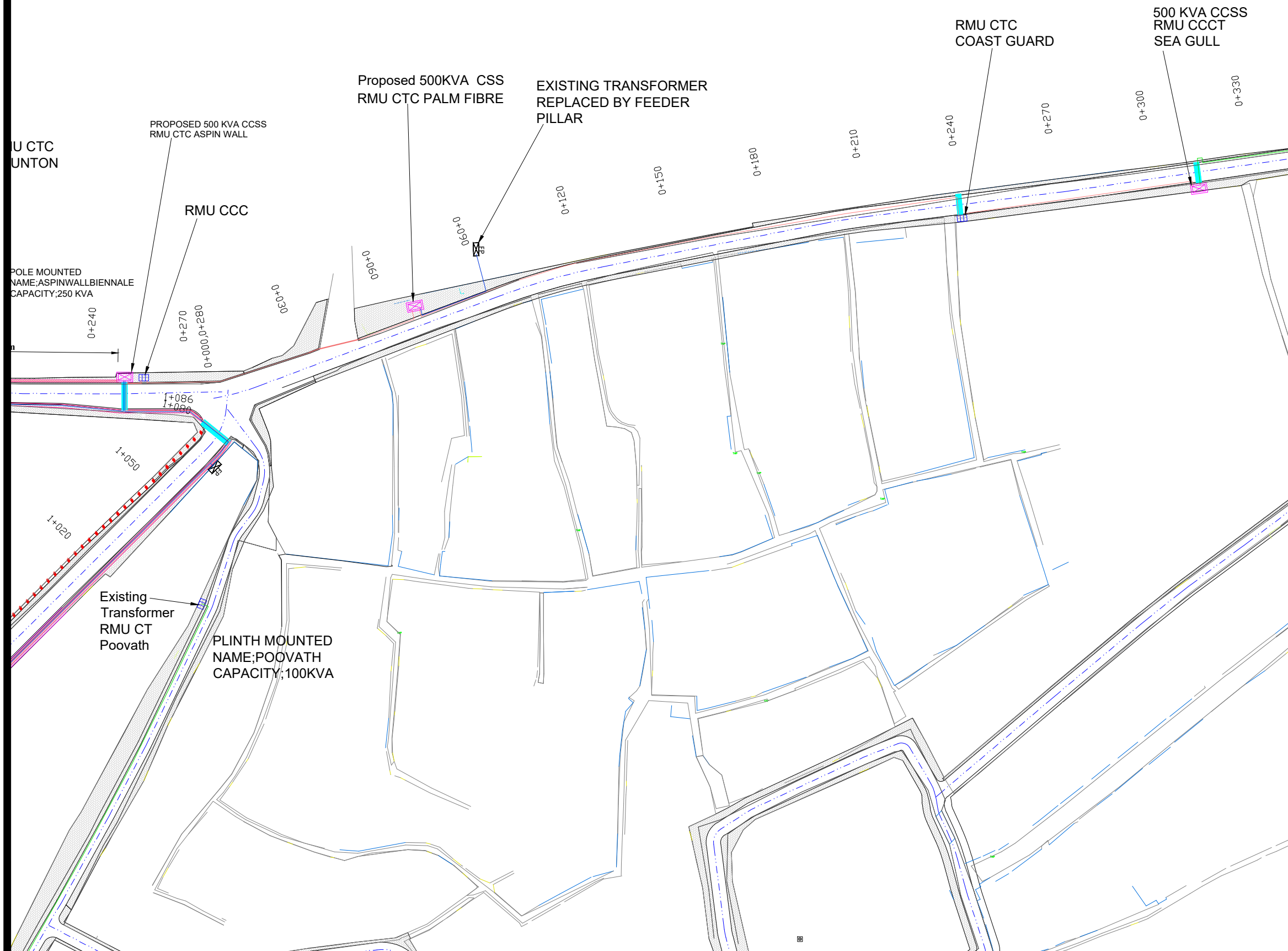
**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT CALVATHY ROAD**

- NOTE:**
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  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Cherial Feeder
- Pullupalam Feeder
- Beach Feeder
- Shahap House Feeder
- Moolankuzhi Feeder
- LT Line
- RCC Trench



**CLIENT : COCHIN SMART MISSION LIMITED**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE : CALVATHY ROAD ELECTRICAL EQUIPMENT LAYOUT (1 of 2)**

**DRG NO.** CSML/M4/SMR/WK/EL-057      **SCALE : NTS(A3)**      **N**   
**DATE :** 10-07-2018

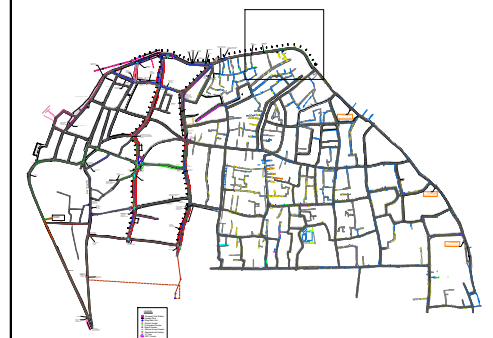
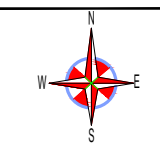
Drawn BY	Design BY	Checked BY	REVISION
Jathish Kumar M	Karunakaran M N	Ajaya Kumar S	RO

**SIGNATORY ARCHITECT:**      **SIGNATORY CSML :**

**TENDER PURPOSE ONLY**

# SMART ROAD ELECTRICAL EQUIPMENT LAYOUT CALVATHY ROAD

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  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Chinnai Feeder
- Pullupalam Feeder
- Beach Feeder
- Bishop House Feeder
- Moolamkuzhi Feeder
- LT Line
- RCC Trench

**CLIENT : COCHIN SMART MISSION LIMITED**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
 Development of Smart Roads & Other Roads in West Kochi  
 under Smart City Mission, Kochi

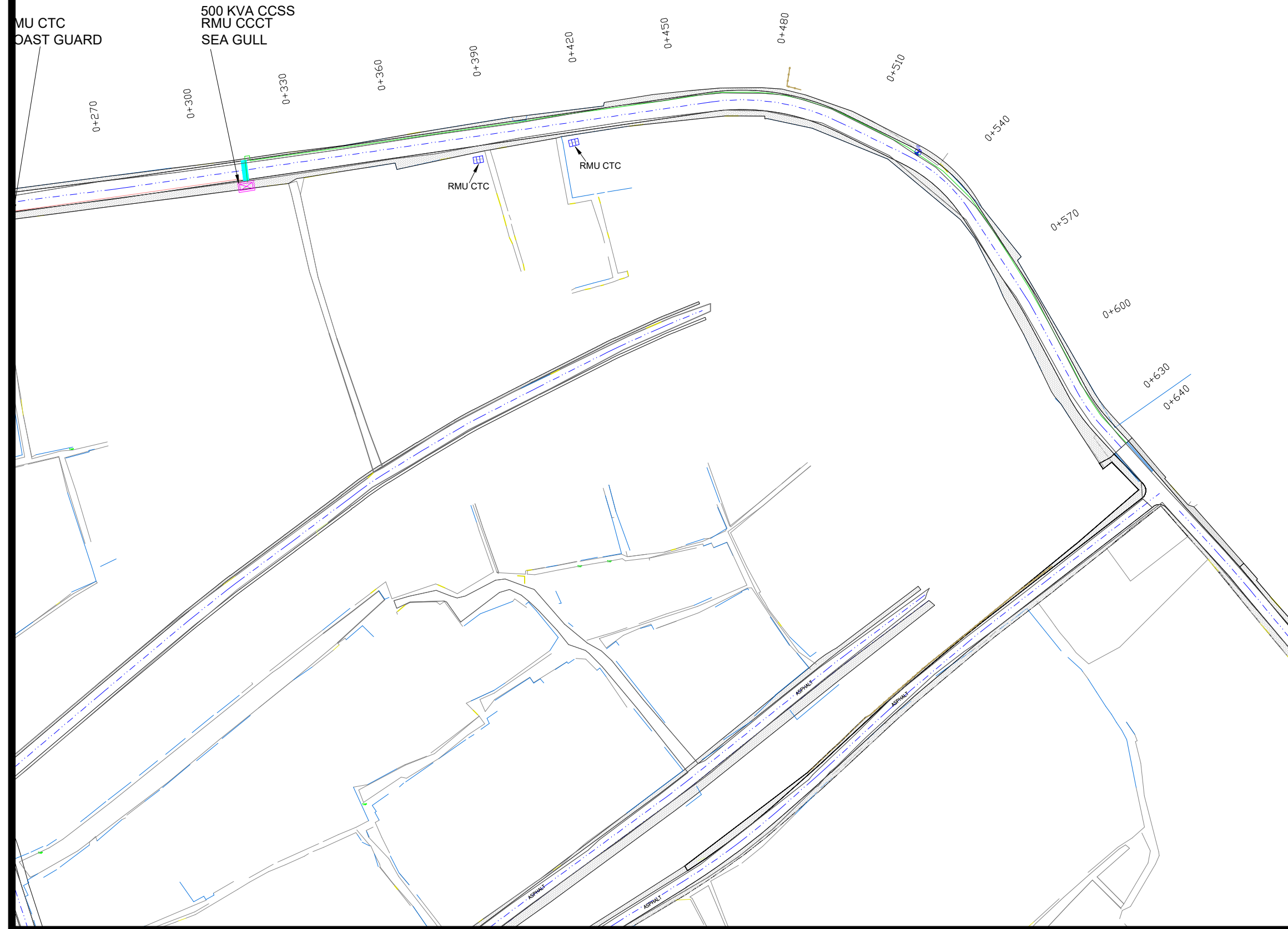
**TITLE : CALVATHY ROAD ELECTRICAL EQUIPMENT LAYOUT (2 of 2)**

