CEB DISTRIBUTION CONSTRUCTION STANDARDS

CEB: DCS - 3:2020

OVERHEAD LOW VOLTAGE LINES

CEYLON ELECTRICITY BOARD

SRI LANKA

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Introduction

The Electricity Distribution has developed rapidly and various systems have been adopted with different types of poles, pole sizes and materials for overhead low voltage line constructions. Standardization of Construction Methods for Overhead Low Voltage Lines offer advantages both to the Ceylon Electricity Board and its Contractors. The CEB has been introduced Construction Standards for Overhead Low Voltage Lines for use by all CEB staff and its contractors accordingly.

Scope

This document provides the construction standards, guidelines and procedures for the selection of materials, methods of construction, material requirements for different arrangements of poles, with drawings and tables.

Review and Approval History

This Construction Standard helps to identify type and size of poles, conductors, insulators, stays, hardware items etc., to match the terrain and the ground conditions for the Low Voltage Overhead Line Construction.

Version Number	Date (dd/mm/yy)	Reviewer and Approver	Remarks
Original DCS-2:1996	September 1997	Reviewer: Distribution Development Branch Approver: Not Available	
Revision 1 DCS-3:2020	August 2020	Reviewer: OH LV Lines Sub Committee, Distribution Design Committee (for Distribution Coordination Branch) Approver: Distribution Coordination Committee	Omissions and Additions were done in updating the original document

This revision of Construction standard for Overhead Low Voltage Lines is prepared as a continuous process of updating the standardization of construction methods and relevant material.

Applicable Standards and Regulatory Documents

Sri Lanka Electricity Act No.2(E)of 2009
Sri Lanka Electricity (Amendment) Act, No.31 of 2013
Electricity Sector Performance Standards Regulations Gazette No. 1975-44

1. Design Criteria

1.1 Environmental Parameters

The following physical design parameters have been accepted in the CEB.

Climate	:	Equatorial, intense sunshine, heavy rain, salt and dust laden atmosphere.
Ambient air temperatures		
Minimum	:	7 ^{o}C
Normal range	:	27 ^{o}C
Mean annual	:	32 ^{o}C
Maximum	:	40 ^{o}C
Average annual rainfall	:	2400 mm
Relative humidity	:	90%
Maximum wind velocity	:	34 m / sec
Altitude	:	MSL to 1900 m above MSL
Isokeraunic (Thunder days) level	:	100 days
Solar radiation	:	4.5 kwh/m^2/day

1.2 System Parameters

Nominal system voltage	:	400 / 230 V
Maximum system voltage	:	424 /244V
Type of system grounding	:	Neutral Earthed at Distribution Substation
System frequency	:	50 Hz
Allowable nominal maximum voltage drop in LV distribution	:	5%
Allowable voltage drop on service wire	:	1%
Ruling span for bare conductor circuits	:	45m
Ruling span for ABC circuits	:	35m

1.3 Clearance Parameters

1.3.1 Clearance from the Ground and Structures

Clearances for LV Overhead Lines given in this document are based on the subsidiary legislations made through Government Notification No. 1975/44 of 2016 under the Electricity Act No.20 of 2009 for Overhead Lines not exceeding the nominal voltage of 1000V.

1.3.2 Above the Ground

LV Overhead Line Conductors shall be so located that at the distance to ground in any direction from any position to which any point of such conductors may sag under the maximum likely temperature of that line shall not be less than the distances below:

i. Low Voltage Conductor not surrounded by insulation or partially insulated Line

Over a road	5.5 m
Along a road	4.9 m
Over any other location accessible to the vehicular traffic	4.9 m
Over any other location inaccessible to the vehicular traffic	4.6 m
Connects equipment mounted on a support to any overhead line	4.3 m

ii. Low Voltage Aerial Bundled Conductor Line / Conductor surrounded by insulation

Over a road	5.5 m
Along a road	4.9 m
Over any other location accessible to the vehicular traffic	4.9 m

iii. Flying Stay Wire

Across any road or street	5.5 m

Note:

Above **Clause 1.3.2 (ii)** shall not apply to any section of an insulated overhead line at any point where it is not over or along a road accessible to vehicular traffic.

1.3.3 Distance from Buildings or Structures

The minimum clearance from any structure or building to any position to which a conductor in an overhead line at the **maximum likely temperature** of that line may swing under the influence of wind shall be as specified below;

Conductor Type	Vertical distance	Horizontal distance
Not surrounded by Insulation or partially insulated	2.4 m	1.5 m
Surrounded by Insulation	2.4 m	0.1 m

1.3.4 From Railway Lines

LV Overhead line conductors, surrounded or not surrounded by insulation shall have the following minimum clearances from railway lines.

Medium Voltage Conductor	7.3 m
Low Voltage Conductor	6.7 m

Note:
However, in any special case, clearances shall be maintained as directed by the Department of Railways.

1.3.5 From Other Conductors

a) Conductors of Same Circuit

Overhead Conductors not surrounded by insulation shall have the following vertical and horizontal spacing **from other conductors of same circuit.**

Conductor Type	Vertical	Horizontal
Conductors not surrounded by insulation & partially insulated	0.2m	0.3m

b) Conductors of Different Circuits: Vertical Spacing

The vertical spacing between any conductor of the lower circuit and any point to which a conductor of the higher circuit, on either different or same support, at attached or unattached crossings, may sag under the influence of load current (excluding fault current) shall not be less than specified below:

Circuit Description	Minimum Spacing between two circuits
Low Voltage & Low Voltage	0.6m
Low Voltage & 11kV	1.2 m
Low Voltage & 33kV	1.5 m

Note: Minimum spacing between two LV ABC lines shall be 0.1m.

c) Conductors of Different Circuits: Horizontal Spacing

The horizontal spacing between different circuits with conductors, (surrounded or not surrounded by insulation) shall not be less than specified below:

Circuit Description	Minimum Spacing between two circuits
Low Voltage & Low Voltage	0.3m
Low Voltage & 11kV	1.2m
Low Voltage & 33kV	1.5m

d) From Telephone Lines

Conductor not surrounded by insulation	1.2 m
Aerial Bundled Conductor / Conductor surrounded by insulation	0.6 m

1.3.6 From Trees

Low Voltage Overhead Line Conductors shall have the following minimum Vertical & Horizontal clearances from trees, at the maximum likely temperature.

The distance identified below may be further increased considering the factors such as tree movement, tree regrowth, overhanging of branches, conductor swing and Falling of a tree/part of a tree, etc.; for different geo-physical conditions, as applicable.
No part of a tree should be allowed above an overhead line within specified horizontal distances.

	Not surrounded by insulation	Surrounded by insulation
Vertical distance	2.7 m	0.15 m
Horizontal distance	1.5 m	0.15 m

1.3.7 Safety Working Clearances

To ensure personal safety the following minimum safety working clearance shall be maintained between;

Low Voltage Conductors not surrounded by insulation or partially insulated and any part of the human body	0.15 m
Low Voltage ABC / Conductors surrounded by insulation and any part of the human body	0.10 m
Low Voltage line, bare or insulated conductor and any mechanical equipment	3.50 m
Low Voltage line, bare or insulated conductor and any construction of building / structure	4.00 m

In special circumstances this may be further reduced to 1.0 m on approval of the Engineer-In-

Charge for the work.

Note:
No overhead line shall so far as is reasonably practicable, come so close to any building, tree or structure as to cause danger.

2. Materials Used and Applications

2.1 Poles

Either 8.3m Reinforced Concrete (RC), Pre-Stressed (PS) or Spun concrete poles shall be used for all new overhead line construction. Wooden poles shall be used in extreme cases where no concrete poles can be used. Higher sizes of poles may be used in combined run as appropriate.

Pole positions are classified as:

Terminal (Dead end)	Where the line is terminated on one side of the pole
Tension	Where the line is terminated on both sides of the pole. (also called as section pole)
Intermediate	Where the line is continuous and supported on LV insulators/ suspension brackets

Self-supported (8.3m 500kg/9m 500kg) RC poles may be used in urban and densely populated areas where stays and struts cannot be erected following the pole selection chart given in **Annex C** of this standard. Engineer in charge has the freedom to select poles to avoid stays and struts following mentioned charts.

All poles must resist the sum of the forces due to;

- Conductor tensions
- Wind forces on conductors and pole

Pole sizes and types shall be selected according to the sag-tension charts and pole selection charts as given in **Annex B and C** of this standard.

Pole Type	Pole Drawing No	Purpose	Buried Length (m)
8.3m/100kg RC	LV-01	LV only	1.4
8.3m/100kg PS	LV-02	LV only, where transport is difficult	1.4
8.3m/100kg PS Spun	LV-03	LV Only, where transport is difficult, For non-coastal areas	1.4
8.3m/100kg RC (LW)	LV-04	LV only, where transport is difficult, For non-coastal areas	1.4
8.3m/500kg RC	LV-05	LV only, Self-supported pole	1.4
9m/115kg RC	LV-06	LV only, where clearances cannot be maintained	1.5
9m/500kg PS	LV-07	LV Only, where clearances cannot be maintained, Self-supported pole	1.5

10m/ 225kg RC	LV-08	LV + single circuit MV	1.7
10m/300kg RC	LV-09	LV + single circuit MV	1.7
11m/350kg PS	LV-10	LV + Double circuit MV	1.8
11m/500kg PS	LV-11	LV + Double circuit MV	1.8
11m/850kg PS	LV-12	LV + Double circuit MV	1.8
11m/1200kg PS	LV-13	LV + Double circuit MV	1.8
13m/500kg PS	LV-14	LV + Double circuit MV	2.2
13m/850kg PS	LV-15	LV + Double circuit MV	2.2
13m/1200kg PS	LV-16	LV + Double circuit MV	2.2

PS - Pre-Stressed, RC - Reinforced Concrete, LW - Light Weight

NOTE:

i. Instead of the normal procedure of erecting self-supporting 8.3m/500kg pole in city LT distributions schemes, 8.3m/350kg pole shall be used as per the pole selection charts.

ii. Similarly, 10m/225kg pole can be used instead of 10m/300kg pole as per the pole selection charts.

2.2 Stay Wire

All Stay wires (guy wires) have seven strands. Two sizes of galvanized steel stay wire are normally available and are used where guyed poles are required. These stay wire sizes are referred to as Medium and Heavy and are identified as follows:

Category		**Medium 7/10 SWG**	**Heavy 7/8 SWG**
Maximum working load	kN	16.26	24.64
Ultimate tensile strength	kN	40.65	61.60
Nominal Area	mm^2	70.00	90.0
Diameter	mm	9.75	12.0
Weight	kg/m	0.460	0.690
Stranding	No./mm	7/3.25	7/4.00
Purpose		LV only	MV only MV & LV

2.3 Stay Assembly

As shown in the **Drawing No. LV-17,** Stay Assembly consists of the following;

a) Stay Rod with Ratchet Nut
b) Stay Tightener (forged steel / channel iron cross head with ratchet arrangement)

c) Stay Plate
d) Stay Pole Bracket and two Thimbles

Two types of Stay Assemblies are used and are as follows:

a) LV Stay Assembly for Low Voltage Lines
b) MV Stay Assembly for Medium Voltage lines and combine run of MV & LV circuits.

Item	LV Stay Assembly	MV Stay Assembly
Rod Length	1.8 m	2.4 m
Rod Diameter	16 ± 2% mm	20 ± 2% mm
Height of the tightener	400 ± 1% mm	400 ± 1% mm
Round Iron used for the Tightener	12 ± 2% mm	14 ± 2% mm
Stay Plate	300(± 1%) x 300(± 1%) x 4(± 2%) mm	380 (± 1%) x 380 (± 1%) x 4 (± 2%) mm
Thimble	54 x 73 (± 2%) mm	59 x 79 (± 2%) mm
Groove Diameter for the Thimble	18 ± 2% mm	21 ± 2% mm

Source: CEB Specification 015-1:2015 or latest

After cutting the stay wire cold galvanizing shall be applied at splicing to prevent corrosion.

2.4 Stay and Strut Brackets

Dimensions of the stay and strut brackets are as shown in the **Drawing No. LV-17.**

2.5 Flying Stay Buckle Assembly

Flying Stay Buckle Assembly consists of turn buckle, two thimbles, two pole clamps and one stay assembly as shown in the **Drawing No. LV-18.**

Item	LV Flying Stay Assembly
Length of the Turn Buckle	450 mm
Round Iron used for the Buckle	12 mm
Thimble	73 x 54 mm
Groove Diameter of the Thimble	18 mm
Thread Length of both sides of the Buckle	225 mm
Pole Bracket 1	50 x 10 mm Flat Iron (110mm)
Pole Bracket II	50 x 6mm Flat Iron (210mm)

All parts of the Flying Stay Assembly after cutting, drilling and threading are cold galvanized to prevent corrosion.

2.6 Stay Insulator

Technical details of LV and MV stay Insulator are as follows (**Drawing No. LV-21)**

Dimensions	LV	MV
Tensile Strength kN	53	89
Overall diameter mm	75	85
Height (Min) mm	115	150
Diameter of Holes mm	20	25
Tolerance mm	±5%	±5%

Source: CEB Specification 057:1997 or latest

2.7 Bare Conductor

a) Technical details of Fly conductor

Characteristics		Fly
Nominal size	mm^2	60
Type		AAC
Number of Strands/ strand diameter	mm	7/3.40
Overall diameter	mm	19.02
Modules of Electricity	N / mm^2	66000
Coefficient of thermal expansion	per °C	23×10^{-6}
Ultimate Tensile Strength	N	10500
Weight	kg / km	175.3
Conductor resistance (20° C)	ohm / km	0.452
Maximum current rating (at 65 ° C) Day	A	200

Source: CEB Specification 019:2013 or latest

b) Technical details of Racoon conductor

Characteristics		Racoon
Nominal size	mm^2	91.95
Type		ACSR
Number of Strands/ strand diameter	mm	7/4.10
Overall diameter	mm	12.27
Modules of Electricity	N / mm^2	79000
Coefficient of thermal expansion	per °C	19.1×10^{-6}
Ultimate Tensile Strength	N	27060
Weight	kg / km	325.17
Conductor resistance (20° C)	ohm / km	0.3632
Maximum current rating (at 70 °C) Day	A	200

Source: CEB Specification 019:2013 or latest

c) Technical details of Lynx conductor

Characteristics		Lynx
Nominal size	mm^2	175
Type		ACSR
Number of Strands/ strand diameter	mm	37/2.79
Overall diameter	mm	19.53
Modules of Electricity	N / mm^2	80000
Coefficient of thermal expansion	per ^oC	17.8×10^{-6}
Ultimate Tensile Strength	N	79800
Weight	kg / km	858.3
Conductor resistance (20° C)	ohm / km	0.1576
Maximum current rating (at 70 ° C) Day	A	400

Source: CEB Specification 019:2013 or latest

d) Technical details of Silvassa conductor

Characteristics		SILVASSA
Nominal size	mm^2	150.7
Type		ACCC
Number of Strands/ strand diameter	mm	15/3.24
Overall diameter	mm	14.35
Modules of Electricity	N / mm^2	68100
Coefficient of thermal expansion	per ^oC	16.5×10^{-6}
Ultimate Tensile Strength	N	66500
Weight	kg / km	392.3
Conductor resistance (20° C)	ohm / km	0.2286
Maximum current rating (at 75 ° C) Day	A	423

Source: CEB Specification 019:2013 or latest

2.8 Conductor Attachments

2.8.1 "D" Brackets & Shackle Straps

These are suitable to use with 90 mm x 76 mm LT Insulators and made of 30 mm x 6 mm Flat Iron. All holes on the bent surfaces of the "D" Brackets and on the Shackle Straps are of the same size as to allow a 16 mm bolt to pass through as shown in the **Drawing No. LV-20.**

2.8.2 Bolts and Nuts

Following sizes of hot dipped galvanized bolts are used for LV line construction.

Dimension	Purpose	Thread Length
16 x 120 mm	Bolts for "D" Bracket	25 mm
16 x 180 mm	Pole Bolts (Spun/LW Poles)	75 mm
16 x 200 mm	Pole Bolts	75 mm
16 x 230 mm	Pole Bolts for combined run	75 mm
16 x 250 mm	Pole Bolts for combined run	75 mm
16 x 280 mm	Pole Bolts for combined run	75 mm
16 x 300 mm	Pole Bolts for combined run	25 mm
16 x 360 mm	Pole Bolts for combined run	25 mm

Source: CEB Specification 064-2:1999 or latest

Pole bolts lengths are to be selected to suit the pole thickness at point of fixing.

2.8.3 Washers

The washers shall be of Round type hot dipped galvanized flat iron. Thickness shall not be less than 3mm and diameter shall not be less than 45mm with a center hole allows a 16 mm diameter bolt to pass through.

2.8.4 LT Insulators

The LT Insulator is made of good commercial grade wet process porcelain. It is Brown or White Glazed and the entire glazed surface is relatively free from imperfections.

The LT Insulator technical details are as follows and dimensions are shown in the **Drawing No. LV-21.**

Height of the Insulator	76 mm
Diameter of the Insulator	90 mm
Insulator bolt hole diameter	19 mm
Radius of the conductor grove	9.5 mm

Source: CEB Specification 043:1996 or latest

2.9 Connectors used in Bare Conductor AAC Lines

The Aluminium Connectors and terminators are made out of high strength and high conductivity Aluminium. They are of tubular or "H" type constructions.

The compression connectors and terminations have markings indicating the size of conductors and dies for easy identification. Makings are also available on the surface of the connector to show the location and sequence of the crimping.

2.9.1 Non tension Joints (Jumper Connectors)

Non –tension Jumper Connector (H type)
"H" shape Compression Connectors are suitable for making main line non-tension jumper connection and T-off connections. It is suitable to accommodate conductors of equal and un-equal sizes.

2.9.2 Full Tension Compression Connectors (Mid-Span Joints)

Mid-span jointing sleeves are tubular type and suitable for jointing two conductors of same size. It is provided with a center stop "indent" for correct positioning of conductors before compression.

The above types of connectors are shown in the **Drawing No. LV-22**.

2.10 Aerial Bundled Conductor (ABC)

Five Wire ABC is used for all LV line constructions for the first circuit and four wire ABC is used for additional circuits. Two wire ABC is also used as appropriate for line ends on approval of the Engineer concern.
Details of ABC used in LV lines in CEB are given in the following table

Item Description	**2 Wire 1x 50 + 54.6 mm^2**	**4 Wire 3 x 70 + 54.6 mm^2**	**5 Wire 3 x 70 + 54.6 + 16 mm^2**	**4 Wire 3 x 95 + 70 mm^2**	**5 Wire 3 x 95 + 70 + 16 mm^2**
Nominal size mm^2	1 x 50 + N54.6	3x70 + N54.6	3x70 + N54.6 + 16	3 x 95 + N70	3 x 95 + N70 + 16
Stressed area (messenger/neutral) mm^2	54.6 AAAC	54.6 AAAC	54.6 AAAC	70 AAAC	70 AAAC
Phase conductor mm^2	50 AAC	70 AAC	70 AAC	95 AAC	95 AAC
Overall diameter mm	-	36.90	37.50	44	44
Modules of Elasticity kg / mm^2	6200	6200	6200	6200	6200
Co-efficient of Thermal Expansion per K	23×10^{-6}	23×10^{-6}	23×10^{-6}	23×10^{-6}	23×10^{-6}
UTS of messenger kN	1660	1660	1660	2050	2050
Weight kg /km (Complete Cable)		975.8	1042.3	1196.2	1262.8
Conductor /Street lighting conductor resistance (20°C) ohm /km	0.641	0.443	0.443/1.91	0.320	0.320 /1.91
Maximum conductor	90	90	90	90	90

temperature ^{o}C					
Maximum current in permanent condition (conductor temp. 90 ^{o}C and air temp. 30^{o}C) (A)	168	213	213 / 83	258	258/83
Voltage drop in conductors (at PF=0.8) (V/A/km)	1.27	0.87	0.87	0.67	0.67

2.11 Connectors used in Aerial Bundled Conductors

2.11.1 Suspension Small Angle Assembly

Each assembly includes:

a) One number suspension bracket
b) One number movable articulated link
c) One number suspension clamp

as shown in the **Drawing No. LV-23.**

Suspension bracket is made of Aluminium Alloy suitable for attachment to a concrete pole by either 16 mm GI bolt or by stainless steel straps 20 x 0.7 mm.

The assembly shall consist of the following three components.

a) One number suspension bracket (NFC reference CS 1500)
b) One number movable connecting (articulated) Ink (NFC reference LM 1500)
c) One number suspension clamp (NFC reference PS 1500)

Each component shall have a nominal force of 1500 N as per the mechanical requirements given in NFC reference ES 1500, CS 1500, LM 1500 and PS 1500

Suspension assemblies shall be installed on the insulated neutral messenger. The assembly is suitable for use on 'out of aligned' poles with angles of deviation such that the maximum angle is 45^{0} for salient angles and 27^{0} for re-entrant angles as shown in **Drawing No. LV-23.**

2.11.2 Dead End Assembly

Dead end assembly shall be suitable for anchoring of overhead lines of rated voltage 0.6/1kV with bundled insulated conductors stretched between poles. Dead end assembly shall be installed on the insulated neutral messenger.

The assembly shall consist of the following two components.

a) One number tension bracket [NFC reference CA 1500].
b) One number wedge type tension clamp [NFC reference PA 1500].
c) Two Nos. insulation straps for clamping bundled conductors.

Each component shall have a nominal force of 1500 daN as per the mechanical requirements given in NFC reference EA 1500. Those components shall be delivered as assemblies to ensure compatibility of the components.

The Bracket is made of Aluminium Alloy for attachment to a wood or concrete pole by either 16 mm. GI Bolts or Stainless-Steel straps as shown in the **Drawing No. LV-60.**

2.11.3 Large Angle Assembly

Description of sub components of the large angle assembly is the same as for the dead-end assembly described above, but 2 Nos. wedged type clamps are included as shown in the **Drawing No. LV-23.**

2.11.4 Conductor Fittings

Connector Type	Description
H Connectors	H connectors should be used where the joints are not opened frequently.
PG Clamps (Cu/Cu, Al/Al, Bi-metallic)	PG clamps shall be used for tension joints which are opened frequently.
Palm Type Non-Tension Jumper Connectors	Palm type connectors shall be used for non-tension joints which are opened frequently.

2.11.5 Pre-insulated Sleeves for 70/95 mm^2 AAC Phase, 54.6/70 mm^2 AAAC Neutral and 16mm^2 AAC Street Lamp Core

The sleeves are pre-insulated i.e. the compression is directly made over the insulation but crimping must not deteriorate the insulation of the sleeve. The pre-insulated sleeves are waterproof type.

A central stop is marked on sleeve to ensure that the conductors are correctly positioned as shown in the **Drawing No. LV-22**.

It is required to use the proper die for the lug and joint types following the instructions given by the manufacturer of the cable lug and crimping tool.

2.11.6 Pre-Insulated Lugs for 70/95 mm^2 AAC Phase XLPE and 54.6/70 mm^2 AAAC (Neutral XLPE Insulated)

The lugs are pre-insulated i.e. the compression is directly made over the insulation but crimping does not deteriorate the insulation of lugs (See **Drawing No. LV-24)**

The pre insulated lugs are the water proof type and pre-filled with an oxide inhibiting compound or silicon grease.

The lugs are of bi-metallic type and are meant to be connected from copper to Aluminium conductors.

For easy identification pre-insulated lugs are marked indicating the conductor sizes.

It is required to use the proper die for the lug and joint types following the instructions given by the manufacture of the cable lug and crimping tool.

2.11.7 Insulated Piercing Connectors

These connectors are of insulation piercing type for both main and tap conductors.

The housing is made entirely of mechanical and weather resistant plastic insulation material and no metallic part outside the housing except for the tightening bolt.

The bolts are shear head type and insulated piercing connectors are waterproofed.

A special rubber seal has been provided to make the connector water tight. Teeth of the connector are greased to prevent moisture penetration.

The connectors have provision (such as removable caps) enabling tapping and branching on either side of the connector. (See **Drawing No. LV-24 & 25)**

Following are the different sizes of insulated piercing connectors;

Identification Code	Cross section of conductors (mm^2)			No of Bolts	Application
	Main		Tap		
	Insulated conductors/ Cables	Bare	Insulated conductors/ Cables		
a	70 - 95	-	54.6 - 70	2	ABC – ABC
b	70 - 95	-	70 - 95	2	ABC – ABC
c	70 - 95	-	54.6 - 50	2	ABC – ABC
d	54.6 - 70	-	54.6 - 70	2	ABC – ABC

e	54.6 - 70	-	54.6 - 50	2	ABC – ABC
f	54.6 - 50	-	54.6 - 50	2	ABC – ABC
g	-	22 - 75	70 - 95	2	Bare – ABC
h	-	22 - 75	54.6 - 70	2	Bare – ABC
i	-	22 - 75	54.6 - 50	2	Bare – ABC
j	6 – 25	-	6 - 25	1	ABC Street Line – ABC Street Line
k	-	22 - 75	6 - 25	1	Bare – ABC Street Line

2.11.8 Insulation Cap

The insulating cap is used at the terminations of the twisted insulated cable to avoid entry of moisture which is shown in the **Drawing No. LV-25.**
There is no penetration of water into the cap as a heat shrinkable sleeve is provided to cover the end of the bundled conductor.

2.11.9 Insulating Binding Strap (Cable tie)

The binding strap is used for binding the Aerial Bundled Conductor at different locations with the dead-end clamp and suspension clamp. The strap has a locking and releasing facility.

Total length and the minimum width of the straps are 215 mm and 9mm respectively as indicated in the **Drawing No. LV-25.**

2.11.10 Stainless Steel Straps & Buckles

Stainless steel Strap is used to fix the accessories to the poles where necessary.

Stainless Steel Strap is of grade 18/8 and 20mm width and 0.7 mm thickness approximately (See **Drawing No. LV-25)**

The Buckles used for the strapping are made of stainless steel. These buckles are compatible with the above stainless-steel straps.

2.11.11 Outrigger Bracket

They are made out of Angle Iron and hot dipped galvanized after cutting, drilling and welding to prevent corrosion. Dimensions of the Outrigger Bracket are as shown in the **Drawing No. LV-26.**

2.11.12 Cradle Guard

Cradle Guard is made out of Angle Iron and (Hot Dipped Galvanized) after cutting, drilling and welding to prevent corrosion. Dimensions of the cross arm, eye bolt thimbles and wires are as shown in the **Drawing No. LV-62.**

3. Overhead Low Voltage Line Construction

3.1 Guidelines for Overhead Low Voltage Lines

3.1.1 Overhead Low Voltage Lines should be routed along the roads be straight as far as possible.

3.1.2 Pole should be located so as to provide maximum number of service connections.

3.1.3 Connections to the prospective customers shall be provided along the access road to the premises as much as possible.

3.1.4 Low Voltage Lines shall be three phase while in special cases the Chief Engineer (P&D) is given the option of choosing single phase configuration.

3.1.5 Following points shall also be considered while locating the pole positions along the lines.

- Access for construction and future maintenance work.
- Environmental and aesthetic considerations.
- Availability and suitability of land to erect poles.

3.1.6 The following shall be avoided.

- Heavy angles and deviations
- Drainage lines, water pipes, side drains, pavings, culverts, marshy lands etc.
- Crossing of probable building sites, play grounds, school premises, road widening routes, places with valuable vegetation etc.

3.1.7 Poles, struts and stays should be positioned so as to cause least obstruction to the public.

3.1.8 Ensure that the poles, stays and struts are not at risk of being damaged by vehicles from driveways.

3.1.9 All LV lines shall be constructed with 8.3m poles. However, pole height may be higher than 8.3m (9m, 10m or 11m) to maintain ground clearances in road crossings and elevated areas in special cases.

3.1.10 Maximum span and pole sizes for different conductor configurations shall be in accordance with **Clause 3.4** of this standard.

3.1.11 If the new line is a combined run of LV and MV, construction should be done using 10m, 11m or 13m poles as specified in the Annexure B and C.

3.1.12 Standard conductor clearances to the ground, permanent structures and trees shall be maintained as specified in **Clause 1.3.1** of this standard.

3.1.13 In case overhead circuits of different voltages (not including earth wires) crosses each other the conductors of the higher voltage circuit shall be placed above the conductors of the lower voltage circuit.

3.1.14 Guards shall be installed at railway crossings for LV lines. Construction of cradle guard shall be in accordance with Drawing No. LV-62.

3.1.15 LV outrigger brackets (G.S) shall be used as an offset support where buildings are located very close to the road to maintain the minimum horizontal and vertical clearances.

3.1.16 Five core ABC shall be drawn for the first circuit and four core ABC shall be drawn for additional circuits.

3.1.17 Bare conductor lines may be connected to ABC lines as an extension, only if the ABC Lines will not be overloaded.

3.1.18 Maximum span for (3x95sqmm + 1x70sqmm + 1x16sqmm) and (3x70sqmm + 1x54.6sqmm + 1x16sqmm) ABC lines shall be 30 m and 35 m respectively for LV lines. Maximum span shall be 45m for LV bare conductor lines.

3.1.19 Construction of LV lines discussed above is required to follow pole selection Charts in Annex C of this standard to select span and the type of pole.

3.1.20 Stringing of conductors should follow the "Sag Tension Charts" given in Annex B of this standard.

3.1.21 Notice shall be served under item 3 of schedule 1 of the Electricity Act no. 20 of 2009 and its latest relevant amendments to the land owners when land and vegetation are involved in construction of LV Lines.

3.1.22 Sag and Tension

Sag of the conductor on a flat terrain is greatest at mid-span. Further, this sag will increase with temperature and be a maximum at the maximum operating temperature.

This sag is given by;

$$\text{Maximum Sag} = \frac{wl^2}{8T}$$

Where

w = weight per unit length of conductor
l = lengths of design span
T = tension at maximum temperature

Conductor sag and tension will be determined in accordance with the following parameters.

- Maximum tension of the conductor is determined at 7^{o} C with wind loading of 0.575 kN/m^2
- Maximum sag of the conductor is determined at 70^{o}C with no wind.
- Constant conductor tension occurs at a defined normal everyday temperature of 32^{o}C. This is the average temperature assumed at which conductor stringing shall

be carried out.

- Tension of the conductors at average temperature (32°C) shall be limited to 17% of the ultimate tensile strength (UTS) of the conductor.
- Maximum allowable stress with wind and low temperature (assumed climatic loads on conductor) shall be limited to 40% UTS.
- Sag and Tension charts for different types of conductor are given in **Annex B** of this standard.

3.2 Selection of Route

Following factors should be considered when selecting a line route.

a) The route shall be along the roads to be straight as far as possible
b) One side of the road is used as far as possible
c) Amount of way-leave to be cleared shall be minimized
d) Inconvenience caused to the other services shall be minimized
e) Swampy ground and areas liable to flood shall be avoided
f) Routes which would involve excavation in rock shall be avoided
g) The use of taller poles at uplifts shall be avoided and construction of tension points at uplifts also be avoided
h) As far as possible, route shall be least expensive to CEB.

3.3 Location of Poles

The poles in residential, commercial or industrial areas are generally spaced to more frequent intervals than in rural areas.

Poles should be located so as to provide access of service lines of prospective customers down driveways, right-of-ways, and side streets. Some compromise may also be needed to ensure that poles located on corners and at driveways will not unduly obstruct the traffic.

The location of all poles shall be pegged before construction.

The following are the recommended maximum distances for pole spacing:

Circuit Description	**Span Along the Road**		**Span Across the Road**
Conductor Type	**AAC**	**ABC**	**ABC / AAC**
LV Only on 8.3m Pole	45 m	35 m	30 m
LV Only on 9m Pole	45 m	35 m	30 m
MV and LV combined run on 10m Pole	45 m	35 m	30 m
MV & LV combined run on 11m & 8.3m pole	MV 70m, LV 45m	MV 70m, LV 35m	50m MV & 30 m LV

MV & LV combined run on 13m & 8.3m pole	MV 70m, LV 45m	MV 70m, LV 35m	50m MV & 30 m LV

Note: Actual spans shall be determined according to terrain, width of the road and the height and weight of poles used:

The distance between shackle poles should not exceed either of the following:

Circuit Description	Maximum Span	Maximum Number of Spans
LV Only	315 m	07
MV & LV combined run on same Pole	LV 280m & MV 560 m	07
MV & LV Combined run on 11m & 8.3 m pole	LV 245m & MV 490 m	07
MV & LV combined run on 13m & 8.3m pole	LV 245m & MV 490 m	07

However, for a particular size and type of pole correct length of a span shall be selected using the sag and tension charts and the pole selection charts which are given in the Annex B and C of this standard.

3.4 Selection of Poles

All poles used in the LV lines shall be concrete poles. However, wooden poles may be used in difficult terrain under the instructions of the engineer concern.

Since concrete poles are designed for specific maximum loads and the ground clearances shall be maintained as per **Clause 1.3.1** of this standard, correct selection of poles for each type of construction and each line pole position is essential. 8.3m 100kg RC Poles shall be used for LV Lines. However, 9m 115kg poles may be used to maintain the ground clearances where necessary. 8.3 m 100 kg pre-stressed poles also may use in difficult terrain. 8.3 m 100 kg pre-stressed Spun poles and 8.3 m 100 kg RC light-weight poles also may use in difficult terrain for non-coastal areas.

Erection of self-supported 8.3m 500kg RC/9m 500kg PS Pole may be recommended where erection of Stays and Struts is not possible due to ground conditions. Span and the angle of deviation for different pole top arrangements for different pole heights are given in the **Annex C.**

Span & the type of pole used for different conductor configuration are tabulated below for quick reference.

Span & the type of pole for any other conductor configuration may be selected with the

instructions of engineer concern.

Any pole which is damaged or cracked shall not be selected for erection.

3.5 Handling and Transportation of Concrete Poles

Concrete poles for Low Voltage Lines are designed such that the strength in the direction along the line is ¼ of the strength in the transverse direction. The shape of a section through a typical concrete pole easily demonstrates this difference in strength. Therefore, a pole must be stored, transported, and handled at all times with its longer axis of the cross section in the vertical position to ensure that the resulting forces are always resisted by the stronger direction of the pole.
Poles must not be dropped off a truck but lifted by means of a crane. When lifting, poles shall be supported at two places to avoid cracking.
The pole should not be allowed to bend on the flat or wide sides, nor to lurch against the side of the pole when it is lowered into position during erection.
The poles should be transported on a suitable vehicle supported full length or with a limited amount of overhang. No overhang for 'Pre Stressed' poles should be ensured.

3.6 Excavation of Pole Pits

The position of the pit is usually indicated by a peg. The pole pit must be excavated so that the pole is erected in its correct position. If the peg indicates the center of the pit, it is advisable to place a temporary peg at a definite distance away so that it is not disturbed during digging operations. The pit can be excavated either manually, or by truck mounted augers.
The depth of the pit is usually made equal to one-sixth of length of the pole as indicated in the **Clause 2.1** of this standard.

Precautions should be taken to prevent soil subsidence while excavating in loose ground or in close proximity to roadways or buildings. To prevent soil subsidence, it may necessary to support the walls of the pit with wooden planks or empty barrel without top and bottom.
When it is required to excavate a pit adjacent to an existing pole, temporary stays should be fixed to the pole prior to excavation. No unnecessary soil disturbing should be ensured.

3.7 Foundation Types

For the purpose of the support foundation, selection it is recommended to consider three categories of soil; Good, Poor and Waterlogged as shown in the Table.

Classification	Type of Soil	Density kN/m^3	Ultimate Bearing Capacity kN/m^2	Ultimate Max. Lateral Soil Resistance Factor k (*for 1m wide foundation) $kN/m^2/m^{//}$
Good Soil	Dry, hard loam and clay, stiff clay, sandy ground and gravel with good surface water drainage	1600	370	300
Poor Soil	Wet loam, soft clay, loose sand and gravel with reasonable surface water drainage	1350	185	150
Waterlogged Poor Soil	Fine wet sand, very soft clay and soil that tend to absorb large amount of water	750	150	100

A selection of foundation suitable for above soil conditions are detailed in **Drawing No. LV-40.** Worst soil condition shall be considered in selecting the soil type in case of seasonal changes of soil strength.

Special foundations should be laid in poor soil locations, to prevent the pole sinking.

A 100 mm layer of concrete is poured in the bottom before erection of pole and allowed to harden in both poor soil and water-logged poor soil conditions. After placing the pole, the pole pit shall be back filled with good soil in layers where soil condition is good or poor. Each layer shall not be greater than 150 mm and compacted by hand ramming. The filling shall be up to a height not less than 250mm above ground level. The pole pit shall be back filled after placing the pole with concrete in the case of water-logged poor soil condition. Temporary stays shall be used to support the pole until the concrete is hardened. The concrete filling shall be up to a height not less than 100 mm above ground level.

3.8 Erecting of Poles

The preferred method of erection is by cranes of adequate size for the weight of pole being handled. Traffic wardens should be posted when the crane obstructs the road and interference with normal traffic flow must be kept to an absolute minimum. Manual methods of pole erection are acceptable in locations inaccessible to cranes.

a) Poles should be erected vertically.
b) The face of the narrow side must be aligned with the LV Line in straight sections of the line. This method is applicable to both tension and terminal poles.
Pole should be erected to bisect the angle at Angle Points as shown in the **Drawing No. LV-38.**

c) Brackets, stay clamps and earth clamps shall be fixed end to the pole using nut and bolts at the ground level before erection of the pole.

3.9 Installation of Stays, Struts & Flying Stays

When a line changes direction, an additional force is introduced at the angle pole. This force is the resultant of line tensions acting at the pole. The resultant force tries to move the top of the pole in the direction that bisects the angle between the wires. These forces, due to angles, can be considerable. The Stays, Struts and Flying Stays shall be fixed to neutralize the resultant force on the poles.
Number of stays to be used at any particular pole location is designed on the overturning force acting on the pole. The force acting on the pole depends on the following factors:

a) Number of conductors and size of the conductor along with conductor tension.
b) Length of adjacent spans
c) Angle of deviation of the line
d) Equipment mounted on the pole
e) Geographical position of the pole

7/12 SWG (7/2.60 mm) Stay Wire shall be used for LV Lines except in coastal areas. 7/10 SWG (7/356mm) Stay wire shall be used in coastal areas to avoid fast corrosion. 7/8 SWG (7/4.05 mm) Stay Wire shall be used for MV and LV combined runs. Stay insulators shall be used in all stays. Thimbles and Brackets shall be used as indicated in **Drawing No. LV-41.**

Following shall be noted in fixing stays & struts

a) The angle between pole and the stay wire or strut pole shall not be less than 30^{o}.
b) Stays, Struts and Flying Stays should be erected so as to avoid disturbances to pedestrians or vehicular traffic.
c) It shall be ensured that the correct side of the ratchet nut faces the ratchet face of the cross head of the buckle before tightening the stay buckle.
d) Stay and Flying Stay Wire over a street must not be less than 5.5m from the ground.
e) Stays shall be installed conforming to **Drawing No. LV-41.**
f) In flat terrain poles used for struts and flying stays shall be of the same size as line poles.
g) Stay insulator shall be positioned below the level of the lowest current carrying conductor and not less than 3.7 m above the ground.
h) Splicing of Stay Wire shall be done according to **Drawing No. LV-28** and **Drawing No. LV-30** Depth of the pole pit of the strut pole shall not be less than 800 mm.

Stays, Flying Stays and Struts shall be installed and kept in position before conductors are strung to avoid over-straining of supports.

Pits for stays, struts and flying stays should be excavated in locations marked by pegs. All struts and stay rods shall be in line with the resultant of load and be so installed that the buckle of the stay assembly is above ground level by not more than 30cm after the load is applied.

Construction of struts and flying stays shall be in accordance with the **Drawing No. LV-29** and **Drawing No. LV-36** respectively.

3.10 Stringing of Conductors

Cable drum should be securely supported on drum jacks with an axle during running out of conductors. The drum jacks should be on a firm foundation and the axle of the drum jack should be level.

Sufficient employees shall be engaged at site to ensure that the conductors are not damaged by contract with the ground or pole hardware during running out. Stringing pulleys shall be used while stringing of conductors. Care should be taken to avoid kinking, twisting or abrading of the conductor in any manner. LV insulators and shackle straps shall be fixed to the D Brackets at tension points of the line. One end of the conductor shall be bound to one tension point insulator and pulled by hand from the other end of the section. Then the conductor shall be tensioned and bound to the insulator at the other end. Conductor should not be trampled on, run over by vehicles or dragged over the ground. Vehicles should not be used to run out conductors. Stays, Struts and Flying Stays shall be installed before stringing the conductor.

Special care must be taken when running out of conductors near other existing electrical systems.

After stringing the conductors, line shall be kept under tension on stringing blocks for a period of not less than 24 hours to allow settling before final tensioning and binding.

3.11 Tensioning and Binding

3.11.1 Bare Conductors

All Aluminium 7/3.40 mm (Fly) Conductor shall be used for LV Lines.

Earth Wire No.8 shall be strung on the top of the pole before stringing the Bare Conductors. Conductors shall be strung in vertical formation as per drawings. After final tension of the conductor LV insulator shall be fixed to the D Brackets at the intermediate poles. Conductors shall be bound to the insulator at each support using Aluminium Binding Wire No.11 as shown in **Drawing No. LV-30**. Only one mid-span joint per conductor shall be allowed for a shackle point span. All mid-span joints shall be compression type.

During stringing of conductors, maximum precautions shall be taken to prevent excessive strain and damage to the conductor. Standard sags and tensions applicable to the particular size of conductor shall be maintained.

The conductors should be tensioned using ratchet pullers and wire grips (Come along Clamps) designed to prevent damage to the conductor using tensioning.

