



DISTRIBUTION CONSTRUCTION STANDARDS

Part 8

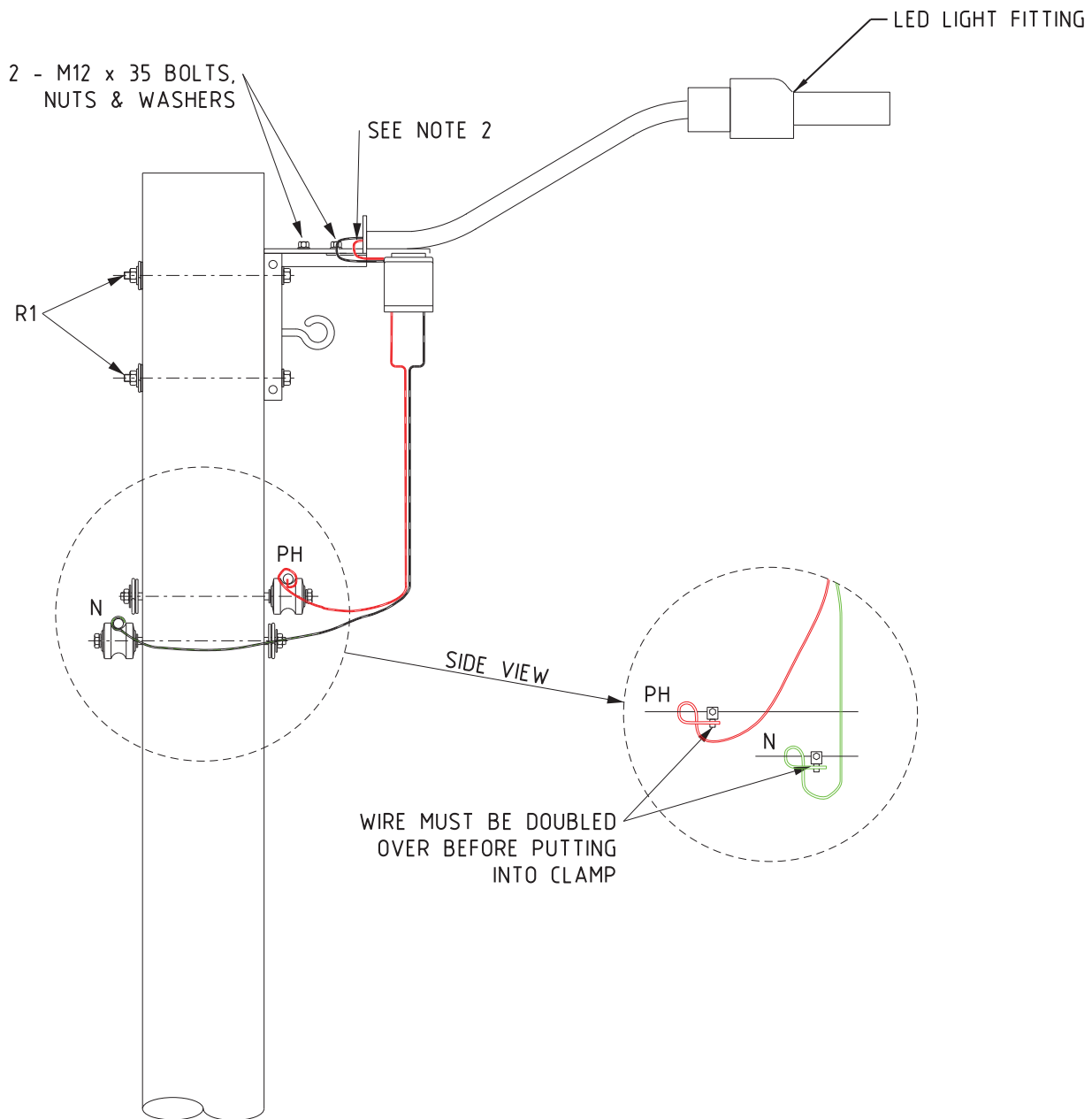
Date Published: 8 October 2020

S - Street Lighting

For application to
Horizon Power
Electricity Distribution Networks

Part 8 – Street Lighting – Drawing Register

Number	Description
S1	Street Lighting Minor Road Pole Without Crossarm
S2	Street Lighting Minor Road Pole with Crossarm
S3	Street Lighting Arterial Road Steel / Wood Pole with Crossarm
S4	Street Lighting Arterial Road Steel / Wood Pole without Crossarm
S5	Street Lighting Arterial Road Concrete Pole with Crossarm
S6	Street Lighting Arterial Road for LV ABC
S7	Street Lighting Minor Road for LV ABC
S9-1	Single Outreach Steel Standard – 6.5m, 10.5m and 12.5m – Non Cyclonic
S9-2	Single Outreach Steel Standard – 6.5m, 10.5m and 12.5m – Cyclonic
S10	Double Outreach Steel Standard – 10.5m and 12.5m – Non Cyclonic
S10-1	Double Outreach Steel Standard – 10.5m and 12.5m - Cyclonic



NOTE:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. CABLE MUST BE ENCLOSED IN 12mm FLEXIBLE CONDUIT UV STABILISED EXTENDING 150mm INTO STREETLIGHT BRACKET (APPLIES TO COCKATOO PRONE AREAS).