<b>DRG NO.</b> CSML/M4/SMR/WK/EL-058	<b>SCALE :</b> NTS(A3)	
<b>DATE :</b> 10-07-2018		

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	<b>RO</b>

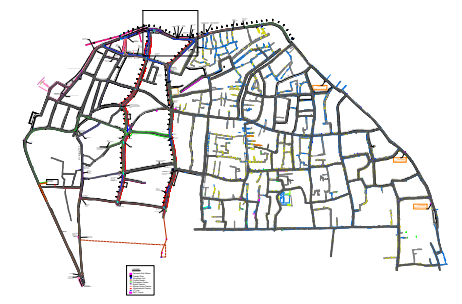
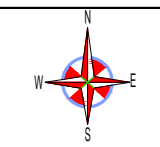
**SIGNATORY ARCHITECT:**  
**SIGNATORY CSML :**

**TENDER PURPOSE ONLY**



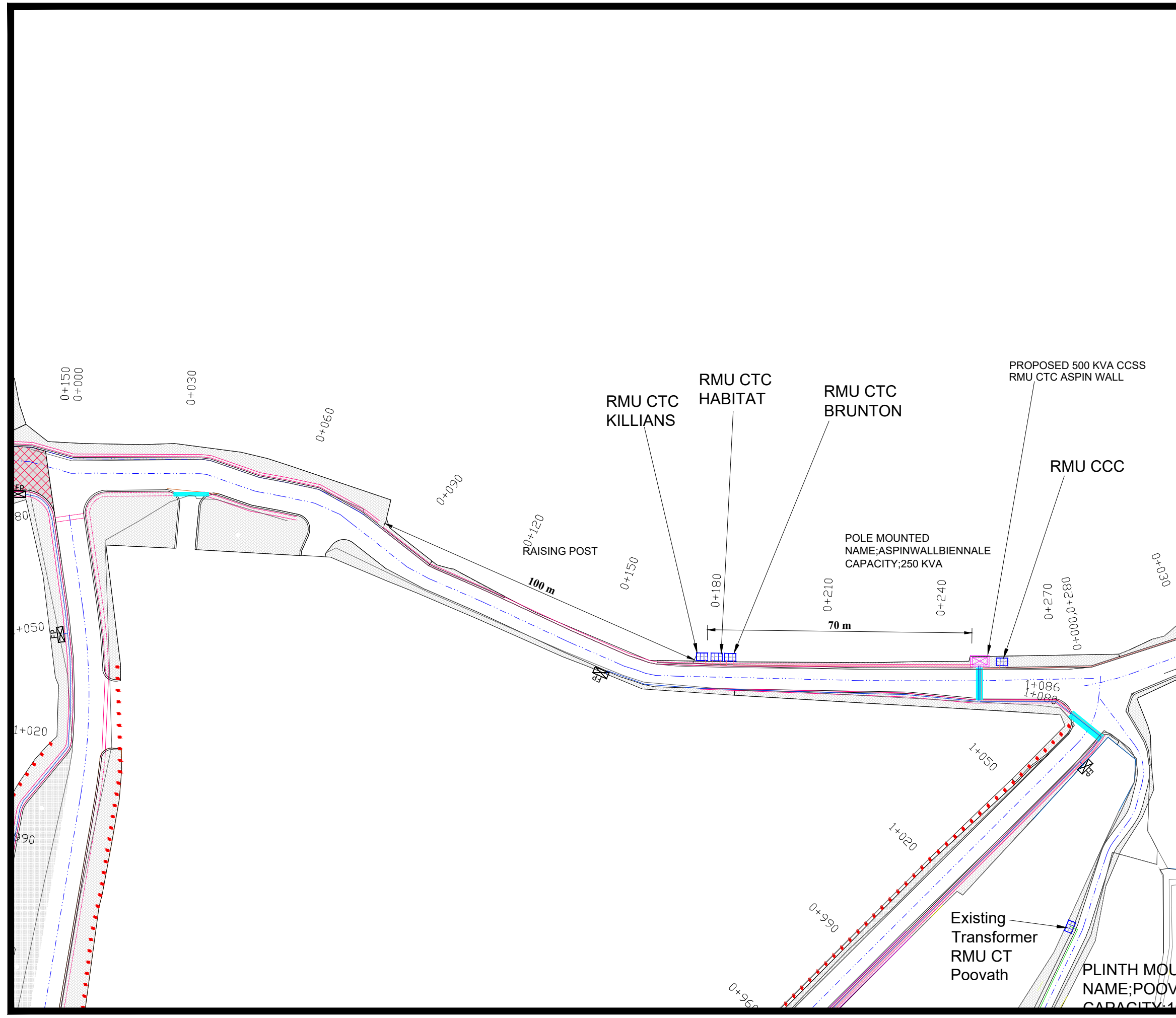
**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT BELLAR ROAD**

- NOTE:**
1. ALL DIMENSIONS ARE IN M UNLESS MENTIONED OTHERWISE
  2. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED
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  4. NECESSARY CLARIFICATIONS MIGHT BE OBTAINED FROM CSML DEPARTMENT
  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Charal Feeder
- Pullupalam Feeder
- Beach Feeder
- Bishop House Feeder
- Moolamkuzhi Feeder
- LT Line
- RCC Trench



**CLIENT : COCHIN SMART MISSION LIMITED**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE : BELLAR ROAD ELECTRICAL EQUIPMENT LAYOUT (1 of 1)**

DRG NO. CSML/M4/SMR/WK/EL-059	SCALE : NTS(A3) DATE : 10-07-2018	
Drawn BY Jathish Kumar M	Design BY Karunakaran M N	

REVISION <b>RO</b>
-----------------------

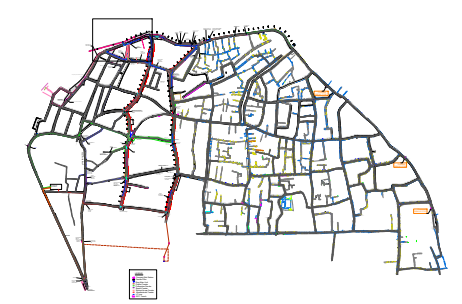
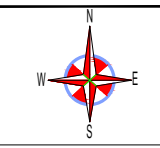
SIGNATORY ARCHITECT: \_\_\_\_\_ SIGNATORY CSML: \_\_\_\_\_

**TENDER PURPOSE ONLY**



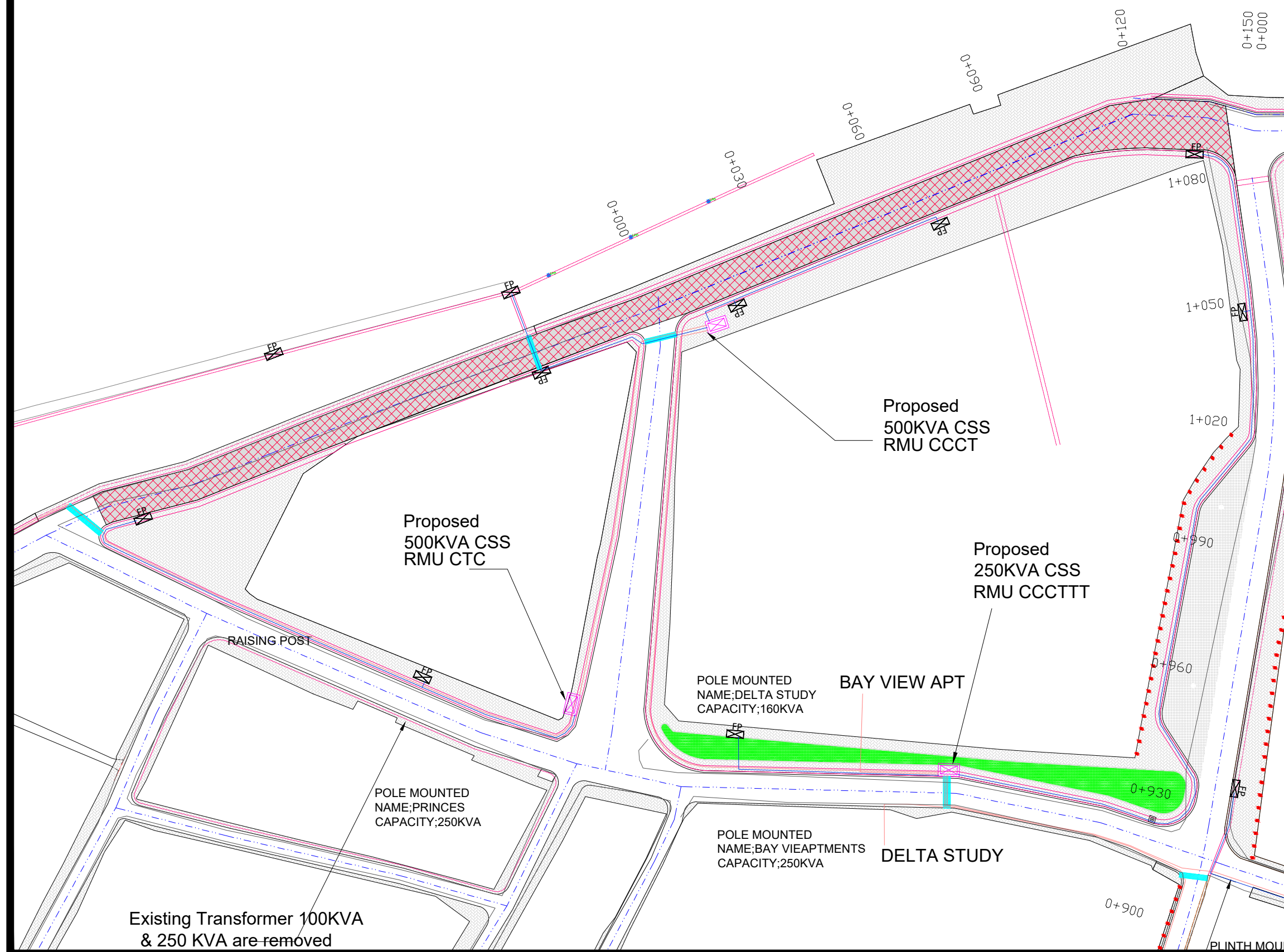
**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT RIVER ROAD**