3.11.2 Aerial Bundled Conductor

The conductor should be pulled from the top of the drum. Bundled Conductor shall not be dragged on the ground. A suitable means of breaking the drum to prevent over-run should be provided. Stringing pulleys used for Bundled Conductor shall be installed on every pole. The bundled conductor shall be fitted with a complete pulling grip system such that the main pulling force comes only on the neutral messenger. During running out the conductor should be pulled only by hand or by using a Nylon Grips, a swivel, a GS Grip and a rope as shown in the **Drawing No. LV-54.**

Insulating conductor grips designed to prevent damage to the insulation of the conductor shall be used for tensioning. Every care must be taken to avoid damage to the conductor insulation.

The strained section of the bundle will be kept on stringing blocks a minimum period of 24 hours before clamping suspension and angle points.

Dead end fittings shall be fitted to the conductor after tensioning at each shackle point. Intermediate fittings shall then be fitted at major angles and then the smaller angles. After all fittings are in place the sagging should be checked at two places and corrected if necessary.

Insulation straps (cable ties) shall be used to tie the conductor at each supporting point as shown in **Drawing No. LV-55** and **Drawing No. LV-60.**

3.12 Installation of Conductor Attachments

3.12.1 Bare Conductor Attachment

"D" Brackets and Shackle Straps shall be installed using bolts and nuts according to the pole top arrangement as shown in **Drawing No. LV-32 to Drawing No. LV-53**. "D" Brackets shall be always fixed on the narrow face of the pole. Care shall be taken in handling and installing LV Insulators. Conductors at straight line and at acute angles it shall be tied to the outer groove of the insulator and on to the inner groove at opium angles. Hot Dip Galvanized Cotter Pin of diameter 16 mm and length 120 mm is also used as an insulator Pin in place of insulator bolt. Binding shall be performed as shown in the **Drawing No. LV-30** soft drawn Aluminium Binding Wire. Binding at intermediate insulators shall only proceed after the terminal shackle points have been completed at both ends.

3.12.2 Aerial Bundled Conductor Attachment

The correct attachment shall be selected and installed on the poles in different positions, such as small angle point, shackle point, large angle point, etc. As shown in **Drawing No. LV-54 to Drawing No. LV-61.**

3.13 Installation of Connectors

3.13.1 Bare Conductors

Compression type Aluminium fittings should be used for all terminal, mid-span and jumper connections as shown in **Drawing No. LV-32 to Drawing No. LV-53**.

Utmost care should be exercised in installing connectors to ensure that contact surfaces of clamps and wires are clean and bright.

There are three types of non-tension joints used as jumper connectors and T-off for LV lines. These shall be in accordance with the **Drawing No. LV-22.** Palm type non-tension jumper connectors should be used for all T-offs and sleeve type non-tension connectors should be used as main line jumper connectors. Bolts of non-tension jumper terminals should be tightened hard, but the threads mush not be overstressed.

Where mid-span tension joints are required, the conductor ends should be examined and any damaged strands should be trimmed back as necessary.

H Type compression connectors shall be used for connecting the branch conductor to the main conductor at the T-off. H Type compression connectors should also be used for connecting unequal conductor terminals.

All jumpers shall have adequate lengths so as not to apply any force to the main conductor. Adequate clearances shall be maintained around all jumpers at congested poles such as Tee-off and right angles.

Above type of compression connectors could be crimped using both hydraulic and mechanical compression tools. Connectors and dies shall be selected as per the following table to suit the conductors used.

It is required to use the proper die for the lug and joint types following the instructions given by the manufacture of the cable sleeve and crimping tool.

3.13.2 Aerial Bundled Conductor

All joints except T-offs shall be of compression type insulated connections. Special care

must be taken to ensure that the correct size and type of connectors are used for each conductor as shown in **Drawing No. LV-55 to Drawing No. LV-62.** Tension connectors are employed for mid-span joints on the neutral messenger only. Non-tension connectors can then be applied to all other conductors ensuring that no tension force is applied to these other conductors.

Insulation piercing connectors should be used for all tee-off jointing. They shall be applied over the insulation of the conductor and screwed down into the conductor using special shear head screws. These must be tightened until shearing of the hold head takes place, thus making a permanent watertight connection. Once applied the "T" off connectors should not be removed. If it is required to remove the "T" off Branch Conductor, it shall be cut-off and the exposed ends shall be sealed with end caps.

Piercing connectors shall be connected such that its bolts shall be positioned vertically and bolt head upward. Branching terminal shall be covered using terminal cap provided with the connector. All terminal point the ABC shall be covered using terminal cap and the outer cover as shown in **Drawing No. LV-61**.

3.14 LV Intermediate Offset Support Arrangement

LV Offset supports shall be used where horizontal clearances cannot be maintained due to existing buildings and valuable trees. These supports shall be installed where the angle of deviation is not more than 5 deg. As indicated in the **Drawing No. LV-43.**

3.15 Cradle Guard

Cradle guard shall be installed as per **Drawing No. LV-62** at all crossings of Railway lines for LV Lines. Length of the cradle guard shall not be more than 25 m.

4. Safety of Personnel

The personnel safety of all employees of CEB is governed by the Safety Rules and Codes of Practice as described in the Operational Safety rules Manual published in 1988, CEB Specifications 67-1:2019 (Head Protection-Safety Helmet), 67-5A:2019 and 67-5B:2019 (Hand Protection), 67-7:2019 (Fall Protection), 67-8A:2019 and 67-8B:2019 (Safety - footwear). The Supervisor-in-charge of work shall ensure their safety and safety from dangers arising in and out of the course of work. All possible accidents and inconveniences arising out of the activities of the CEB to pedestrian and vehicular traffic shall be minimized by displaying Warning Sign Boards. Caution, Notice and Danger Notices, placing barricades etc. as appropriate and whenever necessary. The Supervisor-in-charge of work before starting any work shall satisfy himself that all conditions of personnel safety are ensured as per guidance and instruction.

All contractors' employees are equally governed by the Safety Rules and Codes Practices that

are applicable to CEB employees. The Contractor will be held responsible for the safety of men, when the system is under his control for the purpose of executing the construction work for the CEB. Safe working condition once imposed shall continue to be maintained till the completion of work undertaken.

It shall also be noted that a minimal disturbance be caused to un-effected areas by works carried out in effected areas. For all excesses in this regard, the hand in charge of work places will be held responsible. For all norms and purposes to ensure safety of men at work places, supervisory control shall be implemented in accordance with proper guidance and instructions from the Supervisory Staff as per regulations of the Safety Rules and Codes of Practice of the CEB.

5. Deviations to the Manual

This manual serves only as a guide line for constructional purposes. The Engineer-In-Charge for the work reserve the right to modify, amend or adjust according to the circumstances that may arise at site may make slight deviations depending on the ground condition.

Annex B: Sag – Tension Charts

1. Sag Tension Chart for FLY Conductor

1.1 FLY Conductor - Flat Ground

Conductor UTS = 10,500 N

Final MWT @ 7°C with full wind = 3108 N

Final MWT as % of UTS = 29.6%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	
7	Initial	0.01	0.02	0.03	0.05	0.07	0.09	0.11	3837
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	3108
12	Initial	0.01	0.02	0.04	0.05	0.07	0.10	0.12	3532
	Final	0.02	0.03	0.05	0.07	0.10	0.13	0.16	2656
17	Initial	0.01	0.03	0.04	0.06	0.08	0.11	0.13	3210
	Final	0.02	0.04	0.06	0.09	0.12	0.15	0.19	2224
22	Initial	0.02	0.03	0.055	0.07	0.09	0.12	0.15	2879
	Final	0.03	0.05	0.07	0.11	0.14	0.19	0.24	1812
27	Initial	0.02	0.03	0.05	0.08	0.10	0.13	0.17	2539
	Final	0.03	0.06	0.09	0.13	0.18	0.24	0.30	1447
32	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.20	2196
	Final	0.04	0.07	0.12	0.17	0.23	0.30	0.38	1146
37	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	1855
	Final	0.05	0.09	0.14	0.21	0.28	0.37	0.47	922
42	Initial	0.03	0.06	0.09	0.13	0.17	0.22	0.28	1529
	Final	0.06	0.11	0.17	0.25	0.34	0.45	0.56	766
47	Initial	0.04	0.07	0.11	0.16	0.21	0.28	0.35	1237
	Final	0.07	0.13	0.20	0.29	0.40	0.52	0.66	657
52	Initial	0.05	0.09	0.13	0.19	0.26	0.34	0.43	1000
	Final	0.08	0.15	0.23	0.33	0.45	0.59	0.75	579
57	Initial	0.06	0.10	0.16	0.23	0.32	0.41	0.52	825
	Final	0.09	0.16	0.26	0.37	0.50	0.65	0.83	522
62	Initial	0.07	0.12	0.19	0.27	0.37	0.49	0.62	701
	Final	0.10	0.18	0.28	0.40	0.55	.72	0.91	477
67	Initial	0.08	0.14	0.22	0.31	0.43	0.56	0.71	613
	Final	0.11	0.19	0.30	0.43	0.59	0.77	0.98	442

1.2 FLY Conductor - 5^0 Inclination of Ground

Conductor UTS = 10,500 N

Final MWT @ 7°C with full wind = 3111 N

Final MWT as % of UTS = 29.6%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	[N]
7	Initial	0.01	0.02	0.03	0.05	0.07	0.09	0.11	3845
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	3111
12	Initial	0.01	0.02	0.04	0.05	0.07	0.10	0.12	3537
	Final	0.02	0.03	0.05	0.07	0.10	0.13	0.16	2666
17	Initial	0.01	0.03	0.04	0.06	0.08	0.11	0.13	3219
	Final	0.02	0.04	0.06	0.09	0.12	0.15	0.19	2227
22	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	2889
	Final	0.03	0.05	0.07	0.11	0.14	0.19	0.24	1821
27	Initial	0.02	0.03	0.05	0.08	0.10	0.13	0.17	2549
	Final	0.03	0.06	0.09	0.13	0.18	0.24	0.30	1453
32	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.20	2206
	Final	0.04	0.07	0.12	0.17	0.23	0.30	0.38	1149
37	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	1860
	Final	0.05	0.09	0.15	0.21	0.28	0.37	0.47	922
42	Initial	0.03	0.06	0.09	0.13	0.17	0.22	0.28	1534
	Final	0.06	0.11	0..17	0.25	0.34	0.45	0.57	765
47	Initial	0.04	0.07	0.11	0.16	0.21	0.28	0.35	1242
	Final	0.07	0.13	0.20	0.29	0.40	0.52	0.66	657
52	Initial	0.05	0.09	0.13	0.19	0.26	0.34	0.43	1002
	Final	0.08	0.15	0.23	0.33	0.45	0.59	0.75	578
57	Initial	0.06	0.10	0.16	0.23	0.32	0.42	0.53	825
	Final	0.09	0.16	0.26	0.37	0.50	0.66	0.83	521
62	Initial	0.07	0.12	0.19	0.28	0.37	0.49	0.62	701
	Final	0.10	0.18	0.28	0.40	0.55	0.72	0.91	476
67	Initial	0.08	0.14	0.22	0.32	0.43	0.56	0.71	611
	Final	0.11	0.19	0.30	0.44	0.60	0.78	0.98	440

1.3 FLY Conductor - 10^0 Inclination of Ground

Conductor UTS = 10,500 N

Final MWT @ 7°C with full wind = 3129N

Final MWT as % of UTS = 29.8%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.01	0.02	0.04	0.05	0.7	0.9	0.11	3862
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	3129
12	Initial	0.01	0.02	0.04	0.05	0.7	0.10	0.12	3554
	Final	0.02	0.03	0.05	0.07	0.10	0.13	0.16	2678
17	Initial	0.02	0.03	0.04	0.06	0.08	0.11	0.14	3233
	Final	0.02	0.04	0.06	0.09	0.12	0.15	0.20	2246
22	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	2903
	Final	0.03	0.05	0.07	0.11	0.14	0.19	0.24	1833
27	Initial	0.02	0.03	0.05	0.08	0.10	0.13	0.17	2569
	Final	0.03	0.06	0.09	0.13	0.18	0.14	0.30	1459
32	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.20	2222
	Final	0.04	0.07	0.12	0.17	0.23	0.30	0.38	1155
37	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	1876
	Final	0.05	0.09	0.15	0.21	0.29	0.37	0.47	925
42	Initial	0.03	0.06	0.09	0.13	0.17	0.22	0.28	1545
	Final	0.06	0.11	0.18	0.25	0.35	0.45	0.57	765
47	Initial	0.04	0.07	0.11	0.16	0.21	0.28	0.35	1251
	Final	0.07	0.13	0.21	0.30	0.41	0.53	0.67	654
52	Initial	0.05	0.09	0.13	0.19	0.26	0.34	0.43	1008
	Final	0.08	0.15	0.24	0.34	0.46	0.60	0.76	575
57	Initial	0.06	0.10	0.16	0.24	0.32	0.42	0.53	828
	Final	0.09	0.17	0.26	0.38	0.51	0.67	0.85	517
62	Initial	0.07	0.12	0.19	0.28	0.38	0.49	0.63	701
	Final	0.10	0.18	0.29	0.41	0.56	0.73	0.93	473
67	Initial	0.08	0.14	0.22	0.32	0.44	0.57	0.72	610
	Final	0.11	0.20	0.31	0.45	0.61	0.79	1.00	437

1.4 FLY Conductor - 20^0 Inclination of Ground

Conductor UTS = 10,500 N

Final MWT @ 7°C with full wind = 3204 N

Final MWT as % of UTS = 30.5%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.12	3933
	Final	0.02	0.03	0.04	0.06	0.09	0.11	0.14	3204
12	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	3627
	Final	0.02	0.03	0.05	0.07	0.10	0.13	0.17	2753
17	Initial	0.02	0.03	0.04	0.06	0.08	0.11	0.14	3309
	Final	0.02	0.04	0.06	0.09	0.12	0.16	0.20	2314
22	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	2982
	Final	0.03	0.05	0.08	0.11	0.15	0.19	0.24	1889
27	Initial	0.02	0.03	0.05	0.08	0.11	0.14	0.17	2642
	Final	0.03	0.06	0.09	0.14	0.18	0.24	0.30	1508
32	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.20	2298
	Final	0.04	0.08	0.12	0.17	0.24	0.31	0.39	1178
37	Initial	0.03	0.05	0.07	0.10	0.14	0.19	0.24	1950
	Final	0.05	0.10	0.15	0.22	0.30	0.39	0.49	935
42	Initial	0.03	0.06	0.09	0.13	0.17	0.23	0.29	1611
	Final	0.07	0.12	0.19	0.27	0.36	0.48	0.60	763
47	Initial	0.04	0.07	0.11	0.16	0.21	0.28	0.35	1299
	Final	0.08	0.14	0.22	0.32	0.43	0.56	0.71	646
52	Initial	0.05	0.09	0.14	0.20	0.27	0.35	0.44	1037
	Final	0.09	0.16	0.25	0.36	0.49	0.64	0.81	564
57	Initial	0.06	0.11	0.17	0.24	0.33	0.43	0.55	839
	Final	0.10	0.18	0.28	0.40	0.55	0.72	0.91	505
62	Initial	0.07	0.13	0.20	0.29	0.40	0.52	0.65	702
	Final	0.11	0.20	0.31	0.44	0.60	0.79	1.00	460
67	Initial	0.08	0.15	0.23	0.34	0.46	0.60	0.76	605
	Final	0.12	0.21	0.33	0.48	0.66	0.86	1.08	424

1.5 FLY Conductor - 30^0 Inclination of Ground

Conductor UTS = 10,500 N

Final MWT @ 7°C with full wind = 3321N

Final MWT as % of UTS = 31.6 %

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.01	0.02	0.04	0.05	0.07	0.10	0.12	4043
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.15	3321
12	Initial	0.01	0.03	0.04	0.06	0.08	0.11	0.13	3743
	Final	0.02	0.03	0.05	0.08	0.11	0.14	0.17	2870
17	Initial	0.02	0.03	0.04	0.06	0.09	0.11	0.15	3429
	Final	0.02	0.04	0.06	0.09	0.12	0.16	0.21	2418
22	Initial	0.02	0.03	0.05	0.07	0.10	0.13	0.16	3108
	Final	0.03	0.05	0.08	0.11	0.15	0.20	0.25	1986
27	Initial	0.02	0.04	0.06	0.08	0.11	0.14	0.18	2768
	Final	0.04	0.06	0.10	0.14	0.19	0.25	0.32	1580
32	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.21	2423
	Final	0.05	0.08	0.13	0.18	0.25	0.32	0.41	1225
37	Initial	0.03	0.05	0.07	0.11	0.15	0.19	0.24	2070
	Final	0.06	0.10	0.16	0.23	0.32	0.41	0.52	953
42	Initial	0.03	0.06	0.09	0.13	0.17	0.23	0.29	1725
	Final	0.07	0.13	0.20	0.29	0.40	0.52	0.66	761
47	Initial	0.04	0.07	0.11	0.16	0.22	0.28	0.36	1388
	Final	0.09	0.16	0.24	0.35	0.48	0.62	0.79	633
52	Initial	0.05	0.09	0.14	0.20	0.27	0.36	0.45	1097
	Final	0.10	0.18	0.28	0.41	0.55	0.72	0.91	545
57	Initial	0.06	0.11	0.18	0.26	0.35	0.45	0.57	869
	Final	0.11	0.20	0.32	0.46	0.62	0.81	1.03	484
62	Initial	0.08	0.14	0.22	0.31	0.43	0.56	0.70	710
	Final	0.13	0.23	0.35	0.51	0.69	0.90	1.14	437
67	Initial	0.09	0.16	0.26	0.37	0.50	0.66	0.83	599
	Final	0.14	0.25	0.38	0.55	0.75	0.98	1.24	401

2. Sag Tension Chart for 4 Core, 70 mm^2 ABC Conductor

2.1 ABC Conductor (4 CORE, 70 mm^2)- Flat Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1791N

Final MWT as % of UTS = 10.79%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	
7	Initial	0.00	0.00	0.00	0.01	0.01	0.01	0.01	201956
	Final	0.15	0.27	0.43	0.61	0.84	1.09	1.38	1791
12	Initial	0.00	0.00	0.00	0.01	0.01	0.01	0.02	163027
	Final	0.16	0.28	0.44	0.63	0.86	1.12	1.42	1742
17	Initial	0.00	0.00	0.01	0.01	0.01	0.02	0.02	124097
	Final	0.16	0.29	0.45	0.65	0.88	1.15	1.46	1693
22	Initial	0.00	0.01	0.01	0.01	0.02	0.02	0.03	85167
	Final	0.17	0.30	0.46	0.67	0.91	1.19	1.51	1644
27	Initial	0.01	0.01	0.02	0.02	0.03	0.04	0.05	46768
	Final	0.17	0.31	0.48	0.69	0.94	1.23	1.55	1595
32	Initial	0.02	0.03	0.05	0.07	0.10	0.13	0.17	14738
	Final	0.18	0.32	0.49	0.71	0.97	1.26	1.60	1546
37	Initial	0.04	0.08	0.12	0.17	0.23	0.30	0.38	6461
	Final	0.18	0.33	0.51	0.73	1.00	1.31	1.65	1497
42	Initial	0.06	0.11	0.17	0.24	0.32	0.42	0.53	4621
	Final	0.19	0.34	0.53	0.76	1.03	1.35	1.71	1448
47	Initial	0.07	0.13	0.20	0.29	0.40	0.52	0.66	3742
	Final	0.20	0.35	0.55	0.79	1.07	1.40	1.77	1398
52	Initial	0.09	0.15	0.24	0.34	0.46	0.60	0.77	3228
	Final	0.20	0.36	0.57	0.81	1.11	1.45	1.83	1349
57	Initial	0.09	0.17	0.26	0.38	0.51	0.67	0.85	2914
	Final	0.20	0.36	0.56	0.80	1.09	1.43	1.81	1367
62	Initial	0.10	0.18	0.29	0.41	0.56	0.73	0.93	2665
	Final	0.21	0.37	0.58	0.83	1.14	1.48	1.88	1318
67	Initial	0.11	0.20	0.31	0.44	0.60	0.79	1.00	2484
	Final	0.22	0.38	0.60	0.87	1.18	1.54	1.95	1269

2.2 ABC Conductor (4 CORE, 70 mm^2)- 5^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1458N

Final MWT as % of UTS = 8.78%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.05	0.09	0.14	0.20	0.28	0.36	0.46	5394
	Final	0.19	0.34	0.53	0.76	1.03	1.35	1.70	1458
12	Initial	0.07	0.12	0.18	0.27	0.36	0.47	0.60	4151
	Final	0.20	0.35	0.54	0.78	1.07	1.39	1.76	1409
17	Initial	0.08	0.14	0.22	0.31	0.43	0.56	0.71	3504
	Final	0.20	0.36	0.56	0.81	1.10	1.44	1.83	1360
22	Initial	0.09	0.16	0.25	0.36	0.49	0.64	0.81	3057
	Final	0.20	0.36	0.56	0.80	1.09	1.42	1.80	1378
27	Initial	0.10	0.18	0.28	0.40	0.54	0.71	0.89	2776
	Final	0.21	0.37	0.58	0.83	1.13	1.48	1.87	1329
32	Initial	0.11	0.19	0.30	0.43	0.59	0.77	0.97	2561
	Final	0.22	0.38	0.60	0.86	1.17	1.53	1.94	1279
37	Initial	0.12	0.21	0.32	0.46	0.63	0.82	1.04	2379
	Final	0.21	0.38	0.59	0.85	1.16	1.51	1.92	1297
42	Initial	0.13	0.22	0.35	0.50	0.68	0.89	1.13	2197
	Final	0.22	0.39	0.61	0.88	1.20	1.57	1.99	1248
47	Initial	0.13	0.24	0.37	0.53	0.72	0.94	1.19	2082
	Final	0.23	0.41	0.64	0.92	1.25	1.64	2.07	1199
52	Initial	0.14	0.25	0.39	0.56	0.76	1.00	1.26	1966
	Final	0.23	0.40	0.63	0.91	1.24	1.61	2.04	1216
57	Initial	0.14	0.26	0.40	0.58	0.78	1.02	1.29	1917
	Final	0.24	0.42	0.66	0.95	1.29	1.68	2.13	1167
62	Initial	0.15	0.27	0.43	0.61	0.83	1.09	1.38	1802
	Final	0.23	0.41	0.65	0.93	1.27	1.66	2.10	1185
67	Initial	0.16	0.28	0.44	0.63	0.86	1.12	1.42	1753
	Final	0.24	0.43	0.67	0.97	1.32	1.73	2.19	1135

2.3 ABC Conductor (4 CORE, 70 mm^2)- 10^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1458N

Final MWT as % of UTS = 8.78%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.04	0.07	0.10	0.15	0.20	0.26	0.33	7551
	Final	0.19	0,34	0.53	0.77	1.04	1.36	1.72	1458
12	Initial	0.06	0.10	0.16	0.23	0.31	0.40	0.51	4947
	Final	0.20	0.35	0.55	0.79	1.08	1.41	1.78	1409
17	Initial	0.07	0.13	0.20	0.29	0.39	0.51	0.64	3903
	Final	0.20	0.35	0.54	0.78	1.06	1.39	1.76	1427
22	Initial	0.08	0.15	0.23	0.34	0.46	0.60	0.76	3323
	Final	0.20	0.36	0.56	0.81	1.10	1.44	1.82	1378
27	Initial	0.09	0.17	0.26	0.38	0.52	0.67	0.85	2942
	Final	0.21	0.37	0.58	0.84	1.14	1.49	1.89	1329
32	Initial	0.10	0.18	0.29	0.41	0.56	0.74	0.93	2694
	Final	0.22	0.39	0.61	0.87	1.19	1.55	1.97	1280
37	Initial	0.11	0.20	0.32	0.46	0.62	0.81	1.03	2445
	Final	0.21	0.38	0.60	0.86	1.17	1.53	1.94	1297
42	Initial	0.12	0.21	0.33	0.48	0.65	0.85	1.08	2330
	Final	0.22	0.40	0.62	0.89	1.22	1.59	2.02	1248
47	Initial	0.13	0.23	0.36	0.52	0.71	0.92	1.17	2148
	Final	0.23	0.41	0.65	0.93	1.27	1.66	2.10	1199
52	Initial	0.14	0.24	0.38	0.55	0.75	0.98	1.24	2033
	Final	0.23	0.41	0.64	0.92	1.25	1.63	2.07	1216
57	Initial	0.14	0.25	0.40	0.57	0.78	1.02	1.29	1950
	Final	0.24	0.42	0.66	0.96	1.30	1.70	2.16	1167
62	Initial	0.15	0.27	0.41	0.60	0.81	1.06	1.34	1868
	Final	0.24	0.42	0.65	0.94	1.28	1.68	2.12	1185
67	Initial	0.15	0.27	0.43	0.61	0.83	1.09	1.38	1819
	Final	0.25	0.44	0.68	0.98	1.34	1.75	2.22	1135

2.4 ABC Conductor (4 CORE, 70 mm^2)- 20^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1525N

Final MWT as % of UTS = 9.18%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.00	0.01	0.01	0.01	0.02	0.02	0.03	94205
	Final	0.19	0.34	0.53	0.77	1.04	1.36	1.73	1525
12	Initial	0.01	0.01	0.01	0.02	0.03	0.04	0.05	55806
	Final	0.20	0.35	0.55	0.79	1.08	1.41	1.78	1476
17	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	19795
	Final	0.20	0.36	0.57	0.82	1.12	1.46	1.84	1427
22	Initial	0.04	0.07	0.12	0.17	0.23	0.30	0.38	6940
	Final	0.21	0.38	0.59	0.85	1.16	1.51	1.91	1378
27	Initial	0.06	0.11	0.18	0.25	0.34	0.45	0.57	4635
	Final	0.21	0.37	0.58	0.84	1.14	1.49	1.89	1396
32	Initial	0.08	0.14	0.22	0.32	0.43	0.56	0.71	3690
	Final	0.22	0.39	0.60	0.87	1.18	1.54	1.96	1347
37	Initial	0.09	0.16	0.26	0.37	0.50	0.65	0.83	376
	Final	0.23	0.40	0.63	0.90	1.23	1.60	2.03	1298
42	Initial	0.10	0.19	0.29	0.42	0.57	0.74	0.94	2759
	Final	0.23	0.42	0.65	0.94	1.28	1.67	2.11	1248
47	Initial	0.11	0.20	0.32	0.46	0.62	0.82	1.03	2547
	Final	0.23	0.41	0.64	0.92	1.26	1.64	2.08	1266
52	Initial	0.12	0.22	0.34	0.49	0.67	0.88	1.11	2365
	Final	0.24	0.43	0.67	0.96	1.31	1.71	2.17	1217
57	Initial	0.13	0.24	0.37	0.54	0.73	0.95	1.20	2183
	Final	0.25	0.44	0.70	1.00	1.36	1.78	2.26	1168
62	Initial	0.14	0.25	0.39	0.57	0.77	1.01	1.27	2068
	Final	0.25	0.44	0.69	0.99	1.34	1.76	2.22	1185
67	Initial	0.15	0.27	0.42	0.60	0.81	1.06	1.35	1952
	Final	0.26	0.46	0.71	1.03	1.40	1.83	2.32	1136

2.5 ABC Conductor (4 CORE, 70 mm^2) - 30^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1326N

Final MWT as % of UTS = 7.98%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.04	0.07	0.11	0.16	0.22	0.29	0.36	7817
	Final	0.24	0.42	0.66	0.96	1.30	1.70	2.15	1326
12	Initial	0.07	0.12	0.19	0.27	0.37	0.48	0.61	4649
	Final	0.25	0.44	0.69	0.99	1.35	1.77	2.24	1277
17	Initial	0.09	0.16	0.25	0.36	0.48	0.63	0.80	3571
	Final	0.26	0.46	0.72	1.03	1.41	1.84	2.33	1228
22	Initial	0.10	0.19	0.29	0.42	0.57	0.75	0.94	3025
	Final	0.27	0.48	0.75	1.08	1.46	1.91	2.42	1179
27	Initial	0.12	0.21	0.33	0.47	0.64	0.84	1.07	2677
	Final	0.26	0.47	0.74	1.06	1.44	1.89	2.39	1197
32	Initial	0.13	0.23	0.36	0.52	0.71	0.93	1.18	2429
	Final	0.28	0.49	0.77	1.11	1.51	1.97	2.49	1148
37	Initial	0.15	0.26	0.40	0.58	0.79	1.03	1.31	2180
	Final	0.29	0.51	0.80	1.16	1.57	2.05	2.60	1098
42	Initial	0.15	0.27	0.43	0.61	0.84	1.09	1.38	2065
	Final	0.28	0.51	0.79	1.14	1.55	2.02	2.56	1116
47	Initial	0.16	0.29	0.45	0.65	0.89	1.16	1.46	1950
	Final	0.30	0.53	0.83	1.19	1.62	2.12	2.68	1067
52	Initial	0.17	0.31	0.48	0.69	0.94	1.23	1.56	1834
	Final	0.29	0.52	0.81	1.17	1.59	2.08	2.64	1084
57	Initial	0.18	0.33	0.51	0.74	1.00	1.31	1.66	1719
	Final	0.31	0.54	0.85	1.23	1.67	2.18	2.76	1035
62	Initial	0.19	0.34	0.53	0.76	1.03	1.35	1.71	1670
	Final	0.30	0.54	0.84	1.21	1.64	2.14	2.71	1053
67	Initial	0.20	0.36	0.57	0.82	1.11	1.45	1.84	1554
	Final	0.32	0.56	0.88	1.26	1.72	2.25	2.85	1004

3. Sag Tension Chart for 5 Core, 70 mm^2 ABC Conductor

3.1 ABC Conductor (5 CORE, 70 mm^2) - Flat Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1657N

Final MWT as % of UTS = 9.98%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	
7	Initial	0.01	0.01	0.01	0.02	0.03	0.04	0.05	56518
	Final	0.18	0.31	0.49	0.71	0.96	1.26	1.59	1657
12	Initial	0.01	0.02	0.04	0.06	0.07	0.10	0.12	21304
	Final	0.18	0.32	0.51	0.73	0.99	1.30	1.64	1608
17	Initial	0.04	0.07	0.10	0.15	0.20	0.27	0.34	7851
	Final	0.18	0.33	0.51	0.74	1.00	1.31	1.66	1592
22	Initial	0.06	0.10	0.15	0.22	0.30	0.39	0.50	5281
	Final	0.19	0.33	0.52	0.74	1.01	1.32	1.68	1577
27	Initial	0.07	0.12	0.19	0.28	0.38	0.50	0.63	4203
	Final	0.19	0.34	0.53	0.77	1.05	1.37	1.73	1528
32	Initial	0.08	0.14	0.22	0.32	0.44	0.58	0.73	3623
	Final	0.20	0.35	0.55	0.79	1.08	1.41	1.79	1478
37	Initial	0.09	0.16	0.26	0.37	0.50	0.66	0.83	3176
	Final	0.21	0.36	0.57	0.82	1.12	1.46	1.85	1429
42	Initial	0.10	0.18	0.28	0.41	0.55	0.72	0.91	2894
	Final	0.21	0.37	0.58	0.83	1.13	1.48	1.87	1414
47	Initial	0.11	0.19	0.30	0.44	0.60	0.78	0.99	2679
	Final	0.21	0.37	0.58	0.84	1.14	1.49	1.89	1398
52	Initial	0.12	0.21	0.33	0.47	0.64	0.84	1.06	2497
	Final	0.22	0.39	0.60	0.87	1.19	1.55	1.96	1349
57	Initial	0.13	0.23	0.35	0.51	0.69	0.90	1.14	2315
	Final	0.23	0.40	0.63	0.90	1.23	1.61	2.04	1300
62	Initial	0.13	0.24	0.37	0.53	0.73	0.95	1.20	2200
	Final	0.22	0.40	0.62	0.89	1.21	1.59	2.01	1317
67	Initial	0.14	0.25	0.39	0.56	0.77	1.00	1.27	2085
	Final	0.23	0.41	0.64	0.93	1.26	1.65	2.09	1268

3.2 ABC Conductor (5 CORE, 70 mm^2)- 5^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1524N

Final MWT as % of UTS = 9.18%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.06	0.11	0.17	0.24	0.33	0.43	0.54	4896
	Final	0.19	0.34	0.54	0.77	1.05	1.37	1.74	1524
12	Initial	0.07	0.13	0.20	0.29	0.40	0.52	0.66	4018
	Final	0.20	0.35	0.55	0.8	1.09	1.42	1.80	1475
17	Initial	0.09	0.15	0.24	0.34	0.47	0.61	0.77	3438
	Final	0.20	0.35	0.55	0.79	1.07	1.40	1.78	1493
22	Initial	0.10	0.17	0.26	0.38	0.52	0.68	0.86	3090
	Final	0.20	0.36	0.57	0.82	1.11	1.45	1.84	1444
27	Initial	0.10	0.19	0.29	0.42	0.57	0.75	0.94	2809
	Final	0.21	0.38	0.59	0.84	1.15	1.50	1.90	1394
32	Initial	0.11	0.20	0.31	0.45	0.61	0.80	1.01	2627
	Final	0.22	0.39	0.61	0.88	1.19	1.56	1.97	1345
37	Initial	0.12	0.21	0.33	0.48	0.66	0.86	1.08	2445
	Final	0.22	0.38	0.60	0.86	1.18	1.54	1.95	1363
42	Initial	0.13	0.23	0.36	0.51	0.70	0.91	1.15	2296
	Final	0.22	0.40	0.62	0.90	1.22	1.60	2.02	1314
47	Initial	0.14	0.24	0.38	0.55	0.75	0.98	1.23	2148
	Final	0.23	0.41	0.65	0.93	1.27	1.66	2.10	1265
52	Initial	0.14	0.25	0.39	0.56	0.76	1.00	1.26	2099
	Final	0.23	0.41	0.64	0.92	1.25	1.64	2.07	1282
57	Initial	0.15	0.26	0.41	0.59	0.81	1.06	1.34	1983
	Final	0.24	0.42	0.66	0.96	1.30	1.70	2.15	1233
62	Initial	0.15	0.27	0.42	0.61	0.83	1.08	1.37	1934
	Final	0.24	0.42	0.65	0.94	1.28	1.68	2.12	1250
67	Initial	0.16	0.29	0.45	0.65	0.88	1.15	1.46	1819
	Final	0.25	0.44	0.68	0.98	1.34	1.75	2.21	1201

3.3 ABC Conductor (5 CORE, 70 mm^2)- 10^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1391N

Final MWT as % of UTS = 8.37%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.10	0.18	0.28	0.40	0.54	0.70	0.89	3005
	Final	0.21	0.38	0.59	0.86	1.17	1.52	1.93	1391
12	Initial	0.11	0.19	0.30	0.43	0.59	0.77	0.97	2756
	Final	0.21	0.38	0.59	0.85	1.15	1.51	1.91	1409
17	Initial	0.12	0.21	0.33	0.47	0.65	0.84	1.07	2508
	Final	0.22	0.39	0.61	0.88	1.19	1.56	1.98	1360
22	Initial	0.12	0.22	0.35	0.50	0.68	0.89	1.12	2393
	Final	0.23	0.40	0.63	0.91	1.24	1.62	2.05	1310
27	Initial	0.13	0.24	0.37	0.54	0.73	0.96	1.21	2211
	Final	0.22	0.40	0.62	0.90	1.22	1.60	2.02	1328
32	Initial	0.14	0.25	0.39	0.57	0.77	1.01	1.28	2095
	Final	0.23	0.41	0.65	0.93	1.27	1.66	2.10	1279
37	Initial	0.15	0.26	0.40	0.58	0.79	1.04	1.31	2046
	Final	0.24	0.43	0.67	0.97	1.32	1.73	2.18	1230
42	Initial	0.15	0.27	0.43	0.62	0.84	1.10	1.39	1931
	Final	0.24	0.42	0.66	0.96	1.30	1.70	2.15	1247
47	Initial	0.16	0.28	0.44	0.63	0.86	1.13	1.43	1882
	Final	0.25	0.44	0.69	1.00	1.36	1.77	2.24	1198
52	Initial	0.16	0.29	0.45	0.65	0.88	1.16	1.46	1833
	Final	0.24	0.44	0.68	0.98	1.34	1.75	2.21	1215
57	Initial	0.17	0.31	0.48	0.69	0.94	1.23	1.56	1717
	Final	0.26	0.45	0.71	1.02	1.39	1.82	2.30	1166
62	Initial	0.18	0.32	0.50	0.71	0.97	1.27	1.61	1668
	Final	0.25	0.45	0.70	1.01	1.37	1.79	2.27	1184
67	Initial	0.18	0.33	0.51	0.74	1.00	1.31	1.66	1619
	Final	0.26	0.47	0.73	1.05	1.43	1.87	2.37	1135

3.4 ABC Conductor (5 CORE, 70 mm^2)- 20^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1458N

Final MWT as % of UTS = 8.78%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.07	0.12	0.18	0.26	0.36	0.47	0.59	4731
	Final	0.21	0.38	0.59	0.86	1.17	1.52	1.93	1458
12	Initial	0.08	0.15	0.23	0.33	0.44	0.58	0.74	3819
	Final	0.22	0.39	0.62	0.89	1.21	1.58	2.00	1409
17	Initial	0.09	0.17	0.26	0.38	0.51	0.67	0.85	3305
	Final	0.23	0.41	0.64	0.92	1.25	1.63	2.07	1360
22	Initial	0.11	0.19	0.30	0.43	0.58	0.76	0.96	2924
	Final	0.23	0.40	0.63	0.91	1.23	1.61	2.04	1378
27	Initial	0.12	0.21	0.32	0.47	0.63	0.83	1.05	2676
	Final	0.23	0.42	0.65	0.94	1.28	1.67	2.12	1328
32	Initial	0.13	0.22	0.35	0.50	0.68	0.89	1.13	2494
	Final	0.24	0.43	0.68	0.98	1.33	1.74	2.20	1279
37	Initial	0.13	0.24	0.37	0.54	0.73	0.96	1.21	2312
	Final	0.24	0.43	0.67	0.96	1.31	1.71	2.17	1297
42	Initial	0.14	0.25	0.39	0.57	0.77	1.01	1.28	2197
	Final	0.25	0.44	0.70	1.00	1.36	1.78	2.26	1248
47	Initial	0.15	0.27	0.42	0.60	0.82	1.07	1.35	2082
	Final	0.26	0.46	0.72	1.04	1.42	1.85	2.35	1199
52	Initial	0.16	0.28	0.44	0.63	0.86	1.13	1.43	1966
	Final	0.26	0.46	0.71	1.03	1.40	1.83	2.31	1216
57	Initial	0.17	0.30	0.47	0.67	0.92	1.20	1.52	1851
	Final	0.27	0.48	0.74	1.07	1.46	1.90	2.41	1167
62	Initial	0.17	0.31	0.48	0.69	0.94	1.23	1.56	1802
	Final	0.26	0.47	0.73	1.05	1.44	1.88	2.38	1184
67	Initial	0.18	0.32	0.49	0.71	0.97	1.27	1.60	1753
	Final	0.27	0.49	0.76	1.10	1.50	1.96	2.48	1135

3.5 ABC Conductor (5 CORE, 70 mm^2)- 30^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1392N

Final MWT as % of UTS = 8.38%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.04	0.08	0.12	0.17	0.24	0.31	0.39	7750
	Final	0.24	0.43	0.68	0.97	1.32	1.73	2.19	1392
12	Initial	0.07	0.12	0.19	0.28	0.38	0.50	0.63	4848
	Final	0.25	0.45	0.70	1.01	1.37	1.79	2.27	1343
17	Initial	0.09	0.16	0.25	0.36	0.49	0.64	0.81	3770
	Final	0.26	0.47	0.73	1.05	1.43	1.86	2.36	1294
22	Initial	0.11	0.19	0.29	0.42	0.58	0.75	0.96	3190
	Final	0.26	0.46	0.72	1.03	1.41	1.84	2.33	1312
27	Initial	0.12	0.21	0.33	0.48	0.66	0.86	1.08	2809
	Final	0.27	0.48	0.74	1.07	1.46	1.91	2.42	1263
32	Initial	0.13	0.23	0.37	0.53	0.72	0.94	1.19	2561
	Final	0.28	0.50	0.78	1.12	1.52	1.99	2.51	1214
37	Initial	0.15	0.26	0.41	0.59	0.80	1.04	1.32	2313
	Final	0.28	0.49	0.76	1.10	1.50	1.96	2.48	1231
42	Initial	0.15	0.27	0.43	0.62	0.84	1.10	1.39	2198
	Final	0.29	0.51	0.80	1.15	1.56	2.04	2.58	1182
47	Initial	0.17	0.29	0.46	0.66	0.90	1.18	1.49	2049
	Final	0.30	0.53	083	1.20	1.63	2.13	2.69	1133
52	Initial	0.17	0.31	0.48	0.69	0.94	1.22	1.55	1967
	Final	0.29	0.52	0.82	1.18	1.6	2.10	2.65	1150
57	Initial	0.18	0.33	0.51	0.73	1.00	1.30	1.65	1851
	Final	0.31	0.55	0.85	1.23	1.68	2.19	2.77	1101
62	Initial	0.20	0.35	0.54	0.78	1.06	1.39	1.76	1736
	Final	0.30	0.54	0.84	1.21	1.65	2.15	2.73	1119
67	Initial	0.20	0.36	0.56	0.80	1.09	1.43	1.81	1687
	Final	0.32	0.56	0.88	1.27	1.73	2.25	2.85	1070