DISTRIBUTION CONSTRUCTION STANDARDS

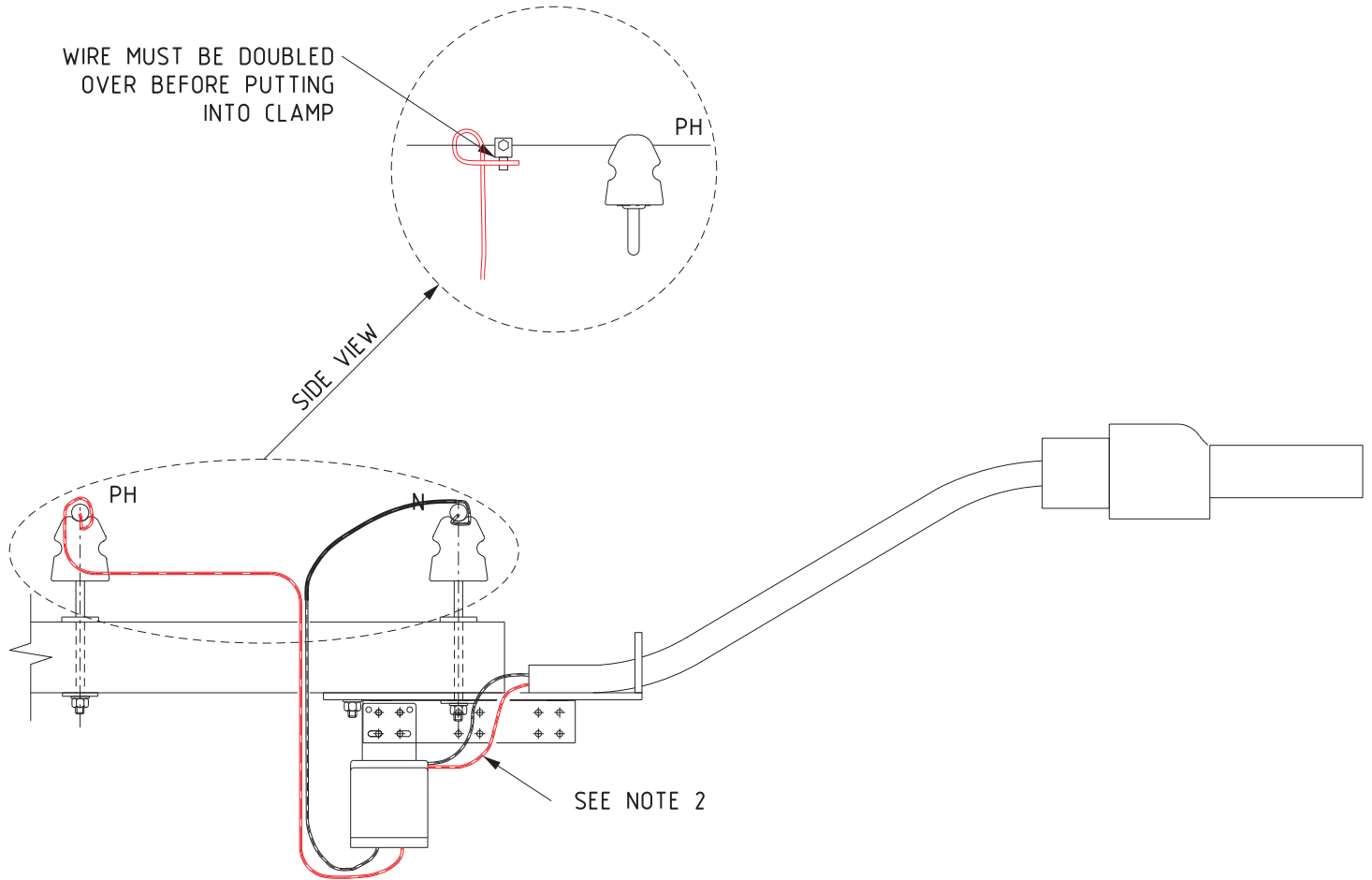
STREET LIGHTING
MINOR ROAD
POLE WITHOUT CROSSARM

REVISION C	DATE APRIL 18
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DRAWING No.

S1

WIRE MUST BE DOUBLED
OVER BEFORE PUTTING
INTO CLAMP



NOTE:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. CABLE MUST BE ENCLOSED IN 12mm FLEXIBLE CONDUIT UV STABILISED EXTENDING 150mm INTO STREETLIGHT BRACKET (APPLIES TO COCKATOO PRONE AREAS).



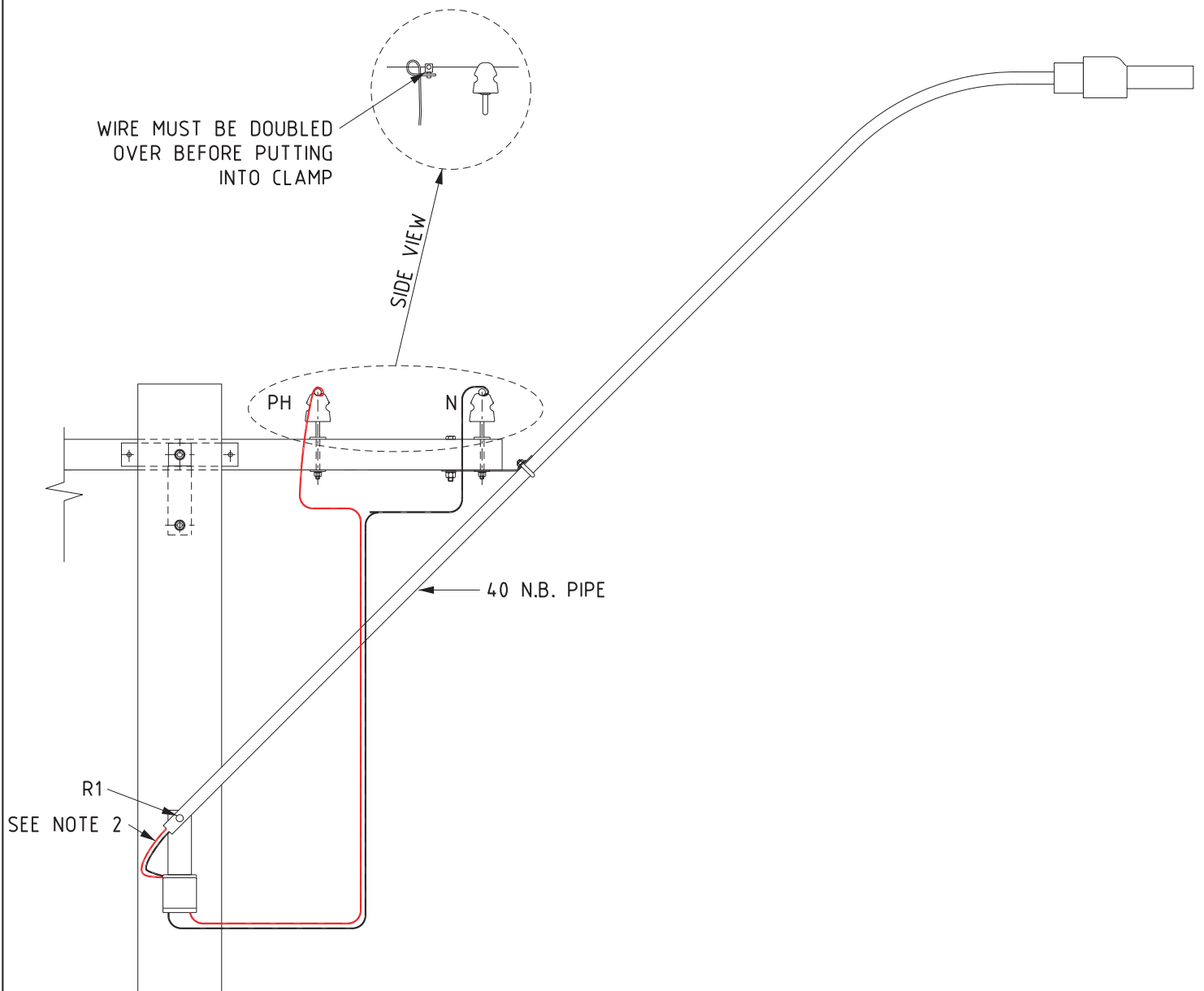
DISTRIBUTION CONSTRUCTION
STANDARDS

STREET LIGHTING
MINOR ROAD
POLE WITH CROSSARM

REVISION C	DATE APRIL 18
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DRAWING No.