- NOTE:**
1. ALL DIMENSIONS ARE IN M UNLESS MENTIONED OTHERWISE
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  4. NECESSARY CLARIFICATIONS MIGHT BE OBTAINED FROM CSML DEPARTMENT
  5. INDISCRIPANCY IF ANY SHOULD BE BROUGHTR TO THE NOTICE OF CSML OFFICE IMMEDIATELY



**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Charial Feeder
- Pullupalam Feeder
- Bach Feeder
- Bishop House Feeder
- Moolamkuzhi Feeder
- LT Line
- RCC Trench



**CLIENT : COCHIN SMART MISSION LIMITED**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
10th Floor, Revenue Tower,  
Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

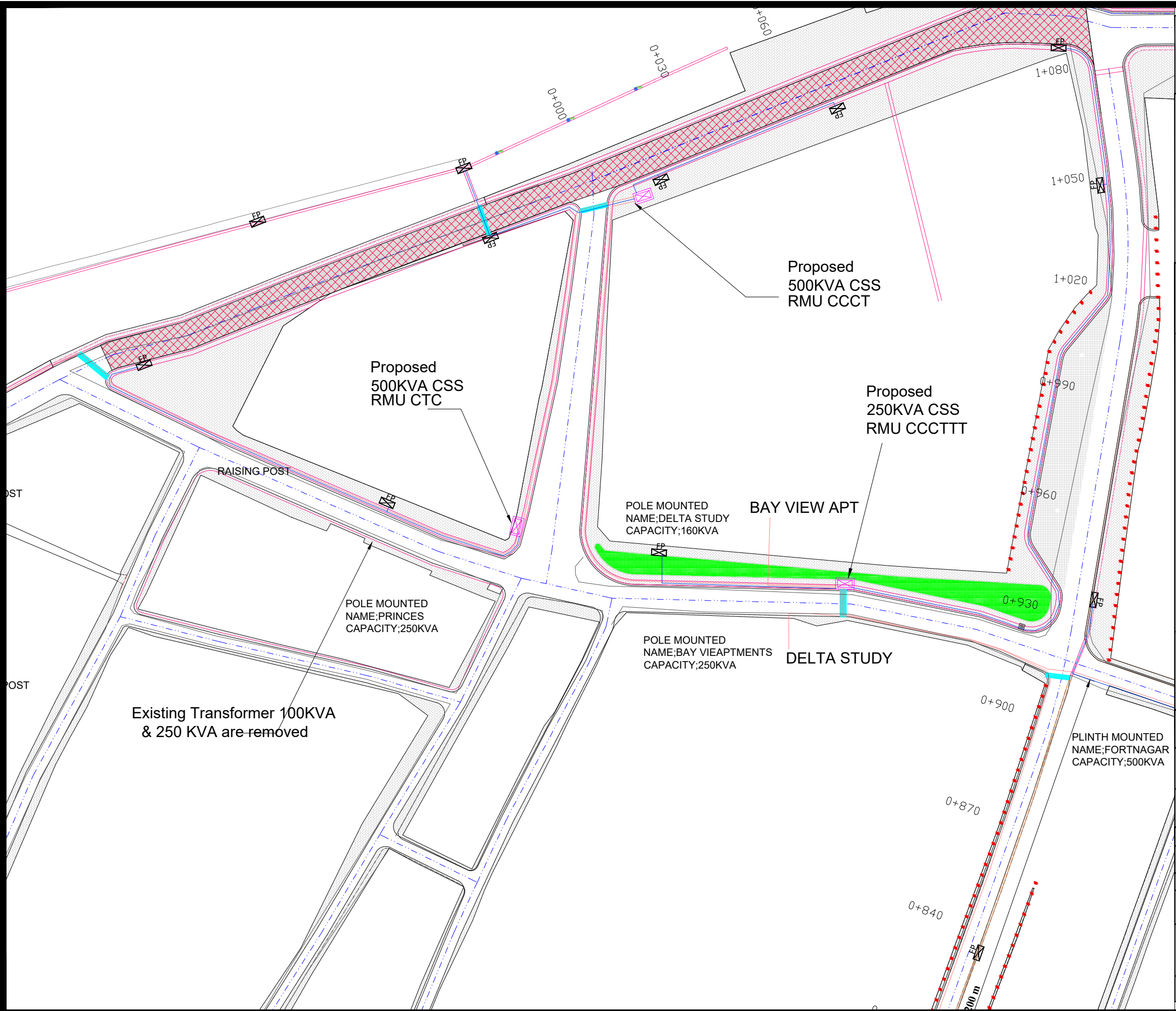
**TITLE : RIVER ROAD ELECTRICAL EQUIPMENT LAYOUT (1 of 1)**

**DRG NO.** CSML/M4/SMR/WK/EL-060      **SCALE : NTS(A3)**      **DATE :** 10-07-2018

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	<b>R0</b>

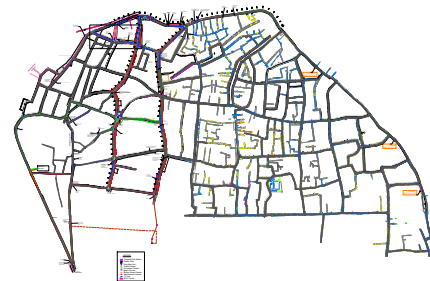
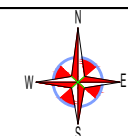
**SIGNATORY ARCHITECT :**      **SIGNATORY CSML :**

**TENDER PURPOSE ONLY**



**SMART ROAD ELECTRICAL EQUIPMENT LAYOUT TOWER ROAD**

- NOTE:**
1. ALL DIMENSIONS ARE IN M UNLESS MENTIONED OTHERWISE
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**LEGEND**

- Compact Sub Station
- Feeder Pillar
- Ring Main Unit
- Charial Feeder
- Pulligalam Feeder
- Beach Feeder
- Shahji House Feeder
- Moolamkuzhi Feeder
- LT Line
- RCC Trench

**CLIENT :** COCHIN SMART MISSION LIMITED  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM :** IPE Global & Royal HaskoningDHV  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
 Development of Smart Roads & Other Roads in West Kochi  
 under Smart City Mission, Kochi

**TITLE :** TOWER ROAD ELECTRICAL EQUIPMENT LAYOUT (1 of 2)

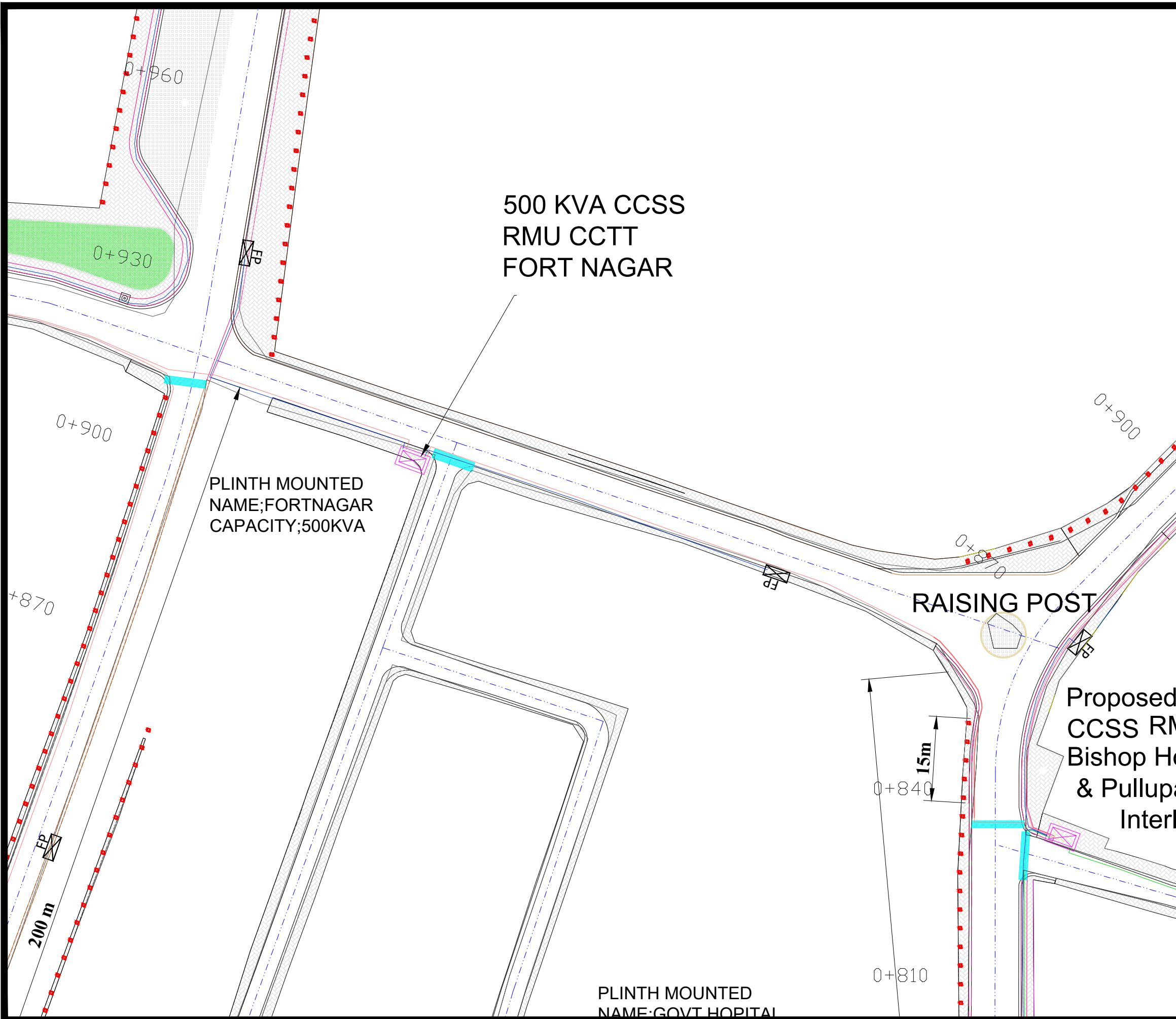
**DRG NO.** CSML/M4/SMR/WK/EL-061 **SCALE :** NTS(A3) **DATE :** 10-07-2018