4. Sag Tension Chart for 4 Core, 95 mm^2 ABC Conductor

4.1 ABC Conductor (4 CORE, 95 mm^2)- Flat Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1955N

Final MWT as % of UTS = 11.77%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	
7	Initial	0.00	0.01	0.01	0.02	0.03	0.03	0.04	68376
	Final	0.17	0.31	0.48	0.69	0.94	1.22	1.55	1955
12	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	23910
	Final	0.18	0.32	0.49	0.71	0.97	1.27	1.60	1893
17	Initial	0.04	0.07	0.11	0.15	0.21	0.27	0.34	8790
	Final	0.18	0.33	0.51	0.74	1.00	1.31	1.66	1830
22	Initial	0.06	0.10	0.16	0.23	0.31	0.40	0.51	5962
	Final	0.19	0.34	0.53	0.76	1.04	1.36	1.72	1767
27	Initial	0.07	0.12	0.19	0.28	0.38	0.50	0.63	4793
	Final	0.20	0.35	0.55	0.79	1.08	1.41	1.78	1704
32	Initial	0.08	0.15	0.23	0.33	0.45	0.58	0.74	4092
	Final	0.19	0.35	0.54	0.78	1.06	1.39	1.76	1726
37	Initial	0.09	0.16	0.26	0.37	0.50	0.66	0.83	3646
	Final	0.20	0.36	0.56	0.81	1.10	1.44	1.82	1633
42	Initial	0.10	0.18	0.28	0.40	0.55	0.72	0.91	3328
	Final	0.21	0.37	0.58	0.84	1.15	1.50	1.90	1600
47	Initial	0.11	0.20	0.31	0.45	0.61	0.80	1.01	3010
	Final	0.21	0.37	0.58	0.83	1.13	1.48	1.87	1623
52	Initial	0.12	0.21	0.33	0.47	0.64	0.84	1.06	2862
	Final	0.22	0.38	0.60	0.86	1.18	1.54	1.95	1560
57	Initial	0.12	0.22	0.34	0.50	0.68	0.88	1.12	2714
	Final	0.22	0.40	0.62	0.90	1.23	1.60	2.03	1497
62	Initial	0.13	0.23	0.63	0.52	0.71	0.93	1.18	2566
	Final	0.22	0.39	0.62	0.89	1.21	1.58	2.00	1519
67	Initial	0.14	0.25	0.39	0.56	0.76	0.99	1.25	2418
	Final	0.23	0.41	0.64	0.93	1.26	1.65	2.09	1456

4.2 ABC Conductor (4 CORE, 95 mm^2)- 5^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1443N

Final MWT as % of UTS = 8.69%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.16	0.28	0.44	0.63	0.86	1.12	1.42	2149
	Final	0.23	0.42	0.65	0.94	1.28	1.67	2.11	1443
12	Initial	0.16	0.29	0.45	0.65	0.88	1.15	1.46	2086
	Final	0.24	0.44	0.68	0.98	1.33	1.74	2.21	1380
17	Initial	0.17	0.30	0.46	0.67	0.91	1.19	1.50	2023
	Final	0.24	0.43	0.67	0.96	1.31	1.72	2.17	1403
22	Initial	0.17	0.31	0.48	0.69	0.94	1.23	1.55	1960
	Final	0.25	0.45	0.70	1.01	1.38	1.80	2.28	1340
27	Initial	0.18	0.32	0.49	0.71	0.97	1.27	1.60	1898
	Final	0.25	0.44	0.69	0.99	1.35	1.77	2.24	1362
32	Initial	0.18	0.33	0.51	0.74	1.00	1.31	1.66	1835
	Final	0.26	0.46	0.72	1.04	1.42	1.85	2.35	1299
37	Initial	0.19	0.34	0.53	0.76	1.04	1.36	1.72	1772
	Final	0.26	0.45	0.71	1.02	1.39	1.82	2.31	1321
42	Initial	0.19	0.33	0.52	0.75	1.03	1.34	1.70	1794
	Final	0.27	0.48	0.75	1.08	1.46	1.91	2.42	1258
47	Initial	0.20	0.35	0.54	0.78	1.06	1.39	1.76	1731
	Final	0.26	0.47	0.73	1.06	1.44	1.88	2.38	1281
52	Initial	0.20	0.36	0.56	0.81	1.10	1.44	1.83	1668
	Final	0.28	0.49	0.77	1.11	1.51	1.98	2.51	1218
57	Initial	0.21	0.37	0.58	0.84	1.15	1.50	1.90	1605
	Final	0.27	0.48	0.76	1.09	1.49	1.94	2.46	1240
62	Initial	0.21	0.37	0.58	0.83	1.13	1.48	1.87	1628
	Final	0.29	0.51	0.80	1.15	1.57	2.05	2.59	1177
67	Initial	0.22	0.38	0.60	0.86	1.18	1.54	1.95	1565
	Final	0.28	0.50	0.78	1.13	1.54	2.01	2.54	1200

4.3 ABC Conductor (4 CORE, 95 mm^2)- 10^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1443N

Final MWT as % of UTS = 8.69%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	[N]
7	Initial	0.15	0.27	0.42	0.61	0.83	1.09	1.38	2234
	Final	0.24	0.42	0.66	0.95	1.29	1.69	2.14	1443
12	Initial	0.16	0.28	0.44	0.63	0.86	1.12	1.42	2172
	Final	0.25	0.44	0.69	0.99	1.35	1.76	2.23	1380
17	Initial	0.16	0.29	0.45	0.65	0.88	1.15	1.46	2109
	Final	0.24	0.43	0.68	0.98	1.33	1.74	2.20	1403
22	Initial	0.17	0.30	0.46	0.67	0.91	1.19	1.50	2046
	Final	0.26	0.45	0.71	1.02	1.39	1.82	2.30	1340
27	Initial	0.17	0.31	0.48	0.69	0.94	1.23	1.55	1983
	Final	0.25	0.45	0.70	1.00	1.37	1.79	2.26	1362
32	Initial	0.18	0.32	0.49	0.71	0.97	1.27	1.60	1920
	Final	0.26	0.47	0.73	1.05	1.43	1.87	2.37	1299
37	Initial	0.18	0.33	0.51	0.74	1.00	1.31	1.66	1857
	Final	0.26	0.46	0.72	1.04	1.41	1.84	2.33	1322
42	Initial	0.19	0.34	0.53	0.76	1.04	1.36	1.72	1794
	Final	0.27	0.48	0.75	1.09	1.48	1.94	2.45	1259
47	Initial	0.20	0.35	0.55	0.79	1.08	1.41	1.78	1731
	Final	0.27	0.47	0.74	1.07	1.45	1.90	2.41	1281
52	Initial	0.20	0.36	0.57	0.82	1.12	1.46	1.85	1668
	Final	0.28	0.50	0.78	1.12	1.53	2.00	2.53	1218
57	Initial	0.20	0.36	0.56	0.81	1.10	1.44	1.82	1691
	Final	0.28	0.49	0.77	1.10	1.50	1.96	2.49	1240
62	Initial	0.21	0.37	0.58	0.84	1.14	1.49	1.89	1628
	Final	0.29	0.52	0.81	1.16	1.58	2.07	2.62	1177
67	Initial	0.22	0.39	0.61	0.87	1.19	1.56	1.97	1565
	Final	0.28	0.51	0.79	1.14	1.55	2.03	2.57	1200

4.4 ABC Conductor (4 CORE, 95 mm^2)- 20^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1444N

Final MWT as % of UTS = 8.69%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.14	0.24	0.38	0.55	0.74	0.97	1.23	2618
	Final	0.25	0.44	0.69	0.99	1.35	1.77	2.24	1444
12	Initial	0.15	0.26	0.41	0.59	0.80	1.05	1.33	2428
	Final	0.24	0.43	0.68	0.98	1.33	1.74	2.20	1466
17	Initial	0.15	0.27	0.42	0.61	0.82	1.08	1.36	2365
	Final	0.26	0.45	0.71	1.02	1.39	1.82	2.30	1403
22	Initial	0.16	0.29	0.45	0.65	0.88	1.15	1.45	2217
	Final	0.27	0.48	0.74	1.07	1.46	1.90	2.41	1340
27	Initial	0.17	0.30	0.46	0.67	0.91	1.18	1.50	2154
	Final	0.26	0.47	0.73	1.05	1.43	1.87	2.37	1363
32	Initial	0.17	0.30	0.48	0.69	0.93	1.22	1.54	2091
	Final	0.28	0.49	0.77	1.10	1.50	1.96	2.49	1300
37	Initial	0.18	0.33	0.51	0.74	1.00	1.31	1.66	1943
	Final	0.27	0.48	0.75	1.08	1.48	1.93	2.44	1322
42	Initial	0.19	0.34	0.53	0.76	1.04	1.36	1.72	1880
	Final	0.28	0.51	0.79	1.14	1.55	2.03	2.57	1259
47	Initial	0.20	0.35	0.55	0.79	1.07	1.40	1.78	1817
	Final	0.28	0.50	0.78	1.12	1.52	1.99	2.52	1282
52	Initial	0.20	0.35	0.55	0.80	1.09	1.42	1.80	1797
	Final	0.29	0.52	0.82	1.18	1.60	2.09	2.65	1219
57	Initial	0.20	0.36	0.56	0.81	1.10	1.43	1.82	1777
	Final	0.29	0.51	0.80	1.16	1.57	2.06	2.60	1241
62	Initial	0.21	0.37	0.58	0.84	1.14	1.49	1.88	1714
	Final	0.30	0.54	0.85	1.22	1.66	2.17	2.74	1178
67	Initial	0.22	0.39	0.60	0.87	1.18	1.54	1.96	1651
	Final	0.30	0.53	0.83	1.19	1.63	2.13	2.69	1201

5.5 ABC Conductor (4 CORE, 95 mm^2)- 30^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1530N

Final MWT as % of UTS = 9.21%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.08	0.14	0.23	0.32	0.44	0.58	0.73	4789
	Final	0.25	0.45	0.71	1.02	1.38	1.81	2.29	1530
12	Initial	0.10	0.17	0.27	9.39	0.53	0.70	0.88	3961
	Final	0.26	0.47	0.74	1.06	1.44	1.88	2.39	1467
17	Initial	0.11	0.20	0.32	0.46	0.62	0.82	1.03	3387
	Final	0.26	0.46	0.72	1.04	1.42	1.86	2.35	1490
22	Initial	0.13	0.23	0.35	0.51	0.69	0.90	1.14	3069
	Final	0.27	0.48	0.76	1.09	1.48	1.94	2.45	1427
27	Initial	0.14	0.25	0.39	0.56	0.76	0.99	1.25	2793
	Final	0.28	0.51	0.79	1.14	1.55	2.03	2.57	1364
32	Initial	0.15	0.27	0.41	0.60	0.81	1.06	1.34	2603
	Final	0.28	0.50	0.78	1.12	1.53	2.00	2.53	1386
37	Initial	0.16	0.28	0.44	0.63	0.86	1.13	1.42	2455
	Final	0.29	0.52	0.82	1.18	1.60	2.09	2.65	1323
42	Initial	0.17	0.30	0.47	0.67	0.92	1.20	1.52	2307
	Final	0.29	0.51	0.80	1.16	1.57	2.06	2.60	1346
47	Initial	0.18	0.32	0.50	0.72	0.98	1.28	1.62	2159
	Final	0.30	0.54	0.84	1.21	1.65	2.16	2.73	1283
52	Initial	0.19	0.33	0.51	0.74	1.01	1.32	1.67	2096
	Final	0.30	0.53	0.83	1.19	1.62	2.12	2.68	1305
57	Initial	0.20	0.35	0.55	0.80	1.09	1.42	1.80	1948
	Final	0.31	0.56	0.87	1.25	1.70	2.23	2.82	1242
62	Initial	0.21	0.37	0.57	0.82	1.12	1.47	1.86	1885
	Final	0.31	0.55	0.85	1.23	1.67	2.19	2.77	1265
67	Initial	0.21	0.38	0.59	0.85	1.16	1.52	1.92	1822
	Final	0.32	0.57	0.90	1.29	1.76	2.30	2.92	1202

5. Sag Tension Chart for 5 Core, 95 mm^2 ABC Conductor

5.1 ABC Conductor (5 CORE, 95 mm^2)- Flat Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1869N

Final MWT as % of UTS = 11.25%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	
7	Initial	0.06	0.11	0.18	0.26	0.35	0.45	0.58	5554
	Final	0.19	0.34	0.53	0.76	1.04	1.35	1.71	1869
12	Initial	0.08	0.14	0.21	0.31	0.42	0.54	0.69	4641
	Final	0.20	0.35	0.55	0.79	1.07	1.40	1.77	1807
17	Initial	0.09	0.16	0.24	0.35	0.48	0.62	0.79	4067
	Final	0.20	0.36	0.57	0.82	1.11	1.45	1.84	1744
22	Initial	0.10	0.17	0.27	0.39	0.53	0.69	0.87	3664
	Final	0.20	0.36	0.56	0.81	1.10	1.43	1.81	1766
27	Initial	0.11	0.19	0.29	0.42	0.58	0.76	0.96	3346
	Final	0.21	0.37	0.58	0.84	1.14	1.49	1.88	1703
32	Initial	0.11	0.20	0.32	0.46	0.62	0.81	1.03	3113
	Final	0.22	0.39	0.60	0.87	1.18	1.54	1.95	1640
37	Initial	0.12	0.22	0.34	0.49	0.67	0.88	1.11	2879
	Final	0.21	0.38	0.59	0.86	1.16	1.52	1.93	1663
42	Initial	0.13	0.23	0.36	0.52	0.71	0.93	1.17	2731
	Final	0.22	0.39	0.62	0.89	1.21	1.58	2.00	1600
47	Initial	0.14	0.24	0.38	0.55	0.75	0.98	1.24	2583
	Final	0.23	0.41	0.64	0.93	1.26	1.65	2.09	1537
52	Initial	0.14	0.25	0.39	0.56	0.77	1.00	1.27	2521
	Final	0.23	0.41	0.63	0.91	1.24	1.62	2.06	1559
57	Initial	0.15	0.27	0.42	0.60	0.82	1.07	1.35	2373
	Final	0.24	0.42	0.66	0.95	1.29	1.69	2.14	1496
62	Initial	0.15	0.27	0.43	0.62	0.84	1.09	1.39	2310
	Final	0.23	0.42	0.65	0.94	1.28	1.67	2.11	1518
67	Initial	0.16	0.28	0.44	0.63	0.86	1.13	1.42	2247
	Final	0.24	0.43	0.68	0.98	1.33	1.74	2.20	1455

5.2 ABC Conductor (5 CORE, 95 mm^2)- 5^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1528N

Final MWT as % of UTS = 9.20%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	
7	Initial	0.15	0.26	0.41	0.59	0.81	1.06	1.34	2404
	Final	0.23	0.42	0.65	0.93	1.27	1.66	2.11	1528
12	Initial	0.15	0.27	0.42	0.61	0.83	1.08	1.37	2341
	Final	0.24	0.43	0.68	0.97	1.33	1.73	2.20	1465
17	Initial	0.16	0.28	0.43	0.63	0.85	1.11	1.41	2279
	Final	0.24	0.43	0.67	0.96	1.31	1.71	2.16	1487
22	Initial	0.17	0.30	0.47	0.67	0.91	1.19	1.51	2130
	Final	0.25	0.45	0.70	1.00	1.37	1.78	2.26	1424
27	Initial	0.17	0.31	0.48	0.69	0.94	1.23	1.55	2068
	Final	0.25	0.44	0.69	0.99	1.34	1.76	2.22	1447
32	Initial	0.18	0.32	0.49	0.71	0.97	1.27	1.60	2005
	Final	0.26	0.46	0.72	1.03	1.41	1.84	2.33	1384
37	Initial	0.18	0.33	0.51	0.73	1.00	1.31	1.66	1942
	Final	0.25	0.45	0.71	1.02	1.38	1.81	2.29	1406
42	Initial	0.19	0.33	0.52	0.74	1.01	1.32	1.67	1922
	Final	0.27	0.47	0.74	1.06	1.45	1.89	2.40	1343
47	Initial	0.19	0.33	0.52	0.75	1.02	1.34	1.69	1901
	Final	0.26	0.46	0.73	1.05	1.42	1.86	2.36	1366
52	Initial	0.19	0.34	0.54	0.78	1.06	1.38	1.75	1838
	Final	0.27	0.49	0.76	1.10	1.49	1.95	2.47	1302
57	Initial	0.20	0.36	0.56	0.80	1.09	1.43	1.81	1775
	Final	0.27	0.48	0.75	1.08	1.47	1.92	2.43	1325
62	Initial	021	0.37	0.58	0.83	1.14	1.48	1.88	1712
	Final	0.28	050	0.79	1.13	1.54	2.02	2.55	1262
67	Initial	0.21	0.37	0.57	0.82	1.12	1.46	1.85	1735
	Final	0.28	0.49	0.77	1.11	1.52	1.98	2.51	1284

5.3 ABC Conductor (5 CORE, 95 mm^2)- 10^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7°C with full wind = 1357N

Final MWT as % of UTS = 8.17%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	
7	Initial	0.18	0.32	0.51	0.73	0.99	1.30	1.64	1978
	Final	0.27	0.47	0.74	1.06	1.45	1.90	2.40	1357
12	Initial	0.19	0.33	0.52	0.75	1.03	1.34	1.70	1915
	Final	0.26	0.47	0.73	1.05	1.43	1.86	2.36	1379
17	Initial	0.19	0.35	0.54	0.78	1.06	1.39	1.76	1852
	Final	0.27	0.49	0.76	1.10	1.49	1.95	2.47	1316
22	Initial	0.20	0.35	0.55	0.79	1.07	1.40	1.78	1832
	Final	0.27	0.48	0.75	1.08	1.47	1.92	2.43	1339
27	Initial	0.20	0.35	0.55	0.80	1.09	1.42	1.79	1812
	Final	0.28	0.50	0.79	1.13	1.54	2.02	2.55	1276
32	Initial	0.21	0.37	0.57	0.83	1.12	1.47	1.86	1749
	Final	0.28	0.49	0.77	1.11	1.52	1.98	2.51	1298
37	Initial	0.21	0.38	0.59	0.86	1.17	1.52	1.93	1686
	Final	0.27	0.49	0.76	1.09	1.49	1.95	2.47	1321
42	Initial	0.21	0.38	0.59	0.85	1.15	1.50	1.90	1708
	Final	0.29	0.51	0.80	1.15	1.57	2.05	2.59	1258
47	Initial	0.22	0.39	0.61	0.88	1.20	1.56	1.98	1645
	Final	0.28	0.50	0.78	1.13	1.54	2.01	2.55	1280
52	Initial	0.23	0.41	0.63	0.91	1.24	1.62	2.06	1582
	Final	0.30	0.53	0.82	1.19	1.62	2.11	2.68	1217
57	Initial	0.22	0.40	0.62	0.90	1.23	1.60	2.03	1605
	Final	0.29	0.52	0.81	1.17	1.59	2.08	2.63	1239
62	Initial	0.23	0.42	0.65	0.94	1.28	1.67	2.11	1542
	Final	0.31	0.55	0.85	1.23	1.67	2.19	2.77	1176
67	Initial	0.24	0.42	0.66	0.95	1.29	1.69	2.14	1521
	Final	0.30	0.54	0.84	1.21	1.64	2.15	2.72	1199

5.4 ABC Conductor (5 CORE, 95 mm^2)- 20^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1785N

Final MWT as % of UTS = 10.75%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.07	0.13	0.20	0.28	0.39	0.50	0.64	5342
	Final	0.2	0.38	0.59	0.85	1.15	1.51	1.91	1785
12	Initial	0.09	0.15	0.24	0.34	0.46	0.61	0.77	4428
	Final	0.22	0.39	0.61	0.88	1.20	1.56	1.98	1722
17	Initial	0.10	0.17	0.27	0.39	0.53	0.70	0.88	3855
	Final	0.23	0.41	0.63	0.91	1.24	1.62	2.05	1659
22	Initial	0.11	0.19	0.30	0.43	0.59	0.77	0.97	3494
	Final	0.24	0.42	0.66	0.95	1.29	1.69	2.14	1596
27	Initial	0.12	0.21	0.33	0.48	0.65	0.85	1.07	3176
	Final	0.23	0.42	0.65	0.93	1.27	1.66	2.11	1618
32	Initial	0.13	0.23	0.36	051	0.70	0.91	1.16	2943
	Final	0.24	0.43	0.68	0.97	1.32	1.73	2.19	1556
37	Initial	0.14	0.25	0.39	0.56	0.76	0.99	1.26	2710
	Final	0.25	0.45	0.70	1.01	1.38	1.80	2.28	1493
42	Initial	0.15	0.26	0.41	0.59	0.80	1.05	1.33	2562
	Final	0.25	0.44	0.69	1.00	1.36	1.78	2.25	1515
47	Initial	0.15	0.27	0.42	0.61	0.82	1.08	1.36	2499
	Final	0.26	0.46	0.72	1.04	1.42	1.85	2.35	1452
52	Initial	0.16	0.29	0.45	0.64	0.88	1.14	1.45	2351
	Final	0.26	0.46	0.71	1.03	1.40	1.83	2.31	1474
57	Initial	0.17	0.29	0.46	0.66	0.90	1.18	1.49	2288
	Final	0.27	0.48	0.74	1.07	1.46	1.91	2.42	1411
62	Initial	0.18	0.31	0.49	0.71	0.96	1.26	1.59	2140
	Final	0.26	0.47	0.73	1.06	1.44	1.88	2.38	1434
67	Initial	0.18	0.32	0.51	0.73	0.99	1.30	1.64	2077
	Final	0.28	0.49	0.77	1.10	1.50	1.96	2.49	1371

5.5 ABC Conductor (5 CORE, 95 mm^2)- 30^0 Inclination of Ground

Conductor UTS = 16600N

Final MWT @ 7^oC with full wind = 1444N

Final MWT as % of UTS = 8.69%

Criteria		Mid Span Sag for Different Span Lengths (m)							Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	
7	Initial	0.14	0.24	0.38	0.55	0.74	0.97	1.23	3002
	Final	0.28	0.50	0.79	1.14	1.55	2.02	2.56	1444
12	Initial	0.15	0.26	0.41	0.59	0.81	1.05	1.33	2769
	Final	0.28	0.50	0.78	1.12	1.52	1.99	2.52	1467
17	Initial	0.16	0.29	0.45	0.65	0.88	1.15	1.46	2535
	Final	0.29	0.52	0.81	1.17	1.59	2.08	2.63	1404
22	Initial	0.17	0.31	0.48	0.69	0.94	1.22	1.55	2387
	Final	0.29	0.51	0.80	1.15	1.57	2.05	2.59	1426
27	Initial	0.18	0.31	0.49	0.71	0.96	1.26	1.59	2325
	Final	0.30	0.53	0.84	1.20	1.64	2.14	2.71	1363
32	Initial	0.19	0.34	0.52	0.75	1.03	1.34	1.70	2177
	Final	0.32	0.56	0.88	1.26	1.72	2.25	2.84	1300
37	Initial	0.19	0.34	0.54	0.78	1.06	1.38	1.75	2114
	Final	0.31	0.55	0.86	1.24	1.69	2.21	2.80	1323
42	Initial	0.20	0.36	0.56	0.80	1.09	1.42	1.80	2051
	Final	0.33	0.58	0.90	1.30	1.77	2.32	2.94	1260
47	Initial	0.22	0.38	0.60	0.86	1.17	1.53	1.94	1903
	Final	0.32	0.57	0.89	1.28	1.74	2.28	2.88	1282
52	Initial	0.22	0.40	0.62	0.89	1.21	1.59	2.01	1840
	Final	0.34	0.60	0.94	1.35	1.83	2.40	3.03	1219
57	Initial	0.23	0.41	0.64	0.92	1.26	1.64	2.08	1777
	Final	0.33	0.59	0.92	1.32	1.80	2.35	2.98	1242
62	Initial	0.24	0.43	0.66	0.96	1.30	1.70	2.16	1714
	Final	0.35	0.62	0.97	1.39	1.90	2.48	3.14	1178
67	Initial	0.24	0.42	0.66	0.95	1.29	1.68	2.13	1737
	Final	0.34	0.61	0.95	1.37	1.86	2.43	3.08	1201

6. Sag Tension Chart for Lynx Conductor

6.1 LYNX Conductor - Flat Ground

Conductor UTS = 79800N

Final MWT @ 7°C with full wind = 21271N

Final MWT as % of UTS = 26.65%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.39	0.44	0.49	21271
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.39	0.44	0.49	21271
12	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.29	0.33	0.38	0.42	0.47	0.52	19805
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.29	0.33	0.38	0.42	0.47	0.52	19805
17	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.24	0.28	0.32	0.36	0.41	0.46	0.51	0.57	18338
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.24	0.28	0.32	0.36	0.41	0.46	0.51	0.57	18338
22	Initial	0.01	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.19	0.22	0.26	0.30	0.34	0.39	0.44	0.50	0.55	0.61	16899
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.19	0.22	0.26	0.30	0.34	0.39	0.44	0.50	0.55	0.61	16899
27	Initial	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.20	0.24	0.28	0.33	0.38	0.43	0.48	0.54	0.60	0.67	15488
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.20	0.24	0.28	0.33	0.38	0.43	0.48	0.54	0.60	0.67	15488
32	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.18	0.22	0.26	0.31	0.36	0.41	0.47	0.53	0.59	0.66	0.73	14132
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.18	0.22	0.26	0.31	0.36	0.41	0.47	0.53	0.59	0.66	0.73	14132
37	Initial	0.02	0.03	0.05	0.07	0.10	0.13	0.16	0.20	0.24	0.29	0.34	0.39	0.45	0.52	0.58	0.65	0.73	0.81	12858
	Final	0.02	0.03	0.05	0.07	0.10	0.13	0.16	0.20	0.24	0.29	0.34	0.39	0.45	0.52	0.58	0.65	0.73	0.81	12858
42	Initial	0.02	0.04	0.06	0.08	0.11	0.14	0.18	0.22	0.27	0.32	0.38	0.44	0.50	0.57	0.64	0.72	0.80	0.89	11640
	Final	0.02	0.04	0.06	0.08	0.11	0.14	0.18	0.22	0.27	0.32	0.38	0.44	0.50	0.57	0.64	0.72	0.80	0.89	11640
47	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42	0.48	0.55	0.63	0.71	0.80	0.89	0.99	10504
	Final	0.02	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42	0.48	0.55	0.63	0.71	0.80	0.89	0.99	10504
52	Initial	0.02	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.33	0.39	0.46	0.54	0.61	0.70	0.79	0.89	0.99	1.09	9478
	Final	0.02	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.33	0.39	0.46	0.54	0.61	0.70	0.79	0.89	0.99	1.09	9478
57	Initial	0.03	0.05	0.08	0.11	0.15	0.19	0.24	0.30	0.37	0.43	0.51	0.59	0.68	0.77	0.87	0.98	1.09	1.21	8576
	Final	0.03	0.05	0.08	0.11	0.15	0.19	0.24	0.30	0.37	0.43	0.51	0.59	0.68	0.77	0.87	0.98	1.09	1.21	8576
62	Initial	0.03	0.05	0.08	0.12	0.16	0.21	0.27	0.33	0.40	0.48	0.56	0.65	0.75	0.85	0.96	1.08	1.20	1.33	7784
	Final	0.03	0.05	0.08	0.12	0.16	0.21	0.27	0.33	0.40	0.48	0.56	0.65	0.75	0.85	0.96	1.08	1.20	1.33	7784
67	Initial	0.03	0.06	0.09	0.13	0.18	0.23	0.30	0.36	0.44	0.53	0.62	0.71	0.82	0.93	1.05	1.18	1.32	1.46	7103
	Final	0.03	0.06	0.09	0.13	0.18	0.23	0.30	0.36	0.44	0.53	0.62	0.71	0.82	0.93	1.05	1.18	1.32	1.46	7103

6.2 LYNX Conductor - 5^0 Inclination of Ground

Conductor UTS = 79800N

Final MWT @ 7^oC with full wind = 21161N

Final MWT as % of UTS = 26.51%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.28	0.31	0.36	0.40	0.44	0.49	21161
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.28	0.31	0.36	0.40	0.44	0.49	21161
12	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.30	0.34	0.38	0.43	0.48	0.53	19667
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.30	0.34	0.38	0.43	0.48	0.53	19667
17	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.14	0.17	0.21	0.24	0.28	0.32	0.37	0.41	0.46	0.52	0.57	18228
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.14	0.17	0.21	0.24	0.28	0.32	0.37	0.41	0.46	0.52	0.57	18228
22	Initial	0.01	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.19	0.22	0.26	0.30	0.35	0.40	0.45	0.50	0.56	0.62	16789
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.19	0.22	0.26	0.30	0.35	0.40	0.45	0.50	0.56	0.62	16789
27	Initial	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.20	0.24	0.29	0.33	0.38	0.43	0.49	0.55	0.61	0.68	15378
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.20	0.24	0.29	0.33	0.38	0.43	0.49	0.55	0.61	0.68	15378
32	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.22	0.27	0.31	0.36	0.42	0.47	0.53	0.60	0.67	0.74	14049
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.22	0.27	0.31	0.36	0.42	0.47	0.53	0.60	0.67	0.74	14049
37	Initial	0.02	0.03	0.05	0.07	0.10	0.13	0.17	0.20	0.25	0.29	0.34	0.40	0.46	0.52	0.59	0.66	0.74	0.82	12478
	Final	0.02	0.03	0.05	0.07	0.10	0.13	0.17	0.20	0.25	0.29	0.34	0.40	0.46	0.52	0.59	0.66	0.74	0.82	12478
42	Initial	0.02	0.04	0.06	0.08	0.11	0.14	0.18	0.23	0.27	0.32	0.38	0.44	0.51	0.58	0.65	0.73	0.81	0.90	11530
	Final	0.02	0.04	0.06	0.08	0.11	0.14	0.18	0.23	0.27	0.32	0.38	0.44	0.51	0.58	0.65	0.73	0.81	0.90	11530
47	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42	0.49	0.56	0.64	0.72	0.81	0.90	1.00	10421
	Final	0.02	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42	0.49	0.56	0.64	0.72	0.81	0.90	1.00	10421
52	Initial	0.02	0.04	0.07	0.10	0.14	0.18	0.22	0.28	0.33	0.40	0.47	0.54	0.62	0.71	0.80	0.90	1.00	1.11	9395
	Final	0.02	0.04	0.07	0.10	0.14	0.18	0.22	0.28	0.33	0.40	0.47	0.54	0.62	0.71	0.80	0.90	1.00	1.11	9395
57	Initial	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.37	0.44	0.52	0.60	0.69	0.78	0.88	0.99	1.11	1.22	8494
	Final	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.37	0.44	0.52	0.60	0.69	0.78	0.88	0.99	1.11	1.22	8494
62	Initial	0.03	0.05	0.08	0.12	0.17	0.22	0.27	0.34	0.41	0.49	0.57	0.66	0.76	0.86	0.97	1.09	1.22	1.35	7716
	Final	0.03	0.05	0.08	0.12	0.17	0.22	0.27	0.34	0.41	0.49	0.57	0.66	0.76	0.86	0.97	1.09	1.22	1.35	7716
67	Initial	0.03	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45	0.53	0.62	0.72	0.83	0.95	1.07	1.20	1.33	1.48	7034
	Final	0.03	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45	0.53	0.62	0.72	0.83	0.95	1.07	1.20	1.33	1.48	7034

6.3 LYNX Conductor - 10^0 Inclination of Ground

Conductor UTS = 79800N

Final MWT @ 7°C with full wind = 20940N

Final MWT as % of UTS = 26.24%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.15	0.18	0.21	0.25	0.28	0.32	0.36	0.41	0.45	0.50	20940
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.15	0.18	0.21	0.25	0.28	0.32	0.36	0.41	0.45	0.50	20940
12	Initial	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.16	0.19	0.23	0.26	0.30	0.35	0.39	0.44	0.49	0.54	19474
	Final	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.16	0.19	0.23	0.26	0.30	0.35	0.39	0.44	0.49	0.54	19474
17	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.37	0.42	0.47	0.53	0.58	18008
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.37	0.42	0.47	0.53	0.58	18008
22	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.36	0.41	0.46	0.51	0.57	0.64	16569
	Final	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.36	0.41	0.46	0.51	0.57	0.64	16569
27	Initial	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.44	0.50	0.56	0.63	0.69	15185
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.44	0.50	0.56	0.63	0.69	15185
32	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.32	0.37	0.43	0.49	0.55	0.62	0.69	0.76	13829
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.32	0.37	0.43	0.49	0.55	0.62	0.69	0.76	13829
37	Initial	0.02	0.03	0.05	0.08	0.10	0.13	0.17	0.21	0.25	0.30	0.35	0.41	0.47	0.54	0.61	0.68	0.76	0.84	12555
	Final	0.02	0.03	0.05	0.08	0.10	0.13	0.17	0.21	0.25	0.30	0.35	0.41	0.47	0.54	0.61	0.68	0.76	0.84	12555
42	Initial	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.45	0.52	0.59	0.67	0.75	0.84	0.93	11337
	Final	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.45	0.52	0.59	0.67	0.75	0.84	0.93	11337
47	Initial	0.02	0.04	0.06	0.09	0.13	0.16	0.21	0.26	0.31	0.37	0.43	0.50	0.58	0.66	0.74	0.83	0.93	1.03	10228
	Final	0.02	0.04	0.06	0.09	0.13	0.16	0.21	0.26	0.31	0.37	0.43	0.50	0.58	0.66	0.74	0.83	0.93	1.03	10228
52	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.28	0.34	0.41	0.48	0.56	0.64	0.73	0.82	0.92	1.03	1.14	9230
	Final	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.28	0.34	0.41	0.48	0.56	0.64	0.73	0.82	0.92	1.03	1.14	9230
57	Initial	0.03	0.05	0.08	0.11	0.15	0.20	0.26	0.32	0.38	0.45	0.52	0.62	0.71	0.81	0.91	1.02	1.14	1.26	8342
	Final	0.03	0.05	0.08	0.11	0.15	0.20	0.26	0.32	0.38	0.45	0.52	0.62	0.71	0.81	0.91	1.02	1.14	1.26	8342
62	Initial	0.03	0.06	0.09	0.13	0.17	0.22	0.28	0.35	0.42	0.50	0.59	0.68	0.78	0.89	1.05	1.13	1.26	1.39	7564
	Final	0.03	0.06	0.09	0.13	0.17	0.22	0.28	0.35	0.42	0.50	0.59	0.68	0.78	0.89	1.05	1.13	1.26	1.39	7564
67	Initial	0.03	0.06	0.10	0.14	0.19	0.24	0.31	0.38	0.46	0.55	0.64	0.75	0.86	0.97	1.10	1.23	1.37	1.52	6910
	Final	0.03	0.06	0.10	0.14	0.19	0.24	0.31	0.38	0.46	0.55	0.64	0.75	0.86	0.97	1.10	1.23	1.37	1.52	6910

6.4 LYNX Conductor - 20^0 Inclination of Ground

Conductor UTS = 79800N

Final MWT @ 7°C with full wind = 20224N

Final MWT as % of UTS = 25.34%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.16	0.20	0.23	0.27	0.31	0.35	0.39	0.44	0.49	0.55	20224
	Final	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.16	0.20	0.23	0.27	0.31	0.35	0.39	0.44	0.49	0.55	20224
12	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.38	0.43	0.48	0.53	0.59	18730
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.38	0.43	0.48	0.53	0.59	18730
17	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.36	0.41	0.46	0.52	0.58	0.64	17292
	Final	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.36	0.41	0.46	0.52	0.58	0.64	17292
22	Initial	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.45	0.50	0.56	0.63	0.70	15853
	Final	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.45	0.50	0.56	0.63	0.70	15853
27	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.32	0.37	0.43	0.49	0.55	0.62	0.69	0.76	14469
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.32	0.37	0.43	0.49	0.55	0.62	0.69	0.76	14469
32	Initial	0.02	0.03	0.05	0.08	0.10	0.13	0.17	0.21	0.25	0.30	0.35	0.41	0.47	0.54	0.61	0.68	0.76	0.84	13140
	Final	0.02	0.03	0.05	0.08	0.10	0.13	0.17	0.21	0.25	0.30	0.35	0.41	0.47	0.54	0.61	0.68	0.76	0.84	13140
37	Initial	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.46	0.52	0.59	0.67	0.75	0.84	0.93	11867
	Final	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.46	0.52	0.59	0.67	0.75	0.84	0.93	11867
42	Initial	0.02	0.04	0.06	0.09	0.13	0.17	0.21	0.26	0.31	0.37	0.44	0.51	0.58	0.66	0.75	0.84	0.93	1.03	10676
	Final	0.02	0.04	0.06	0.09	0.13	0.17	0.21	0.26	0.31	0.37	0.44	0.51	0.58	0.66	0.75	0.84	0.93	1.03	10676
47	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.29	0.35	0.41	0.49	0.56	0.65	0.74	0.83	0.93	1.04	1.15	9595
	Final	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.29	0.35	0.41	0.49	0.56	0.65	0.74	0.83	0.93	1.04	1.15	9595
52	Initial	0.03	0.05	0.08	0.12	0.16	0.20	0.26	0.32	0.39	0.46	0.54	0.63	0.72	0.82	0.92	1.04	1.15	1.28	8624
	Final	0.03	0.05	0.08	0.12	0.16	0.20	0.26	0.32	0.39	0.46	0.54	0.63	0.72	0.82	0.92	1.04	1.15	1.28	8624
57	Initial	0.03	0.06	0.09	0.13	0.17	0.23	0.29	0.35	0.43	0.51	0.60	0.69	0.80	0.91	1.02	1.15	1.28	1.42	7791
	Final	0.03	0.06	0.09	0.13	0.17	0.23	0.29	0.35	0.43	0.51	0.60	0.69	0.80	0.91	1.02	1.15	1.28	1.42	7791
62	Initial	0.04	0.06	0.10	0.14	0.19	0.25	0.32	0.39	0.47	0.56	0.66	0.77	0.88	1.00	1.13	1.27	1.41	1.56	7055
	Final	0.04	0.06	0.10	0.14	0.19	0.25	0.32	0.39	0.47	0.56	0.66	0.77	0.88	1.00	1.13	1.27	1.41	1.56	7055
67	Initial	0.04	0.07	0.11	0.15	0.21	0.27	0.35	0.43	0.52	0.62	0.72	0.84	0.96	1.10	1.24	1.39	1.55	1.71	6442
	Final	0.04	0.07	0.11	0.15	0.21	0.27	0.35	0.43	0.52	0.62	0.72	0.84	0.96	1.10	1.24	1.39	1.55	1.71	6442

6.5 LYNX Conductor - 30^0 Inclination of Ground

Conductor UTS = 79800N

Final MWT @ 7^oC with full wind = 18517N

Final MWT as % of UTS = 23.20%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^oC)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.20	0.23	0.27	0.32	0.36	0.41	0.47	0.52	0.58	0.65	18517
	Final	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.20	0.23	0.27	0.32	0.36	0.41	0.47	0.52	0.58	0.65	18517
12	Initial	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.18	0.21	0.25	0.30	0.34	0.39	0.45	0.51	0.57	0.83	0.70	17050
	Final	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.18	0.21	0.25	0.30	0.34	0.39	0.45	0.51	0.57	0.83	0.70	17050
17	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.16	0.19	0.23	0.28	0.32	0.38	0.43	0.49	0.55	0.62	0.69	0.77	15612
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.16	0.19	0.23	0.28	0.32	0.38	0.43	0.49	0.55	0.62	0.69	0.77	15612
22	Initial	0.02	0.03	0.05	0.08	0.10	0.13	0.17	0.21	0.25	0.30	0.36	0.41	0.47	0.54	0.61	0.68	0.76	0.84	14225
	Final	0.02	0.03	0.05	0.08	0.10	0.13	0.17	0.21	0.25	0.30	0.36	0.41	0.47	0.54	0.61	0.68	0.76	0.84	14225
27	Initial	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.46	0.52	0.59	0.67	0.75	0.84	0.93	12872
	Final	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.46	0.52	0.59	0.67	0.75	0.84	0.93	12872
32	Initial	0.02	0.04	0.06	0.09	0.13	0.17	0.21	0.26	0.31	0.37	0.44	0.51	0.58	0.66	0.75	0.84	0.93	1.03	11570
	Final	0.02	0.04	0.06	0.09	0.13	0.17	0.21	0.26	0.31	0.37	0.44	0.51	0.58	0.66	0.75	0.84	0.93	1.03	11570
37	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.29	0.35	0.42	0.49	0.57	0.65	0.74	0.84	0.94	1.04	1.16	10352
	Final	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.29	0.35	0.42	0.49	0.57	0.65	0.74	0.84	0.94	1.04	1.16	10352
42	Initial	0.03	0.05	0.08	0.12	0.16	0.21	0.26	0.32	0.39	0.46	0.55	0.63	0.73	0.83	0.93	1.05	1.16	1.29	9271
	Final	0.03	0.05	0.08	0.12	0.16	0.21	0.26	0.32	0.39	0.46	0.55	0.63	0.73	0.83	0.93	1.05	1.16	1.29	9271
47	Initial	0.03	0.06	0.09	0.13	0.18	0.23	0.29	0.36	0.44	0.52	0.61	0.71	0.81	0.93	1.04	1.17	1.31	1.45	8273
	Final	0.03	0.06	0.09	0.13	0.18	0.23	0.29	0.36	0.44	0.52	0.61	0.71	0.81	0.93	1.04	1.17	1.31	1.45	8273
52	Initial	0.04	0.06	0.10	0.15	0.20	0.26	0.33	0.40	0.49	0.58	0.68	0.79	0.91	1.03	1.17	1.31	1.46	1.61	7412
	Final	0.04	0.06	0.10	0.15	0.20	0.26	0.33	0.40	0.49	0.58	0.68	0.79	0.91	1.03	1.17	1.31	1.46	1.61	7412
57	Initial	0.04	0.07	0.11	0.16	0.22	0.29	0.36	0.45	0.54	0.64	0.76	0.88	1.01	1.14	1.29	1.45	1.61	1.79	6689
	Final	0.04	0.07	0.11	0.16	0.22	0.29	0.36	0.45	0.54	0.64	0.76	0.88	1.01	1.14	1.29	1.45	1.61	1.79	6689
62	Initial	0.04	0.08	0.12	0.18	0.24	0.32	0.40	0.49	0.60	0.71	0.83	0.96	1.11	1.26	1.42	1.60	1.78	1.97	6077
	Final	0.04	0.08	0.12	0.18	0.24	0.32	0.40	0.49	0.60	0.71	0.83	0.96	1.11	1.26	1.42	1.60	1.78	1.97	6077
67	Initial	0.05	0.09	0.13	0.19	0.26	0.34	0.44	0.54	0.65	0.77	0.91	1.05	1.21	1.38	1.55	1.74	1.94	2.15	5561
	Final	0.05	0.09	0.13	0.19	0.26	0.34	0.44	0.54	0.65	0.77	0.91	1.05	1.21	1.38	1.55	1.74	1.94	2.15	5561