S2



NOTE:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. CABLE MUST BE ENCLOSED IN 12mm FLEXIBLE CONDUIT UV STABILISED EXTENDING 150mm INTO STREETLIGHT BRACKET (APPLIES TO COCKATOO PRONE AREAS).



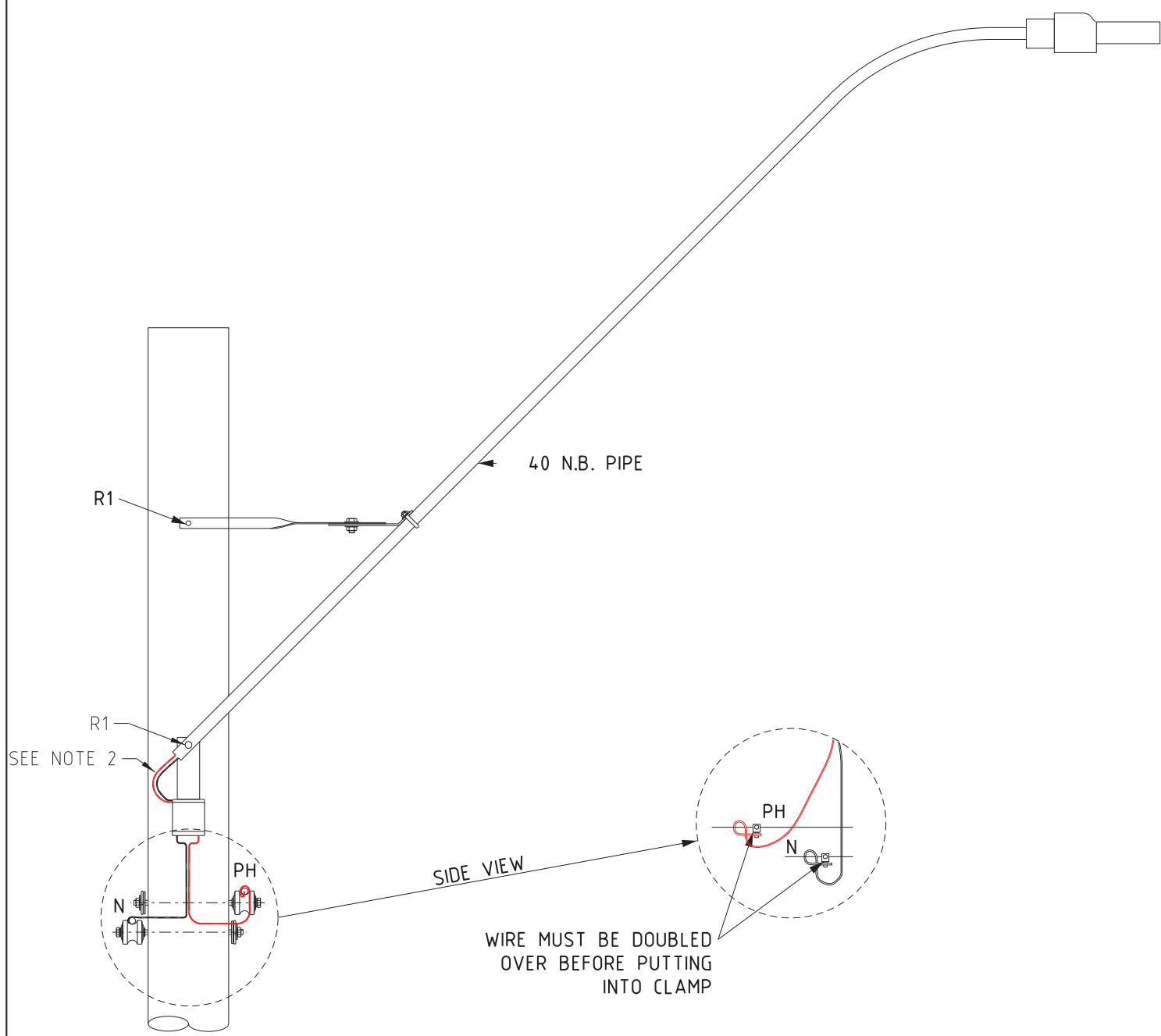
DISTRIBUTION CONSTRUCTION STANDARDS

STREET LIGHTING
ARTERIAL ROAD
STEEL/WOOD POLE
WITH CROSSARM

REVISION C	DATE APRIL 18
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DRAWING No.

S3



NOTE:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. CABLE MUST BE ENCLOSED IN 12mm FLEXIBLE CONDUIT
 UV STABILISED EXTENDING 150mm INTO STREETLIGHT BRACKET
 (APPLIES TO COCKATOO PRONE AREAS).