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	<b>RO</b>

**SIGNATORY ARCHITECT:** **SIGNATORY CSML :**

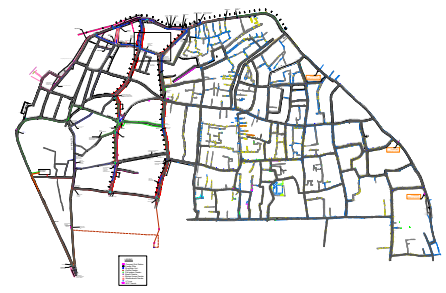
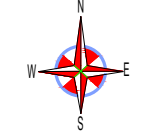
**TENDER PURPOSE ONLY**





**SMART ROAD ELECTRICAL EQUIPMENT  
LAYOUT TOWER ROAD**

- NOTE:**
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- LEGEND**
- Compact Sub Station
  - Feeder Pillar
  - Ring Main Unit
  - Cherla Feeder
  - Pullupalam Feeder
  - Banish Feeder
  - Bishop House Feeder
  - Moolamkuzhi Feeder
  - LT Line
  - RCC Trench

**CLIENT :** COCHIN SMART MISSION LIMITED  
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**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE :** TOWER ROAD ELECTRICAL EQUIPMENT LAYOUT (2 of 2)

<b>DRG NO.</b> CSML/M4/SMR/WK/EL-062	<b>SCALE :</b> NTS(A3)	N ↑
	<b>DATE :</b> 10-07-2018	

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	<b>RO</b>

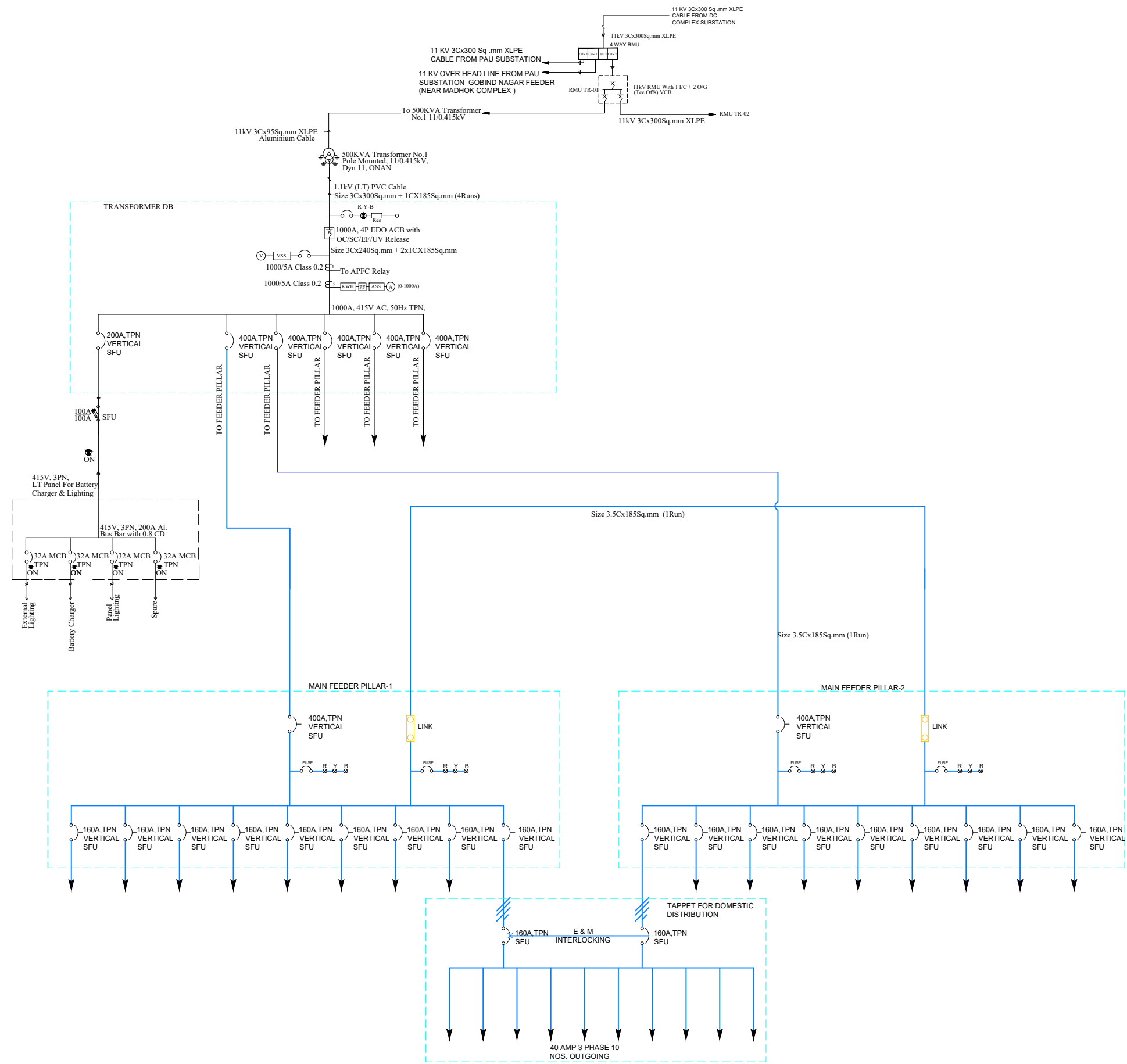
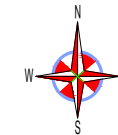
<b>SIGNATORY ARCHITECT :</b>	<b>SIGNATORY CSML :</b>
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**TENDER PURPOSE ONLY**



# SCHEMATIC DISTRIBUTION OF COMPACT SUB STATION

- NOTE:**
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**CLIENT : COCHIN SMART MISSION LIMITED**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PMC TEAM : IPE Global & Royal HaskoningDHV**  
 10th Floor, Revenue Tower,  
 Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
 Development of Smart Roads & Other Roads in West Kochi  
 under Smart City Mission, Kochi

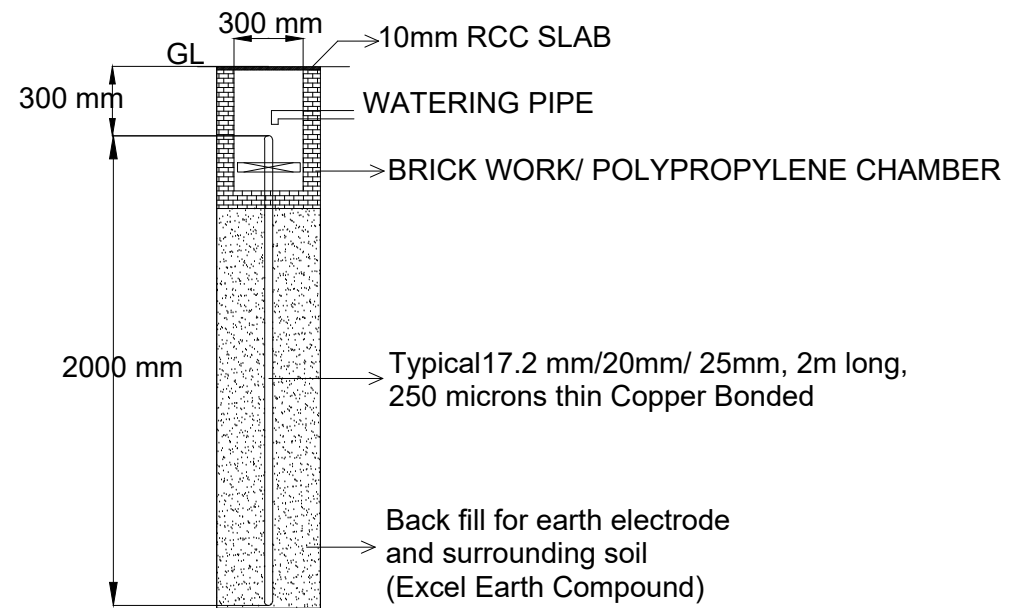
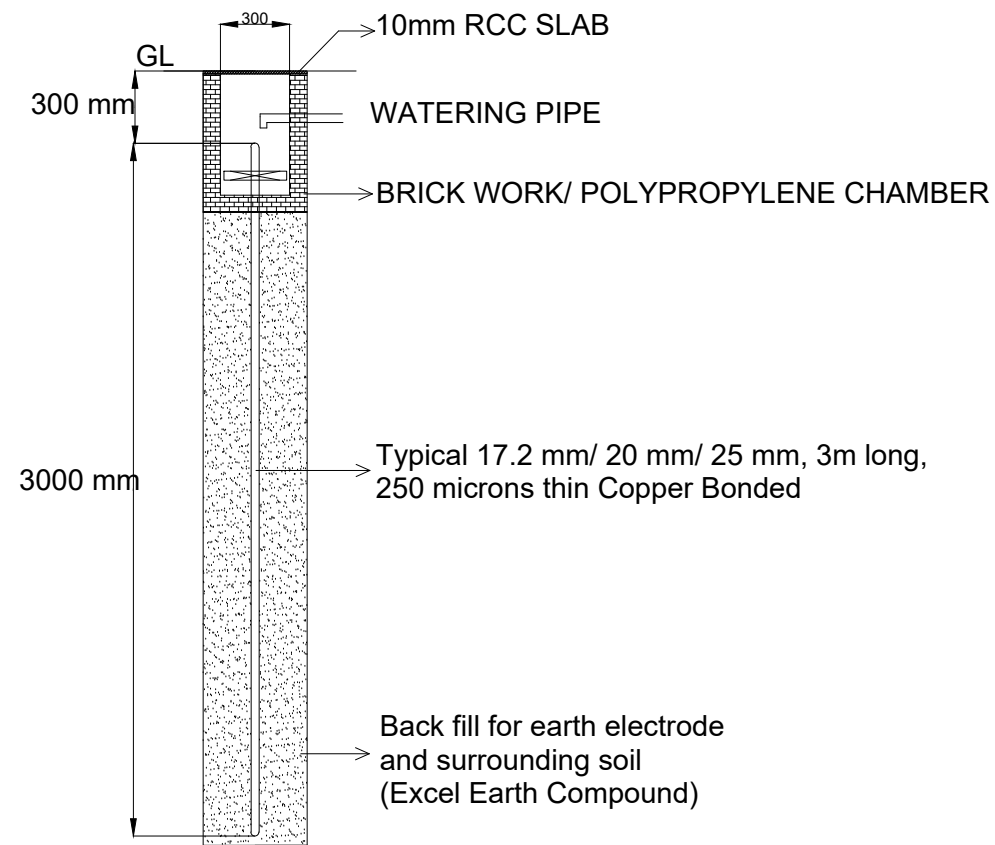
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DRG NO. CSML/M4/SMR/WK/EL-071      SCALE: NTS(A3)      N  
 DATE: 10-07-2018