7. Sag Tension Chart for RACOON Conductor

7.1 RACOON Conductor – Flat Ground

Conductor UTS = 27060 N

Final MWT @ 7°C with full wind = 6884 N

Final MWT as % of UTS = 25.44%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.15	0.18	0.21	0.25	0.28	0.32	0.37	0.41	0.46	0.51	7707
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.24	0.28	0.32	0.36	0.41	0.46	0.51	0.57	6884
12	Initial	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.13	0.16	0.19	0.23	0.26	0.30	0.34	0.39	0.43	0.48	0.54	7269
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.22	0.26	0.30	0.35	0.40	0.45	0.50	0.56	0.62	6278
17	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.14	0.17	0.21	0.24	0.28	0.32	0.37	0.41	0.46	0.52	0.57	6829
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.44	0.50	0.55	0.62	0.69	5693
22	Initial	0.01	0.02	0.04	0.06	0.07	0.10	0.12	0.15	0.18	0.22	0.26	0.30	0.34	0.39	0.44	0.50	0.55	0.61	6379
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.32	0.37	0.43	0.49	0.55	0.62	0.69	0.76	5130
27	Initial	0.01	0.03	0.04	0.06	0.08	0.11	0.13	0.16	0.20	0.24	0.28	0.32	0.37	0.42	0.48	0.53	0.59	0.66	5929
	Final	0.02	0.03	0.05	0.08	0.10	0.14	0.17	0.21	0.26	0.31	0.36	0.42	0.48	0.54	0.61	0.69	0.77	0.85	4589
32	Initial	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.18	0.22	0.26	0.30	0.35	0.40	0.45	0.51	0.58	0.64	0.71	5487
	Final	0.02	0.04	0.06	0.09	0.12	0.15	0.19	0.24	0.29	0.34	0.40	0.47	0.53	0.61	0.69	0.77	0.86	0.95	4103
37	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.16	0.19	0.23	0.28	0.33	0.38	0.43	0.49	0.56	0.63	0.70	0.77	5045
	Final	0.02	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.68	0.77	0.86	0.96	1.07	3658
42	Initial	0.02	0.03	0.05	0.08	0.10	0.14	0.17	0.21	0.26	0.30	0.36	0.41	0.47	0.54	0.61	0.68	0.76	0.84	4622
	Final	0.03	0.50	0.07	0.11	0.15	0.19	0.24	0.30	0.36	0.43	0.50	0.58	0.67	0.76	0.86	0.97	1.08	1.19	3270
47	Initial	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.45	0.52	0.59	0.67	0.75	0.84	0.93	4208
	Final	0.03	0.05	0.08	0.12	0.16	0.21	0.27	0.33	0.40	0.48	0.56	0.65	0.75	0.85	0.96	1.08	1.20	1.33	2938
52	Initial	0.02	0.04	0.06	0.09	0.13	0.16	0.21	0.26	0.31	0.37	0.43	0.50	0.57	0.65	0.74	0.83	0.92	1.02	3820
	Final	0.30	0.60	0.09	0.13	0.18	0.23	0.30	0.37	0.44	0.53	0.62	0.72	0.83	0.94	1.06	1.19	1.33	1.47	2656
57	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.28	0.34	0.41	0.48	0.55	0.63	0.72	0.81	0.91	1.02	1.13	3463
	Final	0.04	0.06	0.10	0.14	0.19	0.25	0.32	0.39	0.48	0.57	0.66	0.77	0.88	1.01	1.14	1.27	1.42	1.57	2482
62	Initial	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.38	0.45	0.52	0.61	0.70	0.79	0.90	1.01	1.12	1.24	3142
	Final	0.04	0.07	0.10	0.15	0.20	0.26	0.33	0.41	0.49	0.59	0.69	0.80	0.91	1.04	1.17	1.32	1.47	1.63	2399
67	Initial	0.03	0.05	0.09	0.12	0.17	0.22	0.28	0.34	0.41	0.49	0.58	0.67	0.77	0.87	0.99	1.11	1.23	1.37	2856
	Final	0.04	0.07	0.11	0.15	0.21	0.27	0.34	0.42	0.51	0.61	0.71	0.82	0.95	1.08	1.22	1.36	1.52	1.68	2320

7.2 RACOON Conductor - 5^0 Inclination of Ground

Conductor UTS = 27060 N

Final MWT @ 7°C with full wind = 7521N

Final MWT as % of UTS = 27.79%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.33	0.38	0.42	0.46	8446
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.29	0.33	0.38	0.42	0.47	0.52	7521
12	Initial	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.40	0.44	0.49	8012
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.24	0.28	0.32	0.36	0.41	0.46	0.51	0.57	6904
17	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.16	0.19	0.22	0.25	0.29	0.33	0.37	0.42	0.47	0.52	7576
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.22	0.26	0.31	0.35	0.40	0.45	0.50	0.56	0.62	6286
22	Initial	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.23	0.27	0.31	0.35	0.40	0.44	0.50	0.55	7131
	Final	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.44	0.50	0.56	0.62	0.69	5702
27	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.29	0.33	0.37	0.42	0.47	0.53	0.59	6685
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.32	0.37	0.43	0.49	0.55	0.62	0.69	0.76	5139
32	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.35	0.40	0.45	0.51	0.57	0.63	6229
	Final	0.02	0.03	0.05	0.08	0.10	014	0.17	0.21	0.26	0.31	0.36	0.42	0.48	0.54	0.62	0.69	0.77	0.85	4599
37	Initial	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.20	0.24	0.29	0.33	0.38	0.43	0.49	0.55	0.61	0.68	5781
	Final	0.02	0.04	0.06	0.09	0.12	0.15	0.19	0.24	0.29	0.34	0.40	0.47	0.54	0.61	0.69	0.77	0.86	0.95	4109
42	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.18	0.22	0.26	0.31	0.36	0.41	0.47	0.53	0.59	0.66	0.73	5332
	Final	0.02	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.68	0.77	0.87	0.96	1.07	3664
47	Initial	0.02	0.03	0.05	0.07	0.10	0.13	0.16	0.20	0.24	0.29	0.34	0.39	0.45	0.51	0.58	0.65	0.72	0.80	4893
	Final	0.03	0.05	0.07	0.11	0.15	0.19	0.24	0.30	0.36	0.43	0.51	0.59	0.67	0.77	0.87	0.97	1.08	1.20	3270
52	Initial	0.02	0.04	0.05	0.08	0.11	0.14	0.18	0.22	0.27	0.32	0.37	0.43	0.49	0.56	0.63	0.71	0.79	0.88	4464
	Final	0.03	0.05	0.08	0.12	0.16	0.21	0.27	0.33	0.40	0.48	0.56	0.65	0.75	0.85	0.96	1.08	1.20	1.33	2938
57	Initial	0.02	0.04	0.06	0.09	0.12	0.15	0.20	0.24	0.29	0.35	0.41	0.47	0.54	0.62	0.70	0.78	0.87	0.96	4063
	Final	0.03	0.06	0.09	0.13	0.18	0.23	0.29	0.36	0.44	0.52	0.61	0.71	0.81	0.93	1.05	1.17	1.31	1.45	2705
62	Initial	0.02	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.32	0.38	0.45	0.52	0.60	0.68	0.77	0.86	0.96	1.06	3683
	Final	0.03	0.06	0.09	0.14	0.18	0.24	0.30	0.38	0.45	0.54	0.63	0.74	0.84	0.96	1.08	1.22	1.35	1.50	2610
67	Initial	0.03	0.05	0.07	0.11	0.14	0.19	0.24	0.29	0.36	0.42	0.50	0.58	0.66	0.75	0.85	0.95	1.06	1.17	3333
	Final	0.03	0.06	0.10	0.14	0.19	0.25	0.31	0.39	0.47	0.56	0.66	0.76	0.87	0.99	1.12	1.26	1.40	1.55	2523

7.3 RACOON Conductor - 10^0 Inclination of Ground

Conductor UTS = 27060 N

Final MWT @ 7°C with full wind = 7441N

Final MWT as % of UTS = 27.49%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	003	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30	0.34	0.38	0.43	0.47	8351
	Final	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.13	0.16	0.19	0.22	0.26	0.30	0.34	0.38	0.43	0.48	0.53	7441
12	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.15	0.18	0.21	0.25	0.28	0.32	0.36	0.41	0.45	0.50	7915
	Final	.01	0.02	0.04	0.05	0.07	0.09	0.12	0.15	0.18	0.21	0.25	0.28	0.33	0.37	0.42	0.47	0.52	0.58	6824
17	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.30	0.34	0.38	0.43	0.48	0.53	7478
	Final	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.36	0.41	0.46	0.52	0.58	0.64	6206
22	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.24	0.28	0.32	0.36	0.41	0.46	0.51	0.56	7031
	Final	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.18	0.21	0.25	0.30	0.35	0.40	0.45	0.51	0.57	0.64	0.70	5622
27	Initial	0.01	0.02	0.04	0.05	0.07	0.10	0.12	0.15	0.18	0.22	0.25	0.29	0.34	0.39	0.43	0.49	0.54	0.60	6583
	Final	0.02	0.03	0.05	0.07	0.10	0.13	0.16	0.20	0.24	0.28	0.33	0.38	0.44	0.50	0.57	0.63	0.71	0.78	5059
32	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.20	0.23	0.27	0.32	0.36	0.41	0.47	0.52	0.58	0.65	6125
	Final	0.02	0.03	0.05	0.08	0.11	0.14	0.18	0.22	0.26	0.31	0.37	0.43	0.49	0.56	0.63	0.71	0.79	0.87	4529
37	Initial	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.45	0.50	0.57	0.63	0.70	5675
	Final	0.02	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.35	0.41	0.48	0.55	0.63	0.71	0.79	0.88	0.98	4039
42	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.19	0.23	0.27	0.32	0.37	0.43	0.48	0.55	0.61	0.68	0.76	5234
	Final	0.02	0.04	0.07	0.10	0.13	0.18	0.22	0.28	0.33	0.40	0.47	0.54	0.62	0.71	0.80	0.89	0.99	1.10	3595
47	Initial	0.02	0.03	0.05	0.07	0.10	0.13	0.17	0.21	0.25	0.30	0.35	0.40	0.46	0.53	0.60	0.67	0.75	0.83	4794
	Final	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.37	0.44	0.52	0.61	0.69	0.79	0.89	1.00	1.12	1.24	3206
52	Initial	0.02	0.04	0.06	0.08	0.11	0.14	0.18	0.23	0.27	0.33	0.38	0.44	0.51	0.58	0.65	0.73	0.82	0.91	4372
	Final	0.03	0.06	0.09	0.12	0.17	0.22	0.28	0.34	0.42	0.50	0.58	0.67	0.77	0.88	0.99	1.11	1.24	1.38	2880
57	Initial	0.02	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.36	0.42	0.49	0.56	0.64	0.72	0.81	0.90	1.00	3970
	Final	0.03	0.06	0.09	0.13	0.18	0.24	0.30	0.37	0.45	0.54	0.63	0.73	0.84	0.95	1.07	1.20	1.34	1.49	2664
62	Initial	0.02	0.04	0.07	0.10	0.14	0.18	0.22	0.28	0.33	0.40	0.47	0.54	0.62	0.71	0.80	0.89	1.00	1.10	2589
	Final	0.03	0.06	0.10	0.14	0.19	0.25	0.31	0.38	0.47	0.55	0.65	0.75	0.87	0.99	1.11	1.25	1.39	1.54	2573
67	Initial	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.30	0.37	0.44	0.51	0.60	0.69	0.78	0.88	0.99	1.10	1.22	3250
	Final	0.04	0.06	0.10	0.14	0.20	0.26	0.32	0.40	0.48	0.57	0.67	0.78	0.90	1.02	1.15	1.29	1.44	1.60	2481

7.4 RACOON Conductor - 20^0 Inclination of Ground

Conductor UTS = 27060 N

Final MWT @ 7^oC with full wind = 7197N

Final MWT as % of UTS = 26.59%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^{0}C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.16	0.19	0.22	0.25	0.29	0.33	0.37	0.42	0.47	0.52	8047
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.14	0.17	0.21	0.24	0.28	0.32	0.37	0.42	0.47	0.52	0.58	7197
12	Initial	0.01	0.02	0.03	0.05	0.07	0.09	0.11	0.14	0.16	0.20	0.23	0.27	0.31	0.35	0.39	0.44	0.49	0.55	7614
	Final	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.35	0.40	0.46	0.51	0.57	0.63	6579
17	Initial	0.01	0.02	0.04	0.05	0.07	0.09	0.12	0.14	0.18	0.21	0.24	0.28	0.33	0.37	0.42	0.47	0.52	0.58	7163
	Final	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.39	0.44	0.50	0.56	0.63	0.69	5973
22	Initial	0.01	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.19	0.22	0.26	0.30	0.35	0.40	0.45	0.50	0.56	0.62	6711
	Final	0.02	0.03	0.05	0.07	0.09	0.12	0.16	0.19	0.23	0.28	0.33	0.38	0.43	0.49	0.56	0.62	0.70	0.77	5388
27	Initial	0.01	0.03	0.04	0.06	0.08	0.11	0.13	0.17	0.20	0.24	0.28	0.32	0.37	0.42	0.48	0.54	0.60	0.66	6266
	Final	0.02	0.03	0.05	0.08	0.11	0.14	0.17	0.22	0.26	0.31	0.36	0.42	0.48	0.55	0.62	0.70	0.78	0.86	4825
32	Initial	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.18	0.22	0.26	0.30	0.35	0.40	0.46	0.52	0.58	0.64	0.71	5812
	Final	0.02	0.04	0.06	0.09	0.12	0.15	0.20	0.24	0.29	0.35	0.41	0.47	0.54	0.62	0.70	0.78	0.87	0.97	4295
37	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.16	0.19	0.23	0.28	0.33	0.38	0.44	0.50	0.56	0.63	0.70	0.77	5357
	Final	0.02	0.04	0.07	0.10	0.13	0.17	0.22	0.27	0.33	0.39	0.46	0.53	0.61	0.70	0.79	0.88	0.98	1.09	3816
42	Initial	0.02	0.03	0.05	0.08	0.10	0.14	0.17	0.21	0.26	0.30	0.36	0.41	0.48	0.54	0.61	0.68	0.76	0.85	4911
	Final	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.37	0.44	0.52	0.60	0.69	0.78	0.89	0.99	1.11	1.23	3388
47	Initial	0.02	0.04	0.06	0.08	0.11	0.15	0.19	0.23	0.28	0.33	0.39	0.45	0.52	0.59	0.67	0.75	0.84	0.93	4475
	Final	0.03	0.06	0.09	0.12	0.17	0.22	0.28	0.34	0.42	0.50	0.58	0.67	0.77	0.88	0.99	1.11	1.24	1.38	3017
52	Initial	0.02	0.04	0.06	0.09	0.13	0.16	0.21	0.26	0.31	0.37	0.43	0.50	0.58	0.65	0.74	0.82	0.92	1.02	4058
	Final	0.03	0.06	0.10	0.14	0.19	0.25	0.31	0.38	0.46	0.55	0.65	0.75	0.86	0.98	1.11	1.24	1.38	1.53	2707
57	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.28	0.34	0.41	0.48	0.55	0.64	0.72	0.82	0.92	1.02	1.13	3670
	Final	0.04	0.07	0.10	0.15	0.20	0.26	0.33	0.41	0.50	0.59	0.69	0.80	0.92	1.05	1.19	1.33	1.48	1.64	2530
62	Initial	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.38	0.45	0.53	0.61	0.71	0.80	0.91	1.02	1.13	1.25	3309
	Final	0.04	0.07	0.11	0.15	0.21	0.27	0.34	0.43	0.51	0.61	0.72	0.83	0.96	1.09	1.23	1.38	1.54	1.72	2441
67	Initial	0.03	0.06	0.09	0.12	0.17	0.22	0.28	0.35	0.42	0.50	0.59	0.68	0.78	0.89	1.00	1.12	1.25	1.39	2991
	Final	0.04	0.07	0.11	0.16	0.22	0.28	0.36	0.44	0.53	0.63	0.75	0.86	0.99	1.13	1.27	1.43	1.59	1.76	2354

7.5 RACOON Conductor - 30^0 Inclination of Ground

Conductor UTS = 27060 N

Final MWT @ 7^oC with full wind = 6327N

Final MWT as % of UTS = 23.38%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.03	0.04	0.06	0.08	0.10	0.13	0.16	0.19	0.23	0.27	0.31	0.36	0.41	0.46	0.52	0.58	0.64	7034
	Final	0.02	0.03	0.04	0.06	0.09	0.11	0.14	0.18	0.22	0.26	0.30	0.35	0.40	0.46	0.51	0.58	0.64	0.71	6327
12	Initial	0.02	0.03	0.04	0.06	0.08	0.11	0.14	0.17	0.21	0.25	0.29	0.34	0.38	0.44	0.49	0.55	0.62	0.68	6584
	Final	0.02	0.03	0.05	0.07	0.10	0.3	0.16	0.20	0.24	0.28	0.33	0.39	0.44	0.50	0.57	0.64	0.71	0.79	5720
17	Initial	0.02	0.03	0.05	0.07	0.09	0.12	0.15	0.18	0.22	0.26	0.31	0.36	0.41	0.47	0.53	0.60	0.66	0.74	6124
	Final	0.02	0.04	0.05	0.08	0.11	0.14	0.18	0.22	0.27	0.32	0.37	0.43	0.49	0.56	0.63	0.71	0.79	0.88	5135
22	Initial	0.02	0.03	0.05	0.07	0.10	0.13	0.16	0.20	0.24	0.29	0.34	0.39	0.45	0.51	0.57	0.64	0.72	0.79	5672
	Final	0.02	0.04	0.06	0.09	0.12	0.16	0.20	0.25	0.30	0.35	0.42	0.48	0.55	0.63	0.71	0.80	0.89	0.99	4571
27	Initial	0.02	0.03	0.05	0.08	0.11	0.14	0.17	0.22	0.26	0.3	0.36	0.42	0.49	0.55	0.62	0.70	0.78	0.86	529
	Final	0.03	0.04	0.07	0.10	0.14	0.18	0.23	0.28	0.34	0.40	0.47	0.54	0.63	0.71	0.80	0.90	1.00	1.11	4052
32	Initial	0.02	0.04	0.06	0.09	0.12	0.15	0.19	0.24	0.29	0.34	0.40	0.46	0.53	0.60	0.68	0.77	0.85	0.94	4766
	Final	0.03	0.05	0.08	0.11	0.15	0.20	0.25	0.31	0.38	0.45	0.53	0.62	0.71	0.81	0.91	1.02	1.14	1.26	3577
37	Initial	0.02	0.04	0.06	0.09	0.13	0.17	0.21	0.26	0.31	0.37	0.44	0.51	0.58	0.67	0.75	0.84	0.94	1.04	4331
	Final	0.03	0.06	0.09	0.13	0.17	0.23	0.29	0.36	0.43	0.51	0.60	0.70	0.80	0.91	1.03	1.16	1.29	1.43	3155
42	Initial	0.03	0.05	0.07	0.10	0.14	0.18	0.23	0.29	0.35	0.42	0.49	0.56	0.65	0.74	0.83	0.93	1.04	1.15	3907
	Final	0.04	0.06	0.10	0.15	0.20	0.26	0.33	0.40	0.49	0.58	0.68	0.79	0.91	1.03	1.17	1.31	1.46	1.61	2789
47	Initial	0.03	0.05	0.08	0.12	0.16	0.21	0.26	0.32	0.39	0.46	0.54	063	0.72	0.82	0.93	1.04	1.16	1.28	3512
	Final	0.04	0.07	0.11	0.16	0.22	0.29	0.37	0.45	0.55	0.65	0.76	0.89	1.02	1.16	1.31	1.46	1.63	1.81	2491
52	Initial	0.03	0.06	0.09	0.13	0.17	0.23	0.29	0.36	0.43	0.51	0.60	0.70	0.80	0.91	1.03	1.16	1.29	1.43	3157
	Final	0.05	0.08	0.13	0.18	025	0.32	0.41	0.50	0.6	0.72	0.85	0.98	1.13	1.28	1.45	1.62	1.81	2.00	2250
57	Initial	0.04	0.06	0.10	0.14	0.19	0.25	0.32	0.40	0.48	0.57	0.67	0.78	0.90	1.02	1.15	1.29	1.44	1.59	2830
	Final	0.05	0.08	0.13	0.19	0.25	0.33	0.42	0.52	0.63	0.75	0.88	1.02	1.17	1.33	1.50	1.68	1.88	2.08	2166
62	Initial	0.04	0.07	0.11	0.16	0.22	0.28	0.36	0.44	0.53	0.64	0.75	0.87	0.99	1.13	1.28	1.43	1.59	1.77	2551
	Final	0.05	0.09	0.13	0.19	0.26	0.35	0.44	0.54	0.65	0.78	0.91	1.06	1.21	1.38	1.56	1.75	1.95	2.16	2087
67	Initial	0.04	0.08	0.12	0.18	0.24	0.31	0.39	0.49	0.59	0.70	0.82	0.95	1.10	1.25	1.41	1.58	1.76	1.95	2312
	Final	0.05	0.09	0.14	0.20	0.27	0.36	0.45	0.56	0.68	0.81	0.95	1.10	1.26	1.43	1.62	1.81	2.02	2.24	2012

8. Sag Tension Chart for SILVASSA Conductor

8.1 SILVASSA Conductor – Flat Ground

Conductor UTS = 67300N

Final MWT @ 7°C with full wind = 15135N

Final MWT as % of UTS = 22.48%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.10	0.11	0.13	0.16	0.18	0.20	0.23	0.26	0.29	0.32	15135
	Final	0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.10	0.11	0.13	0.16	0.18	0.020	0.23	0.26	0.29	0.32	15135
12	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	14992
	Final	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.24	0.27	0.30	0.33	14740
17	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	14851
	Final	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.15	0.17	0.20	0.22	0.25	0.28	0.31	0.35	13911
22	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.24	0.27	0.30	0.33	14699
	Final	0.01	0.01	0.02	0.03	0.05	0.06	0.07	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.33	0.37	13098
27	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.33	14543
	Final	0.01	0.02	0.02	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.28	0.32	0.35	0.39	12269
32	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	010	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.34	14384
	Final	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.18	0.21	0.24	0.27	0.30	0.34	0.38	0.42	11456
37	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.24	0.27	0.31	0.34	14229
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.25	0.29	0.33	0.37	0.41	0.45	10659
42	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.10	0.12	0.14	0.17	0.19	0.22	025	0.28	0.31	0.34	14066
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.26	0.29	0.33	0.37	0.41	0.46	10560
47	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.12	0.15	0.17	0.20	0.22	0.25	0.28	0.31	0.35	13900
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.26	0.29	0.33	0.37	0.41	0.46	10534
52	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.22	0.25	0.28	0.32	0.35	13733
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.14	0.17	0.19	0.22	0.26	0.29	0.33	0.37	0.41	0.46	10509
57	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.23	0.26	0.29	0.32	0.36	13565
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.19	0.23	0.26	0.29	0.33	0.37	0.42	0.46	10484
62	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.32	0.36	13403
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.19	0.23	0.26	0.30	0.33	0.37	0.42	0.46	10458
67	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.21	0.23	0.26	0.30	0.33	0.36	13234
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.33	0.37	0.42	0.46	10433

8.2 SILVASSA Conductor - 5^0 Inclination of Ground

Conductor UTS = 67300N

Final MWT @ 7^oC with full wind = 15064N

Final MWT as % of UTS = 22.38%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^oC)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	15064
	Final	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	15064
12	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.29	0.32	14920
	Final	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.33	14679
17	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.24	0.27	0.30	0.33	14778
	Final	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.22	0.25	0.28	0.32	0.35	13580
22	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.33	14625
	Final	0.01	0.01	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.34	0.37	13021
27	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.33	14469
	Final	0.01	0.02	0.02	0.04	005	0.06	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.29	0.32	0.36	0.40	12208
32	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.24	0.27	0.31	0.34	14310
	Final	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.18	0.21	0.24	0.27	0.31	0.34	0.38	0.43	11395
37	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.28	0.31	0.34	14148
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.26	0.29	0.33	0.37	0.41	0.46	10582
42	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.15	0.17	0.19	0.22	0.25	0.28	0.31	0.35	13984
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.19	0.23	0.26	0.30	0.33	0.37	0.42	0.46	10505
47	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.22	0.25	0.28	0.32	0.35	13825
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.33	0.37	0.42	0.46	10480
52	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.23	0.26	0.29	0.32	0.35	13658
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.33	0.38	0.42	0.46	10455
57	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.32	0.36	13490
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.34	0.38	0.42	0.46	10429
62	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.33	0.36	13328
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.34	0.38	0.42	0.47	10404
67	Initial	0.01	0.01	0.02	0.03	0.05	0.06	0.07	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.33	0.37	13158
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.34	0.38	0.42	0.47	10379

8.3 SILVASSA Conductor - 10^0 Inclination of Ground

Conductor UTS = 67300N

Final MWT @ 7°C with full wind = 14887N

Final MWT as % of UTS = 22.12%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (°C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.33	14887
	Final	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.33	14887
12	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.33	14748
	Final	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.24	0.27	0.30	0.34	14518
17	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.30	0.34	14598
	Final	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.32	0.36	13689
22	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.27	0.31	0.34	14444
	Final	0.01	0.02	0.02	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.27	0.31	0.34	0.38	12876
27	Initial	0.01	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.28	0.31	0.34	14294
	Final	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.15	0.17	0.20	0.23	0.26	0.29	0.33	0.37	0.41	12063
32	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.10	0.12	0.15	0.17	0.19	0.22	0.25	0.28	0.31	0.35	14133
	Final	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.28	0.31	0.35	0.39	0.44	11250
37	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.22	0.25	0.28	0.32	0.35	13971
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.34	0.38	0.42	0.47	10437
42	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.20	0.23	0.26	0.29	0.32	0.35	13806
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30	0.34	0.38	0.43	0.47	10372
47	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.32	0.36	13640
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30	0.34	0.38	0.43	0.47	10347
52	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.33	0.36	13479
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30	0.34	0.38	0.43	0.47	10322
57	Initial	0.01	0.01	0.02	0.03	0.05	0.06	0.07	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.33	0.37	13311
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30	0.34	0.39	0.43	0.48	10296
62	Initial	0.01	0.01	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.34	0.37	13142
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.31	0.34	0.39	0.43	0.48	10276
67	Initial	0.01	0.02	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.14	0.16	0.18	0.21	0.24	0.27	0.31	0.34	0.38	12979
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.31	0.35	0.39	0.43	0.48	10251

8.4 SILVASSA Conductor - 20^0 Inclination of Ground

Conductor UTS = 67300N

Final MWT @ 7^oC with full wind = 14242N

Final MWT as % of UTS = 21.16%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.33	0.36	14242
	Final	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.33	0.36	14242
12	Initial	0.01	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.30	0.33	0.36	14098
	Final	0.01	0.01	0.02	0.03	0.05	0.06	0.07	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.33	0.37	13972
17	Initial	0.01	0.01	0.02	0.03	0.05	0.06	0.07	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.33	0.37	13942
	Final	0.01	0.02	0.02	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.28	0.32	0.35	0.39	13143
22	Initial	0.01	0.01	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.27	0.30	0.34	0.37	13784
	Final	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.13	0.15	0.18	0.20	0.23	0.27	0.30	0.34	0.38	0.42	12330
27	Initial	0.01	0.02	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.14	0.16	0.18	0.21	0.24	0.27	0.31	0.34	0.38	13623
	Final	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.25	0.29	0.32	0.36	0.40	0.45	11501
32	Initial	0.01	0.02	0.02	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.28	0.31	0.34	0.38	13466
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.20	0.24	0.27	0.31	0.35	0.39	0.43	0.48	10704
37	Initial	0.01	0.02	0.02	0.03	0.05	0.06	0.08	0.10	0.12	0.14	0.16	0.19	0.22	0.25	0.28	0.31	0.35	0.39	13301
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.10	0.13	0.16	0.19	0.22	0.25	0.29	0.33	0.37	0.42	0.47	0.52	9914
42	Initial	0.01	0.02	0.02	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.28	0.32	0.35	0.39	13134
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.25	0.29	0.33	0.38	0.42	0.47	0.52	9889
47	Initial	0.01	0.02	0.02	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.17	0.19	0.22	0.25	0.29	0.32	0.36	0.40	12967
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.29	0.33	0.38	0.42	0.47	0.52	9864
52	Initial	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.26	0.29	0.32	0.36	0.40	12805
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.29	0.33	0.38	0.42	0.47	0.52	9838
57	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.15	0.17	0.20	0.23	0.26	0.29	0.33	0.37	0.41	12636
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.29	0.33	0.38	0.42	0.47	0.52	9818
62	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.12	0.15	0.17	0.20	0.23	0.26	0.30	0.33	0.37	0.41	12466
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.29	0.34	0.38	0.42	0.47	0.52	9793
67	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.08	0.10	0.13	0.15	0.18	0.20	0.23	0.27	0.30	0.34	0.38	0.42	12304
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.30	0.34	0.38	0.43	0.47	0.53	9767

8.5 SILVASSA Conductor - 30^0 Inclination of Ground

Conductor UTS = 67300N

Final MWT @ 7^oC with full wind = 13187N

Final MWT as % of UTS = 19.59%

Criteria		Mid Span Sag for Different Span Lengths (m)																		Horizontal Tension [N]
Conductor Temp (^0C)	Status	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	
7	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.18	0.21	0.24	0.27	0.31	0.34	0.38	0.42	13187
	Final	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.18	0.21	0.24	0.27	0.31	0.34	0.38	0.42	13187
12	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.39	0.43	13028
	Final	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.39	0.43	13028
17	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	0.18	0.21	0.24	0.28	0.31	0.35	0.39	0.43	12874
	Final	0.01	0.02	0.03	0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.26	0.29	0.33	0.37	0.41	0.45	12265
22	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	0.19	0.21	0.25	0.28	0.32	0.36	0.40	0.44	12710
	Final	0.01	0.02	0.03	0.04	0.06	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.27	0.31	0.35	0.39	0.44	0.49	11436
27	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.13	0.16	0.19	0.22	0.25	0.28	0.32	0.36	0.40	0.44	12545
	Final	0.01	0.02	0.03	0.05	0.06	0.08	0.11	0.13	0.16	0.19	0.22	0.26	0.30	0.34	0.38	0.42	0.47	0.52	10623
32	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.25	0.29	0.33	0.36	0.41	0.45	12384
	Final	0.01	0.02	0.04	0.05	0.07	0.09	0.11	0.14	0.17	0.20	0.24	0.28	0.32	0.36	0.41	0.46	0.51	0.57	9826
37	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.26	0.29	0.33	0.37	0.41	0.46	12216
	Final	0.01	0.02	0.04	0.05	0.07	0.10	0.12	0.15	0.18	0.22	0.26	0.30	0.34	0.39	0.44	0.49	0.55	0.61	9135
42	Initial	0.01	0.02	0.03	0.04	0.05	0.07	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.33	0.37	0.42	0.46	12048
	Final	0.01	0.02	0.04	0.06	0.07	0.10	0.12	0.15	0.19	0.22	0.26	0.30	0.34	0.39	0.44	0.50	0.55	0.61	9110
47	Initial	0.01	0.02	0.03	0.04	0.05	0.08	0.09	0.12	0.14	0.17	0.20	0.23	0.26	0.30	0.34	0.38	0.42	0.47	11879
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.19	0.22	0.26	0.30	0.34	0.39	0.44	0.50	0.55	0.61	9084
52	Initial	0.01	0.02	0.03	0.04	0.05	0.08	0.10	0.12	0.14	0.17	0.20	0.23	0.27	0.30	0.34	0.39	0.43	0.48	11716
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.19	0.22	0.26	0.30	0.35	0.39	0.44	0.50	0.56	0.62	9059
57	Initial	0.01	0.02	0.03	0.04	0.05	0.08	0.10	0.12	0.15	0.17	0.20	0.24	0.27	0.31	0.35	0.39	0.44	0.48	11547
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.12	0.15	0.19	0.22	0.26	0.30	0.35	0.39	0.45	0.50	0.56	0.62	9034
62	Initial	0.01	0.02	0.03	0.04	0.05	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.28	0.31	0.35	0.40	0.44	0.49	11384
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.19	0.22	0.26	0.30	0.35	0.40	0.45	0.50	0.56	0.62	9013
67	Initial	0.01	0.02	0.03	0.04	0.05	0.08	0.10	0.12	0.15	0.18	0.21	0.24	0.28	0.32	0.36	0.40	0.45	0.50	11215
	Final	0.01	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.19	0.22	0.26	0.30	0.35	0.40	0.45	0.50	0.56	0.62	8988

Annex C: Pole Selection Charts

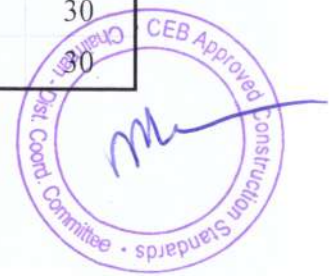
1. Pole Selection Charts for LV Lines

- **8.3m/100kg Pole-Maximum Span [m]**

Configuration	8.3m/100kg						8.3m/100kg with One Stay					
Angle of Deviation (Deg)	0	15	30	45	60	90	0	15	30	45	60	90
04 Nos Fly Conductors	45	40	30	25	20	20	N/A	45	45	45	45	45
08 Nos Fly Conductors	40	25	20	15	15	15	N/A	45	45	45	45	45
02 Wire (70) ABC Single Circuit	35	35	35	30	25	25	N/A	35	35	35	35	35
04 Wire (70) ABC Single Circuit	35	35	30	25	20	20	N/A	35	35	35	35	35
04 Wire (70)ABC Double Circuit	35	25	20	15	15	15	N/A	35	35	35	35	35
04 Wire (70)ABC Triple Circuit	20	20	15	15	10	10	N/A	35	35	35	35	35
04 Wire (70)ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	35	35
05 Wire (70)ABC Single Circuit	35	35	25	25	20	20	N/A	35	35	35	35	35
05 Wire (70)ABC Double Circuit	35	25	20	15	15	10	N/A	35	35	35	35	35
05 Wire (70) ABC Triple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	35	35
05 Wire (70) ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	35	35
04 Wire (95) ABC Single Circuit	30	30	25	20	20	15	N/A	30	30	30	30	30
04 Wire (95) ABC Double Circuit	30	25	15	15	15	10	N/A	30	30	30	30	30
04 Wire (95) ABC Triple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30
04 Wire (95) ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30
05 Wire (95) ABC Single Circuit	30	30	25	20	20	15	N/A	30	30	30	30	30
05 Wire (95) ABC Double Circuit	30	25	15	15	10	10	N/A	30	30	30	30	30
05 Wire (95) ABC Triple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30
05 Wire (95) ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30

- **8.3m/350kg Pole- Maximum Span [m]**

Configuration	8.3m/350kg						8.3m/350kg/With One Stay					
Angle of Deviation (Deg)	**0**	**15**	**30**	**45**	**60**	**90**	**0**	**15**	**30**	**45**	**60**	**90**
04 Nos Fly Conductors	45*	45*	45*	45*	40	35	N/A	45	45	45	45	45
08 Nos Fly Conductors	45*	45*	35	30	30	25	N/A	45	45	45	45	45
02 Wire (70) ABC Single Circuit	35	35	35	35	35	35	N/A	35	35	35	35	35
04 Wire (70) ABC Single Circuit	35	35	35	35	35	35	N/A	35	35	35	35	35
04 Wire (70)ABC Double Circuit	35	35	35	30	30	25	N/A	35	35	35	35	35
04 Wire (70)ABC Triple Circuit	35	35	30	25	25	20	N/A	35	35	35	35	35
04 Wire (70)ABC Quadruple Circuit	35	35	25	20	20	15	N/A	35	35	35	35	35
05 Wire (70)ABC Single Circuit	35	35	35	35	35	35	N/A	35	35	35	35	35
05 Wire (70)ABC Double Circuit	35	35	35	30	25	25	N/A	35	35	35	35	35
05 Wire (70) ABC Triple Circuit	35	35	30	25	20	20	N/A	35	35	35	35	35
05 Wire (70) ABC Quadruple Circuit	35	35	25	20	20	15	N/A	35	35	35	35	35
04 Wire (95) ABC Single Circuit	30	30	30	30	30	30	N/A	30	30	30	30	30
04 Wire (95) ABC Double Circuit	30	30	30	30	25	25	N/A	30	30	30	30	30
04 Wire (95) ABC Triple Circuit	30	30	30	25	20	20	N/A	30	30	30	30	30
04 Wire (95) ABC Quadruple Circuit	30	30	25	20	20	15	N/A	30	30	30	30	30
05 Wire (95) ABC Single Circuit	30	30	30	30	30	30	N/A	30	30	30	30	30
05 Wire (95) ABC Double Circuit	30	30	30	30	25	25	N/A	30	30	30	30	30
05 Wire (95) ABC Triple Circuit	30	30	25	20	20	20	N/A	30	30	30	30	30
05 Wire (95) ABC Quadruple Circuit	30	30	25	20	15	15	N/A	30	30	30	30	30



- **8.3m/500kg Pole- Maximum Span [m]**

Configuration	8.3m/500kg					
Angle of Deviation (Deg)	**0**	**15**	**30**	**45**	**60**	**90**
04 Nos Fly Conductors	45	45	45	45	45	45
08 Nos Fly Conductors	45	45	45	35	35	30
02 Wire (70) ABC Single Circuit	35	35	35	35	35	35
04 Wire (70) ABC Single Circuit	35	35	35	35	35	35
04 Wire (70)ABC Double Circuit	35	35	35	35	35	30
04 Wire (70)ABC Triple Circuit	35	35	35	30	30	25
04 Wire (70)ABC Quadruple Circuit	35	35	30	25	25	20
05 Wire (70)ABC Single Circuit	35	35	35	35	35	35
05 Wire (70)ABC Double Circuit	35	35	35	35	30	30
05 Wire (70) ABC Triple Circuit	35	35	35	30	25	25
05 Wire (70) ABC Quadruple Circuit	35	35	30	25	20	20
04 Wire (95) ABC Single Circuit	30	30	30	30	30	30
04 Wire (95) ABC Double Circuit	30	30	30	30	30	30
04 Wire (95) ABC Triple Circuit	30	30	30	30	25	25
04 Wire (95) ABC Quadruple Circuit	30	30	30	25	20	20
05 Wire (95) ABC Single Circuit	30	30	30	30	30	30
05 Wire (95) ABC Double Circuit	30	30	30	30	30	30
05 Wire (95) ABC Triple Circuit	30	30	30	25	25	25
05 Wire (95) ABC Quadruple Circuit	30	30	30	25	20	20

- **9m Pole- Maximum Span [m]**

Configuration	9m/115kg						9m/115kg with One Stay						9m/500kg					
Angle of Deviation (Deg)	**0**	**15**	**30**	**45**	**60**	**90**	**0**	**15**	**30**	**45**	**60**	**90**	**0**	**15**	**30**	**45**	**60**	**90**
04 Nos Fly Conductors	45	40	30	25	20	20	N/A	45	45	45	45	45	45	45	45	45	45	45
08 Nos Fly Conductors	40	25	20	15	15	15	N/A	45	45	45	45	45	45	45	45	35	35	30
02 Wire (70) ABC Single Circuit	35	35	35	30	25	25	N/A	35	35	35	35	35	35	35	35	35	35	35
04 Wire (70) ABC Single Circuit	35	35	30	25	20	20	N/A	35	35	35	35	35	35	35	35	35	35	35
04 Wire (70)ABC Double Circuit	35	25	20	15	15	15	N/A	35	35	35	35	35	35	35	35	35	35	30
04 Wire (70)ABC Triple Circuit	20	20	15	15	10	10	N/A	35	35	35	35	35	35	35	35	30	30	25
04 Wire (70)ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	35	35	35	35	30	25	25	20
05 Wire (70)ABC Single Circuit	35	35	25	25	20	20	N/A	35	35	35	35	35	35	35	35	35	35	35
05 Wire (70)ABC Double Circuit	35	25	20	15	15	10	N/A	35	35	35	35	35	35	35	35	35	30	30
05 Wire (70) ABC Triple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	35	35	35	35	35	30	25	25
05 Wire (70) ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35	35	35	35	35	35	35	30	25	20	20
04 Wire (95) ABC Single Circuit	30	30	25	20	20	15	N/A	30	30	30	30	30	30	30	30	30	30	30
04 Wire (95) ABC Double Circuit	30	25	15	15	15	10	N/A	30	30	30	30	30	30	30	30	30	30	30
04 Wire (95) ABC Triple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30	30	30	30	30	25	25
04 Wire (95) ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30	30	30	30	25	20	20
05 Wire (95) ABC Single Circuit	30	30	25	20	20	15	N/A	30	30	30	30	30	30	30	30	30	30	30
05 Wire (95) ABC Double Circuit	30	25	15	15	10	10	N/A	30	30	30	30	30	30	30	30	30	30	30
05 Wire (95) ABC Triple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30	30	30	30	25	25	25
05 Wire (95) ABC Quadruple Circuit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	30	30	30	30	30	30	30	25	20	20

- **10 m Pole- Maximum Span [m]**

Configuration	10m/225kg or 300kg						10m/225kg or 300kg/With One Stay					
Angle of Deviation (Deg)	**0**	**15**	**30**	**45**	**60**	**90**	**0**	**15**	**30**	**45**	**60**	**90**
04 Nos Fly Conductors	45	45	45	35	35	30	N/A	45	45	45	45	45
08 Nos Fly Conductors	45	40	30	25	20	20	N/A	45	45	45	45	45
02 Wire (70) ABC Single Circuit	35	35	35	35	35	35	N/A	35	35	35	35	35
04 Wire (70) ABC Single Circuit	35	35	35	35	30	30	N/A	35	35	35	35	35
04 Wire (70)ABC Double Circuit	35	35	30	25	20	20	N/A	35	35	35	35	35
04 Wire (70)ABC Triple Circuit	35	35	25	20	20	15	N/A	35	35	35	35	35
04 Wire (70)ABC Quadruple Circuit	35	30	20	15	15	15	N/A	35	35	35	35	35
05 Wire (70)ABC Single Circuit	35	35	35	35	30	30	N/A	35	35	35	35	35
05 Wire (70)ABC Double Circuit	35	35	30	25	20	20	N/A	35	35	35	35	35
05 Wire (70) ABC Triple Circuit	35	30	25	20	15	15	N/A	35	35	35	35	35
05 Wire (70) ABC Quadruple Circuit	35	30	20	15	15	15	N/A	35	35	35	35	35
04 Wire (95) ABC Single Circuit	30	30	30	30	30	25	N/A	30	30	30	30	30
04 Wire (95) ABC Double Circuit	30	30	25	25	20	20	N/A	30	30	30	30	30
04 Wire (95) ABC Triple Circuit	30	30	20	20	15	15	N/A	30	30	30	30	30
04 Wire (95) ABC Quadruple Circuit	30	25	20	15	15	10	N/A	30	30	30	30	30
05 Wire (95) ABC Single Circuit	30	30	30	30	30	25	N/A	30	30	30	30	30
05 Wire (95) ABC Double Circuit	30	30	25	20	20	20	N/A	30	30	30	30	30
05 Wire (95) ABC Triple Circuit	30	30	20	15	15	15	N/A	30	30	30	30	30
05 Wire (95) ABC Quadruple Circuit	30	25	20	15	15	10	N/A	30	30	30	30	30

2. Pole Selection Charts for Combined Run

NOTE: Span incorporated with Racoon conductor in following tables can be used for the Silvassa conductor also.