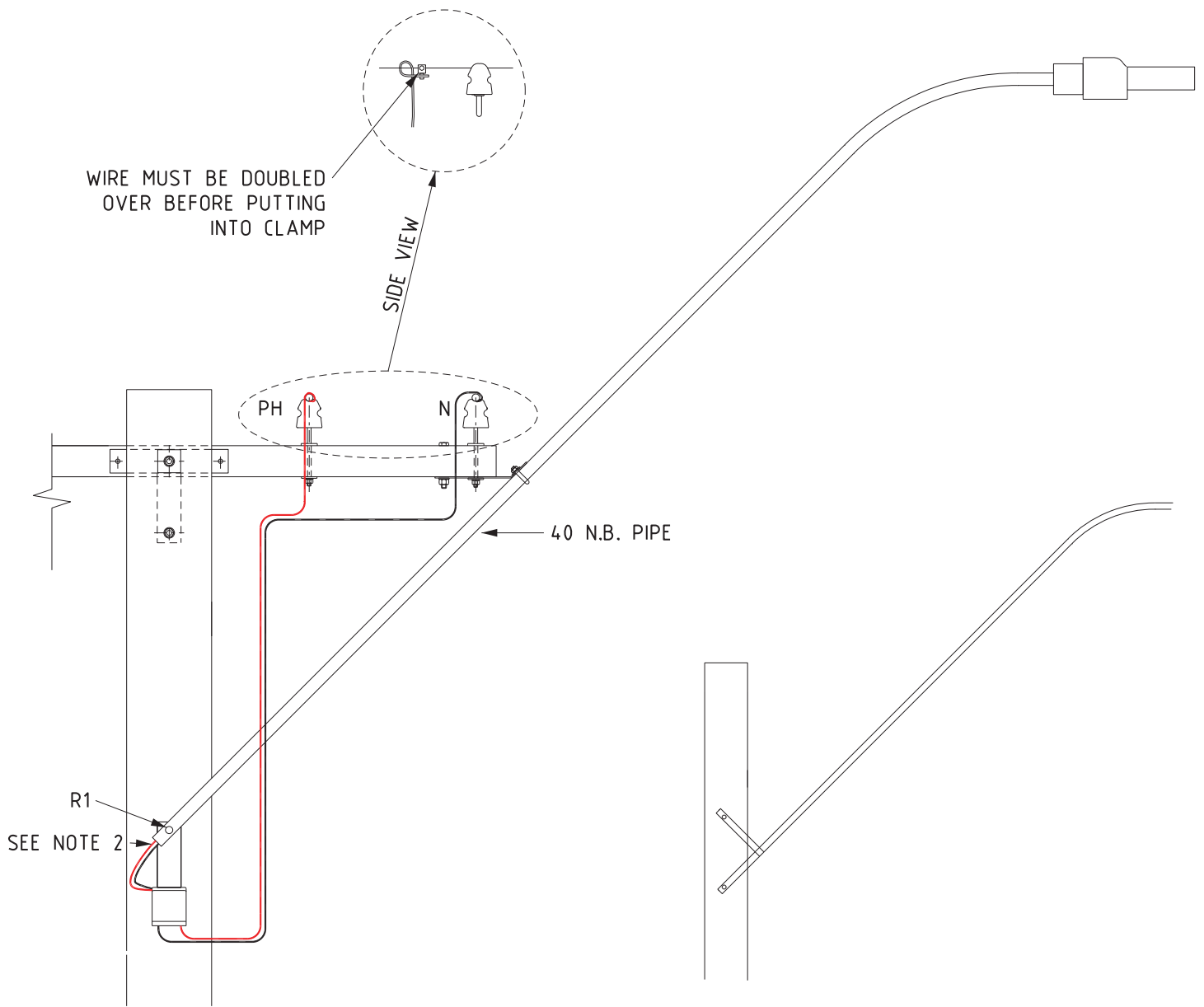
DISTRIBUTION CONSTRUCTION
STANDARDS

STREET LIGHTING
ARTERIAL ROAD
STEEL/WOOD POLE
WITHOUT CROSSARM

REVISION C	DATE APRIL 18
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DRAWING No.

S4



NOTE:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. CABLE MUST BE ENCLOSED IN 12mm FLEXIBLE CONDUIT UV STABILISED EXTENDING 150mm INTO STREETLIGHT BRACKET (APPLIES TO COCKATOO PRONE AREAS).



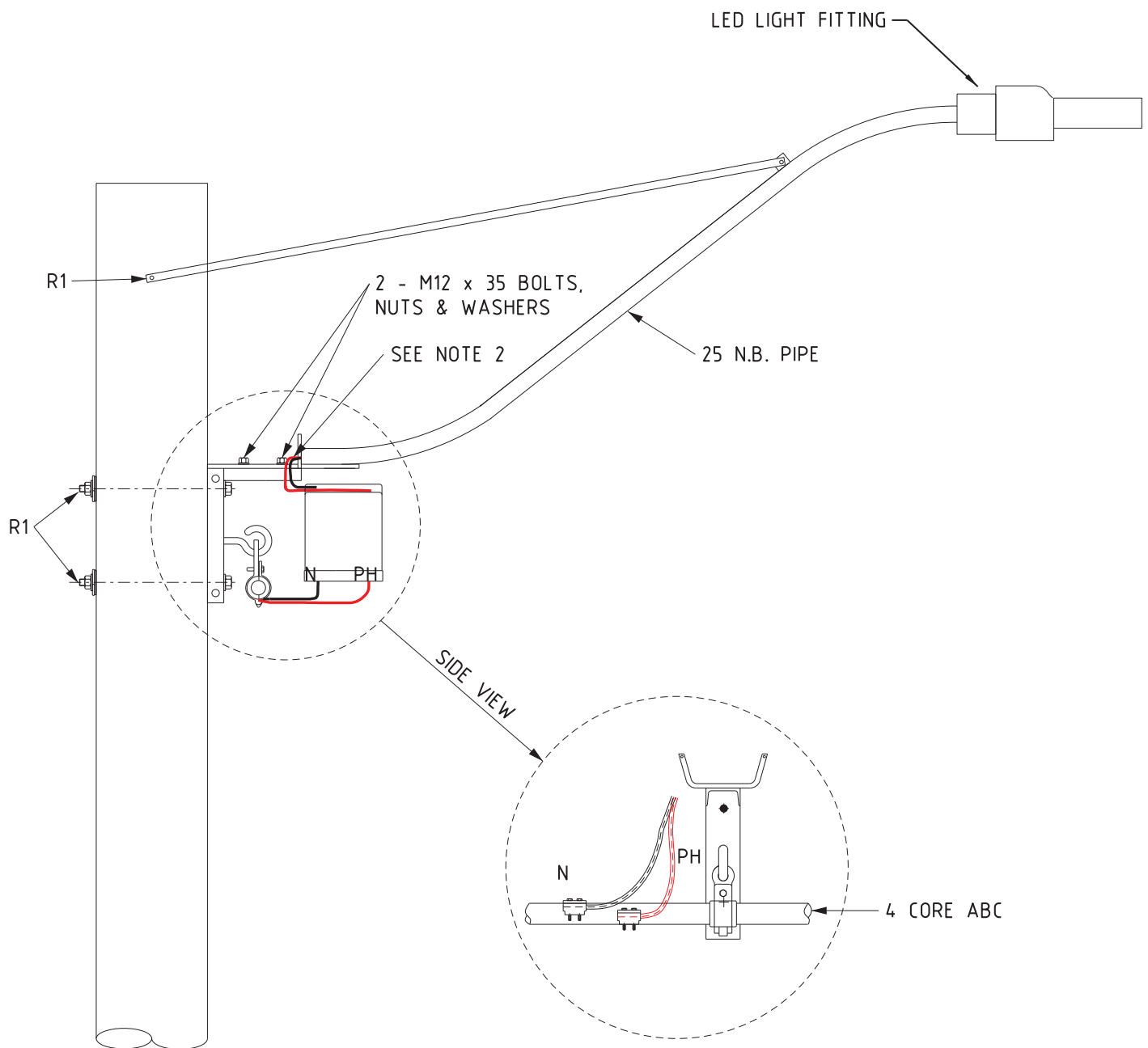
DISTRIBUTION CONSTRUCTION
STANDARDS

STREET LIGHTING
ARTERIAL ROAD
CONCRETE POLE
WITH CROSSARM

REVISION C	DATE APRIL 18
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DRAWING No.