Drawn BY	Design BY	Checked BY	REVISION
Jolhish Kumar M	Karunakaran M N	Ajaya Kumar S	RO

SIGNATORY ARCHITECT:      SIGNATORY CSML:

**TENDER PURPOSE ONLY**

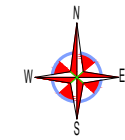


## TYPICAL ROD EARTH DETAILS

### TYPICAL ROD EARTHING DETAILS

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**CLIENT :** COCHIN SMART MISSION LIMITED  
10th Floor, Revenue Tower,  
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**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE :** TYPICAL ROD EARTHING DETAILS

**DRG NO.** CSML/M4/SMR/WK/EL-072  
**SCALE :** 1:1000(A3)  
**DATE :** 03-07-2018

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	RO

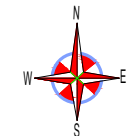
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**SIGNATORY CSML :**

**TENDER PURPOSE ONLY**

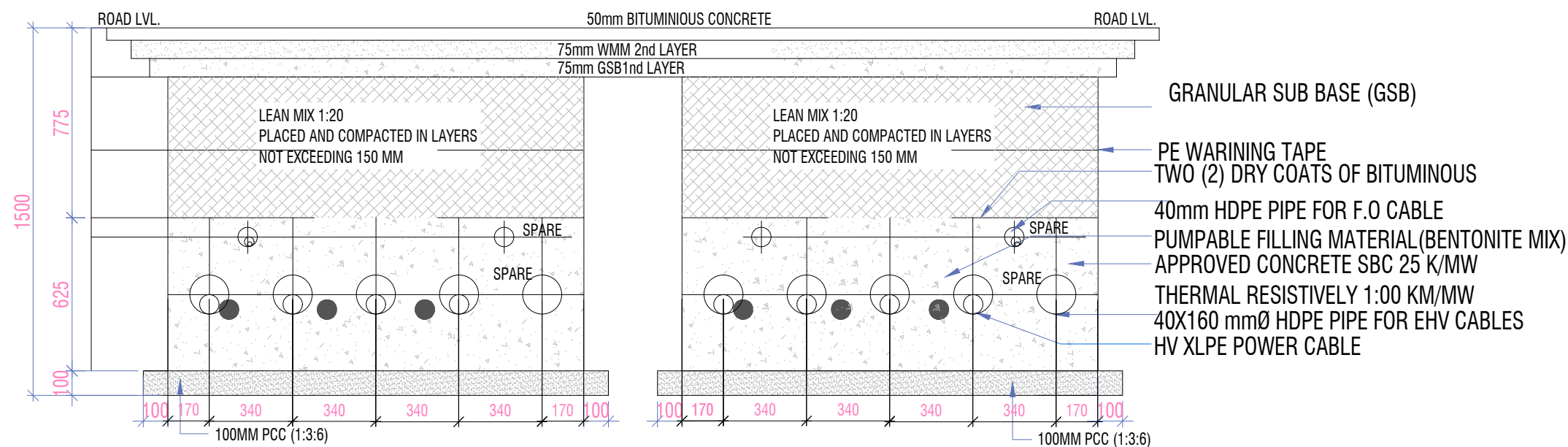
**PROPOSED RCC DUCT BANK**

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**NOTES:-**

- 1 - ALL DIMENSION AREA IN MILLIMETERS.
- 2 - SPACING BETWEEN TWO CIRCUITS CENTER TO CENTER IS 250mm.
- 3 - DUCTS TO BE EXTENDED 100mm BEYOND THE CARRIAGEWAY.
- 4 - ALL PIPE SHALL BE HDPE TYPE ONLY.
- 5 - CONCRETE SHALL BE PROTECTED WITH 2(TWO) COATS OF BITUMINOUS PAINT
- 6 - SPARE PIPES BOTH ENDS TO BE APPROVED BLANKING CAPS



**TYPICAL ROAD CROSSING  
DUCT BY OPEN CUT**

**CLIENT : COCHIN SMART MISSION LIMITED**  
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**PMCTEAM : IPE Global & Royal HaskoningDHV**  
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Park Avenue, Kochi-682011, Kerala,India

**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE : PROPOSED RCC DUCT BANK**

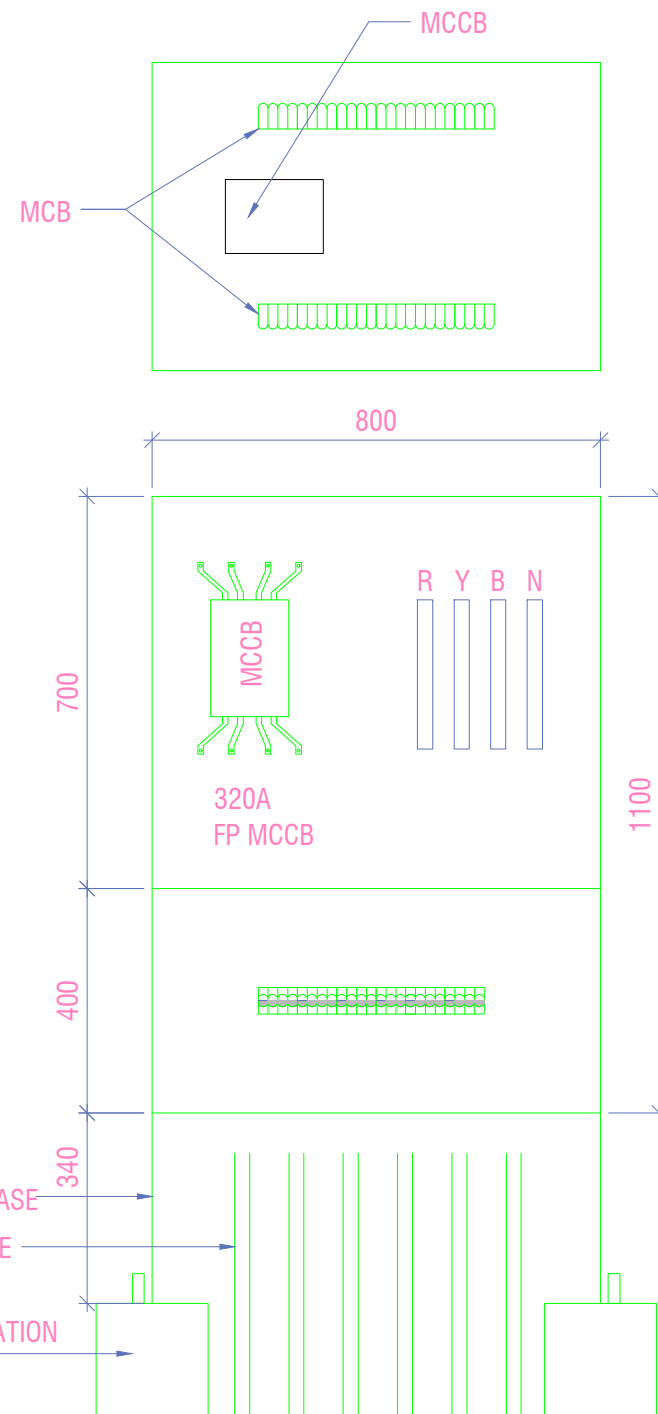
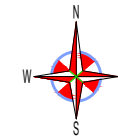
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	DATE : 07-07-2018		
Drawn BY Jolhish Kumar M	Design BY Karnakaran M N	Checked BY Ajaya Kumar S	REVISION <b>RO</b>
SIGNATORY ARCHITECT:	SIGNATORY CSML :		