- **10 m Pole- Maximum Span [m]**

Combined Run	10m/225kg or 300kg						10m/225kg or 300kg/With One Stay					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90
Racoon SC + Fly SC	45	35	25	20	20	15	N/A	70	70	70	70	70
Racoon SC + Fly DC	45	30	20	15	15	15	N/A	70	70	70	65	60
Racoon SC + 04 Wire (70) ABC SC	50	40	30	25	20	20	N/A	70	70	70	70	70
Racoon SC + 04 Wire (70) ABC DC	35	35	25	20	15	15	N/A	70	70	70	65	65
Racoon SC + 04 Wire (70) ABC TC	35	30	20	15	15	15	N/A	70	70	65	60	55
Racoon SC + 04 Wire (70) ABC QC	30	25	15	15	10	10	N/A	70	70	60	50	50
Racoon SC + 05 Wire (70) ABC SC	50	40	30	25	20	20	N/A	70	70	70	70	70
Racoon SC + 05 Wire (70) ABC DC	35	35	25	20	15	15	N/A	70	70	70	65	60
Racoon SC + 05 Wire (70) ABC TC	35	30	20	15	15	15	N/A	70	70	65	60	55
Racoon SC + 05 Wire (70) ABC QC	30	25	15	15	10	10	N/A	70	70	60	55	50
Racoon SC + 04 Wire (95) ABC SC	45	40	30	25	20	20	N/A	70	70	70	70	70
Racoon SC + 04 Wire (95) ABC DC	45	30	20	15	15	15	N/A	70	70	70	65	60
Racoon SC + 04 Wire (95) ABC TC	30	25	20	15	15	15	N/A	70	70	60	55	50
Racoon SC + 04 Wire (95) ABC QC	25	25	15	15	10	10	N/A	70	65	55	50	45
Racoon SC + 05 Wire (95) ABC SC	45	40	30	25	20	20	N/A	70	70	70	70	70
Racoon SC + 05 Wire (95) ABC DC	45	30	20	15	15	15	N/A	70	70	70	65	60
Racoon SC + 05 Wire (95) ABC TC	30	25	20	15	15	15	N/A	70	70	60	55	50
Racoon SC + 05 Wire (95) ABC QC	25	25	15	15	10	10	N/A	70	65	55	50	45
Lynx SC + 04 Wire (70) ABC SC	60	30	20	20	15	15	N/A	70	70	70	65	60
Lynx SC + 04 Wire (70) ABC DC	40	25	20	15	15	15	N/A	70	70	60	55	50
Lynx SC + 04 Wire (70)ABC TC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	65	55	50	45
Lynx SC + 04 Wire (70) ABC QC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	60	50	45	40
Lynx SC + 05 Wire (70) ABC SC	60	30	20	20	15	15	N/A	70	70	70	65	60
Lynx SC + 05 Wire (70) ABC DC	40	25	20	15	15	15	N/A	70	70	60	55	50
Lynx SC + 05 Wire (70) ABC TC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	65	55	50	45
Lynx SC + 05 Wire (70) ABC QC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	60	50	45	40
Lynx SC + 04 Wire (95) ABC SC	55	30	20	15	15	15	N/A	70	70	70	60	55
Lynx SC + 04 Wire (95) ABC DC	40	25	20	15	15	10	N/A	70	70	60	55	50
Lynx SC + 04 Wire (95) ABC TC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	65	55	45	45
Lynx SC + 04 Wire (95) ABC QC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	55	50	45	40
Lynx SC + 05 Wire (95) ABC SC	55	30	20	15	15	15	N/A	70	70	70	60	55
Lynx SC + 05 Wire (95)ABC DC	40	25	20	15	15	10	N/A	70	70	60	55	50
Lynx SC + 05 Wire (95) ABC TC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	65	55	45	45
Lynx SC + 05 Wire (95)ABC QC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	70	55	50	45	40

- **11 m/350kg Pole (Racoon and Lynx Single Circuit) - Maximum Span [m]**

Configuration	11m/350kg						11m/350kg with one stay					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90
Racoon SC + Fly SC	70	50	35	30	25	25	N/A	70	70	70	70	70
Racoon SC + Fly DC	70	40	25	20	20	20	N/A	70	70	70	65	60
Racoon SC + 04 Wire (70) ABC SC	70	55	40	30	30	25	N/A	70	70	70	70	70
Racoon SC + 04 Wire (70) ABC DC	55	45	30	25	25	20	N/A	70	70	70	65	65
Racoon SC + 04 Wire (70) ABC TC	40	40	25	20	20	20	N/A	70	70	65	60	55
Racoon SC + 04 Wire (70) ABC QC	40	35	25	20	15	15	N/A	70	70	60	50	50
Racoon SC + 05 Wire (70) ABC SC	70	55	35	30	30	25	N/A	70	70	70	70	70
Racoon SC + 05 Wire (70) ABC DC	70	40	30	25	20	20	N/A	70	70	70	65	60
Racoon SC + 05 Wire (70) ABC TC	60	35	25	20	20	15	N/A	70	70	65	60	55
Racoon SC + 05 Wire (70) ABC QC	50	30	20	20	15	15	N/A	70	70	60	55	50
Racoon SC + 04 Wire (95) ABC SC	70	50	35	30	25	25	N/A	70	70	70	70	70
Racoon SC + 04 Wire (95) ABC DC	45	40	30	25	20	20	N/A	70	70	70	65	60
Racoon SC + 04 Wire (95) ABC TC	35	35	25	20	20	15	N/A	70	70	60	55	50
Racoon SC + 04 Wire (95) ABC QC	35	30	20	20	15	15	N/A	70	65	55	50	45
Racoon SC + 05 Wire (95) ABC SC	70	50	35	30	25	25	N/A	70	70	70	70	70
Racoon SC + 05 Wire (95) ABC DC	45	40	30	25	20	20	N/A	70	70	70	65	60
Racoon SC + 05 Wire (95) ABC TC	35	35	25	20	20	15	N/A	70	70	60	55	50
Racoon SC + 05 Wire (95)ABC QC	35	30	20	15	15	15	N/A	70	65	55	50	45
Lynx SC + 04 Wire (70) ABC SC	70	40	30	25	20	20	N/A	70	70	70	65	60
Lynx SC + 04 Wire (70)ABC DC	55	35	25	20	20	15	N/A	70	70	60	55	50
Lynx SC + 04 Wire (70) ABC TC	45	30	20	20	15	15	N/A	70	65	55	50	45
Lynx SC + 04 Wire (70) ABC QC	35	30	20	15	15	15	N/A	70	60	50	45	40
Lynx SC + 05 Wire (70) ABC SC	70	40	25	25	20	20	N/A	70	70	70	65	60
Lynx SC + 05 Wire (70) ABC DC	55	35	25	20	20	15	N/A	70	70	60	55	50
Lynx SC + 05 Wire (70) ABC TC	45	30	20	20	15	15	N/A	70	65	55	50	45
Lynx SC + 05 Wire (70) ABC QC	35	25	20	15	15	15	N/A	70	60	50	45	40
Lynx SC + 04 Wire (95) ABC SC	70	40	25	20	20	20	N/A	70	70	70	60	55
Lynx SC + 04 Wire (95) ABC DC	55	30	25	20	15	15	N/A	70	70	60	55	50
Lynx SC + 04 Wire (95) ABC TC	45	30	20	15	15	15	N/A	70	65	55	45	45
Lynx SC + 04 Wire (95) ABC QC	35	25	20	15	15	15	N/A	70	55	50	45	40
Lynx SC + 05 Wire (95) ABC SC	70	35	25	20	20	20	N/A	70	70	70	60	55
Lynx SC + 05 Wire (95) ABC DC	55	30	25	20	15	15	N/A	70	70	60	55	50
Lynx SC + 05 Wire (95) ABC TC	45	30	20	15	15	15	N/A	70	65	55	45	45
Lynx SC + 05 Wire (95) ABC QC	35	25	20	15	15	15	N/A	70	55	50	45	40

- **11 m/350kg Pole (Racoon and Lynx Double Circuit) - Maximum Span [m]**

Configuration	11m/350kg						11m/350kg with one stay					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90
Racoon DC + Fly SC	70	35	25	20	20	20	N/A	70	70	70	60	55
Racoon DC + Fly DC	55	30	20	20	15	15	N/A	70	70	60	55	50
Racoon DC + 04 Wire (70) ABC SC	70	40	30	25	20	20	N/A	70	70	70	70	65
Racoon DC + 04 Wire (70) ABC DC	60	35	25	20	20	15	N/A	70	70	65	60	55
Racoon DC + 04 Wire (70) ABC TC	50	30	25	20	15	15	N/A	70	70	60	55	50
Racoon DC + 04 Wire (70) ABC QC	40	30	20	15	15	15	N/A	70	65	55	50	45
Racoon DC + 05 Wire (70) ABC SC	70	40	30	25	20	20	N/A	70	70	70	70	65
Racoon DC + 05 Wire (70) ABC DC	60	35	25	20	20	15	N/A	70	70	65	60	55
Racoon DC + 05 Wire (70) ABC TC	50	30	20	20	15	15	N/A	70	70	60	55	50
Racoon DC + 05 Wire (70) ABC QC	40	30	20	15	15	15	N/A	70	65	55	50	45
Racoon DC + 04 Wire (95) ABC SC	70	40	30	25	20	20	N/A	70	70	70	65	60
Racoon DC + 04 Wire (95) ABC DC	55	35	25	20	20	15	N/A	70	70	65	55	50
Racoon DC + 04 Wire (95) ABC TC	40	30	20	20	15	15	N/A	70	65	55	50	45
Racoon DC + 04 Wire (95) ABC QC	35	25	20	15	15	15	N/A	70	60	50	45	40
Racoon DC + 05 Wire (95) ABC SC	70	40	30	25	20	20	N/A	70	70	70	65	60
Racoon DC + 05 Wire (95) ABC DC	55	35	25	20	20	15	N/A	70	70	65	55	50
Racoon DC + 05 Wire (95) ABC TC	40	30	20	15	15	15	N/A	70	65	55	50	45
Racoon DC + 05 Wire (95)ABC QC	35	30	20	15	15	15	N/A	70	60	50	45	40
Lynx DC + 04 Wire (70) ABC SC	60	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 04 Wire (70)ABC DC	50	25	20	15	15	15	N/A	70	60	50	45	40
Lynx DC + 04 Wire (70) ABC TC	40	25	15	15	15	10	N/A	70	55	45	40	40
Lynx DC + 04 Wire (70) ABC QC	35	25	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 05 Wire (70) ABC SC	55	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 05 Wire (70) ABC DC	50	25	20	15	15	15	N/A	70	60	50	45	40
Lynx DC + 05 Wire (70) ABC TC	40	25	15	15	10	10	N/A	70	55	45	40	40
Lynx DC + 05 Wire (70) ABC QC	35	20	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 04 Wire (95) ABC SC	55	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 04 Wire (95) ABC DC	45	25	20	15	15	10	N/A	70	60	50	45	40
Lynx DC + 04 Wire (95) ABC TC	35	25	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 04 Wire (95) ABC QC	30	20	15	15	10	10	N/A	70	50	40	40	35
Lynx DC + 05 Wire (95) ABC SC	55	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 05 Wire (95) ABC DC	45	25	20	15	15	10	N/A	70	60	50	45	40
Lynx DC + 05 Wire (95) ABC TC	35	25	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 05 Wire (95) ABC QC	30	20	15	15	10	10	N/A	70	50	40	40	35

- **11m/500kg-850kg-1200kg Pole (Racoon and Lynx Single Circuit) - Maximum Span [m]**

Configuration	11m/500kg						11m/850kg						11m/1200kg					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90	0	15	30	45	60	90
Racoon SC + Fly SC	70	55	40	35	30	30	70	70	55	45	40	35	70	70	65	55	50	45
Racoon SC + Fly DC	70	45	30	25	25	25	70	60	45	35	35	30	70	70	55	45	40	35
Racoon SC + 04 Wire (70) ABC SC	70	65	45	40	35	30	70	70	60	50	45	40	70	70	70	60	55	50
Racoon SC + 04 Wire (70) ABC DC	70	55	35	30	30	25	70	70	50	40	35	35	70	70	60	50	45	40
Racoon SC + 04 Wire (70) ABC TC	55	45	30	25	25	20	70	60	40	35	30	30	70	70	50	40	40	35
Racoon SC + 04 Wire (70) ABC QC	55	40	30	25	20	20	70	50	35	30	30	25	70	60	45	35	35	30
Racoon SC + 05 Wire (70) ABC SC	70	65	45	40	35	30	70	70	60	50	45	40	70	70	70	60	55	50
Racoon SC + 05 Wire (70) ABC DC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	40
Racoon SC + 05 Wire (70) ABC TC	70	45	30	25	25	20	70	55	40	35	30	30	70	65	45	40	35	35
Racoon SC + 05 Wire (70) ABC QC	70	40	25	20	20	20	70	50	35	30	25	25	70	60	40	35	30	30
Racoon SC + 04 Wire (95) ABC SC	70	60	45	35	35	30	70	70	55	50	45	40	70	70	70	55	50	50
Racoon SC + 04 Wire (95) ABC DC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	40
Racoon SC + 04 Wire (95) ABC TC	50	40	30	25	20	20	70	55	4	35	30	25	70	65	45	40	35	35
Racoon SC + 04 Wire (95) ABC QC	50	35	25	20	20	20	70	50	35	30	25	25	70	55	40	35	30	30
Racoon SC + 05 Wire (95) ABC SC	70	60	45	35	30	30	70	70	55	45	40	40	70	70	65	55	50	45
Racoon SC + 05 Wire (95) ABC DC	70	50	35	30	25	25	70	65	45	35	35	30	70	70	55	45	40	35
Racoon SC + 05 Wire (95) ABC TC	50	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Racoon SC + 05 Wire (95)ABC QC	50	35	25	20	20	15	70	45	35	30	25	25	70	55	40	35	30	30
Lynx SC + 04 Wire (70) ABC SC	70	45	35	30	25	25	70	60	45	35	35	30	70	70	50	45	40	35
Lynx SC + 04 Wire (70)ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Lynx SC + 04 Wire (70) ABC TC	65	35	25	20	20	20	70	50	35	30	25	25	70	60	40	35	30	30
Lynx SC + 04 Wire (70) ABC QC	55	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx SC + 05 Wire (70) ABC SC	70	45	35	25	25	20	70	60	45	35	35	30	70	70	50	40	40	35
Lynx SC + 05 Wire (70) ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Lynx SC + 05 Wire (70) ABC TC	65	35	25	20	20	15	70	50	35	30	25	25	70	55	40	35	30	30
Lynx SC + 05 Wire (70) ABC QC	55	35	25	20	15	15	70	45	30	25	20	20	70	50	35	30	30	25
Lynx SC + 04 Wire (95) ABC SC	70	45	30	25	25	20	70	60	40	35	30	30	70	70	50	40	40	35
Lynx SC + 04 Wire (95) ABC DC	70	40	30	25	20	20	70	50	35	30	25	25	70	60	45	35	35	30
Lynx SC + 04 Wire (95) ABC TC	65	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx SC + 04 Wire (95) ABC QC	55	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx SC + 05 Wire (95) ABC SC	70	45	30	25	25	20	70	60	40	35	30	30	70	70	50	40	40	35
Lynx SC + 05 Wire (95) ABC DC	70	40	25	25	20	20	70	50	35	30	25	25	70	60	45	35	30	30
Lynx SC + 05 Wire (95) ABC TC	65	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx SC + 05 Wire (95) ABC QC	55	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25

- **11m/500kg-850kg-1200kg Pole (Racoon and Lynx Double Circuit) - Maximum Span [m]**

Configuration	11m/500kg						11m/850kg						11m/1200kg					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90	0	15	30	45	60	90
Racoon DC + Fly SC	70	45	30	25	25	20	70	55	40	35	30	30	70	70	50	40	35	35
Racoon DC + Fly DC	70	40	25	25	20	20	70	50	35	30	25	25	70	60	45	35	30	30
Racoon DC + 04 Wire (70) ABC SC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	45	40
Racoon DC + 04 Wire (70) ABC DC	70	45	30	25	25	20	70	55	40	35	30	30	70	70	50	40	35	35
Racoon DC + 04 Wire (70) ABC TC	70	40	30	25	20	20	70	50	35	30	25	25	70	60	45	35	35	30
Racoon DC + 04 Wire (70) ABC QC	55	35	25	20	20	15	70	45	35	30	25	25	70	55	40	35	30	25
Racoon DC + 05 Wire (70) ABC SC	70	50	35	30	25	25	70	65	45	40	35	35	70	70	55	45	40	40
Racoon DC + 05 Wire (70) ABC DC	70	45	30	25	25	20	70	55	40	35	30	30	70	65	45	40	35	35
Racoon DC + 05 Wire (70) ABC TC	70	40	25	20	20	20	70	50	35	30	25	25	70	60	40	35	30	30
Racoon DC + 05 Wire (70) ABC QC	55	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Racoon DC + 04 Wire (95) ABC SC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	35
Racoon DC + 04 Wire (95) ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Racoon DC + 04 Wire (95) ABC TC	60	35	25	20	20	20	70	50	35	30	25	25	70	55	40	35	30	30
Racoon DC + 04 Wire (95) ABC QC	50	35	25	20	15	15	70	45	30	25	25	20	70	50	35	30	30	25
Racoon DC + 05 Wire (95) ABC SC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	35
Racoon DC + 05 Wire (95) ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Racoon DC + 05 Wire (95) ABC TC	60	35	25	20	20	15	70	45	35	30	25	25	70	55	40	35	30	30
Racoon DC + 05 Wire (95)ABC QC	50	30	25	20	15	15	70	45	30	25	25	20	70	50	35	30	25	25
Lynx DC + 04 Wire (70) ABC SC	70	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 04 Wire (70)ABC DC	70	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx DC + 04 Wire (70) ABC TC	60	30	20	15	15	15	70	40	30	25	20	20	70	45	35	30	25	25
Lynx DC + 04 Wire (70) ABC QC	50	30	20	15	15	15	70	35	25	20	20	15	70	45	30	25	25	20
Lynx DC + 05 Wire (70) ABC SC	70	35	25	20	15	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 05 Wire (70) ABC DC	70	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx DC + 05 Wire (70) ABC TC	60	30	20	15	15	15	70	40	25	25	20	20	70	45	30	25	25	20
Lynx DC + 05 Wire (70) ABC QC	50	30	20	15	15	15	70	35	25	20	20	15	70	45	30	25	25	20
Lynx DC + 04 Wire (95) ABC SC	70	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 04 Wire (95) ABC DC	65	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx DC + 04 Wire (95) ABC TC	55	30	20	15	15	15	70	35	25	20	20	20	70	45	30	25	25	20
Lynx DC + 04 Wire (95) ABC QC	45	25	20	15	15	15	70	35	25	20	20	15	70	40	30	25	20	20
Lynx DC + 05 Wire (95) ABC SC	70	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 05 Wire (95) ABC DC	65	30	20	20	15	15	70	40	30	25	20	20	70	45	35	30	25	25
Lynx DC + 05 Wire (95) ABC TC	55	30	20	15	15	15	70	35	25	20	20	20	70	45	30	25	25	20
Lynx DC + 05 Wire (95) ABC QC	45	25	20	15	15	15	70	35	25	20	20	15	70	40	30	25	20	20

- **13 m/350kg Pole (Racoon and Lynx Single Circuit) - Maximum Span [m]**

Configuration	13m/350kg						13m/350kg with one stay					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90
Racoor SC + Fly SC	70	50	35	30	25	25	N/A	70	70	70	70	70
Racoon SC + Fly DC	70	40	25	20	20	20	N/A	70	70	70	65	60
Racoon SC + 04 Wire (70) ABC SC	70	55	40	30	30	25	N/A	70	70	70	70	70
Racoon SC + 04 Wire (70) ABC DC	55	45	30	25	25	20	N/A	70	70	70	65	65
Racoon SC + 04 Wire (70) ABC TC	40	40	25	20	20	20	N/A	70	70	65	60	55
Racoon SC + 04 Wire (70) ABC QC	40	35	25	20	15	15	N/A	70	70	60	50	50
Racoon SC + 05 Wire (70) ABC SC	70	55	35	30	30	25	N/A	70	70	70	70	70
Racoon SC + 05 Wire (70) ABC DC	70	40	30	25	20	20	N/A	70	70	70	65	60
Racoon SC + 05 Wire (70) ABC TC	60	35	25	20	20	15	N/A	70	70	65	60	55
Racoon SC + 05 Wire (70) ABC QC	50	30	20	20	15	15	N/A	70	70	60	55	50
Racoon SC + 04 Wire (95) ABC SC	70	50	35	30	25	25	N/A	70	70	70	70	70
Racoon SC + 04 Wire (95) ABC DC	45	40	30	25	20	20	N/A	70	70	70	65	60
Racoon SC + 04 Wire (95) ABC TC	35	35	25	20	20	15	N/A	70	70	60	55	50
Racoon SC + 04 Wire (95) ABC QC	35	30	20	20	15	15	N/A	70	65	55	50	45
Racoon SC + 05 Wire (95) ABC SC	70	50	35	30	25	25	N/A	70	70	70	70	70
Racoon SC + 05 Wire (95) ABC DC	45	40	30	25	20	20	N/A	70	70	70	65	60
Racoon SC + 05 Wire (95) ABC TC	35	35	25	20	20	15	N/A	70	70	60	55	50
Racoon SC + 05 Wire (95)ABC QC	35	30	20	15	15	15	N/A	70	65	55	50	45
Lynx SC + 04 Wire (70) ABC SC	70	40	30	25	20	20	N/A	70	70	70	65	60
Lynx SC + 04 Wire (70)ABC DC	55	35	25	20	20	15	N/A	70	70	60	55	50
Lynx SC + 04 Wire (70) ABC TC	45	30	20	20	15	15	N/A	70	65	55	50	45
Lynx SC + 04 Wire (70) ABC QC	35	30	20	15	15	15	N/A	70	60	50	45	40
Lynx SC + 05 Wire (70) ABC SC	70	40	25	25	20	20	N/A	70	70	70	65	60
Lynx SC + 05 Wire (70) ABC DC	55	35	25	20	20	15	N/A	70	70	60	55	50
Lynx SC + 05 Wire (70) ABC TC	45	30	20	20	15	15	N/A	70	65	55	50	45
Lynx SC + 05 Wire (70) ABC QC	35	25	20	15	15	15	N/A	70	60	50	45	40
Lynx SC + 04 Wire (95) ABC SC	70	40	25	20	20	20	N/A	70	70	70	60	55
Lynx SC + 04 Wire (95) ABC DC	55	30	25	20	15	15	N/A	70	70	60	55	50
Lynx SC + 04 Wire (95) ABC TC	45	30	20	15	15	15	N/A	70	65	55	45	45
Lynx SC + 04 Wire (95) ABC QC	35	25	20	15	15	15	N/A	70	55	50	45	40
Lynx SC + 05 Wire (95) ABC SC	70	35	25	20	20	20	N/A	70	70	70	60	55
Lynx SC + 05 Wire (95) ABC DC	55	30	25	20	15	15	N/A	70	70	60	55	50
Lynx SC + 05 Wire (95) ABC TC	45	30	20	15	15	15	N/A	70	65	55	45	45
Lynx SC + 05 Wire (95) ABC QC	35	25	20	15	15	15	N/A	70	55	50	45	40

- **13 m/350kg Pole (Racoon and Lynx Double Circuit) - Maximum Span [m]**

Configuration	13m/350kg						13m/350kg with one stay					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90
Racoon DC + Fly SC	70	35	25	20	20	20	N/A	70	70	70	60	55
Racoon DC + Fly DC	55	30	20	20	15	15	N/A	70	70	60	55	50
Racoon DC + 04 Wire (70) ABC SC	70	40	30	25	20	20	N/A	70	70	70	70	65
Racoon DC + 04 Wire (70) ABC DC	60	35	25	20	20	15	N/A	70	70	65	60	55
Racoon DC + 04 Wire (70) ABC TC	50	30	25	20	15	15	N/A	70	70	60	55	50
Racoon DC + 04 Wire (70) ABC QC	40	30	20	15	15	15	N/A	70	65	55	50	45
Racoon DC + 05 Wire (70) ABC SC	70	40	30	25	20	20	N/A	70	70	70	70	65
Racoon DC + 05 Wire (70) ABC DC	60	35	25	20	20	15	N/A	70	70	65	60	55
Racoon DC + 05 Wire (70) ABC TC	50	30	20	20	15	15	N/A	70	70	60	55	50
Racoon DC + 05 Wire (70) ABC QC	40	30	20	15	15	15	N/A	70	65	55	50	45
Racoon DC + 04 Wire (95) ABC SC	70	40	30	25	20	20	N/A	70	70	70	65	60
Racoon DC + 04 Wire (95) ABC DC	55	35	25	20	20	15	N/A	70	70	65	55	50
Racoon DC + 04 Wire (95) ABC TC	40	30	20	20	15	15	N/A	70	65	55	50	45
Racoon DC + 04 Wire (95) ABC QC	35	25	20	15	15	15	N/A	70	60	50	45	40
Racoon DC + 05 Wire (95) ABC SC	70	40	30	25	20	20	N/A	70	70	70	65	60
Racoon DC + 05 Wire (95) ABC DC	55	35	25	20	20	15	N/A	70	70	65	55	50
Racoon DC + 05 Wire (95) ABC TC	40	30	20	15	15	15	N/A	70	65	55	50	45
Racoon DC + 05 Wire (95)ABC QC	35	30	20	15	15	15	N/A	70	60	50	45	40
Lynx DC + 04 Wire (70) ABC SC	60	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 04 Wire (70)ABC DC	50	25	20	15	15	15	N/A	70	60	50	45	40
Lynx DC + 04 Wire (70) ABC TC	40	25	15	15	15	10	N/A	70	55	45	40	40
Lynx DC + 04 Wire (70) ABC QC	35	25	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 05 Wire (70) ABC SC	55	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 05 Wire (70) ABC DC	50	25	20	15	15	15	N/A	70	60	50	45	40
Lynx DC + 05 Wire (70) ABC TC	40	25	15	15	10	10	N/A	70	55	45	40	40
Lynx DC + 05 Wire (70) ABC QC	35	20	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 04 Wire (95) ABC SC	55	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 04 Wire (95) ABC DC	45	25	20	15	15	10	N/A	70	60	50	45	40
Lynx DC + 04 Wire (95) ABC TC	35	25	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 04 Wire (95) ABC QC	30	20	15	15	10	10	N/A	70	50	40	40	35
Lynx DC + 05 Wire (95) ABC SC	55	30	20	15	15	15	N/A	70	65	55	50	45
Lynx DC + 05 Wire (95) ABC DC	45	25	20	15	15	10	N/A	70	60	50	45	40
Lynx DC + 05 Wire (95) ABC TC	35	25	15	15	10	10	N/A	70	55	45	40	35
Lynx DC + 05 Wire (95) ABC QC	30	20	15	15	10	10	N/A	70	50	40	40	35

- **13m/ 500kg -805kg -1200 kg Pole (Racoon and Lynx Single Circuit) - Maximum Span [m]**

Configuration	13m/500kg						13m/850kg						13m/1200kg					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90	0	15	30	45	60	90
Racoon SC + Fly SC	70	55	40	35	30	30	70	70	55	45	40	35	70	70	65	55	50	45
Racoon SC + Fly DC	70	45	30	25	25	25	70	60	45	35	35	30	70	70	55	45	40	35
Racoon SC + 04 Wire (70) ABC SC	70	65	45	40	35	30	70	70	60	50	45	40	70	70	70	60	55	50
Racoon SC + 04 Wire (70) ABC DC	70	55	35	30	30	25	70	70	50	40	35	35	70	70	60	50	45	40
Racoon SC + 04 Wire (70) ABC TC	55	45	30	25	25	20	70	60	40	35	30	30	70	70	50	40	40	35
Racoon SC + 04 Wire (70) ABC QC	55	40	30	25	20	20	70	50	35	30	30	25	70	60	45	35	35	30
Racoon SC + 05 Wire (70) ABC SC	70	65	45	40	35	30	70	70	60	50	45	40	70	70	70	60	55	50
Racoon SC + 05 Wire (70) ABC DC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	40
Racoon SC + 05 Wire (70) ABC TC	70	45	30	25	25	20	70	55	40	35	30	30	70	65	45	40	35	35
Racoon SC + 05 Wire (70) ABC QC	70	40	25	20	20	20	70	50	35	30	25	25	70	60	40	35	30	30
Racoon SC + 04 Wire (95) ABC SC	70	60	45	35	35	30	70	70	55	50	45	40	70	70	70	55	50	50
Racoon SC + 04 Wire (95) ABC DC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	40
Racoon SC + 04 Wire (95) ABC TC	50	40	30	25	20	20	70	55	4	35	30	25	70	65	45	40	35	35
Racoon SC + 04 Wire (95) ABC QC	50	35	25	20	20	20	70	50	35	30	25	25	70	55	40	35	30	30
Racoon SC + 05 Wire (95) ABC SC	70	60	45	35	30	30	70	70	55	45	40	40	70	70	65	55	50	45
Racoon SC + 05 Wire (95) ABC DC	70	50	35	30	25	25	70	65	45	35	35	30	70	70	55	45	40	35
Racoon SC + 05 Wire (95) ABC TC	50	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Racoon SC + 05 Wire (95)ABC QC	50	35	25	20	20	15	70	45	35	30	25	25	70	55	40	35	30	30
Lynx SC + 04 Wire (70) ABC SC	70	45	35	30	25	25	70	60	45	35	35	30	70	70	50	45	40	35
Lynx SC + 04 Wire (70)ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Lynx SC + 04 Wire (70) ABC TC	65	35	25	20	20	20	70	50	35	30	25	25	70	60	40	35	30	30
Lynx SC + 04 Wire (70) ABC QC	55	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx SC + 05 Wire (70) ABC SC	70	45	35	25	25	20	70	60	45	35	35	30	70	70	50	40	40	35
Lynx SC + 05 Wire (70) ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Lynx SC + 05 Wire (70) ABC TC	65	35	25	20	20	15	70	50	35	30	25	25	70	55	40	35	30	30
Lynx SC + 05 Wire (70) ABC QC	55	35	25	20	15	15	70	45	30	25	20	20	70	50	35	30	30	25
Lynx SC + 04 Wire (95) ABC SC	70	45	30	25	25	20	70	60	40	35	30	30	70	70	50	40	40	35
Lynx SC + 04 Wire (95) ABC DC	70	40	30	25	20	20	70	50	35	30	25	25	70	60	45	35	35	30
Lynx SC + 04 Wire (95) ABC TC	65	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx SC + 04 Wire (95) ABC QC	55	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx SC + 05 Wire (95) ABC SC	70	45	30	25	25	20	70	60	40	35	30	30	70	70	50	40	40	35
Lynx SC + 05 Wire (95) ABC DC	70	40	25	25	20	20	70	50	35	30	25	25	70	60	45	35	30	30
Lynx SC + 05 Wire (95) ABC TC	65	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx SC + 05 Wire (95) ABC QC	55	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25

- **13m/ 500kg -850kg -1200 kg Pole (Racoon and Lynx Double Circuit) - Maximum Span [m]**

Configuration	13m/500kg						13m/850kg						13m/1200kg					
Angle of Deviation	0	15	30	45	60	90	0	15	30	45	60	90	0	15	30	45	60	90
Racoon DC + Fly SC	70	45	30	25	25	20	70	55	40	35	30	30	70	70	50	40	35	35
Racoon DC + Fly DC	70	40	25	25	20	20	70	50	35	30	25	25	70	60	45	35	30	30
Racoon DC + 04 Wire (70) ABC SC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	45	40
Racoon DC + 04 Wire (70) ABC DC	70	45	30	25	25	20	70	55	40	35	30	30	70	70	50	40	35	35
Racoon DC + 04 Wire (70) ABC TC	70	40	30	25	20	20	70	50	35	30	25	25	70	60	45	35	35	30
Racoon DC + 04 Wire (70) ABC QC	55	35	25	20	20	15	70	45	35	30	25	25	70	55	40	35	30	25
Racoon DC + 05 Wire (70) ABC SC	70	50	35	30	25	25	70	65	45	40	35	35	70	70	55	45	40	40
Racoon DC + 05 Wire (70) ABC DC	70	45	30	25	25	20	70	55	40	35	30	30	70	65	45	40	35	35
Racoon DC + 05 Wire (70) ABC TC	70	40	25	20	20	20	70	50	35	30	25	25	70	60	40	35	30	30
Racoon DC + 05 Wire (70) ABC QC	55	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Racoon DC + 04 Wire (95) ABC SC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	35
Racoon DC + 04 Wire (95) ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Racoon DC + 04 Wire (95) ABC TC	60	35	25	20	20	20	70	50	35	30	25	25	70	55	40	35	30	30
Racoon DC + 04 Wire (95) ABC QC	50	35	25	20	15	15	70	45	30	25	25	20	70	50	35	30	30	25
Racoon DC + 05 Wire (95) ABC SC	70	50	35	30	25	25	70	65	45	40	35	30	70	70	55	45	40	35
Racoon DC + 05 Wire (95) ABC DC	70	40	30	25	20	20	70	55	40	30	30	25	70	65	45	40	35	30
Racoon DC + 05 Wire (95) ABC TC	60	35	25	20	20	15	70	45	35	30	25	25	70	55	40	35	30	30
Racoon DC + 05 Wire (95)ABC QC	50	30	25	20	15	15	70	45	30	25	25	20	70	50	35	30	25	25
Lynx DC + 04 Wire (70) ABC SC	70	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 04 Wire (70)ABC DC	70	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx DC + 04 Wire (70) ABC TC	60	30	20	15	15	15	70	40	30	25	20	20	70	45	35	30	25	25
Lynx DC + 04 Wire (70) ABC QC	50	30	20	15	15	15	70	35	25	20	20	15	70	45	30	25	25	20
Lynx DC + 05 Wire (70) ABC SC	70	35	25	20	15	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 05 Wire (70) ABC DC	70	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx DC + 05 Wire (70) ABC TC	60	30	20	15	15	15	70	40	25	25	20	20	70	45	30	25	25	20
Lynx DC + 05 Wire (70) ABC QC	50	30	20	15	15	15	70	35	25	20	20	15	70	45	30	25	25	20
Lynx DC + 04 Wire (95) ABC SC	70	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 04 Wire (95) ABC DC	65	30	20	20	15	15	70	40	30	25	20	20	70	50	35	30	25	25
Lynx DC + 04 Wire (95) ABC TC	55	30	20	15	15	15	70	35	25	20	20	20	70	45	30	25	25	20
Lynx DC + 04 Wire (95) ABC QC	45	25	20	15	15	15	70	35	25	20	20	15	70	40	30	25	20	20
Lynx DC + 05 Wire (95) ABC SC	70	35	25	20	20	15	70	45	30	25	25	20	70	55	40	30	30	25
Lynx DC + 05 Wire (95) ABC DC	65	30	20	20	15	15	70	40	30	25	20	20	70	45	35	30	25	25
Lynx DC + 05 Wire (95) ABC TC	55	30	20	15	15	15	70	35	25	20	20	20	70	45	30	25	25	20
Lynx DC + 05 Wire (95) ABC QC	45	25	20	15	15	15	70	35	25	20	20	15	70	40	30	25	20	20

Annex D: Material Requirement

1. Material Requirement for 1km of Typical Bare Conductor Line

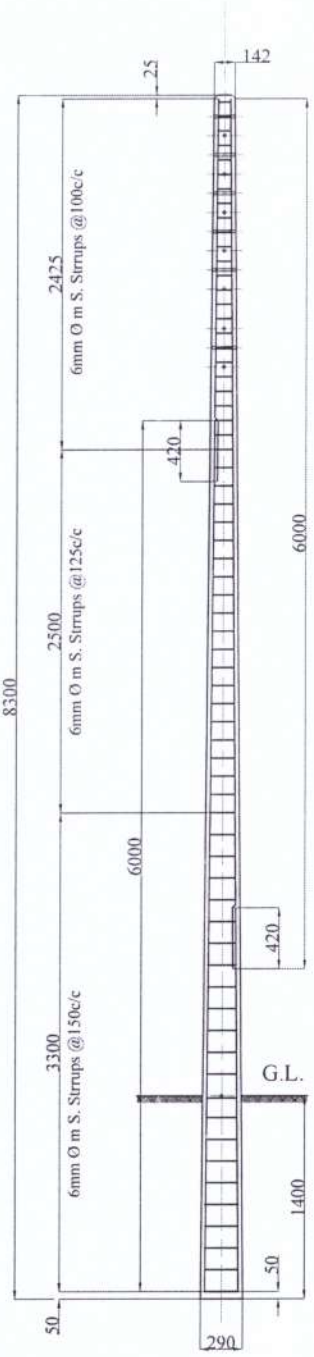
Serial No.	Mat. Code	Item Description	Unit	Qty.
1	A-01-15-1	Poles Wooden 8.3m	Nos.	26
2	B-02-10-1	D-Brackets w/o bolts w/o Insu. 90x75 mm	Nos.	92
3	B-03-30-1	Shackle Straps w/o bolts w/o Insu. 90x75 mm	Set	32
4	B-07-10-1	Washers GI 16mm	Nos.	136
5	B-07-45-1	Bolts & Nuts GI 125 x 16 mm	Nos.	85
6	B-07-55-1	Bolts & Nuts GI 200 x 16 mm	Nos.	102
7	B-07-70-1	Bolts & Nuts GI 230 x 16 mm	Nos.	7
8	B-07-75-1	Bolts & Nuts GI 250 x 16 mm	Nos.	4
9	B-08-10-1	Wire Stay 7/3.15 mm	kg	75
10	B-09-05-01	Stay Assembly 1800 mm x 16 mm	Nos.	15
11	B-10-10-2	Thimbles 7/3.15 mm	Nos.	15
12	B-02-50-1	Stay Clamp GI	Nos.	15
13	B-02-55-1	Strut Bracket GI	Set	3
14	B-22-05-1	Earth Wire attachment (Ten. with Thimb.) LT	Nos.	5
15	B-23-05-1	Cotter Pin with Split Pin GI 120 x 16 mm	Nos.	62
16	C-01-10-1	Insulator LT 90 X 75 mm	Nos.	108
17	C-01-15-1	Insulators Stay LT	Nos.	15
18	D-01-10-1	All Aluminium 7/3.40 mm (Fly)	kg	712
19	D-06-10-2	Wire Binding Alu (No.11)	kg	5
20	D-07-20-1	Al/Al 7/3.40 – 7/4.30 H Type Compression Line Tap	Nos.	4
21	J-03-10-1	Wire GS 4mm (No.8)	kg	105
22	J-03-25-1	Clips Earth LT	Nos.	19
23	J-03-39-1	Earth Rods Steel Copper Clad 1.2m	Nos.	4
24	J-04-15-2	GI Binding Wire 2mm (No.14)	kg	1
25	W-07-03-1	Joint Compression Midspan 7/3.40 Fly	Nos.	4
26	W-07-25-1	Joint Compression Non Tension 7/3.40 Fly	Nos.	12