S5



NOTE:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. CABLE MUST BE ENCLOSED IN 12mm FLEXIBLE CONDUIT UV STABILISED EXTENDING 150mm INTO STREETLIGHT BRACKET (APPLIES TO COCKATOO PRONE AREAS).



DISTRIBUTION CONSTRUCTION STANDARDS

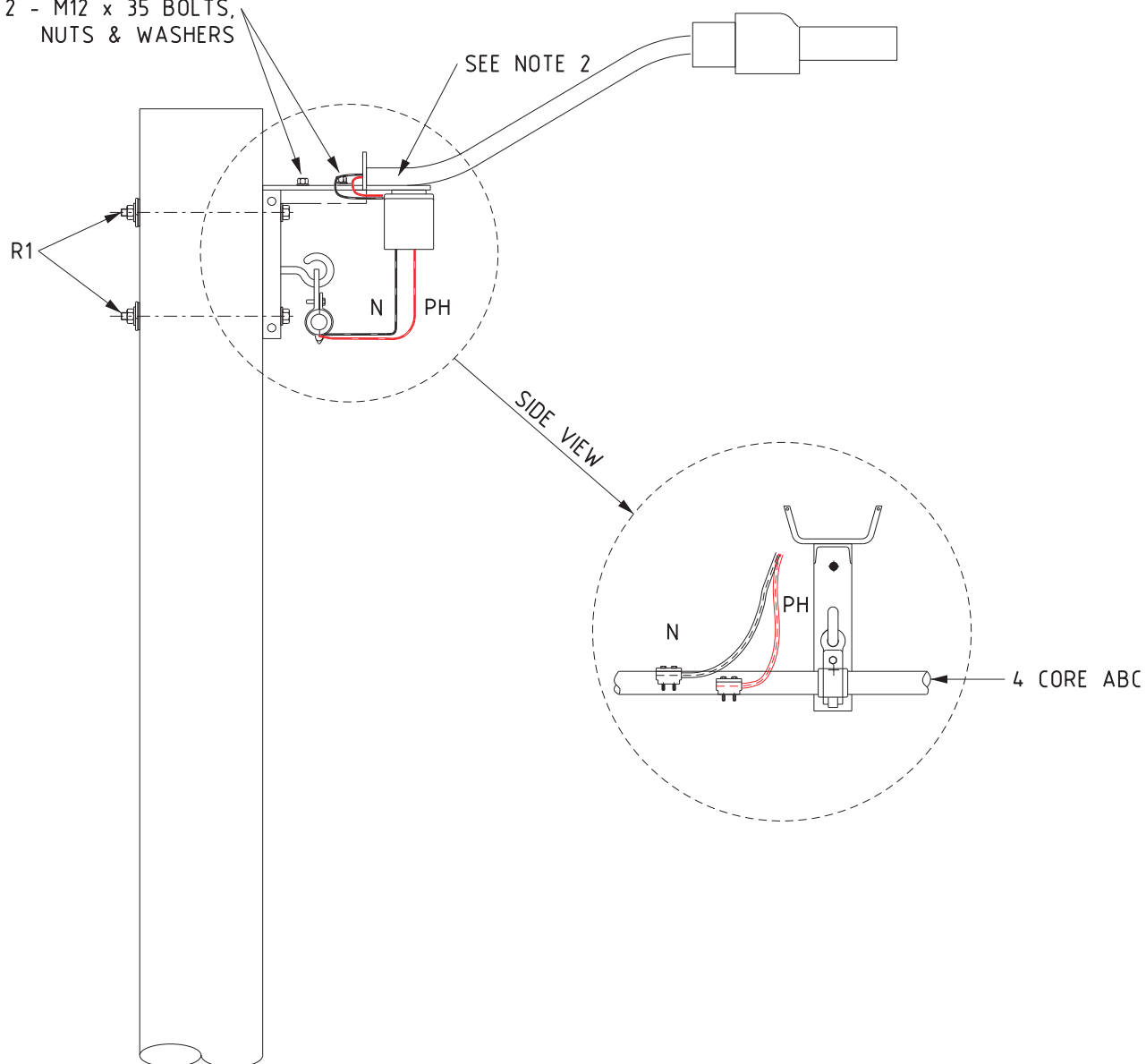
STREET LIGHTING
ARTERIAL ROAD
FOR ABC

REVISION C	DATE APRIL 18
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DRAWING No.

S6

2 - M12 x 35 BOLTS,
NUTS & WASHERS



NOTE:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. PHASE WIRE MUST BE ENCLOSED IN 12mm FLEXIBLE CONDUIT UV STABILISED EXTENDING 150mm INTO STREETLIGHT BRACKET (APPLIES TO COCKATOO PRONE AREAS).



DISTRIBUTION CONSTRUCTION
STANDARDS

STREET LIGHTING
MINOR ROAD
FOR ABC

REVISION C	DATE APRIL 18
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DRAWING No.

S7

**GROUND LINE PROTECTION PETROLEUM WRAP (DENSO)
INSTALLATION PROCEDURE**

SURFACE PREPARATION:

SURFACES MUST BE CLEAN AND DRY. REMOVE ALL LOOSE RUST, SCALE AND FLAKING COATINGS BY SCRAPING, WIRE BRUSHING OR BLAST CLEANING.

PRIMING:

BRUSH DENSO PRIMING SOLUTION OVER THE ENTIRE AREA.

APPLICATION:

PRESS THE END OF THE TAPE FIRMLY ONTO THE PIPE AND UNROLL THE TAPE AROUND THE PIPE SPIRALLY, OVERLAPPING ITSELF. APPLY SUFFICIENT TENSION TO CONFORM THE TAPE TO THE SURFACE WITHOUT GAPS. DO NOT OVERSTRETCH. START A NEW ROLL BY OVERLAPPING THE ENDS BY ONE TAPE WIDTH. PRESS DOWN ALL FOLDS AND SMOOTH THE ENTIRE AREA WITH SPECIAL ATTENTION TO OVERLAPS.

FOR BURIED OR IMMersed APPLICATIONS APPLY TAPES WITH 55% OVERLAP TO GIVE DOUBLE THICKNESS. FOR ABOVE GROUND USE OVERLAP TAPES BY 15mm FOR WIDTHS UP TO 150mm AND 25mm FOR WIDER TAPES.