**TENDER PURPOSE ONLY**

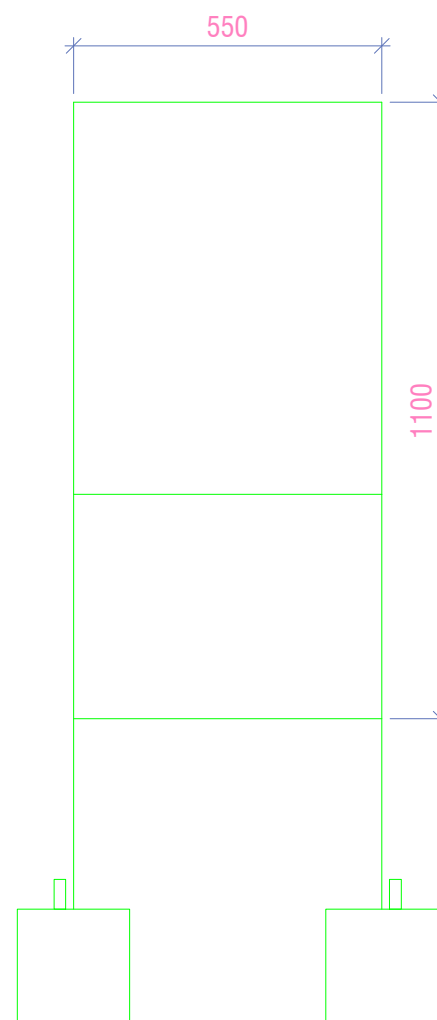


# 200 KW FEEDER PILLAR

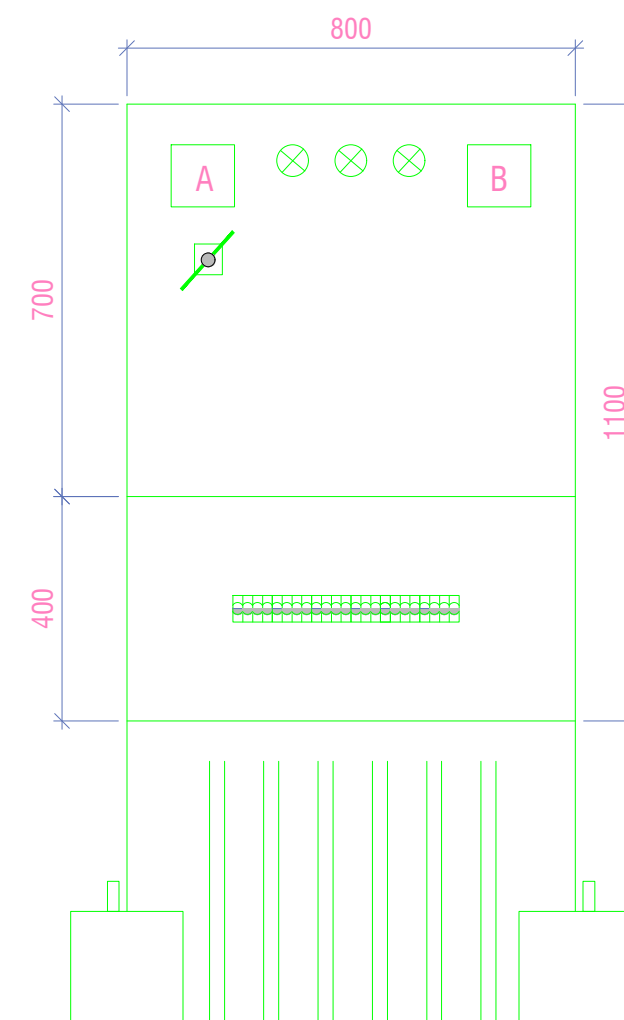
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**FRONT VIEW**  
SCALE 1:15



**SIDE VIEW**  
SCALE 1:15



**METERING**  
SCALE 1:15

100KW FEEDER PILLER

CLIENT : COCHIN SMART MISSION LIMITED  
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PROJECT NAME  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

TITLE : 200 KW FEEDER PILLAR

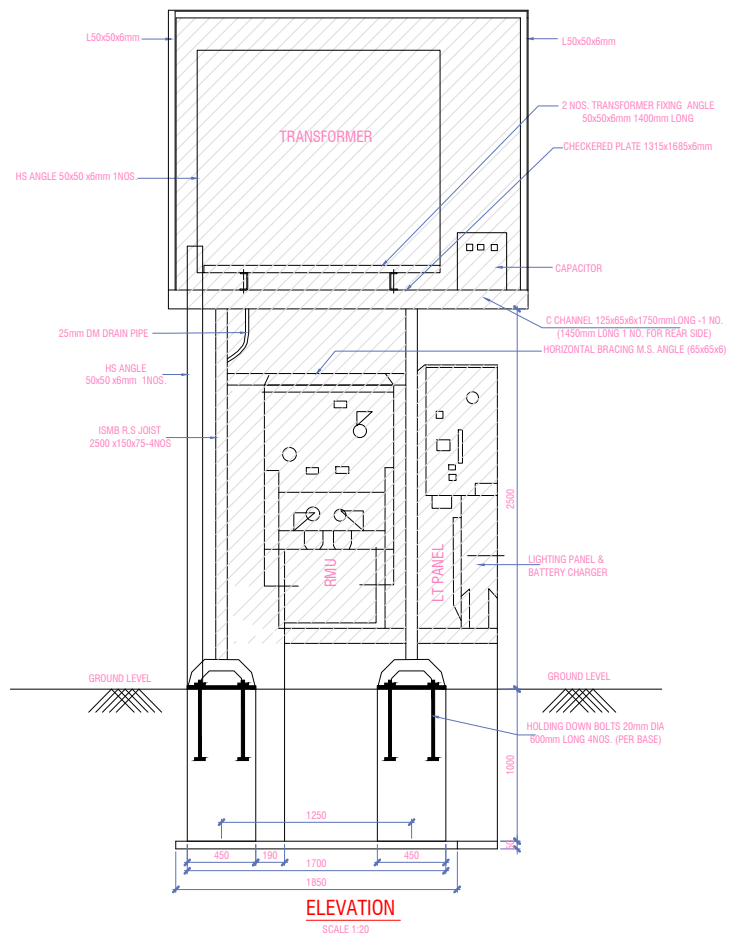
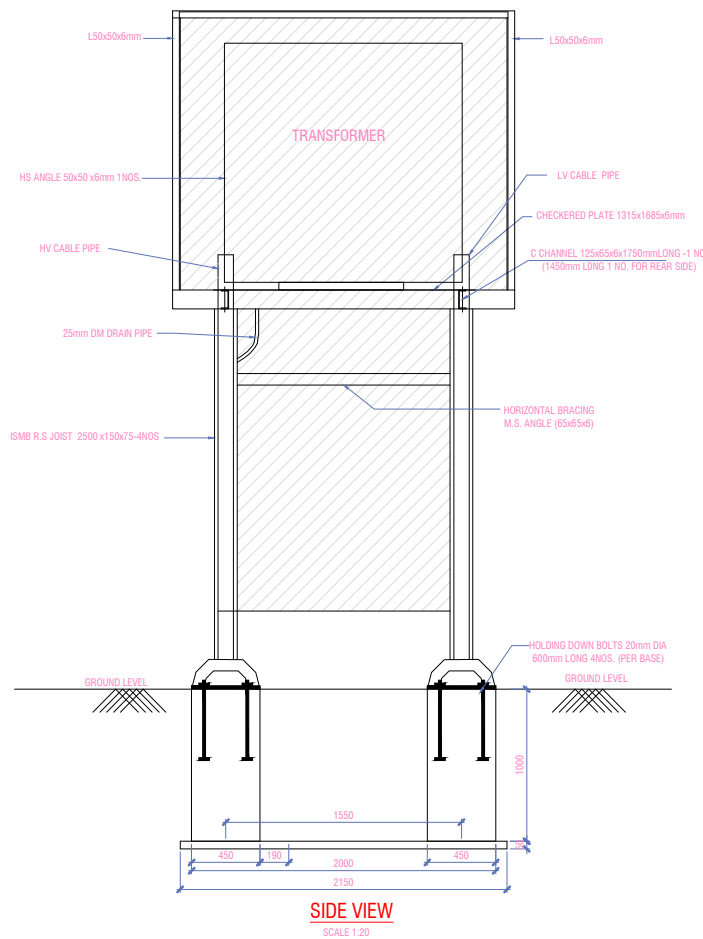
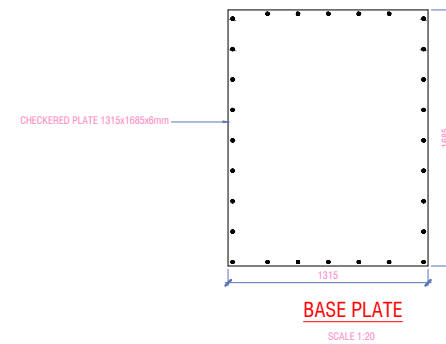
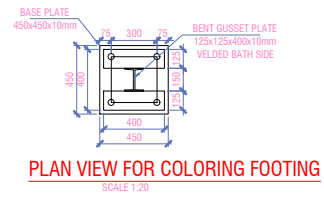
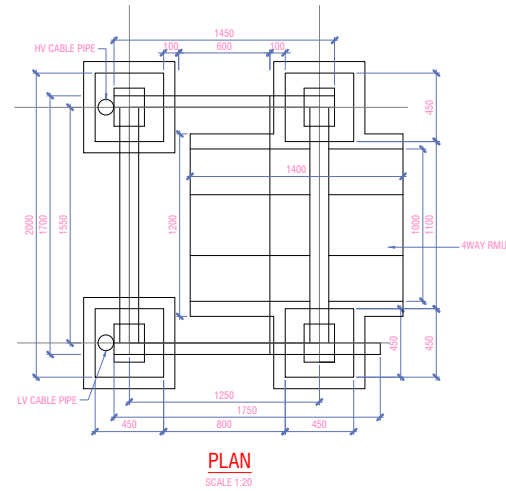
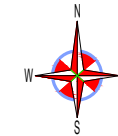
DRG NO. CSML/M4/SMR/WK/EL-074	SCALE : NTS(A3) DATE : 10-07-2018		REVISION
Drawn BY Jothish Kumar M	Design BY Karunakaran M N		Checked BY Ajaya Kumar S

SIGNATORY ARCHITECT:  
SIGNATORY CSML :

TENDER PURPOSE ONLY

# PROPOSED CUSTOMISED COMPACT SUB STATION

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- NOTE:
1. THE SAFE BEARING CAPACITY OF SOIL IS ASSUMED AS 10 TROMPS/SG
  2. FOR SWAY SWAY ETC. THE FOUNDATION STRUCTURE OF 80x80 TO BE EXTENDED IN MULTIPLES OF 400mm
  3. ALL DIMENSIONS ARE IN mm
  4. FOUNDATIONS OF RMU AND ADJOINING STRUCTURE TO BE CAST & INDEPENDENTLY SUITABLE HORIZONTAL REINFORCEMENT FROM RMU FOUNDATION TO BE EMBEDDED IN TO TRANSFORMER FOUNDATION

**CLIENT : COCHIN SMART MISSION LIMITED**  
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**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

**TITLE : PROPOSED CUSTOMISED COMPACT SUB STATION**

**DRG NO.** CSML/M4/SMR/WK/EL-075 **SCALE:1:1000(A1)** **DATE : 11-07-2018**

Drawn BY	Design BY	Checked BY	REVISION
Jaflish Kumar M	Karunakaran M N	Ajaya Kumar S	<b>RO</b>