2. Material Requirement for 1km of Typical Aerial Bundled Conductor Line

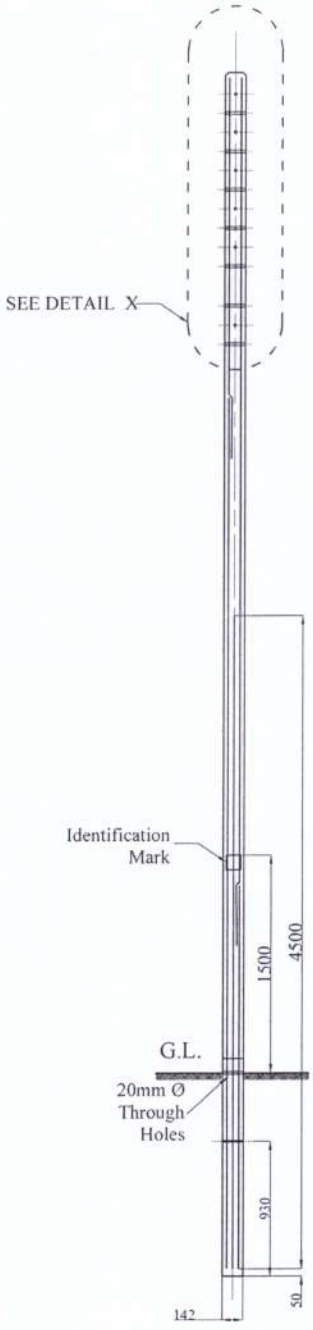
Serial No.	Mat. Code	Item Description	Unit	Qty.
1	A-02-11-1	Poles RC 8.3 100 kg	Nos.	33
2	B-03-7-1	Stainless Steel Strap for ABC	m	5
3	B-07-10-1	Washers GI - 16 mm	Nos.	51
4	B-07-55-1	Bolts & Nuts GI - 200 mm x 16 mm	Nos.	45
5	B-07-70-1	Bolts & Nuts GI - 230 mm x 16 mm	Nos.	06
6	B-08-10-1	Wire Stay - 7/3.15 mm	kg	75
7	B-09-05-1	Stay Assembly - 1800 mm x 16 mm	Nos.	15
8	B-10-10-2	Thimbles - 7/3.15 mm	Nos.	15
9	B-02-50-1	Stay Clamps GI	Nos.	15
10	B-02-55-1	Strut Bracket GI	Set	3
11	B-16-05-1	Suspension Assembly ABC - 3x770 +50 sqmm	Nos.	19
12	B-16-10-1	Large Angle Assembly ABC	Nos.	5
13	B-16-15-1	Dead End Assembly ABC	Nos.	10
14	B-17-05-1	Buckles Straps Stainless Steel for ABC	Nos.	10
15	B-19-15-1	Terminal Cap for ABC 50 sqmm	Nos.	1
16	B-19-20-1	Terminal Cap for ABC 70 sqmm	Nos.	3
17	B-21-05-1	Ties Nylon for Bundle Cable	Nos.	102
18	C-01-15-1	Insulators Stay LT	Nos.	15
19	D-12-20-1	Connector Insul. Phase Conductor ABC 70 sqmm	Nos.	15
20	D-12-50-1	Connector Insul. Neutral Conductor ABC 50 sqmm	Nos.	5
21	D-12-70-1	Connector Piercing for ABC 25-95 / 25-95 sqmm	Nos.	8
22	D-12-90-1	Connector Piercing for ABC 25-95 / 6-35 sqmm	Nos.	120
23	D-14-20-1	Terminal Cap ABC 3 x 70 + 50 sqmm	Set	1
24	B-18-20-1	Lugs Insulated for Bundled Cable 50 sqmm	Nos.	1
25	B-18-25-1	Lugs Insulated for Bundled Cable 70 sqmm	Nos.	3
26	L-08-25-1	ABC A1. 3 x 70 – 50 sqmm	m	1010

Annex A

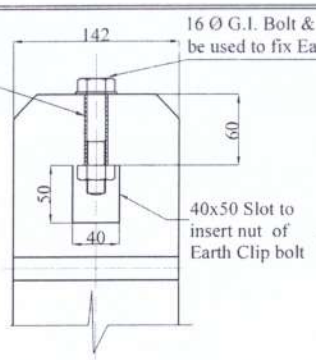
Drawings



SECTIONAL ELEVATION
OF BROAD FACE



SECTIONAL ELEVATION
OF NARROW FACE



DETAIL Y

DETAIL X

NOTE

1. Concrete to have a Cube Strength of 25 N/mm^2 at an age of 28 days (Concrete Grade 25)
2. Main reinforcement to be deformed high yield steel having a Characteristic Strength of 450 N/mm^2
3. Stirrups to be mild steel having a characteristic strength of 250 N/mm^2
4. Minimum lap length of 10mm Øhigh yield steel bars to be 41 x dia.
5. Minimum cover to any reinforcement to be 20 mm
6. Maximum size of coarse aggregate to be 20 mm
7. Laps formed in the adjacent bars in the same face of the pole must be staggered.
8. As a guide a mixing ratio of 1:1 1/2:3 is suggested.
9. The identification mark shall be located at approximately 1500mm above Ground Level, and consist of following information.
   (i) Date of Manufacture
   (ii) Serial Number
   (iii) Name (Identification) of Manufacturer

SPECIAL NOTES

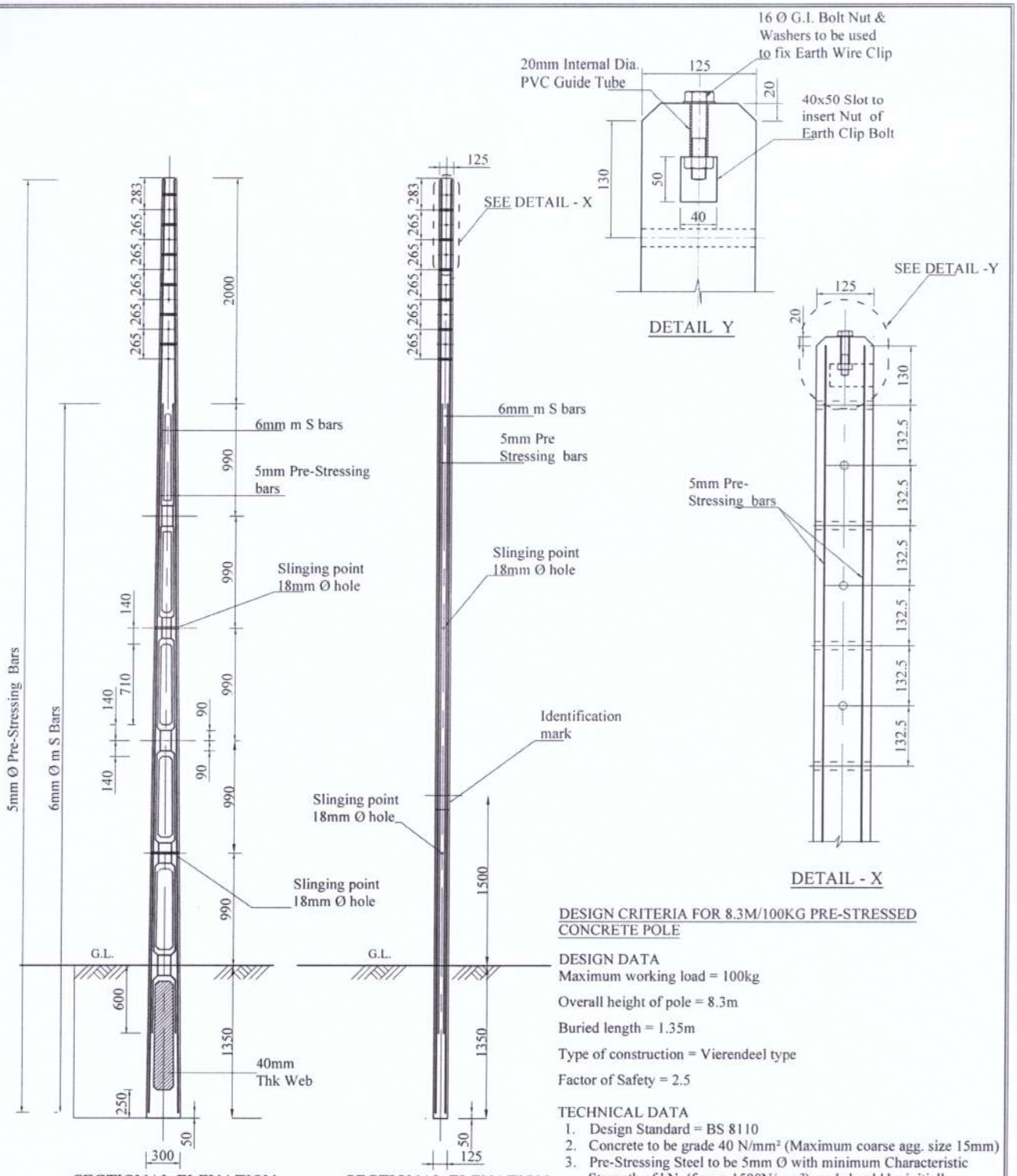
The pole shall be caste so that the narrow face is resting on the base plate, and shall be transported resting on the narrow face while full length of the pole being supported.
Approximate weight of the pole is 610 kg

DESIGN CRITERIA

This pole is designed for working load of 100kg transversely & 25kg longitudinally acting at a distance of 0.6m below the top of the pole.
Factor of Safety = 2.5

ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	8.3 m / 100 kg REINFORCED CONCRETE POLE	DRAWN : Lalani EDITED : Harsha
		DATE : May 2021 REV NO : -
	Extract of CEB Distribution Construction Standard : DCS-1 DS&S/95/7709	DRG NO : LV -01
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS-1 : 1997



DESIGN CRITERIA FOR 8.3M/100KG PRE-STRESSED CONCRETE POLE

DESIGN DATA

Maximum working load = 100kg

Overall height of pole = 8.3m

Buried length = 1.35m

Type of construction = Vierendeel type

Factor of Safety = 2.5

TECHNICAL DATA

1. Design Standard = BS 8110
2. Concrete to be grade 40 N/mm² (Maximum coarse agg. size 15mm)
3. Pre-Stressing Steel to be 5mm Ø with minimum Characteristic Strength of kN (f pu = 1500N/mm²) and should be initially stressed to 75% of this value.
4. Mild steel to be minimum Characteristic Strength = 250 N/mm²
5. Minimum cover to all steel to be 20mm
6. Maximum spacing between this stirrups & any steel to be 15mm This could be achieved by cranking of 6mm m S. straight bars.
7. All holes 18mmØ

ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

8.3 m / 100 kg PRE-STRESSED CONCRETE POLE

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/97/7803

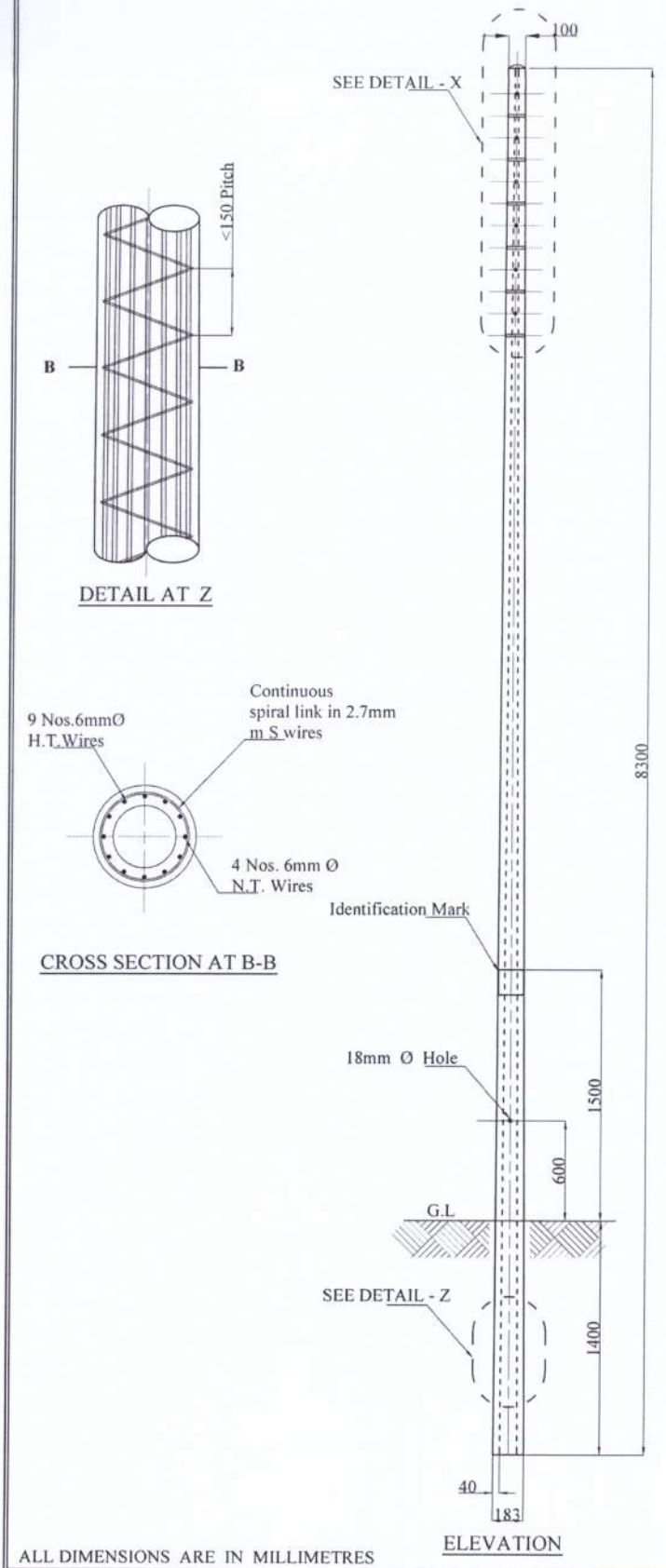
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

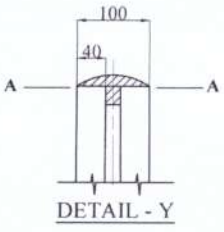
DRG NO : CV-02

SOURCE : DCS-1 : 1997



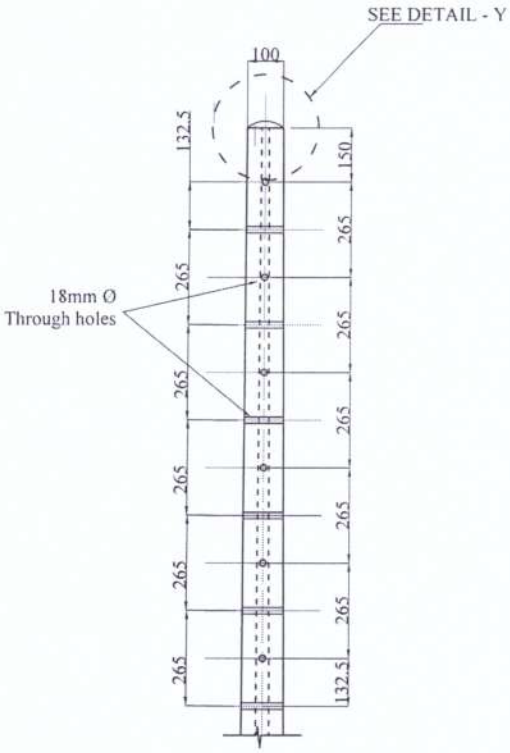
DETAIL AT Z

CROSS SECTION AT B-B



DETAIL - Y

CROSS SECTION AT - A

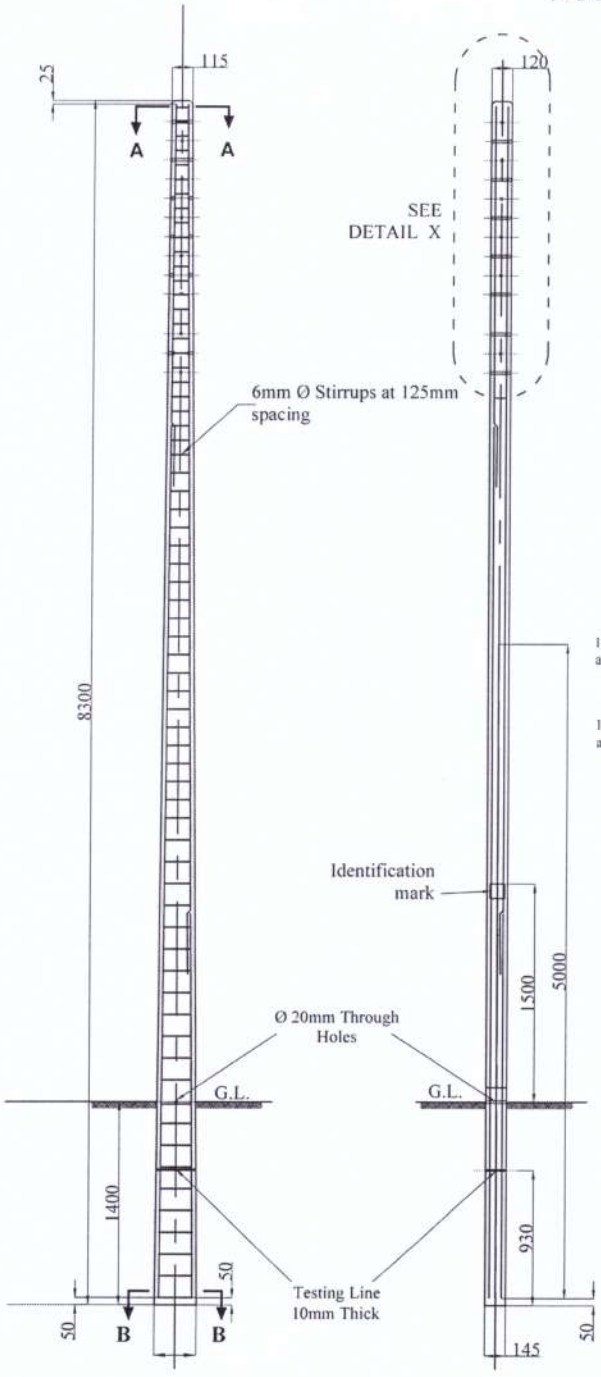


DETAIL X

NOTE :A
* All holes 18 mm Ø
* Maximum working load = 100 kg
* Overall height of pole = 8.3 m
* Buried length = 1.4 m
* Factor of Safety = 2.5
* Minimum covering = 9 mm
* Approx. weight of the pole shall be less than 260 kg
* Length of the N.T. wires shall be at least $\frac{2}{5}$ times of the pole height from bottom
* H.T. Wires & Spiral Wires shall be continuous through out the pole height.

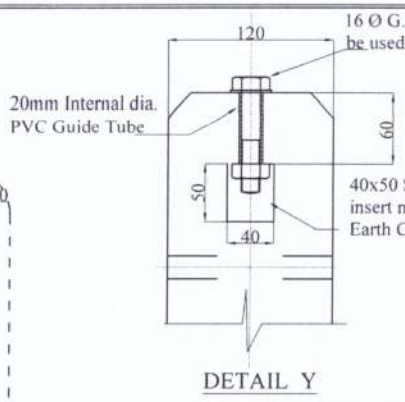
ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	8.3 m /100 kg PRE-STRESSED SPUN CONC. POLE	DRAWN : Lalani EDITED : Harsha
		DATE : May 2021 REV NO :
	Extract of CEB Specification DS&S/2016/044-4B	DRG NO LV-03
DISTRIBUTION COORDINATION BRANCH		SOURCE : DS&S/2016/044-4B

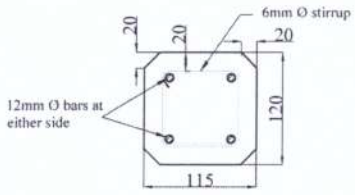


SECTIONAL ELEVATION OF BROAD FACE

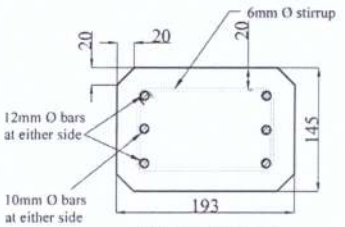
SECTIONAL ELEVATION OF NARROW FACE



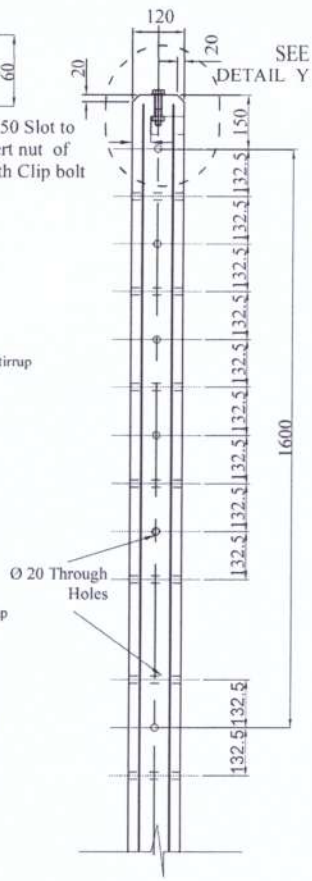
DETAIL Y



SECTION A-A



SECTION B-B



DETAIL X

NOTE

1. Concrete to have a cube strength of 25 N/mm² at an age of 28 days (Concrete Grade 25)
2. Main reinforcement to be deformed High Yield Steel having a Characteristic Strength of 460 N/mm²
3. Stirrups to be Mild Steel having a Characteristic Strength of 250 N/mm²
4. Minimum lap length of 10mm/12mm Ø High Yield Steel bars to be 41x dia.
5. Minimum cover to any reinforcement to be 20 mm
6. Maximum size of coarse aggregate to be 20 mm
7. Laps formed in the adjacent bars in the same face of the pole must be staggered.
8. As a guide a mixing ratio of 1:1 1/2:3 is suggested.
9. The identification mark shall be located at approximately 1500mm above ground level ,and consist of following information.
   (i) Date of Manufacture
   (ii) Serial Number
   (iii) Name (Identification) of Manufacturer

SPECIAL NOTES

The pole shall be caste so that the narrow face is resting on the base plate, and shall be transported resting on the narrow face while full length of the pole being supported.

Approximate weight of the pole shall be less than 400 kg

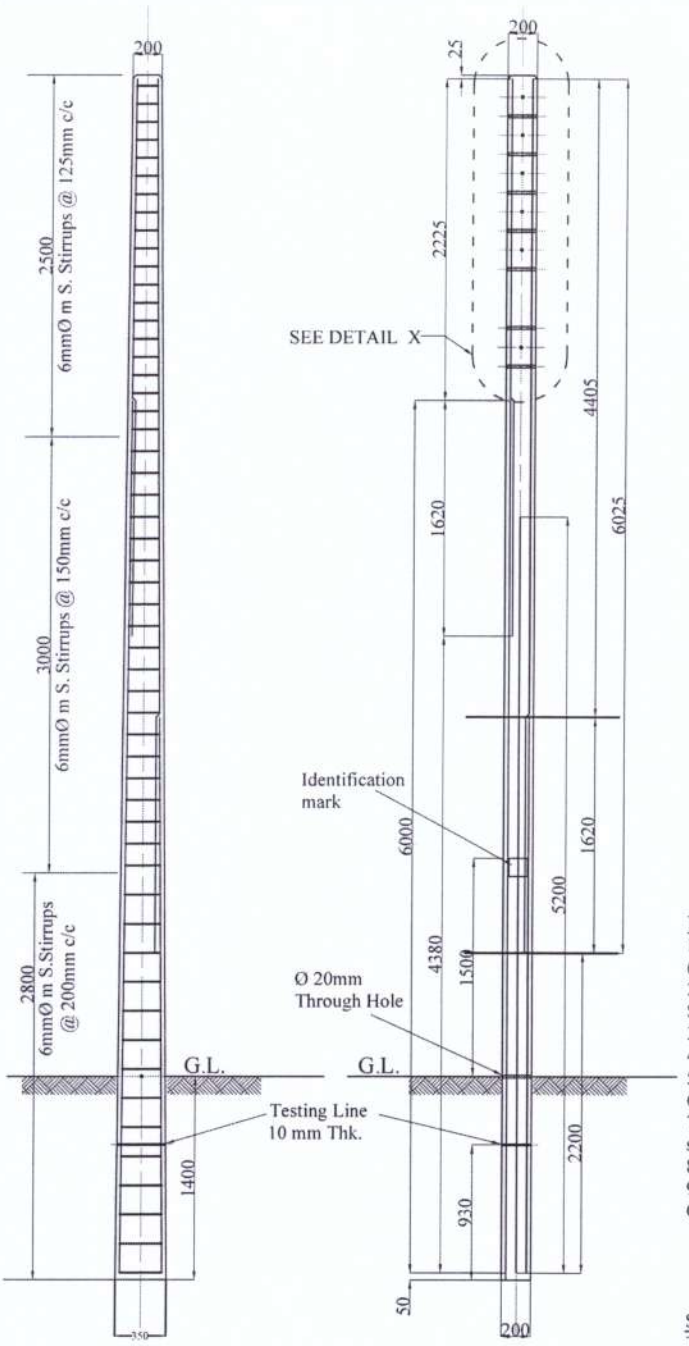
DESIGN CRITERIA

This pole is designed for working load of 100kg transversely & 25kg longitudinaly acting at a distance of 0.6m below the top of the pole.

Factor of safety = 2.5

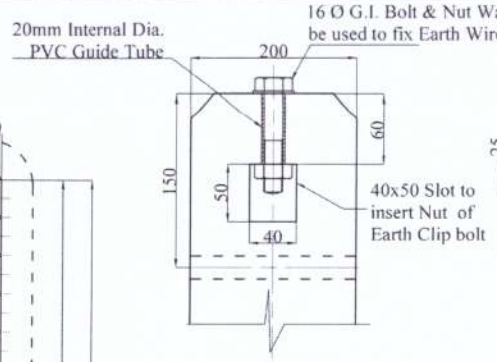
ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	8.3 m / 100 kg LIGHT WEIGHT REINFORCED CONCRETE POLE	DRAWN : Lalani EDITED : Harsha
		DATE : May 2021 REV NO : -
	Extract of CEB Specification DS&S/2017/044-5B	DRG NO : LV-04
DISTRIBUTION COORDINATION BRANCH		SOURCE : 044-5 : 2017

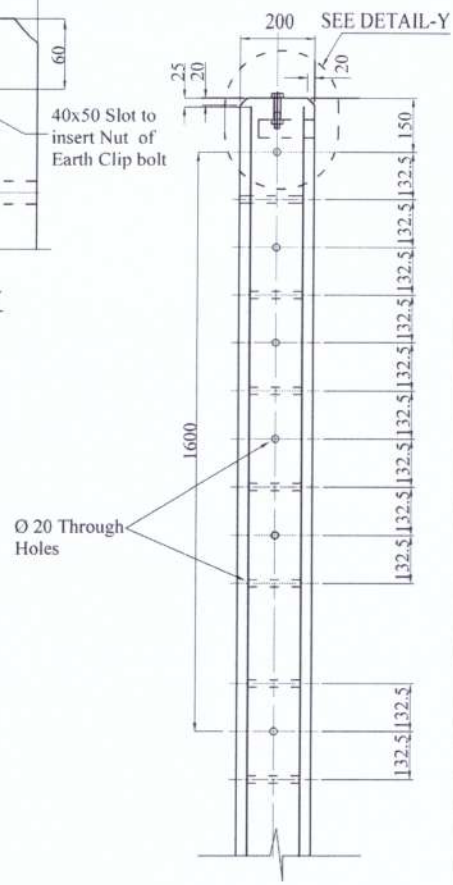


SECTIONAL ELEVATION OF BROAD FACE

SECTIONAL ELEVATION OF NARROW FACE



DETAIL Y



DETAIL X

NOTE

1. Concrete to have a Cube Strength of 25 N/mm at an age of 28 days (Concrete Grade 25)
2. Main reinforcement to be deformed high yield steel having a Characteristic Strength of 460 N/mm
3. Stirrups to be mild steel having a Characteristic Strength of 250 N/mm
4. Minimum lap length of main reinforcement bars to be 81x dia.
5. Minimum cover to any reinforcement to be 25 mm
6. Maximum size of Coarse Aggregate to be 20 mm
7. Laps formed in the adjacent bars in the same face of the pole must be staggered.
8. As a guide a mixing ratio of 1:1 1/2:3 is suggested.
9. The Identification mark shall be located at approximately 1500mm above Ground Level, and consist of following information.
   - (i) Date of Manufacture
   - (ii) Serial Number
   - (iii) Name (Identification) of Manufacturer

SPECIAL NOTES

These poles should be transported resting on the narrow face while full length of the pole being supported.
Approximate weight of the pole is 1100 kg

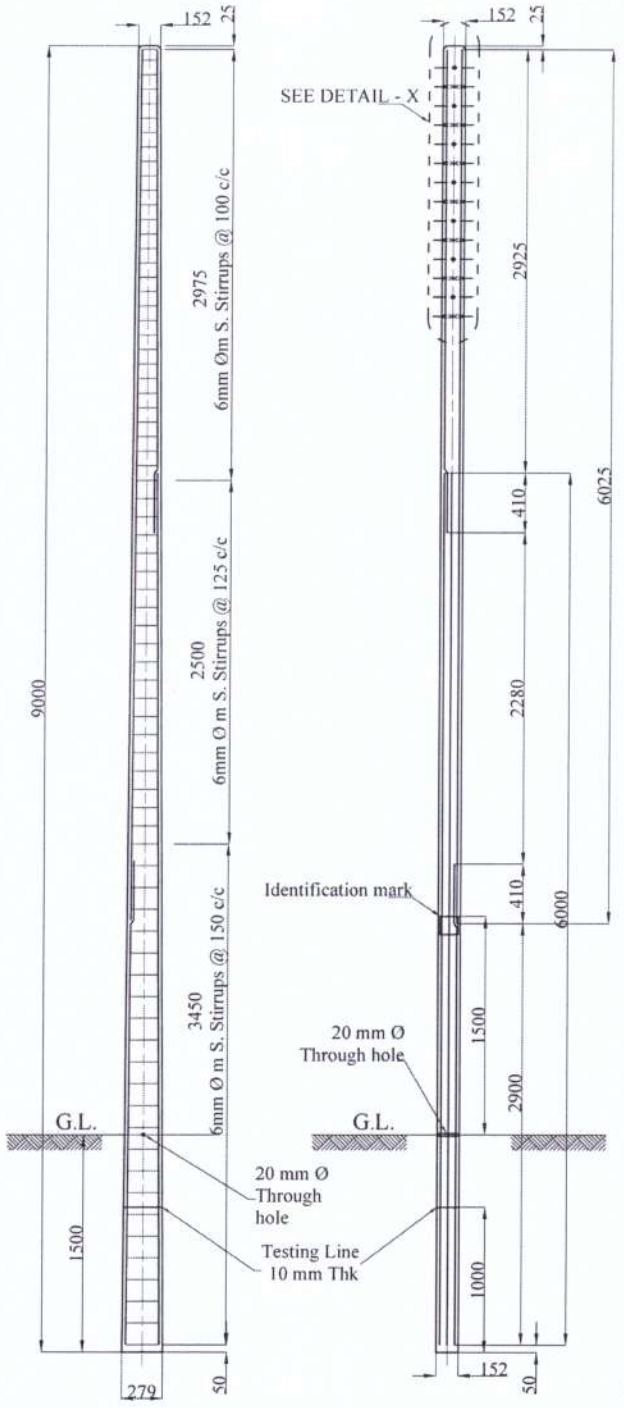
DESIGN CRITERIA

This pole is designed for working load of 500kg transversely & 125kg longitudinally acting at a distance of 0.6 m below the top of the pole.
Factor of Safety = 2.5

ALL DIMENSIONS ARE IN MILLIMETRES

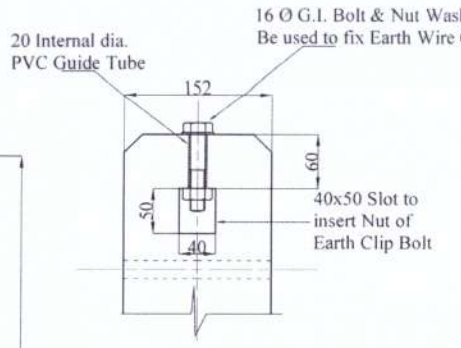
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	8.3 m / 500 kg REINFORCED CONCRETE POLE	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard : DCS-1 DS&S/95/7720	DRG NO : LV-05
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS-1 : 1997

CEB Approved Construction Standard - Chairman - Dist. Coord. Committee

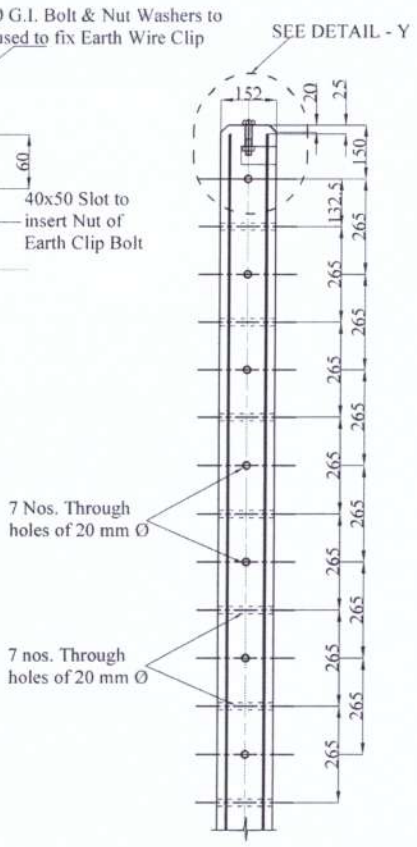


SECTIONAL ELEVATION OF BROAD FACE

SECTIONAL ELEVATION OF NARROW FACE



DETAIL Y



DETAIL X

NOTES

1. Concrete to have a Cube Strength of 25 N/mm at an age of 28 days (Concrete Grade 25 - as a guide a mixing ratio 1 : 1 1/2 : 3 is suggested.)
2. Main reinforcement to be deformed High Yield Steel having a Characteristic Strength of 450 N/mm
3. Stirrups to be Mild Steel having a Characteristic Strength of 250 N/mm
4. Minimum lap length of 10 mm Ø High Yield Steel bars to be 41 x dia.
5. Minimum cover to main reinforcement to be 25 mm
6. Maximum size of coarse aggregate to be 20 mm
7. Laps formed in the adjacent bars on the same face must be staggered.
8. Approximate weight of the pole is 710 kg
9. The Identification Mark shall be located at approximately 1500mm above Ground Level and consist of following information.
   (i) Date of Manufacture
   (ii) Serial Number
   (iii) Name (Identification) of Manufacture

SPECIAL NOTES

These poles should be transported resting on the narrow face while full length of the pole being supported.
Approximate weight of the pole is 710 kg

DESIGNED CRITERIA

This pole is designed for working load of 115kg transversely & 28kg longitudinally acting at a distance of 0.6m below the top of the pole.
Factor of Safety 2.5

ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

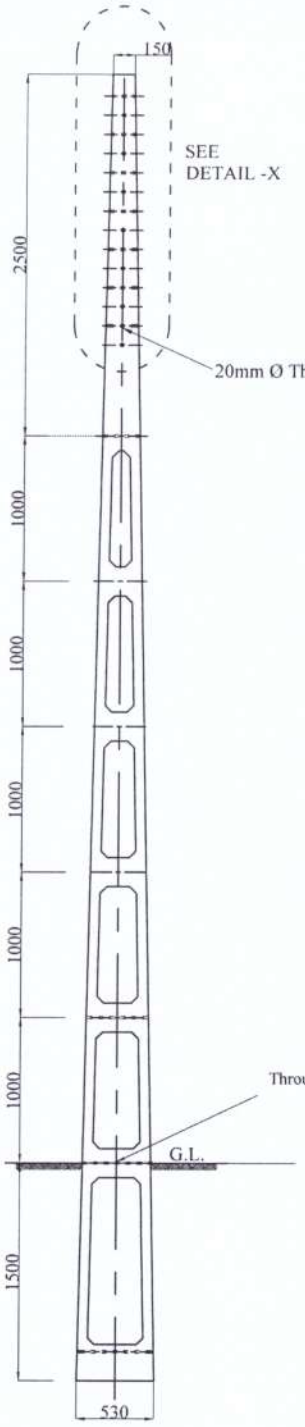
DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

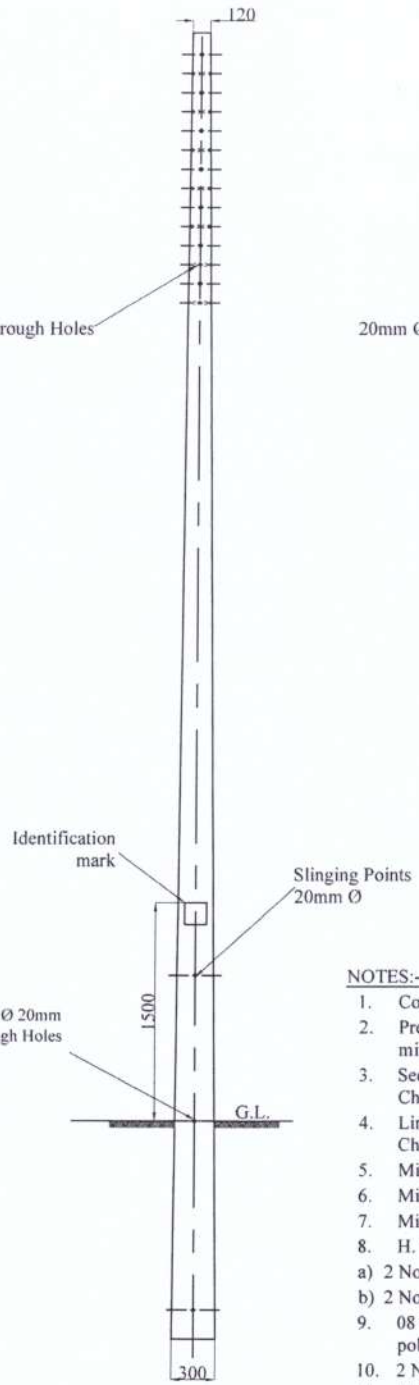
9.0 m /115 kg REINFORCED CONCRETE POLE

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/95/7707

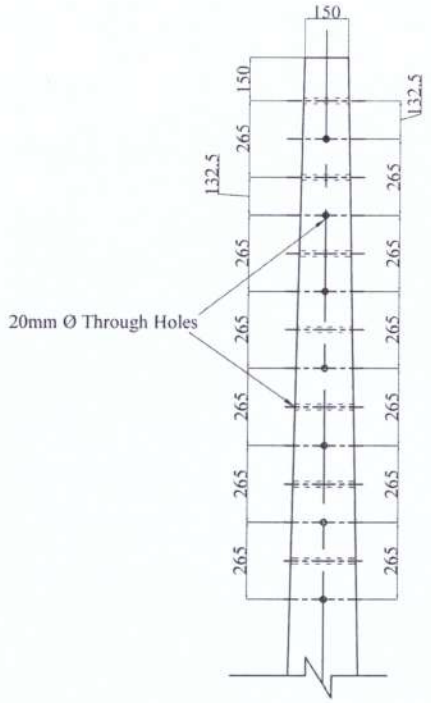
SCALE : Not to Scale	
DRAWN : Lalani	EDITED : Harsha
DATE : May 2021	REV NO : -
DRG NO : LV-06	
SOURCE : DCS-1 : 1997	



ELEVATION
OF BROAD FACE



ELEVATION
OF NARROW FACE



DETAIL X

NOTES:-

1. Concrete to be Grade C40 (Normal agg. size = 15 mm)
2. Pre - Stressing steel to be 10 mm Ø High Tensile Steel Wires with min. 32 kN Characteristic Strength.
3. Secondary steel to be 10 mm Ø tor steel with min. 450N/mm Characteristic Strength.
4. Links to be 6 mm Ø Mild Steel with minimum 250 N/mm Characteristic Strength.
5. Minimum cover to all steel 20 mm
6. Minimum spacing between secondary steel to be 25 mm
7. Minimum spacing between H. T. steel to be 20 mm
8. H. T. wires de - bonded (1/2 No. of each)

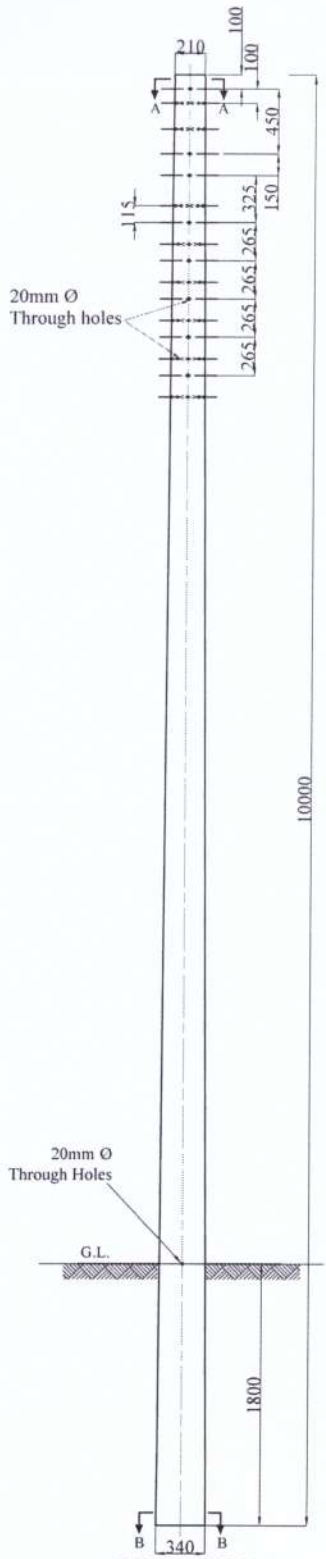
a) 2 Nos. for the top 1500

b) 2 Nos. for the top 1000

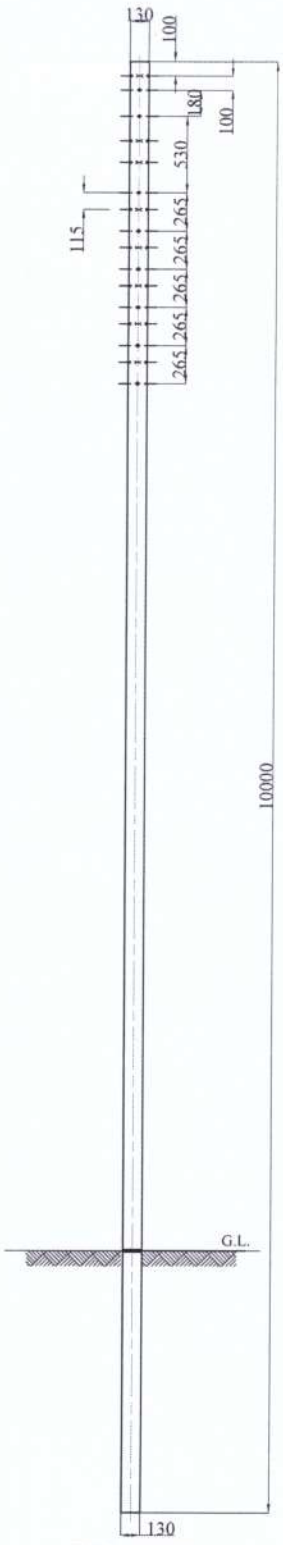
9. 08 Nos. links of 6 mm Ø Mild Steel at 150 mm ctrs. from top of pole.
10. 2 Nos. 5mm untensioned H.T. wires up to 4 m from bottom end
11. All holes 20 mm Ø