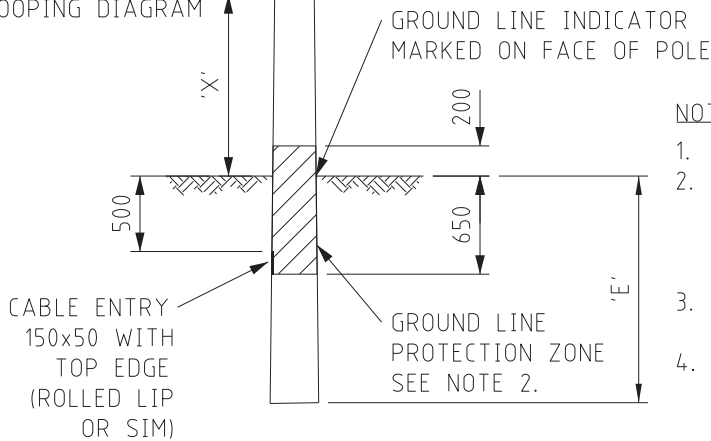
OVERWRAPPING:

FOR FURTHER PROTECTION, A SEPARATE OVERWRAP OF ALUMINIUM SELF ADHESIVE TAPE BE APPLIED SPIRALLY OVER THE DENSO TAPE.

INSPECTION:

ENSURE THAT THE ENTIRE SURFACE IS COVERED WITH NO GAPS OR AIR POCKETS. DENSO AND DENSYL TAPES CANNOT BE HOLIDAY TESTED DUE TO SOFT SURFACE. DENSOPOL 4, DENSOPOL PN AND DENSO WB TAPES CAN BE HOLIDAY TESTED AT 5kV FOR SINGLE THICKNESS AND 10kV FOR DOUBLE THICKNESS.

REFER TO R26-3
OR R26-4
FOR CUT-OUT
DETAILS
R27 FOR
LOOPING DIAGRAM



POLE HEIGHT	EMBEDMENT DEPTH 'E'	CUTOUT OPENING 'X'
6.5m	1500mm	1200mm
10.5m	2000mm	1330mm
12.5m	2200mm	1300mm

NOTES:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. GROUND LEVEL PROTECTION - POLES THAT ARE SUPPLIED WITHOUT A POLYUREA COATING IN THIS PROTECTION ZONE REQUIRE A PETROLEUM WRAP (DENSO) TO BE FITTED. SEE INSTALLATION INSTRUCTIONS.
3. BACKFILL SHALL BE NATURAL FILL COMPACTED IN 150mm LAYERS
4. REFER TO U8-1 AND U9-1 FOR CONNECTIONS TO MINI PILLAR AND UNI PILLAR.