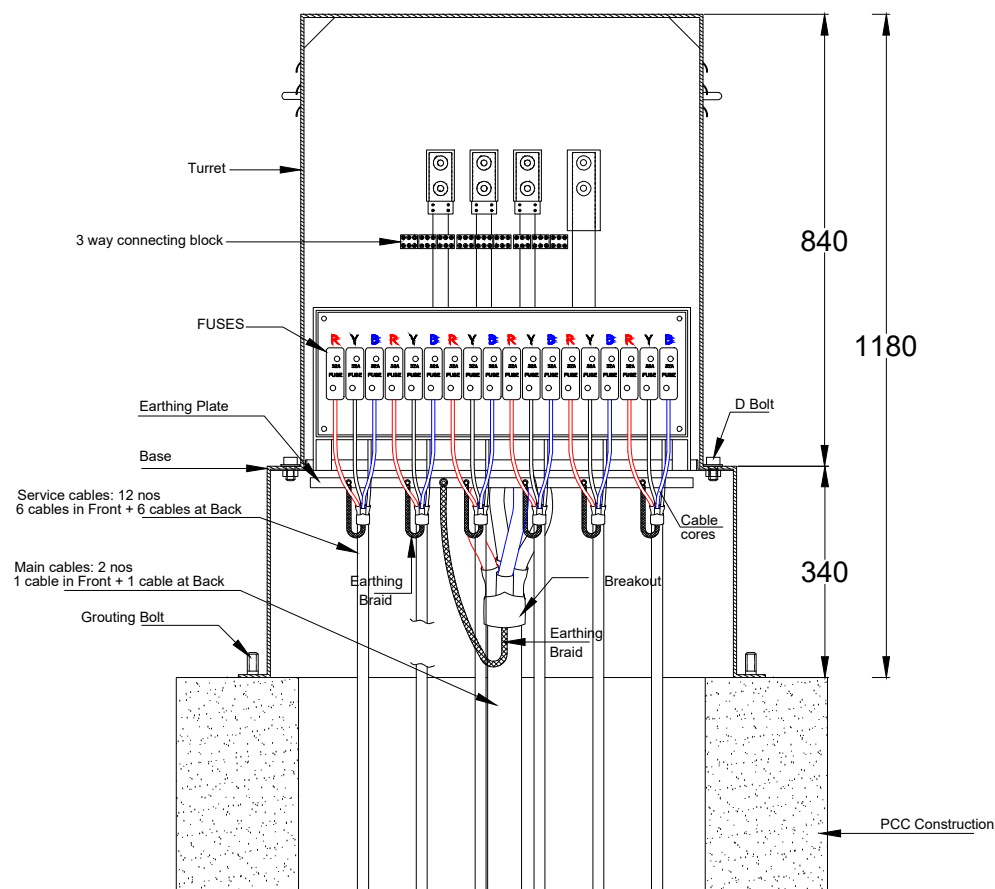
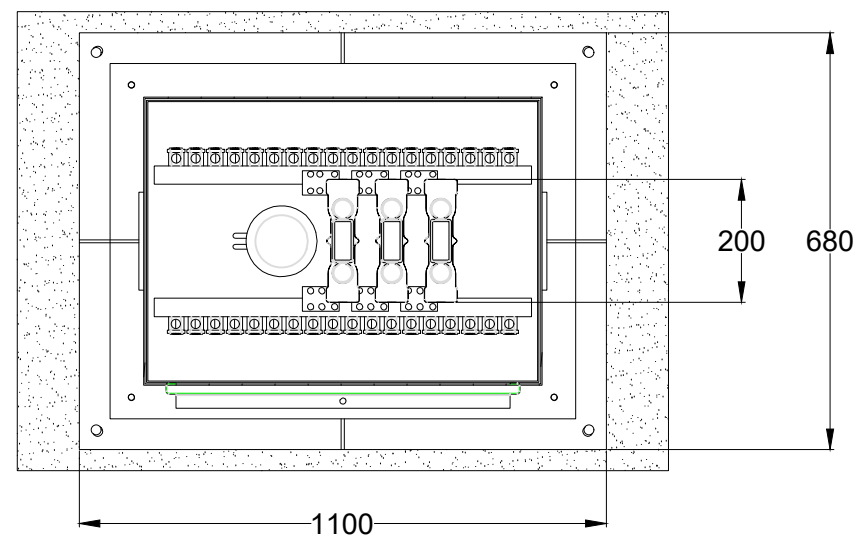
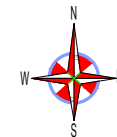
**SIGNATORY ARCHITECT:** **SIGNATORY CSML :**

**TENDER PURPOSE ONLY**

## TYPICAL FEEDER PILLAR INTERNAL CONFIGURATION

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**Configuration:**

- Main Cable: 2 Nos, Range 35-150 mm<sup>2</sup>, 3.5/ 4 Core
- Service Cable: Upto 12 Nos, Range 10-16 mm<sup>2</sup>, 2/3/3.5/4 Core
- Fuse Base: 32 A, Fully Insulated, Both side Cable Termination
- Fuse: 32 A, Bolted Type, A 2 Size

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**PROJECT NAME**  
Development of Smart Roads & Other Roads in West Kochi  
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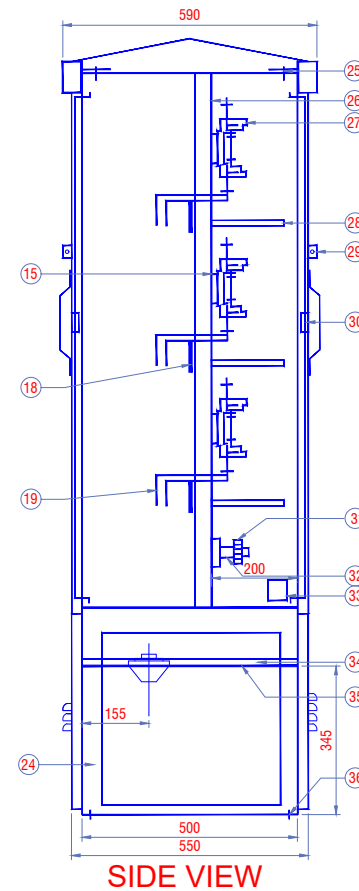
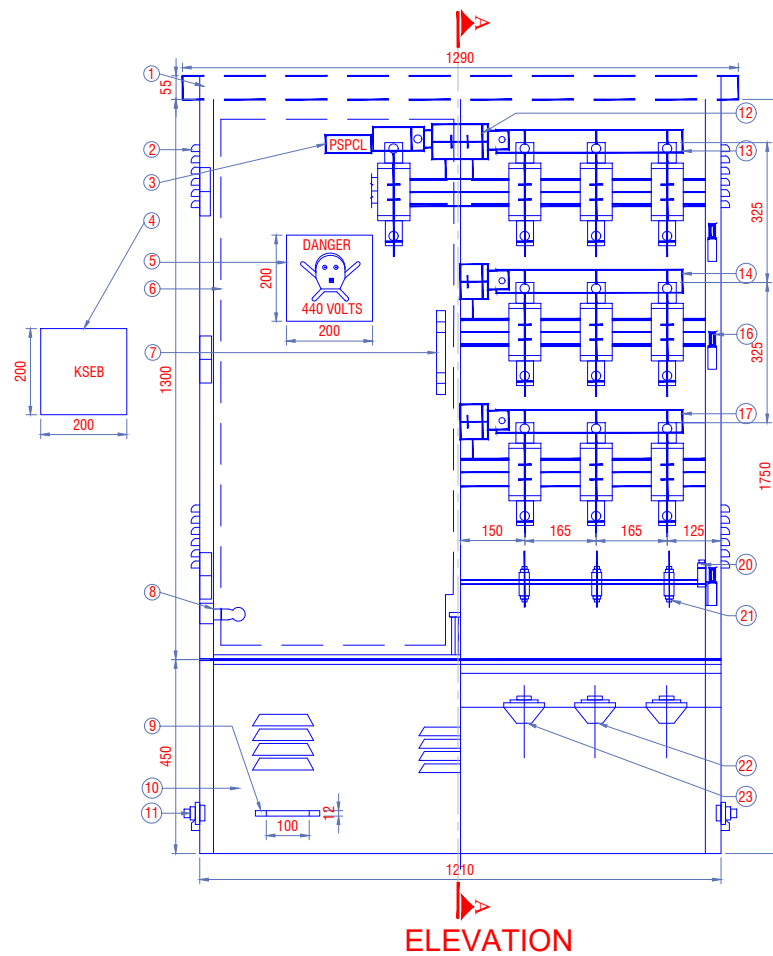
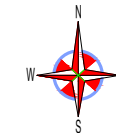
**TITLE :** TYPICAL FEEDER PILLAR INTERNAL CONFIGURATION

DRG NO. CSML/M4/SMR/WK/EL-076	SCALE: NTS(A3)	N
DATE: 21-09-2018		
Drawn BY	Design BY	Checked BY
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S
SIGNATORY ARCHITECT:		SIGNATORY CSML:
<b>RO</b>		