ALL DIMENSIONS ARE IN MILLIMETRES

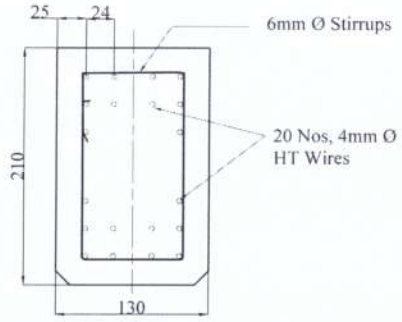
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	9 m / 500 kg PRE-STRESSED CONCRETE POLE	DRAWN : Harsha
	DESIGNED BY / DESIGN APPROVED BY	DATE : May 2021 REV NO. -
		DRG NO : LV-07
DISTRIBUTION COORDINATION BRANCH	CIVIL ENGINEER / CHAIRMAN DISTRIBUTION DESIGN COMMITTEE	SOURCE : -



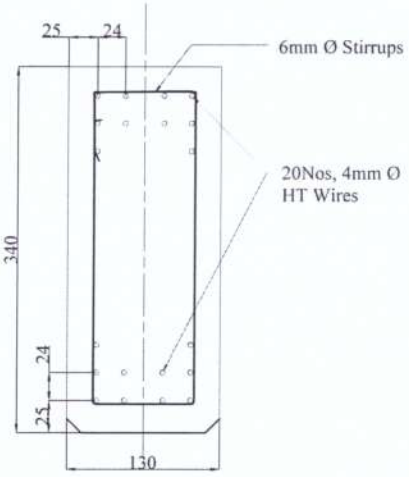
ELEVATION
OF BROAD FACE



ELEVATION
OF NARROW FACE



SECTION A-A

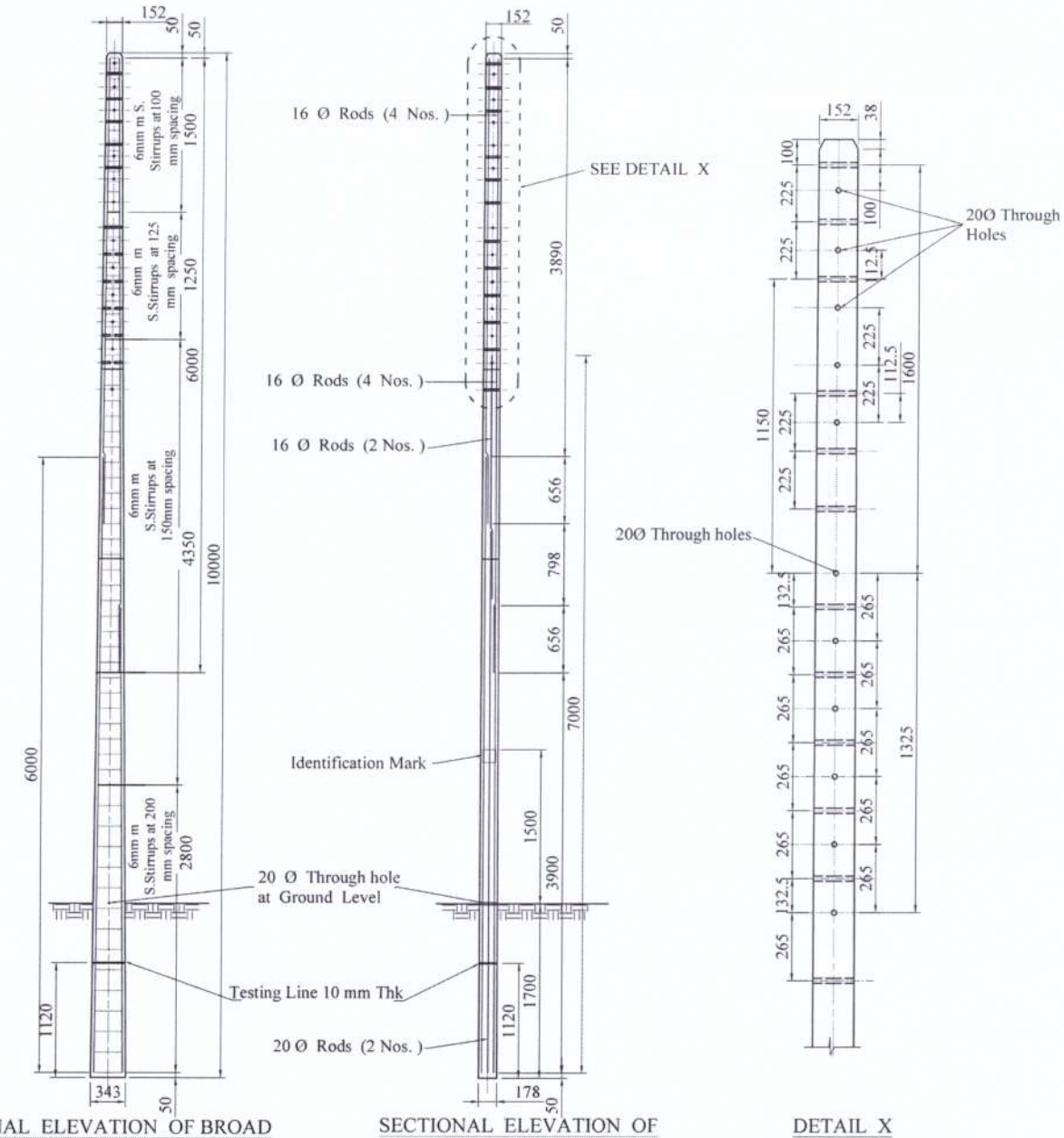


SECTION B-B

NOTE
1. Concrete Grade - M500
2. Load Factor - 2.5
3. Release Strength - 250 kg/cm^2
4. Design Calculations as perr BSS

ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	10 m / 225 kg REINFORCED CONCRETE POLE	DRAWN : Lalani / EDITED : Harsha
	DESIGNED BY / DESIGN APPROVED BY	DATE : May 2021 / REV NO : -
		DRG NO : LV-08
DISTRIBUTION COORDINATION BRANCH	CIVIL ENGINEER / CHAIRMAN DISTRIBUTION DESIGN COMMITTEE	SOURCE : -



NOTES :

1. Concrete to have a Cube Strength of 25.0 N/mm at an age of 28 Days. (Concrete Grade 25)
2. Main Reinforcement to be Deformed High Yield Steel having a Characteristic Strength of 450 N/mm
3. Stirrups to be Mild Steel having a Characteristic Strength of 250 N/mm
4. Minimum Lap Length of High Yield Steel bars to be 41 x dia.
5. Minimum Cover to all Reinforcement (including Stirrups) to be 25 mm
6. Maximum Size of Coarse aggregate to be 20 mm
7. Laps Formed in the Adjacent Bars in the same face of the Pole must be Staggered.
8. 8. As a Guide a Mixing Rate of 1:1 1/2 :3 is Suggested.

SPECIAL NOTES

These poles should be transported resting on the narrow face while full length of the pole being supported.
Approximate weight of the Pole is 1010 kg

DESIGN CRITERIA

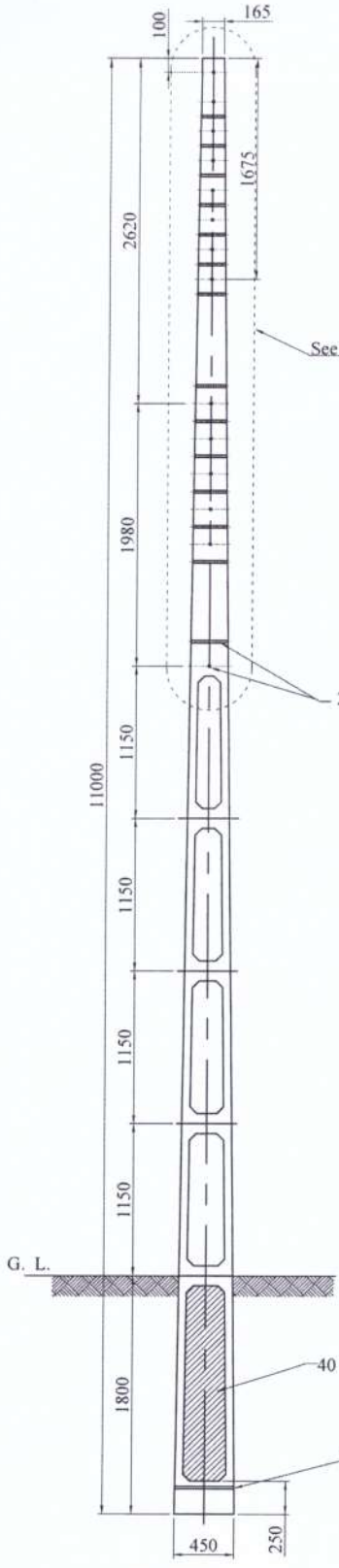
The pole is designed for working load of 300kg transversly and 75kg longitudinally acting at a distance of 0.6m below the top of pole.

Factor of Safty - 2.5

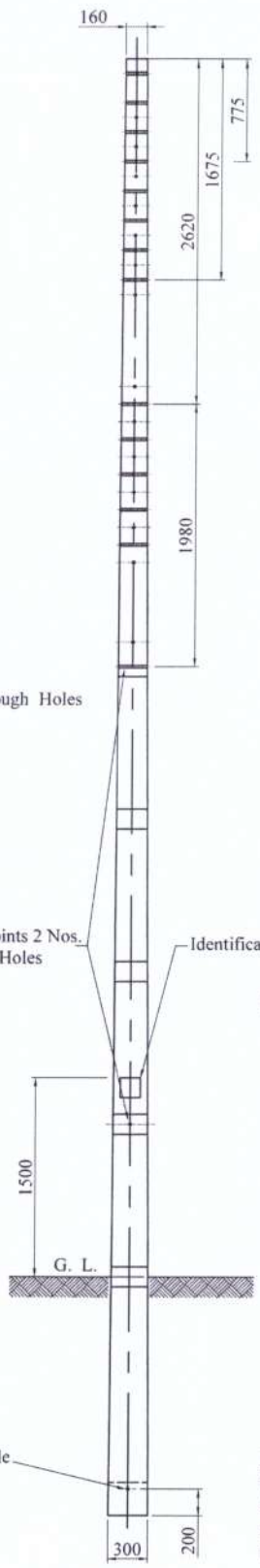
ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	10 m /300 kg REINFORCED CONCRETE POLE	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard : DCS-1 DS&S/95/7705	DRG NO : LV-09
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS-1 : 1997

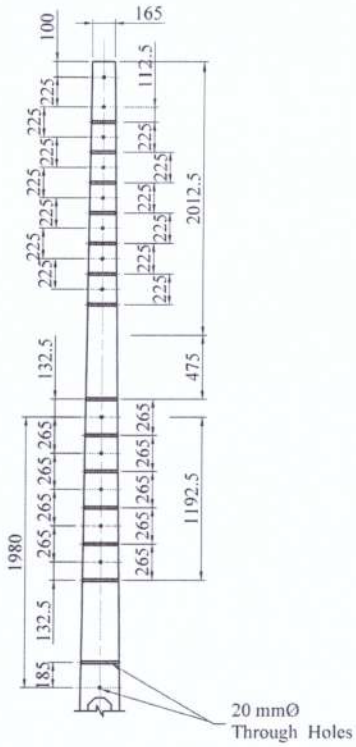
CEB Approved Construction Standard
Chairman - Dist. Coord. Comm



ELEVATION OF BROAD FACE



ELEVATION OF NARROW FACE



DETAIL OF - X

NOTE:-

1. Concrete to be Grade C40 (Normal agg. size = 15 mm)
2. Pre - Stressing steel to be 10 mm Ø High Tensile Steel Wires with min. 32 kN Characteristic Strength.
3. Secondary steel to be 10 mm Ø tor steel with min. 450N/mm Characteristic Strength.
4. 4 Links to be 6 mm Ø Mild Steel with minimum 250 N/mm Characteristic Strength.
5. Minimum cover to all steel 20 mm
6. Minimum spacing between secondary steel to be 25 mm
7. Minimum spacing between H. T. steel to be 20 mm
8. H. T. wires de - bonded (1/2 No. of each)

a) 2 Nos. for the top 1500

b) 2 Nos. for the top 1000

9. 10 Nos. links of 6 mm Ø Mild Steel at 150 mm ctrs. from top end of pole.
10. [e] - 2 nos. 5 mm unless specified otherwise.
11. All holes 20 mm Ø unless specified otherwise.

DESIGN CRITERIA

This pole is designed for a working load of 350 kg transversely, and 87kg longitudinally, acting at a point 0.6m below the top of the pole.

Factor of Safety = 2.5

ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

11.0 m / 350kg PRE-STRESSED CONCRETRE POLE

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/95/7713

SCALE : Not to Scale

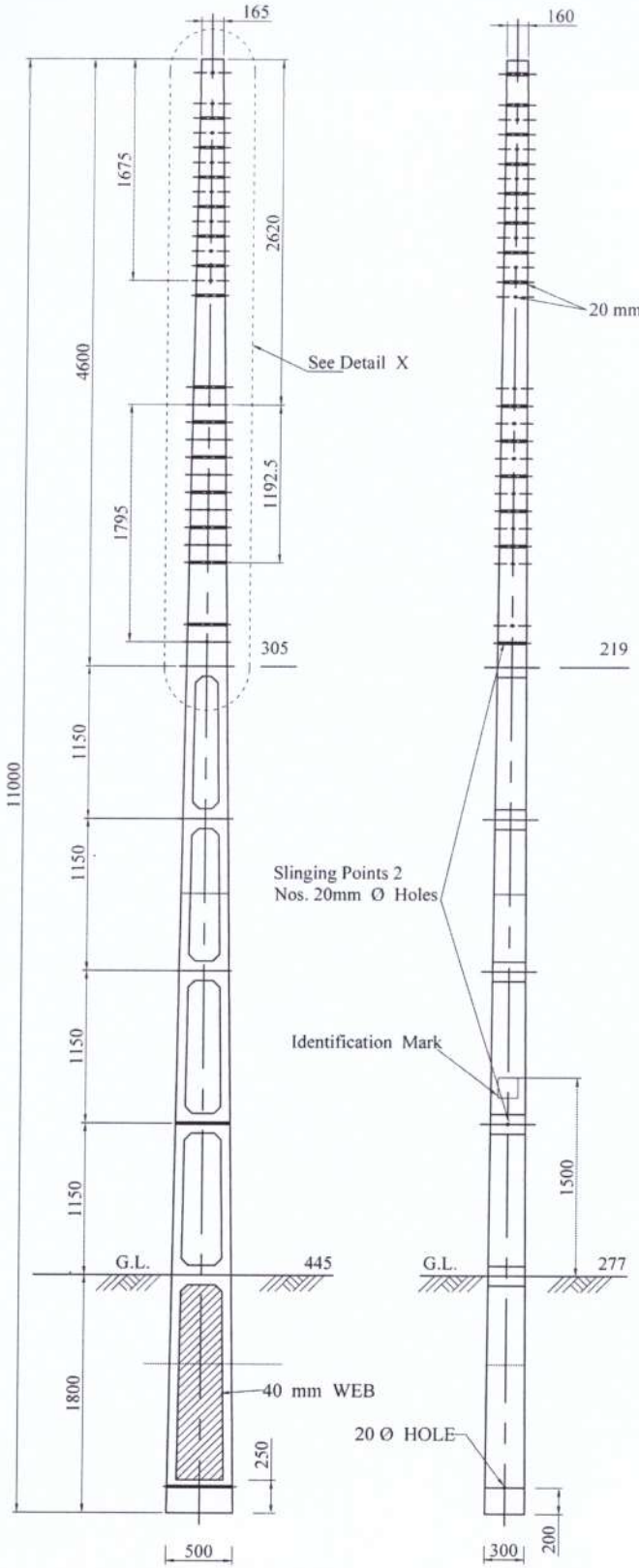
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : LV-10

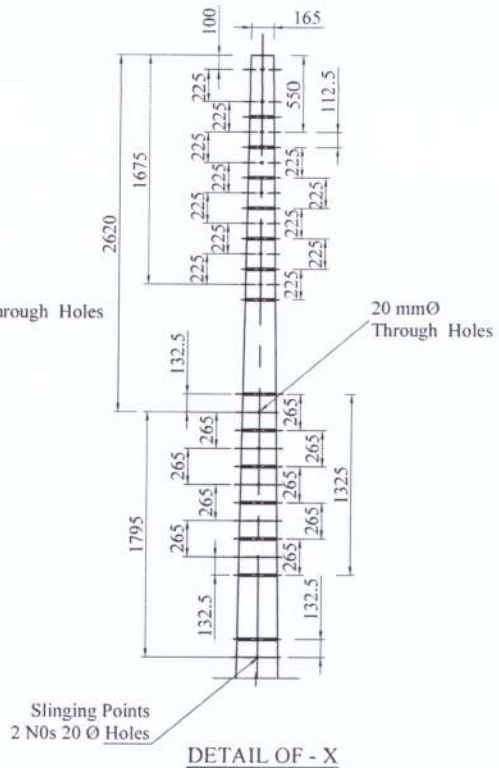
SOURCE : DCS-1 : 1997

CEB Approved Construction Standards • Chairman - Dist. Coord. Committee •



ELEVATION OF BROAD FACE

ELEVATION OF NARROW FACE



DETAIL OF - X

NOTE

1. Concrete to be Grade c 40 (Nominal agg. size = 15 mm)
2. Pre Stressing Steel to be Ø 5 mm High Tensile Steel with min. 32kN Characteristic
3. Secondary steel to be 10 mm Tor Steel with min. 450N/mm² Characteristic Strength
4. Stirrups & web reinforcement to be Mild Steel having minimum 250 N/mm² Characteristic Strength
5. Min. cover to all steel 20 mm
6. Min. spacing between secondary steel to be 25 mm Min. spacing between H.T. steel to be 20mm
7. H.T. wires de bonded (1/2 No. each face)
   2 Nos. for the top 1500
   2 Nos. for the top 1000
8. 10 Nos. Ø6mm Mild Steel stirrups at 150 ctrs. from from top of pole
9. 4 Nos. 5mm unitensioned H.T. wires up to 6.8 m from bottom end
10. All holes Ø20 mm unless specified otherwise.

DESIGN CRITERIA

1. This pole is designed for a working load of 500kg in the transverse direction & 125kg in the longitudinal direction, applied at a point 0.6m below top of pole.
2. Factor of Safety - 2.5

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

11.0m / 500kg PRE-STRESSED CONCRETRE POLE

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/95/7715

SCALE : Not to Scale

DRAWN : Lalam EDITED : Harsha

DATE : May 2021 REV NO : -

DRG NO : LV-11

SOURCE : DCS-1 : 1997

CEB approved Construction Standards
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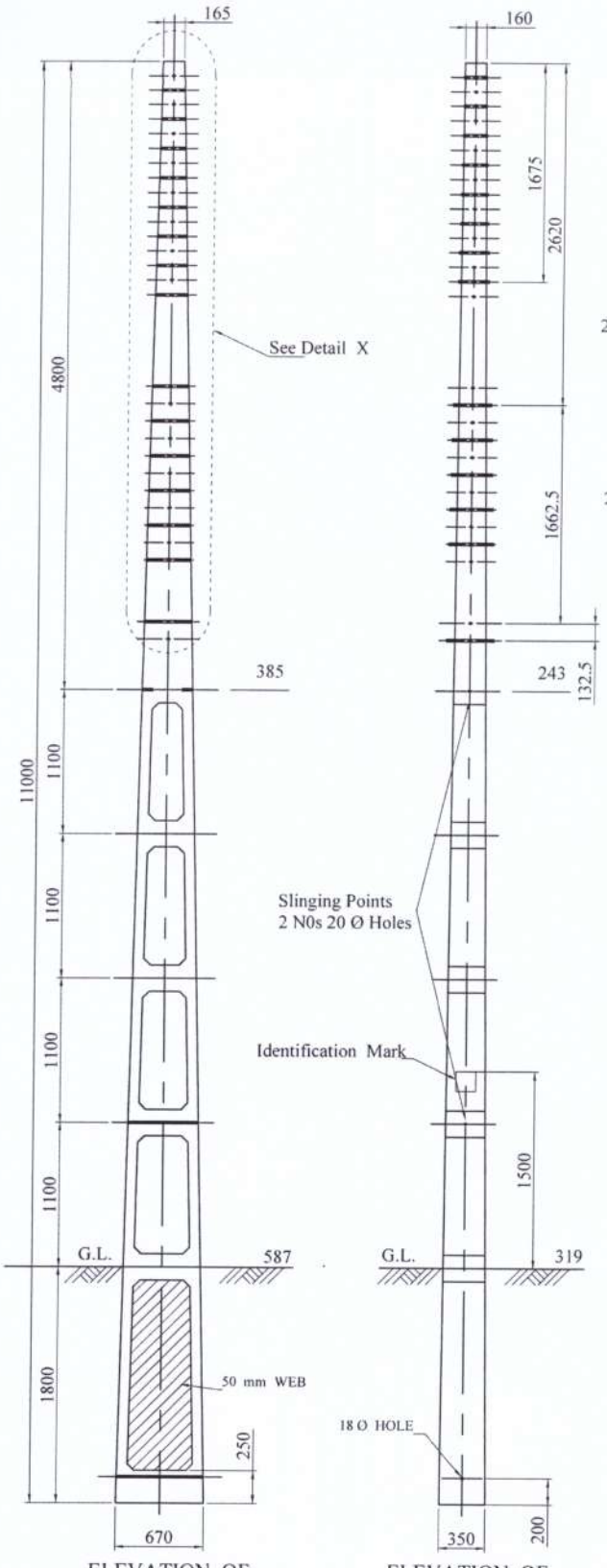
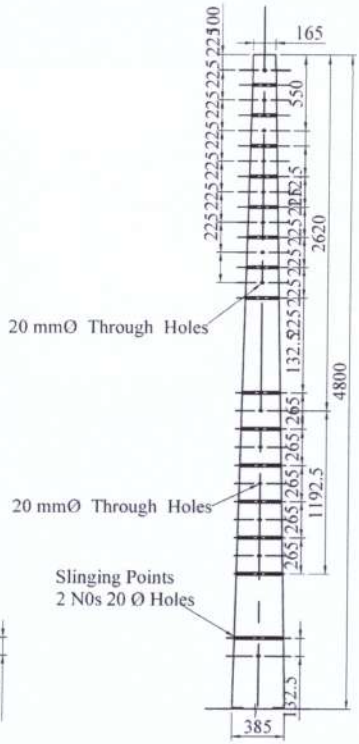




DETAIL OF - X

NOTE

1. Concrete to be Grade C40 (Nominal agg. size = 15 mm)
2. Pre Stressing Steel to be Ø 5 mm High Tensile Steel with min. 32 kN characteristic
3. Secondary Steel to be 10 mm Tor Steel with min. 450 N/mm² Characteristic Strength
4. Stirrups & web reinforcement to be Mild Steel having minimum 250N/mm² characteristic strength
5. Min. cover to all steel 20 mm
6. Min. spacing between secondary steel to be 25 mm min. spacing between H.T. steel to be 20mm
7. H.T. wires de bonded (1/2 No. each face)
   2 Nos. for the top 1500
   2 Nos. for the top 1000
8. 10 Nos. Ø6mm Mild Steel stirrups at 150 ctrs. from from top of pole
9. 4 Nos. 5mm untensioned H.T. wires up to 6.8 m from bottom end
10. All holes Ø20 mm unless specified otherwise.

DESIGN CRITERIA

1. This pole is designed for a working load of 500kg in the transverse direction & 125kg in the longitudinal direction, applied at a point 0.6m below top of pole.
2. Factor of safety - 2.5

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

11.0m / 850kg PRE-STRESSED CONCRETRE POLE

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/95/7730

SCALE : Not to Scale

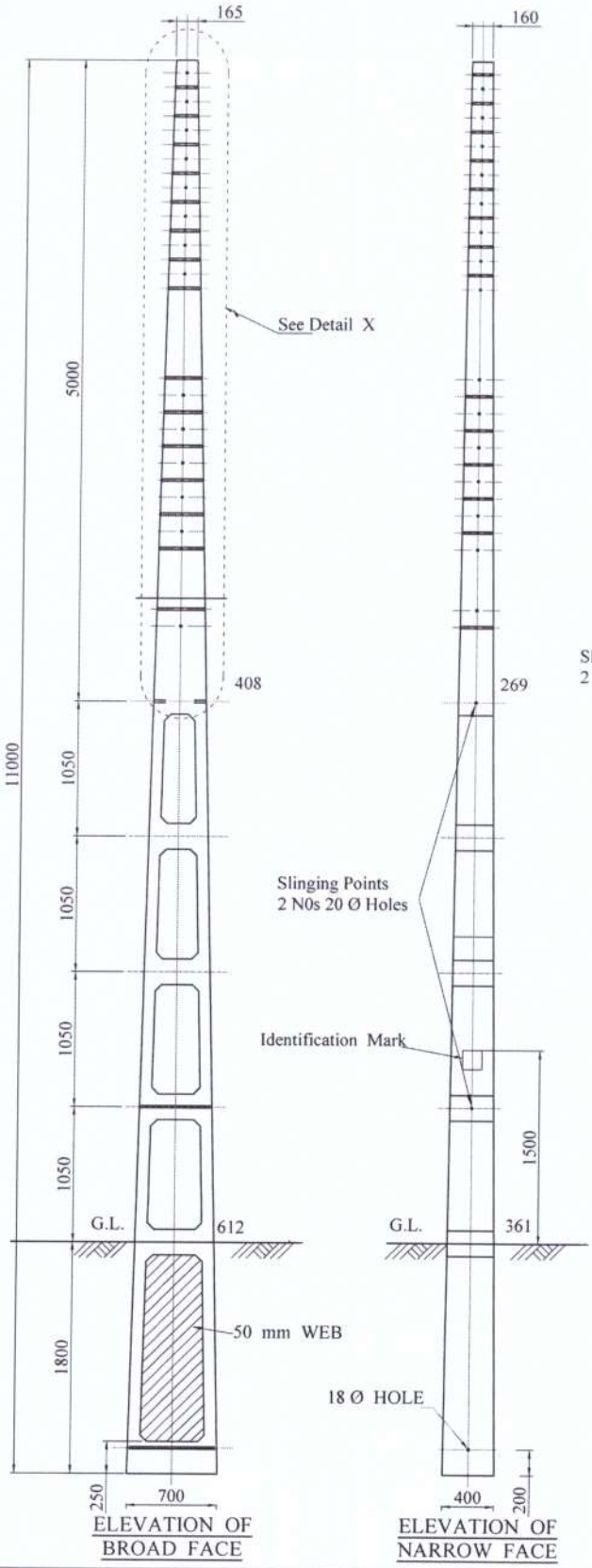
DRAWN : Lalani EDITED : Harsha

DATE : May 2021 REV NO : -

DRG NO : LV-12

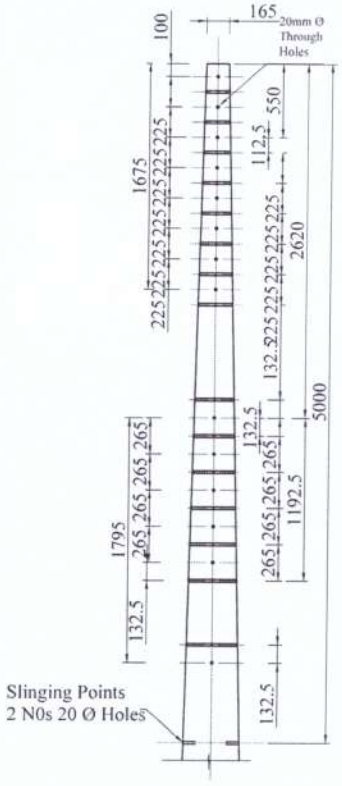
SOURCE : DCS-1 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



ELEVATION OF BROAD FACE

ELEVATION OF NARROW FACE



DETAIL OF - X

NOTE

1. Concrete to be Grade C40 (Nominal agg. size = 15 mm)
2. Pre Stressing Steel to be Ø 5 mm High Tensile Steel with min. 32 kN characteristic
3. Secondary Steel to be 10 mm Tor Steel with min. 450 N/mm² Characteristic Strength
4. Stirrups & web reinforcement to be Mild Steel having minimum 250N/mm² characteristic strength
5. Min. cover to all steel 20 mm
6. Min. spacing between secondary steel to be 25 mm min. spacing between H.T. steel to be 20mm
7. H.T. wires de bonded (1/2 No. each face)
   2 Nos. for the top 1500
   2 Nos. for the top 1000
8. 10 Nos. Ø6mm Mild Steel stirrups at 150 ctrs. from from top of pole
9. [ɐ] 4 Nos. 5mm unitensioned H.T. wires up to 6.8 m from bottom end of pole
10. All holes Ø20 mm unless specified otherwise.

DESIGN CRITERIA

1. This pole is designed for a working load of 1200kg in the transverse direction & 125kg in the longitudinal direction, applied at a point 0.6m below top of pole.
2. Factor of safety - 2.5

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

11.0m / 1200kg PRE-STRESSED CONCRETRE POLE

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/95/7732

SCALE : Not to Scale

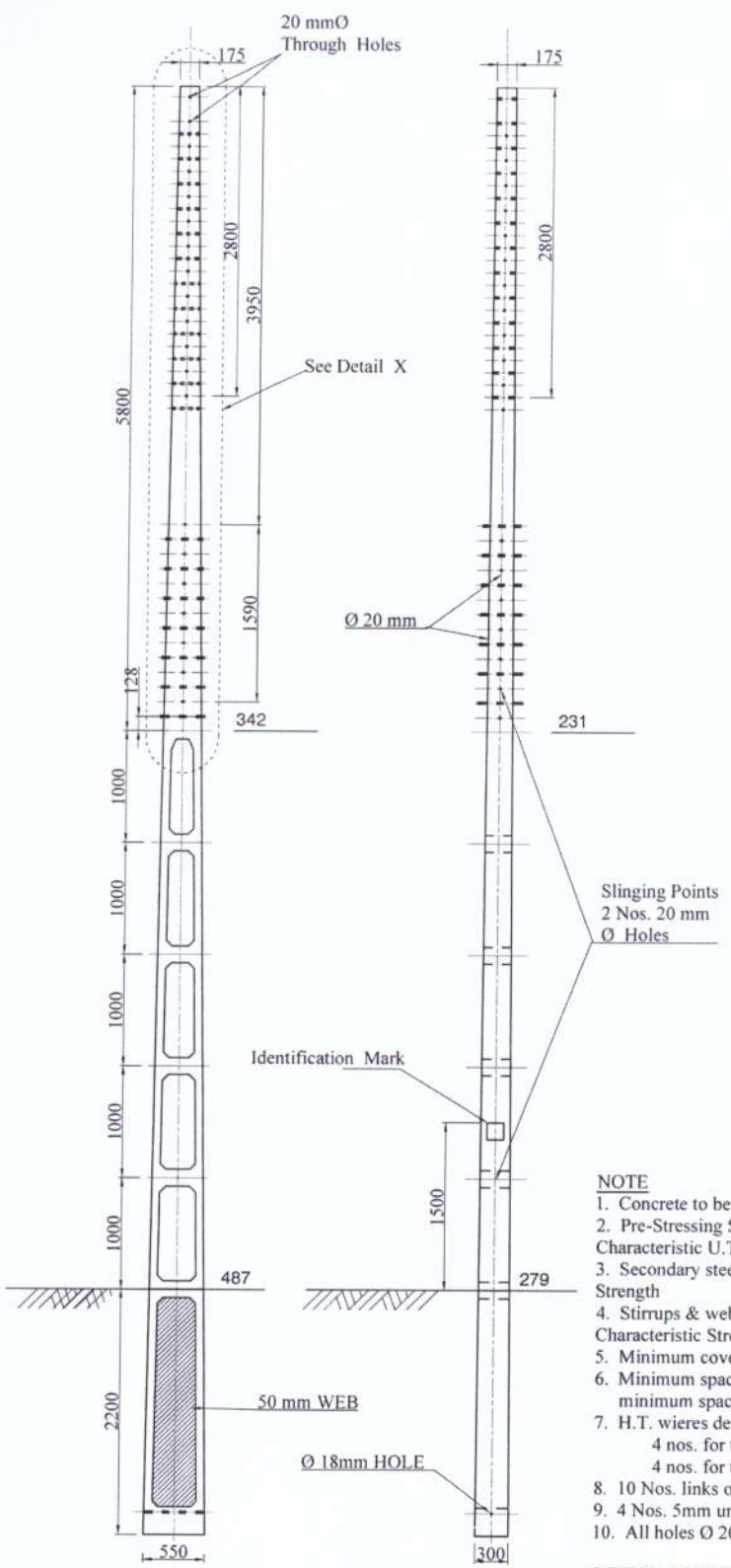
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV.NO :

DRG NO : LV-13

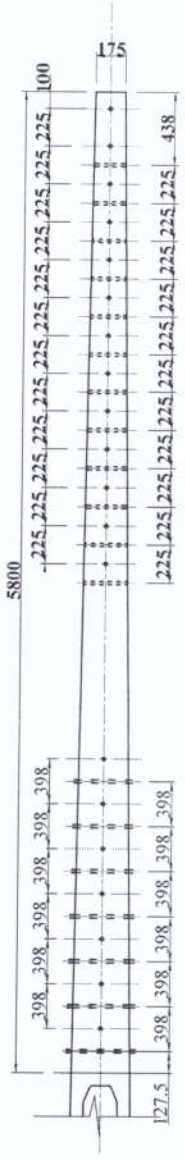
SOURCE : DCS-1 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



ELEVATION OF BROAD FACE

ELEVATION OF NARROW FACE



DETAIL OF - X

ALL DIMENSIONS ARE IN MILLIMETRES

NOTE

1. Concrete to be grade c 40 (nominal agg. size = 15mm).
2. Pre-Stressing Steel to be Ø 5mm High Tensil Steel with minimum 32 kn. Characteristic U.T.S
3. Secondary stee to be Ø 10mm tor steel with minimum 450n/mm^2 Characteristic Strength
4. Stirrups & web reinforcement to be Ø6mm Mild Steel with minimum 250N/mm^2 Characteristic Strength
5. Minimum cover to all steel 20mm
6. Minimum spacing between secondary steel to be 25mm
   minimum spacing between h.t. steel to be 20mm
7. H.T. wieres de-bonded (1/2 no. each face)
   4 nos. for the top 1500
   4 nos. for the top 1000
8. 10 Nos. links of Ø 06mm at 150mm ctrs. from top
9. 4 Nos. 5mm untentioned h.t. wires upto 6.5 m from bottom end
10. All holes Ø 20mm unless specified otherwise.

DESIGN CRITERIA

1. This pole is designed for aworking load of 500kg acting in transvers direction, and 125kg acting in longitudinal direction acting at a point 0.6 m below top of the pole
2. Factor of Safety = 2.5

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

13 m / 500 kg PRE-STRESSED CONCRETE POLES

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/95/7714

SCALE : Not to Scale

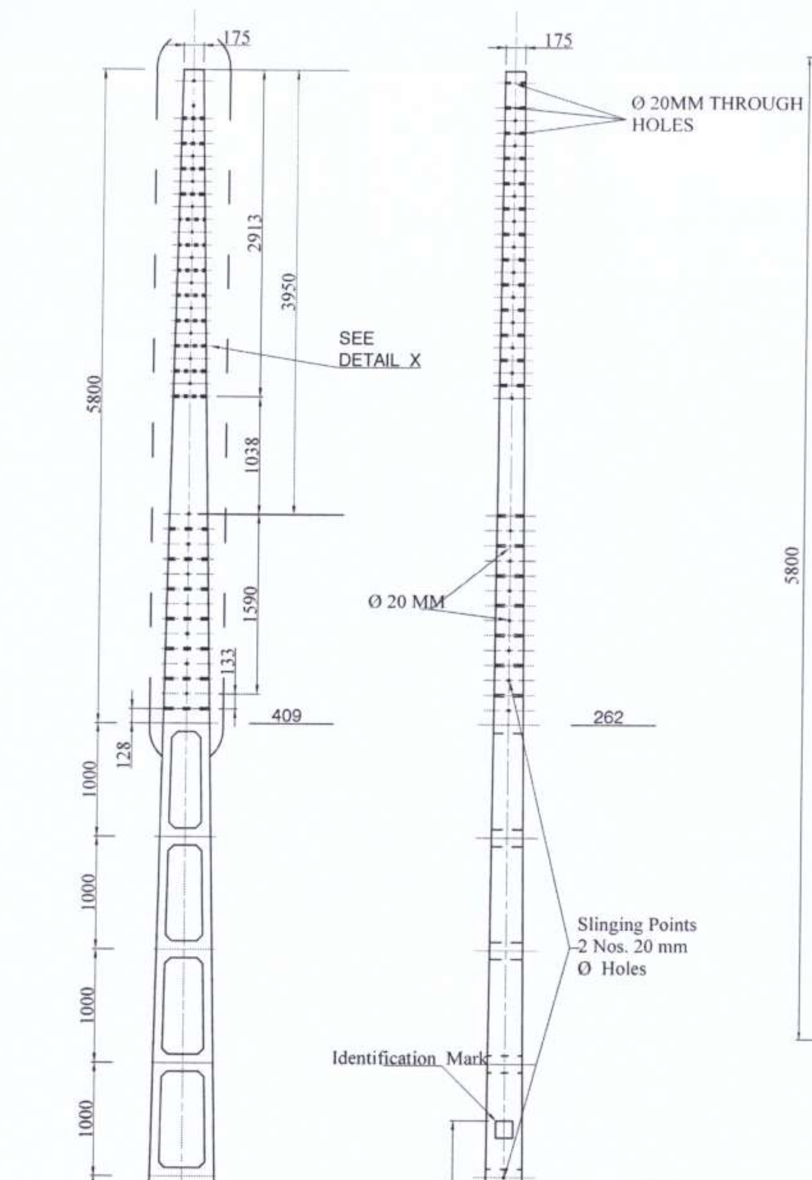
DRAWN : Lalani | EDITED : Harsha

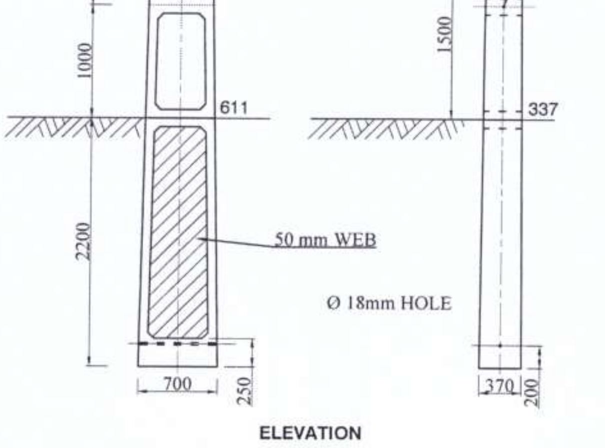
DATE : May 2021 | REV NO : -

DRG NO : LV-14

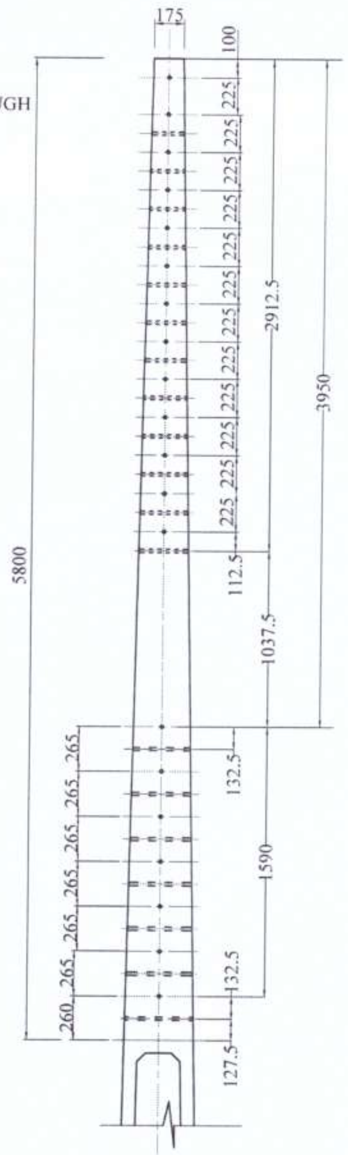
SOURCE : DCS-1 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee





ELEVATION



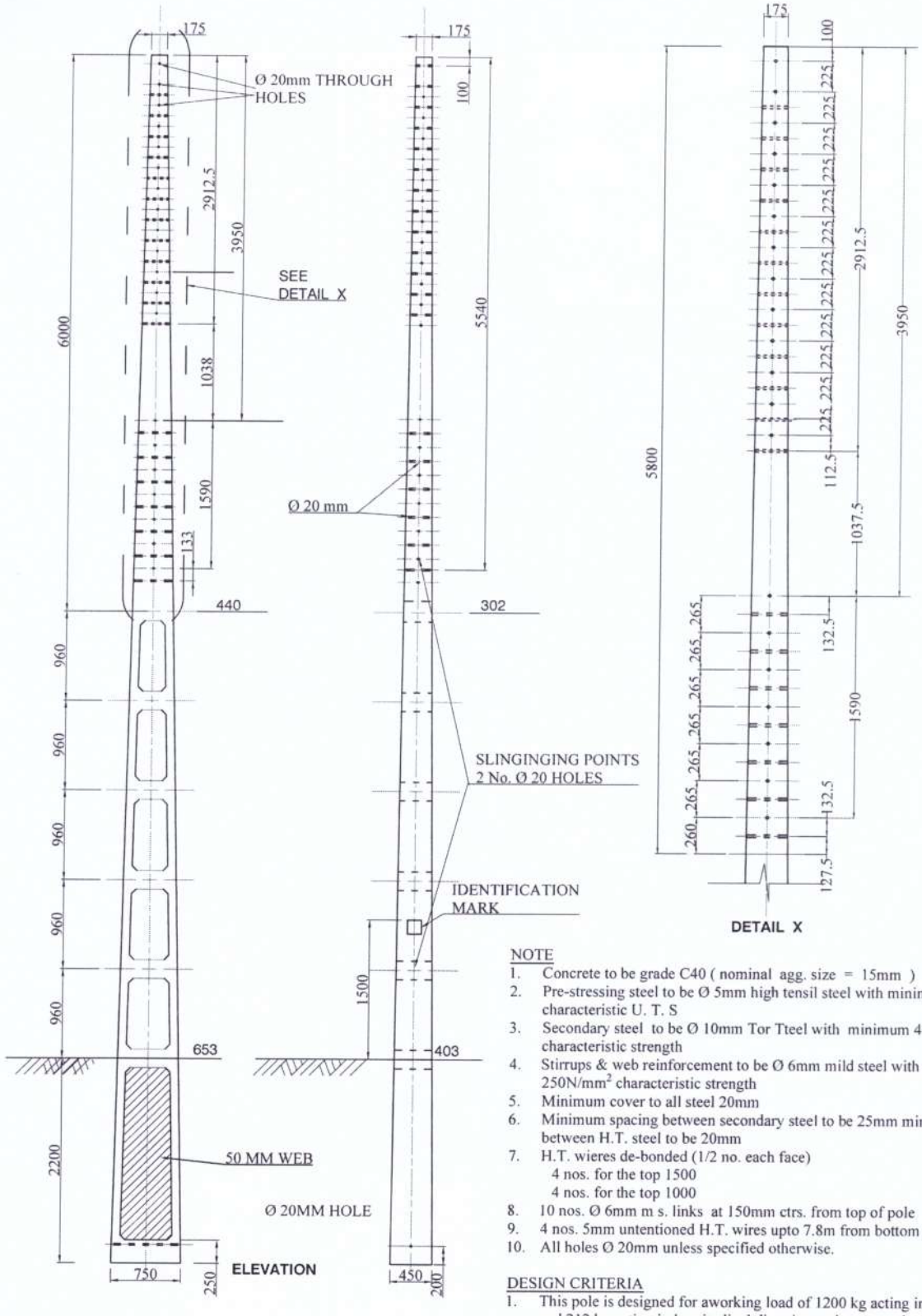
DETAIL X

NOTE
1. Concrete to be grade C40 (nominal agg. size = 15mm)
2. Pre-Stressing steel to be Ø 5mm High Tensil Steel with minimum 32 kN. Characteristic U. T. S
3. Secondary steel to be Ø 10mm Tor Steel with minimum $450n/mm^2$ Characteristic Strength
4. Stirrups & web reinforcement to be Mild Steel of minimum $250N/mm^2$ Characteristic Strength.
5. Minimum cover to all steel to be 20mm
6. Minimum spacing between secondary steel to be 25mm
7. Minimum spacing between H.T. steel to be 20mm
8. H.H. wieres de-bonded (1/2 no. each face)
   4 nos. for the top 1500
   4 nos. for the top 1000
9. 10 nos. Ø 6 mm m s. links at 150mm ctrs. from top of pole
10. 4 nos. 5mm untentioned h.t. wires up to 7.8 m from bottom end
11. All holes Ø 20mm unless specified otherwise.