DISTRIBUTION CONSTRUCTION
STANDARDS

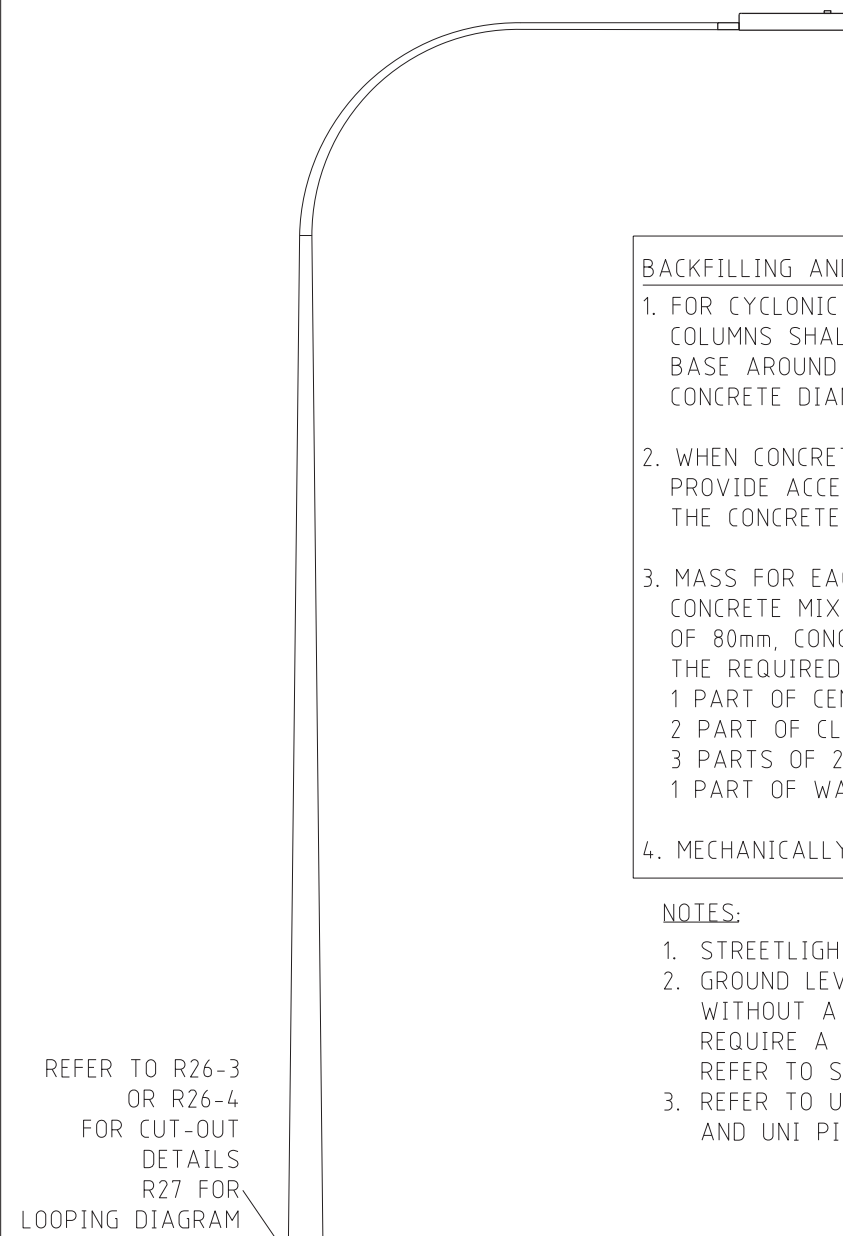
OPERATIONS DIVISION

STREETLIGHTING

SINGLE OUTREACH
STEEL STANDARD - 6.5m, 10.5m AND 12.5m
NON-CYCLONIC

REVISION E DATE 07/10/2020

DRAWING No.
S9-1

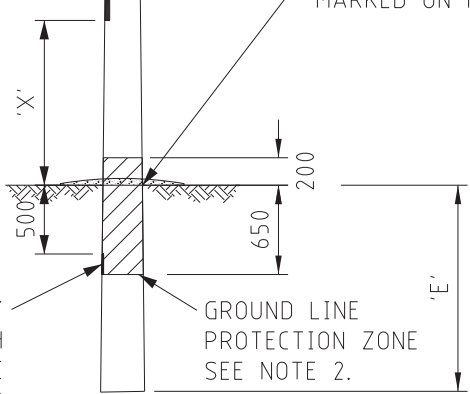


- BACKFILLING AND BELLING DETAILS:**
1. FOR CYCLONIC AREAS (AS/NZS 1170.2 REGIONS C AND D) COLUMNS SHALL BE SUPPORTED WITH A N20 CONCRETE BASE AROUND THE COLUMN TO THE DEPTH OF 800mm. CONCRETE DIAMETER FOR SANDY SOILS 600mm, 900mm FOR CLAY.
 2. WHEN CONCRETE IS USED, A FLEXI CONDUIT SHALL BE FITTED TO PROVIDE ACCESS FOR CABLE INSTALLATION & REMOVAL THROUGH THE CONCRETE INTO THE POLE.
 3. MASS FOR EACH BASE PLATE WILL BE APPROXIMATELY 60kg CONCRETE MIXED ON SITE WILL HAVE 20mm AGGREGATE, SLUMP OF 80mm, CONCRETE GRADE OF N20 WITH NO ADDITIVES REQUIRED THE REQUIRED MEASURE IS:
 1 PART OF CEMENT
 2 PART OF CLEAN SAND
 3 PARTS OF 20mm AGGREGATE
 1 PART OF WATER
 4. MECHANICALLY VIBRATED TO REMOVE TRAPPED AIR POCKETS.

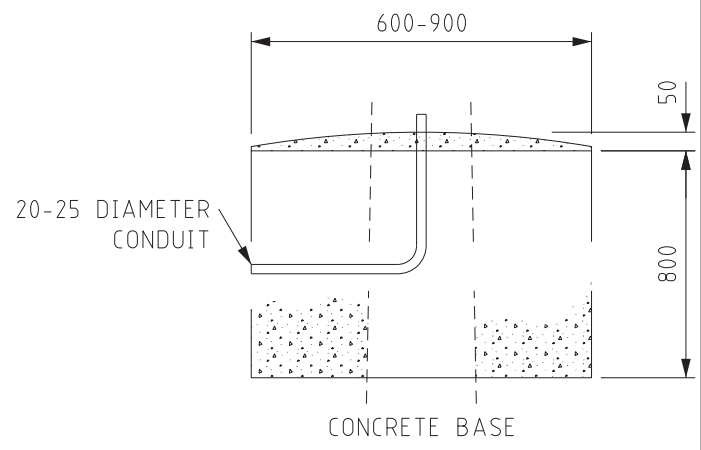
- NOTES:**
1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
 2. GROUND LEVEL PROTECTION - POLES THAT ARE SUPPLIED WITHOUT A POLYUREA COATING IN THIS PROTECTION ZONE REQUIRE A PETROLEUM WRAP (DENSO) TO BE FITTED. REFER TO S9-1 FOR INSTALLATION INSTRUCTIONS.
 3. REFER TO U8-1 AND U9-1 FOR CONNECTIONS TO MINI PILLAR AND UNI PILLAR.

REFER TO R26-3
OR R26-4
FOR CUT-OUT
DETAILS
R27 FOR
LOOPING DIAGRAM

GROUND LINE INDICATOR
MARKED ON FACE OF POLE



POLE HEIGHT	EMBEDMENT DEPTH 'E'	CUTOUT OPENING 'X'
6.5m	1500mm	1200mm
10.5m	2000mm	1330mm
12.5m	2200mm	1300mm