**TENDER PURPOSE ONLY**

# 6/8 WAY FEEDER PILLAR

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LEGEND	
1.	SLANTING ROOF TOP TO BE BOLTED IN SUCH WAY THAT DOORS CANNOT BE REMOVED AND CAP BETWEEN BODY OF THE PILLAR AND ROOF SHALL BE 12 MM FOR VENTILATION
2.	LUMBERS WITH STAINLESS STEEL WIRE WASH INSIDE
3.	MAIN PANEL NAME PLATE AT THE TOP OF THE MODEL DOOR
4.	ENAMELED NAME PLATE WITH PSPCL MAY L.T PILLAR WITH ACB AND ORDER NO, NAMED ON IT SHOULD BE DISPLACED ON THE RIGHT HAND SIDE DOOR SIZE 200x200 MM.
5.	ENAMELED DANGER BOARD ON FRONT & BACK MIDDLE DOOR SIZE 200x200 MM.
6.	MS/SMC CUBICLE SHALL BE PROVIDED WITH SMC DOORS ONLY
7.	DOOR HANDLE MADE FROM 12 MS/SMC ROUND WITH 100 MM GAP AND 50 MM CLEARANCE WELDED TO THE DOOR.
8.	ILLUMINATION LAMP POINT 230 VOLT OPERATED BETWEEN DOOR PANELS THROUGH A HEAVY DUTY SWITCH.
9.	HANDLE FOR BOTTOM COVER MADE OUT OF 12 MM MS/SMC ROUND WITH 100 MM GAP AND 50 MM CLEARANCE WELDED TO THE DOOR.
10.	FOUR SIDE BOTTOM COVER SHOULD BE PROVIDED OF 4 MM MS/SMC SHEET AND WITH A BLACK PAINT.
11.	EARTHING TERMINAL WITH ALUMINUM LEG AT BOTH ENDS.
12.	630 AMPS, 600 VOLTS SOLID LINKS REMOVABLE TYPE ELECTROLYTIC COPPER FOR INCOMING - 3 NOS ( CORRUGATED LINKS)
13.	ELECTROLYTIC ALUMINIUM BUS BAR OF 60X10 MM THICK 1 NO DUTY PANTED WITH EXPORT RED PANTED FOR 'F' PHASE.
15.	60x20x315 MM THK. MS/SMC CHANNEL FOR MOUNTING FUSE BASE.
16.	HEAVY DUTY THREE BRASS HINGES FOR EACH DOOR WITH NON DETACHABLE TYPE BRASS STAINLESS STEEL IN & SLEEVES.
17.	ELECTROLYTIC ALUMINIUM BUSBAR OF 60x10 MM THK. 1 NO DUTY FAINTED WITH EPOXY BLUE PAINT FOR 'B' PHASE.
18.	BAKELITE STEP FOR SPROUTING CONDUCTOR TECHNICAL 12 MM THK.
19.	CONDUCTOR TERMINAL TO SLIT STAGGERED FORMATION OF CABLE CORES.
20.	LUG FOR EARTH ALUMINUM COMPRESSION TYPE - 2 NOS.
21.	SUITABLE LUGS ALUMINUM COMPRESSION TYPE - 6 NOS.
22.	FLANGED TYPE BRASS CABLE GLANDS SUITABLE FOR 3 1/2 C X 300 MM sq CABLE - 2 NOS. 3 1/2 C x 185 MM sq CABLE -2 NOS AND 3 1/2 C x 300 MM sq CABLE -2 NOS
23.	FLANGED TYPE BRASS CABLE GLAND SUITABLE FOR 3 1/2 C x 300 MM sq 400 MM sq CABLE 2 NOS.
24.	50x50x 6 MM THK M.S / SMC ANGLE FOR PEDESTAL ONLY.
25.	10 MM & STUD -6 NOS.TO BE WELDED TO ROOF FOR ADECOLLATE VENTILATION
26.	40 x 20 x 3.15 MM THICK M.S/SMC ANGLE - 2 NOS MOUNTING PUSE BASE CHANNEL
27.	PUSE HOLDER .
28.	ANGLE FOR SUPPORTING ASBESTOS SHEET 6 MM THK TO FORM TWO SEPARATE COMPLIMENT.
29.	WELDED ANGLE 38 x 38 x 3 MM THK CLEET WITH 12 MM HOLE.
30.	GODREJ TYPE LOCKING ARRANGEMENT CENTRALLY OPERATED THREE POTION ON BOTH DOORS
31.	NEUTRAL ELECTROLYTIC ALUMINIUM BUSBAR SIZE 50 x 6 MM -1 NOS. WITH BLACK EPOXY PAINT.
32.	PORCELAIN BASE SUPPURATES FOR NEUTRAL BUSBAR -3 NOS.
33.	LIGHTING BOARD WITH S.P SWITCH -5A CUTOUT AND THREE MM SOCKET-SA.
34.	50 x50 x5 MM THK M.S/SMC ANGLE FOR MOUNTING 4 MM THK. MS/SMC CABLE GLAND PLATES.
35.	10 MM HOLE 14 MM STUBBLE FOR 12.5 MM FOUNDATION BOLTS.
36.	12 MM HOLE FOR EARTH CONFECTION AT BOTH END PLATES .

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PROJECT NAME  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

TITLE : 6/8 WAY FEEDER PILLAR

DRG NO. CSML/M4/SMR/WK/EL-077	SCALE: 1:1000(A1)	N
	DATE: 06-07-2018	

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	RO

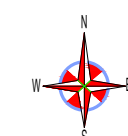
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TENDER PURPOSE ONLY

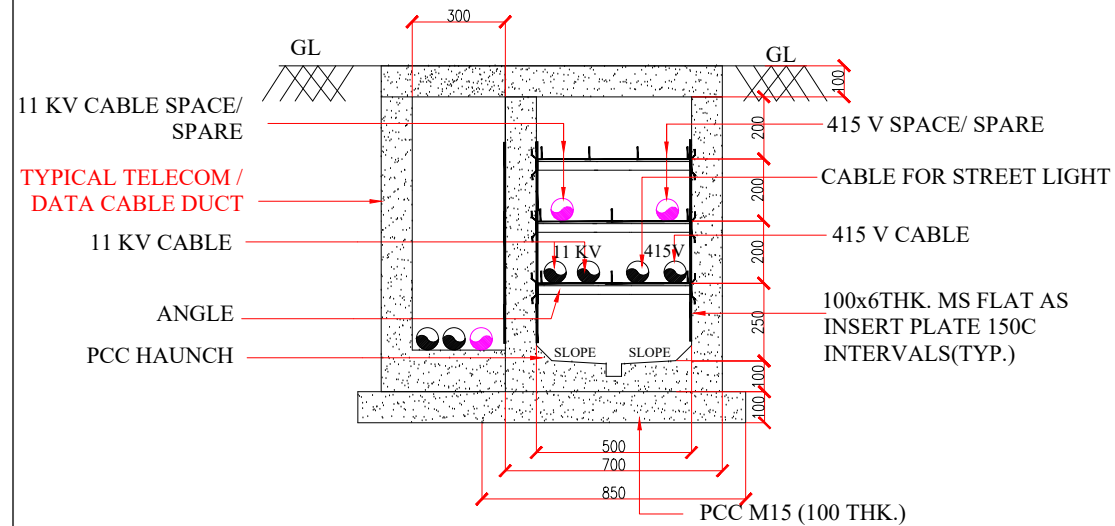


TYPICAL HDPE CABLE DUCT AND BURIED CABLE TRENCH

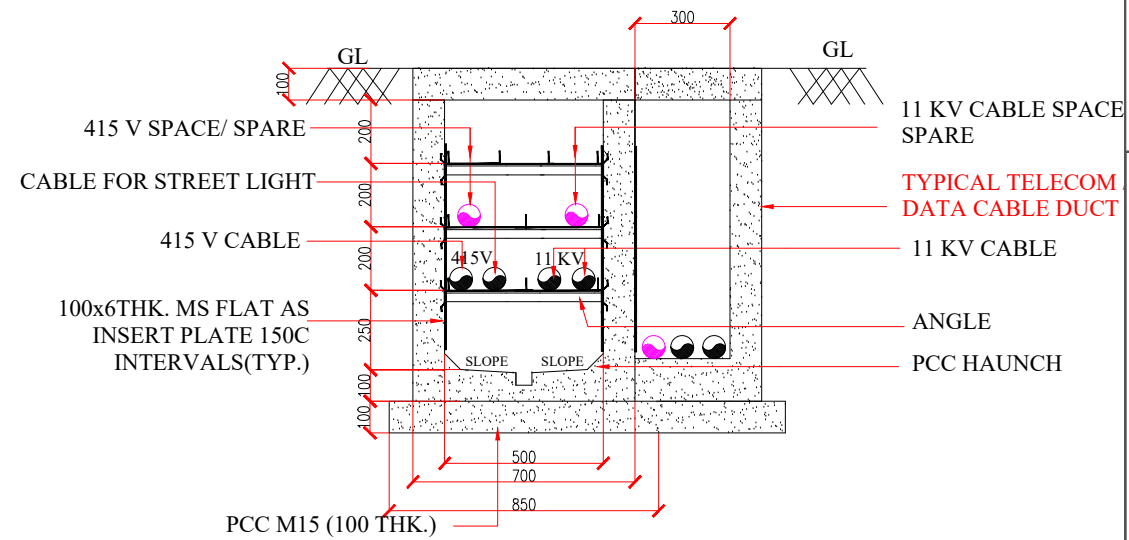
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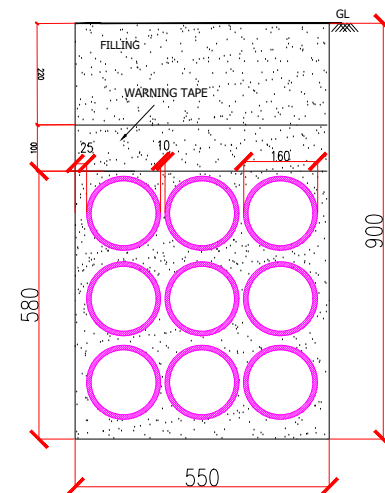
ELECTRICAL TRENCH SECTION RIGHT SIDE



ELECTRICAL TRENCH SECTION LEFT SIDE



BURIED CABLE TRENCH FOR (HT,LT)



CLIENT : COCHIN SMART MISSION LIMITED  
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Park Avenue, Kochi-682011, Kerala,India

PROJECT NAME  
Development of Smart Roads & Other Roads in West Kochi  
under Smart City Mission, Kochi

TITLE : TYPICAL HDPE CABLE DUCT AND BURIED CABLE TRENCH

DRG NO. CSML/M4/SMR/WK/EL-078 SCALE : 1:1000(A1) DATE : 04-07-2018

Drawn BY	Design BY	Checked BY	REVISION
Jothish Kumar M	Karunakaran M N	Ajaya Kumar S	RO

SIGNATORY ARCHITECT: SIGNATORY CSML:

TENDER PURPOSE ONLY