DISTRIBUTION CONSTRUCTION
STANDARDS

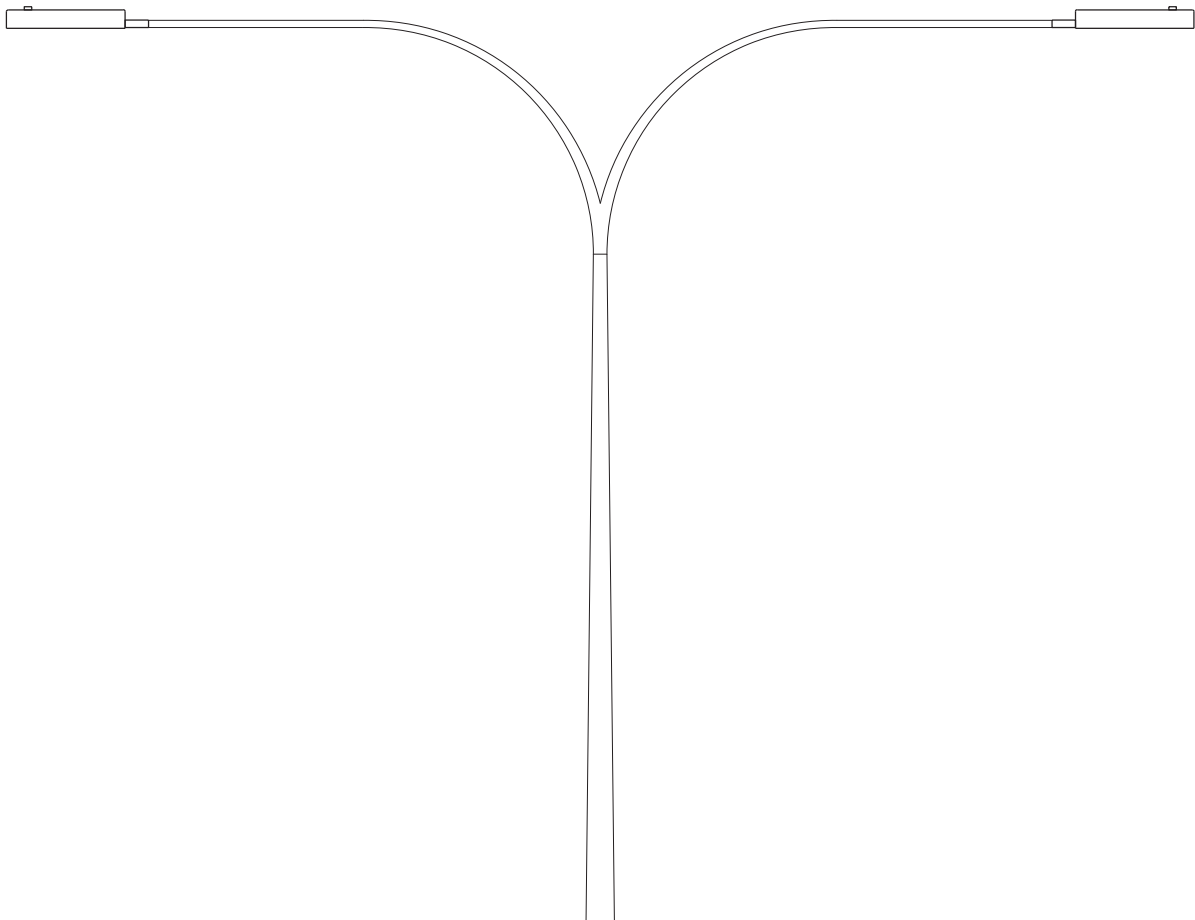
OPERATIONS DIVISION

STREETLIGHTING

SINGLE OUTREACH
STEEL STANDARD - 6.5m, 10.5m AND 12.5m
CYCLONIC

REVISION
E DATE
07/10/2020

DRAWING No.
S9-2

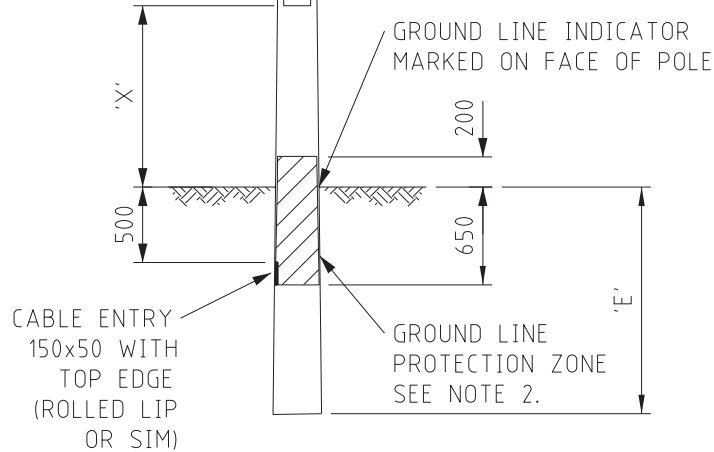


POLE HEIGHT	EMBEDMENT DEPTH 'E'	CUTOUT OPENING 'X'
10.5m	2000mm	1330mm
12.5m	2200mm	1300mm

NOTES:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. GROUND LEVEL PROTECTION - POLES THAT ARE SUPPLIED WITHOUT A POLYUREA COATING IN THIS PROTECTION ZONE REQUIRE A PETROLEUM WRAP (DENSO) TO BE FITTED. SEE INSTALLATION INSTRUCTIONS ON DCS REFERENCE S9-1.
3. BACKFILL SHALL BE NATURAL FILL COMPACTED IN 150mm LAYERS.
4. REFER TO U8-1 AND U9-1 FOR CONNECTIONS TO MINI PILLAR AND UNI PILLAR.

REFER TO R26-3 OR R26-4 FOR CUT-OUT DETAILS R27 FOR LOOPING DIAGRAM

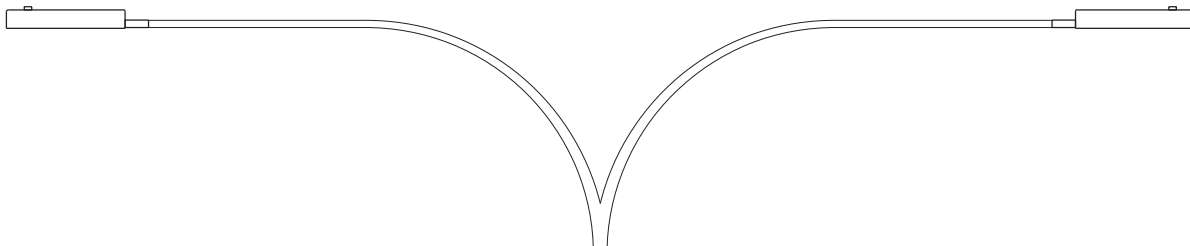


DISTRIBUTION CONSTRUCTION STANDARDS

DOUBLE OUTREACH
STEEL STANDARD - 10.5m AND 12.5m
NON-CYCLONIC

REVISION	DATE
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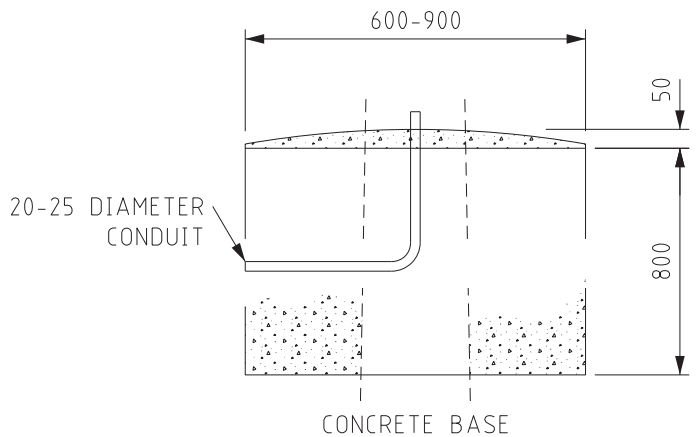
DRAWING No.
S10



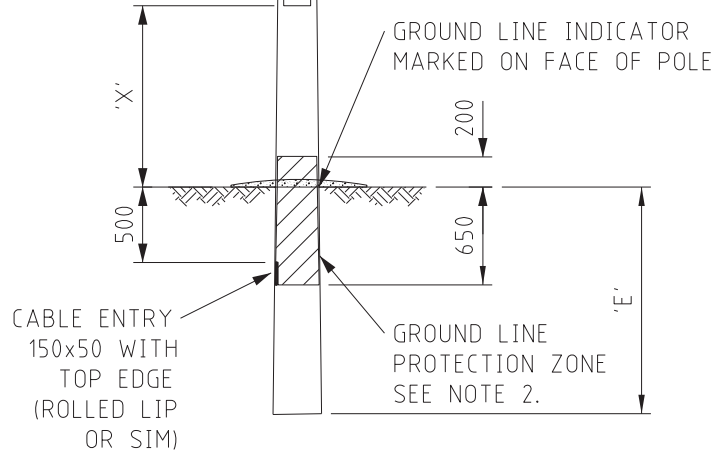
NOTES:

1. STREETLIGHT LOADS SHOULD BE BALANCED ACROSS PHASES.
2. GROUND LEVEL PROTECTION - POLES THAT ARE SUPPLIED WITHOUT A POLYUREA COATING IN THIS PROTECTION ZONE REQUIRE A PETROLEUM WRAP (DENSO) TO BE FITTED. SEE INSTALLATION INSTRUCTIONS ON DCS REFERENCE S9-1.
3. REFER TO S9-2 FOR BACKFILLING AND BELLING DETAILS.
4. REFER TO U8-1 AND U9-1 FOR CONNECTIONS TO MINI PILLAR AND UNI PILLAR.

POLE HEIGHT	EMBEDMENT DEPTH 'E'	CUTOUT OPENING 'X'
10.5m	2000mm	1330mm
12.5m	2200mm	1300mm



REFER TO R26-3 OR R26-4 FOR CUT-OUT DETAILS
R27 FOR LOOPING DIAGRAM



DISTRIBUTION CONSTRUCTION STANDARDS

OPERATIONS DIVISION

STREETLIGHTING

DOUBLE OUTREACH
STEEL STANDARD - 10.5m AND 12.5m
CYCLONIC

REVISION A DATE 07/10/2020

DRAWING No. S10-1