DESIGN CRITERIA
1. This pole is designed for aworking load of 850kg transversly, and 212kg longitudinally acting at a point 0.6 m below top of the pole.
2. Factor of Safety = 2.5

ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	13 m / 850 kg PRE-STRESSED CONCRETE POLES	DRAWN : Lalani EDITED : Harsha
		DATE : May 2021 REV NO : -
	Extract of CEB Distribution Construction Standard : DCS-1 DS&S/95/7712	DRG NO : LV-15
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS-1 : 1997



NOTE

1. Concrete to be grade C40 (nominal agg. size = 15mm)
2. Pre-stressing steel to be Ø 5mm high tensil steel with minimum 32 kN. characteristic U. T. S
3. Secondary steel to be Ø 10mm Tor Tteel with minimum 450N/mm^2 characteristic strength
4. Stirrups & web reinforcement to be Ø 6mm mild steel with minimum 250N/mm^2 characteristic strength
5. Minimum cover to all steel 20mm
6. Minimum spacing between secondary steel to be 25mm minimum spacing between H.T. steel to be 20mm
7. H.T. wieres de-bonded (1/2 no. each face)
   4 nos. for the top 1500
   4 nos. for the top 1000
8. 10 nos. Ø 6mm m s. links at 150mm ctrs. from top of pole
9. 4 nos. 5mm untentioned H.T. wires upto 7.8m from bottom end
10. All holes Ø 20mm unless specified otherwise.

DESIGN CRITERIA

1. This pole is designed for aworking load of 1200 kg acting in transvers direction, and 212 kg acting in longitudinal direction acting at a point 0.6 m below top of the pole.
2. Factor of Safety = 2.5

ALL DIMENSIONS ARE IN MILLIMETRES

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

13 m / 1200 kg PRE-STRESSED CONCRETE POLES

Extract of
CEB Distribution Construction Standard : DCS-1
DS&S/95/7725

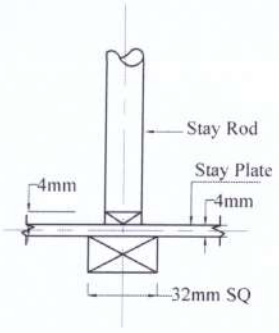
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

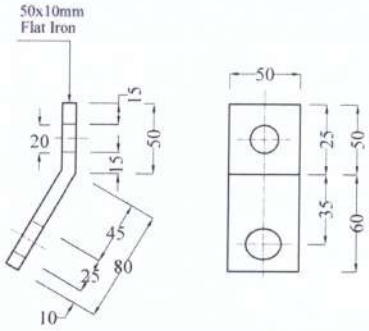
DATE : May 2021 | REV NO :

DRG NO : DCV-16

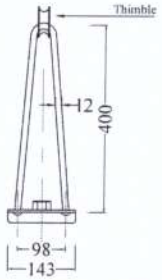
SOURCE : DCS-1 : 1997



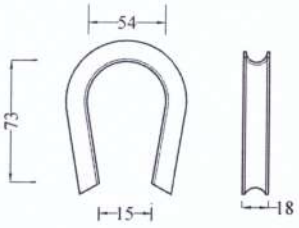
DETAIL A



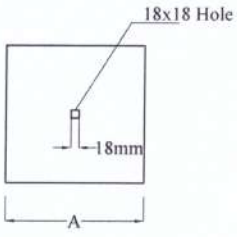
DETAIL OF BRACKET



CHANNEL IRON CROSS HEAD STAY TIGHTNER

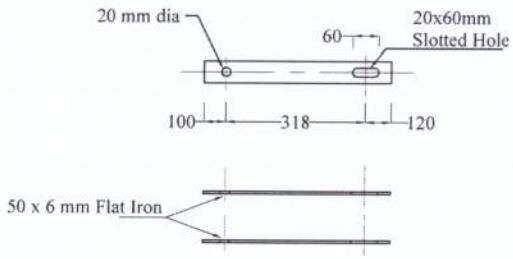


THIMBLE



300 X 300 X 4
STAY PLATE

METHOD OF ARRANGEMENT OF LINE STAY

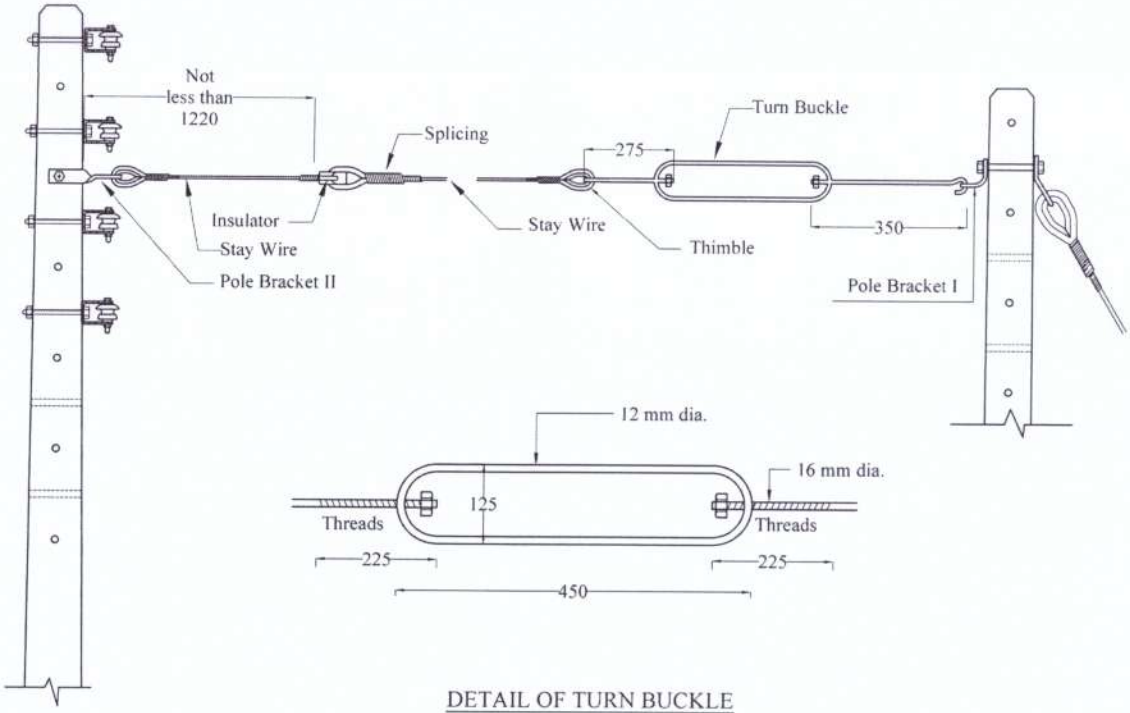


STRUT BRACKET

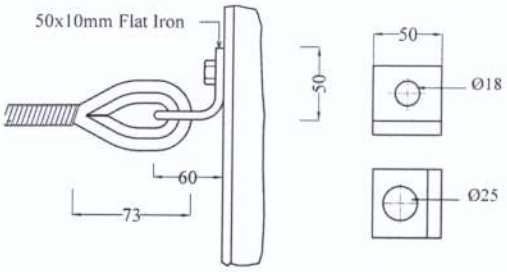
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	LV STAY ASSEMBLY STAY CLAMP & STRUT BRACKET	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-17
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

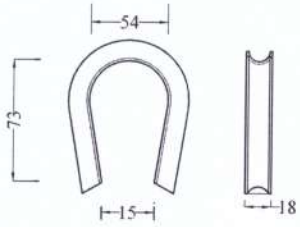
CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



DETAIL OF TURN BUCKLE



DETAIL OF POLE BRACKET-I



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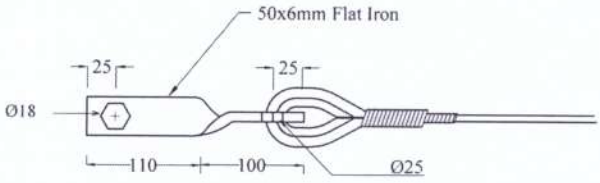
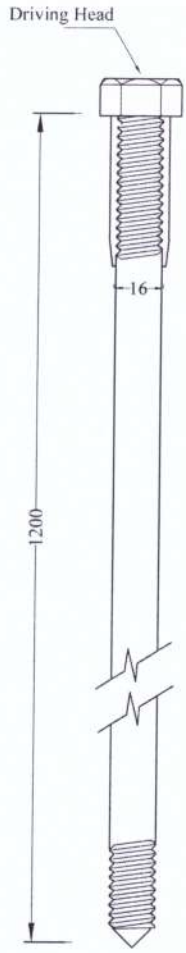


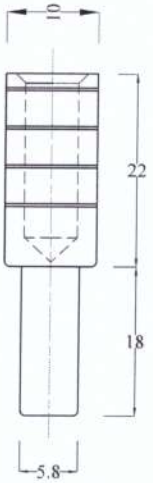
DETAIL OF POLE BRACKET- II

ALL DIMENSIONS ARE IN MILLIMETERS

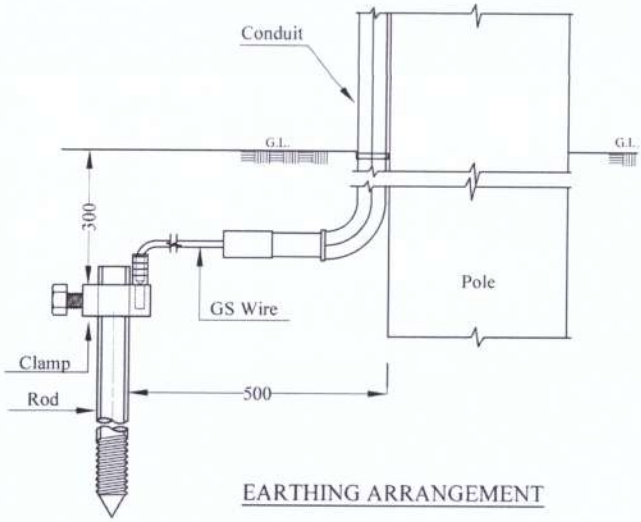
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	LV FLYING STAY BUCKLE ASSEMBLY	DRAWN : Lalani EDITED : Harsha
		DATE : May 2021 REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-18
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997



COPPER BONDED EARTH ROD



COMPRESSION TINNED COPPER ADAPTER



EARTHING ARRANGEMENT

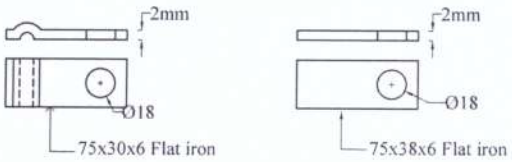
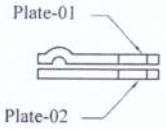
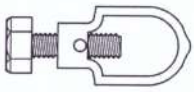


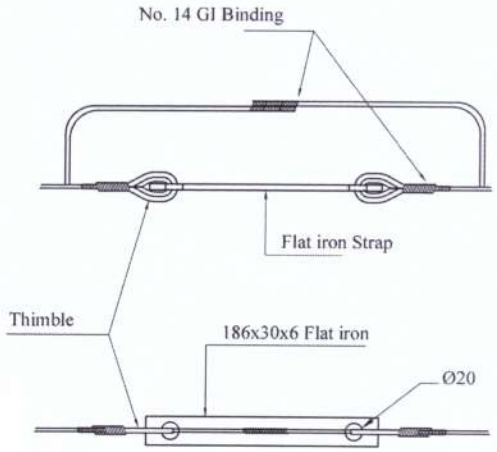
Plate-01 Plate-02



EARTH CLIP LINE POLE



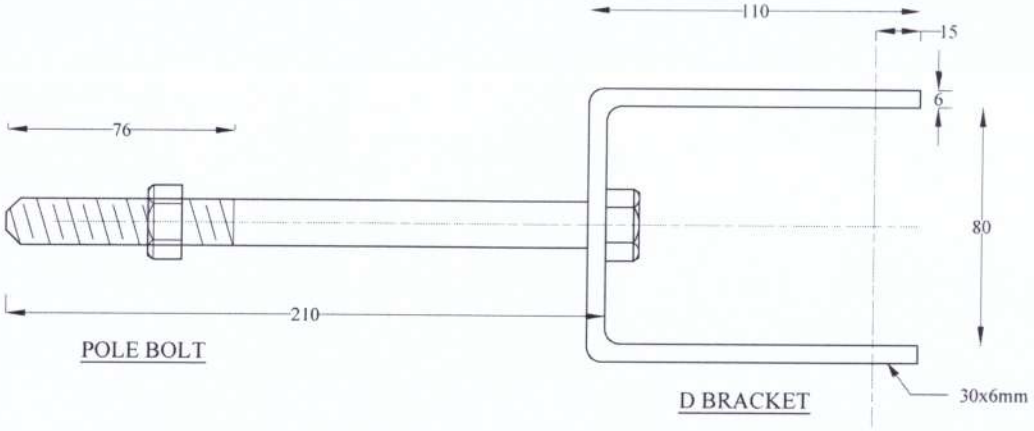
CLAMP



LV EARTH CLAMP TENSION POLE

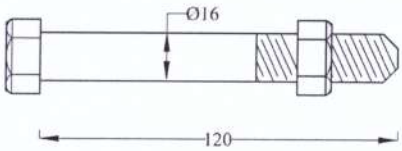
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	LV EARTHING ACCESSORIES	DRAWN : Lalani EDITED : Harsha
		DATE : May 2021 REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-19
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

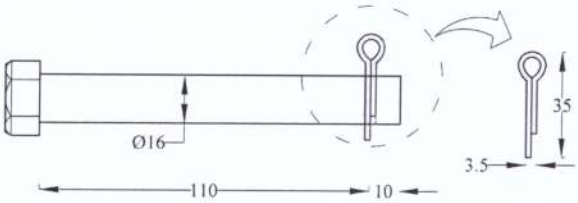


POLE BOLT

D BRACKET

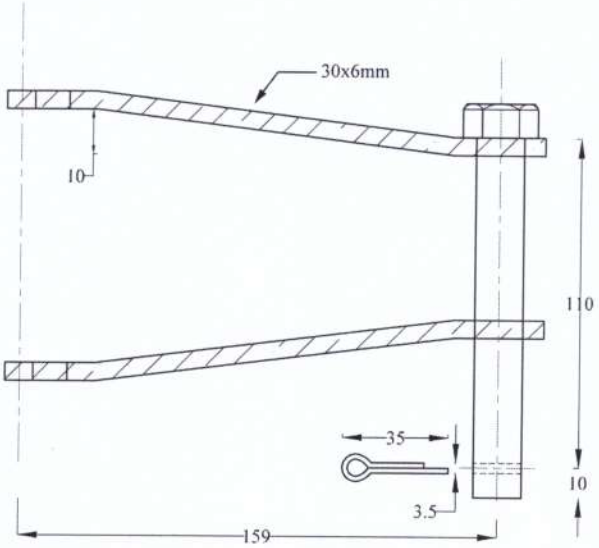


INSULATOR BOLT

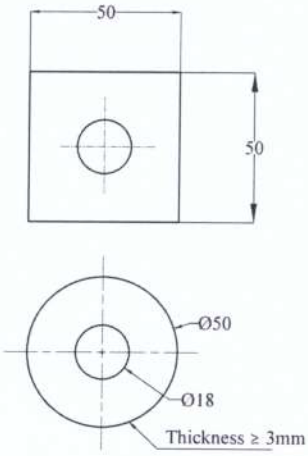


COTTER PIN

SPLIT PIN



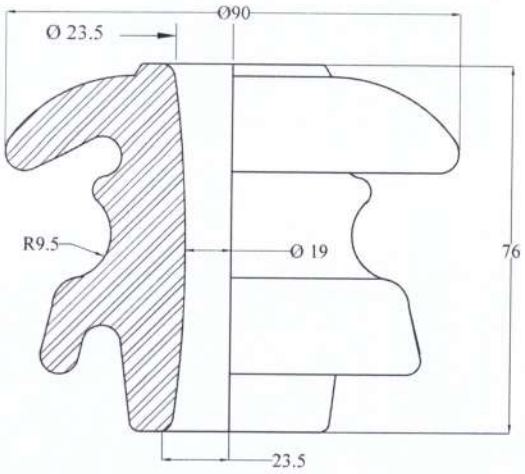
SHACKLE STRAP



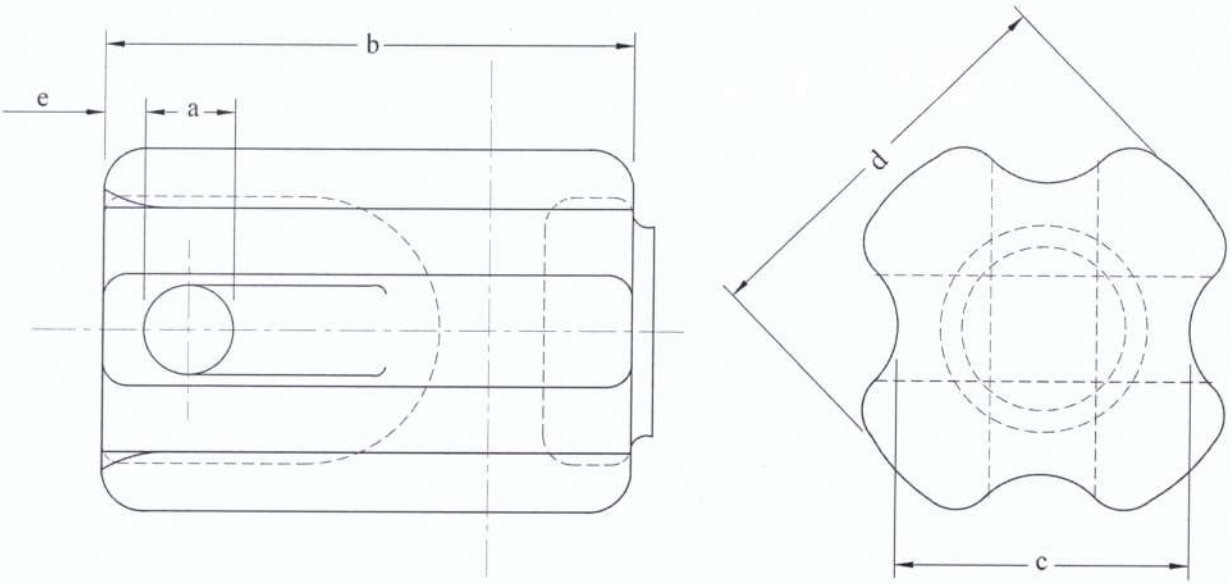
WASHER

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	D- BRACKET , SHACKLE STRAPS , GI BOLTS & NUTS	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-20
DISTRIBUTION COORDINATION BRANCH		SOURCE : " DCS -03 : 1997



LV INSULATOR



	LV	MV
a	20	25
b	115	150
c	55	60
d	75	85
e	18	18
Creepage Distance	25	60
Dimensional Tolerance	± 5 %	± 5 %

STAY INSULATOR

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

LV SHACKLE INSULATOR & STAY INSULATOR

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

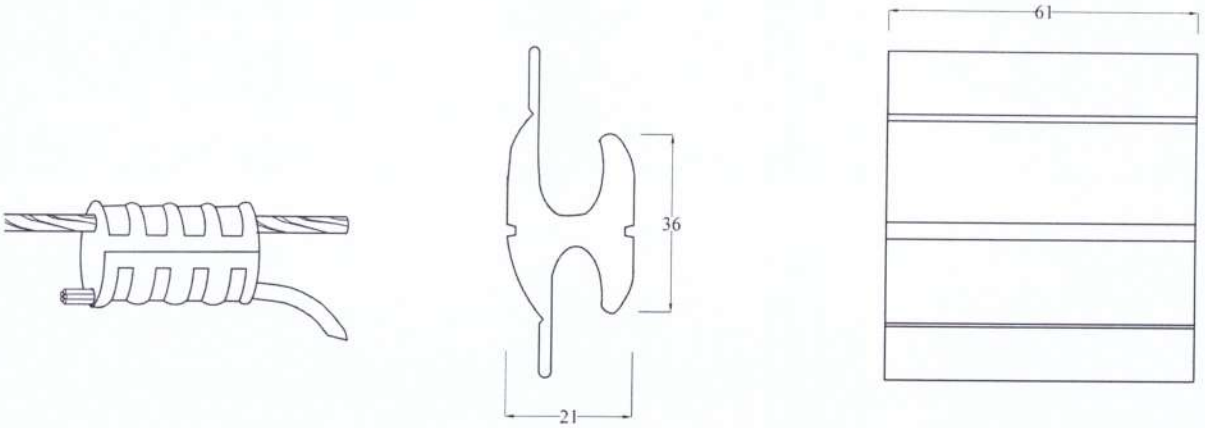
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

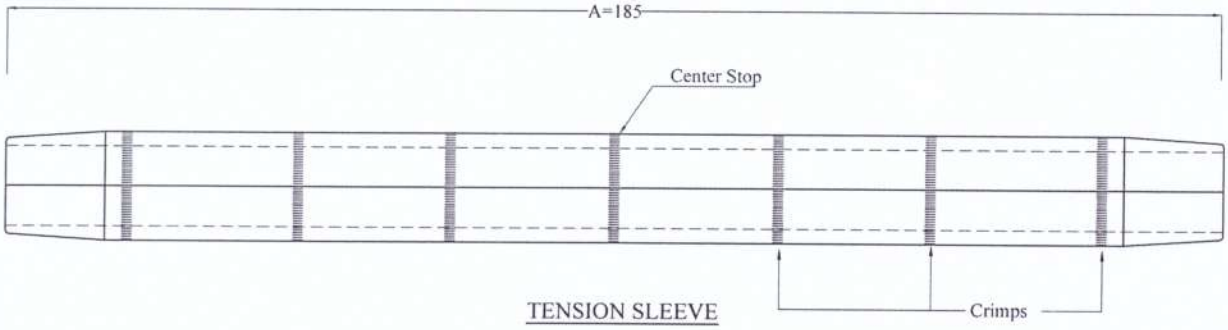
DATE : May 2021 | REV NO : -

DRG NO : LV-21

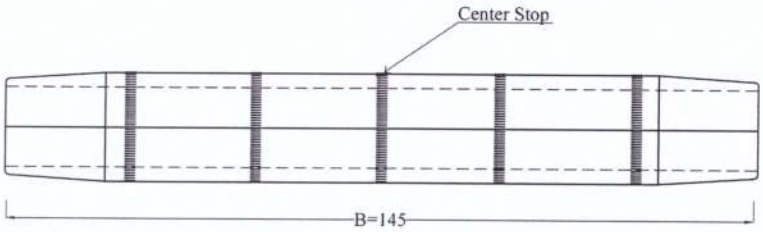
SOURCE : DCS -03 : 1997



H TYPE COMPRESSION LINE TAP



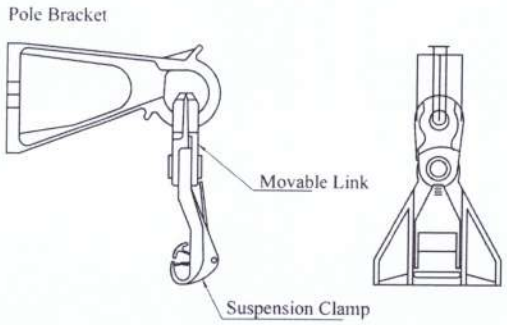
TENSION SLEEVE



NON TENSION SLEEVE

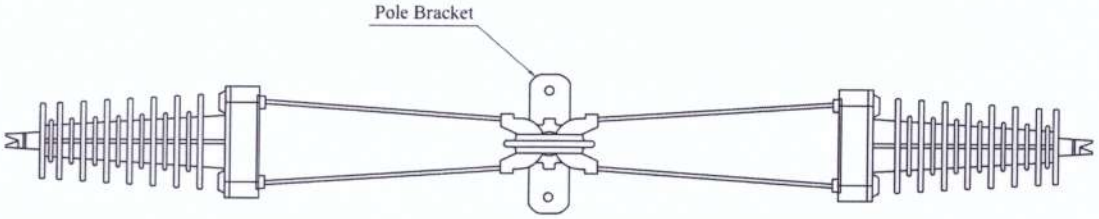
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONNECTORS USED IN BARE CONDUCTORS	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-22
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS-03 : 1997



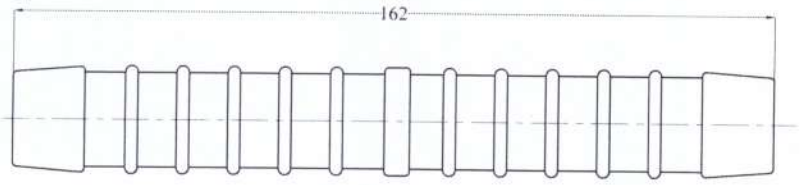
SUSPENSION / SMALL ANGLE ASSEMBLY
(B 16 05 1)

DEAD END ASSEMBLY
(B 16 15 1)

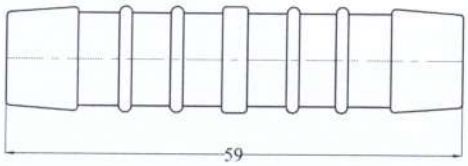


LARGE ANGLE ASSEMBLY
(B 16 10 01)

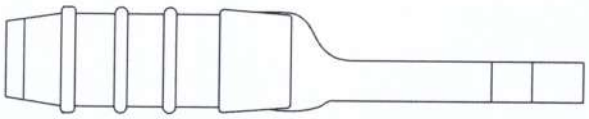
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	SUSPENSION / SMALL ANGLE/ LARGE ANGLE AND DEAD- END ASSEMBLY	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LM-23
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997



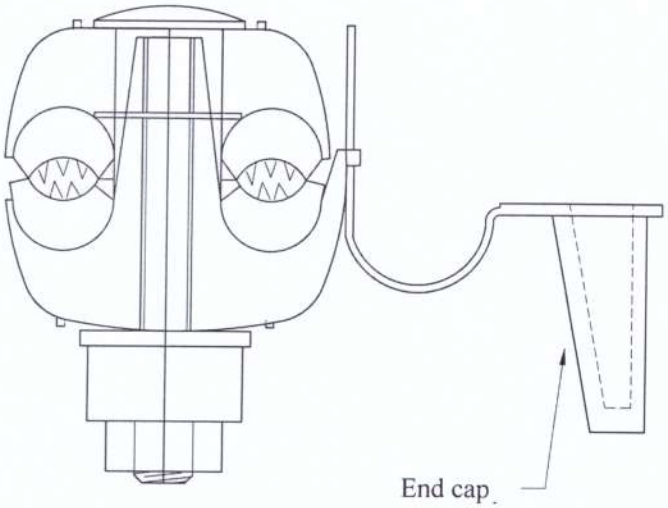
PRE-INSULATED TENSION SLEEVE



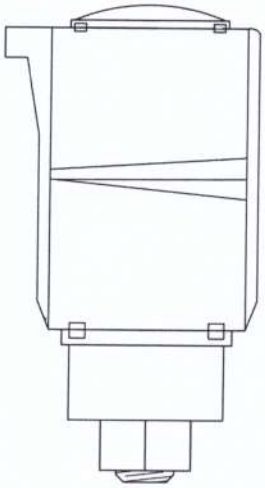
PRE-INSULATED NON TENSION SLEEVE



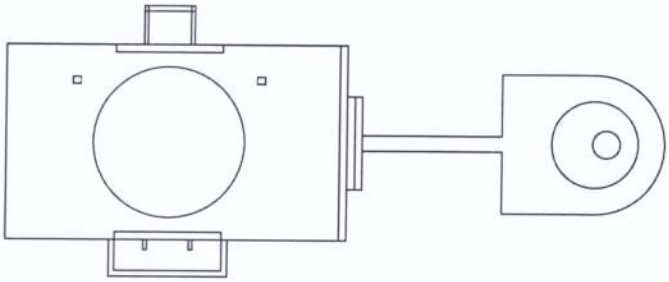
PRE INSULATED LUG



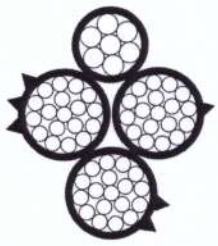
FRONT VIEW



SIDE VIEW



TOP VIEW

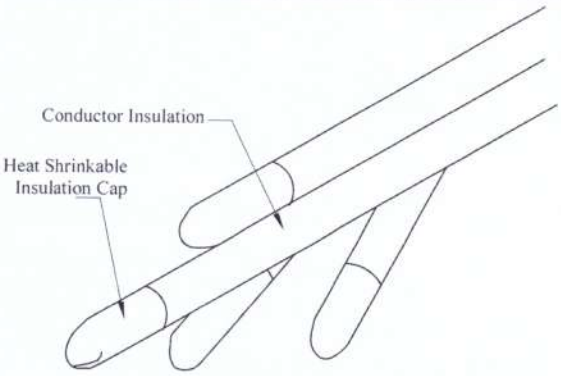


LV 4 WIRE BUNDLED OVERHEAD CONDUCTOR

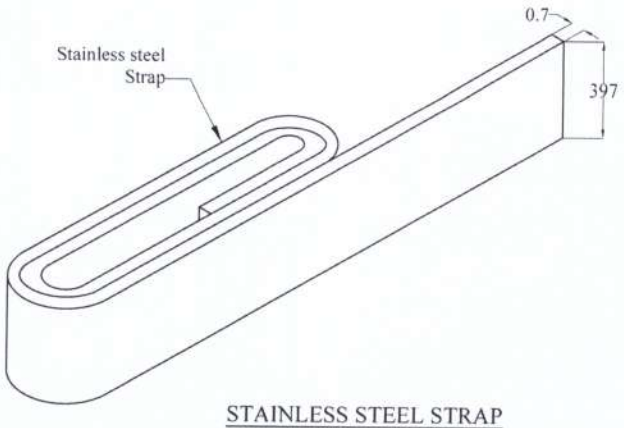
PIERCING CONNECTOR

ALL DIMENSIONS ARE IN MILLIMETERS

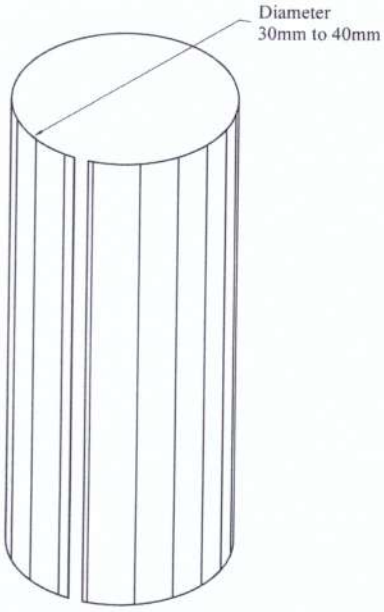
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONNECTORS FOR ABC & ABC 4 WIRE	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
DISTRIBUTION COORDINATION BRANCH	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : EV-24
		SOURCE : DCS -03 : 1997



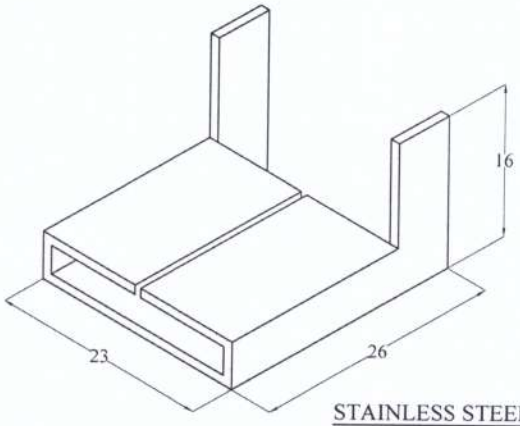
INSULATION END CAP
20 x 0.7 mm



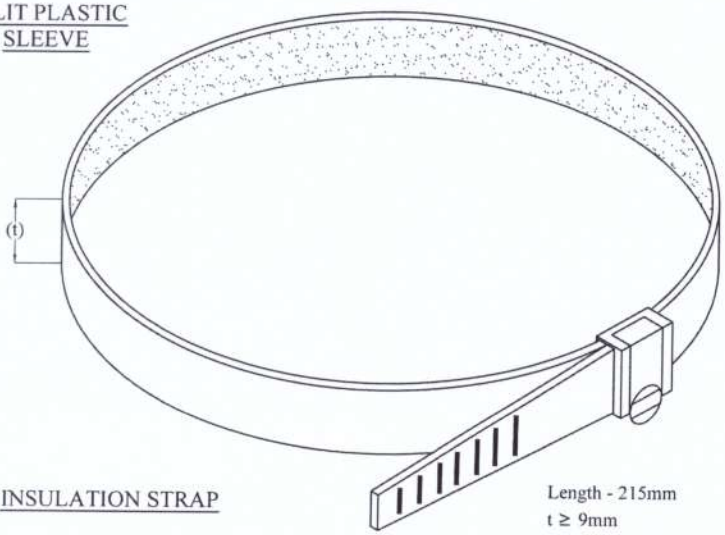
STAINLESS STEEL STRAP
20 x 0.7 mm



SPLIT PLASTIC
SLEEVE



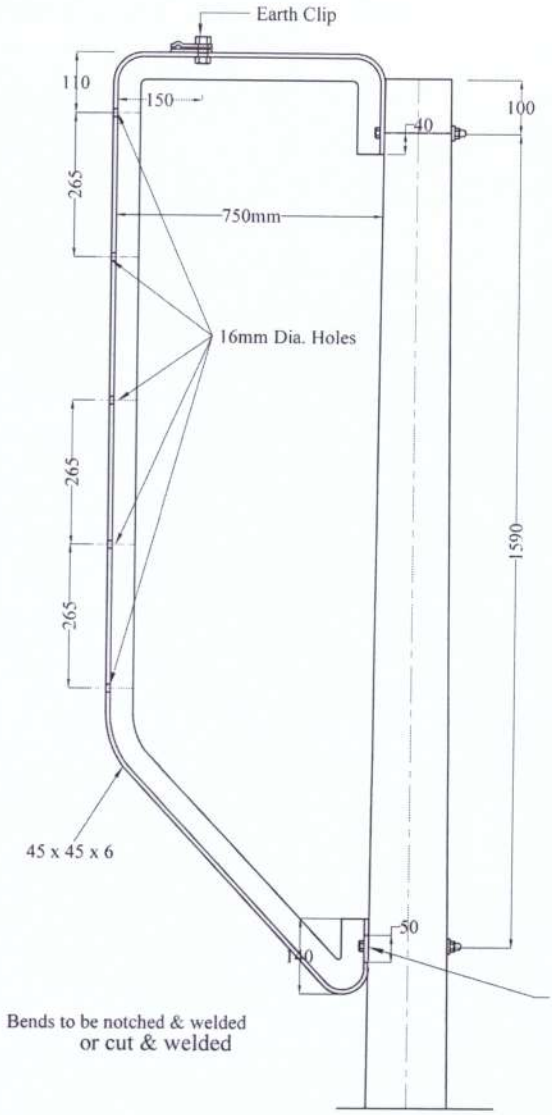
STAINLESS STEEL
BUCKLES

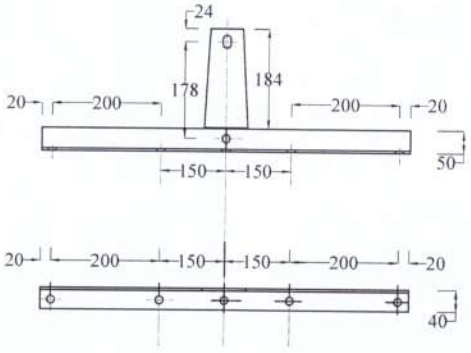


INSULATION STRAP

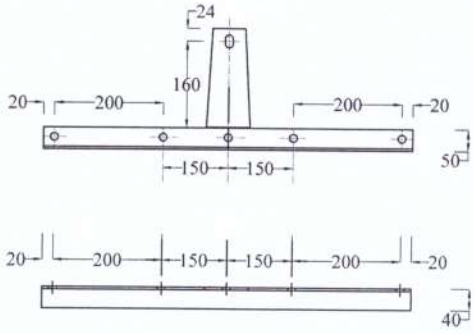
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	INSULATION END CAP, STAINLESS STEEL STRAP & BUCKLE AND INSULATION STRAP	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
DISTRIBUTION COORDINATION BRANCH	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-25
		SOURCE : DCS -03 : 1997

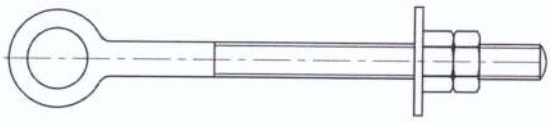




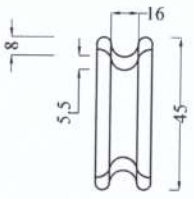
CROSS ARM NO. 1

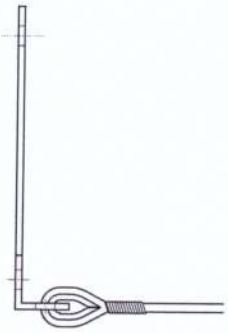


CROSS ARM NO. 2



EYE BOLT

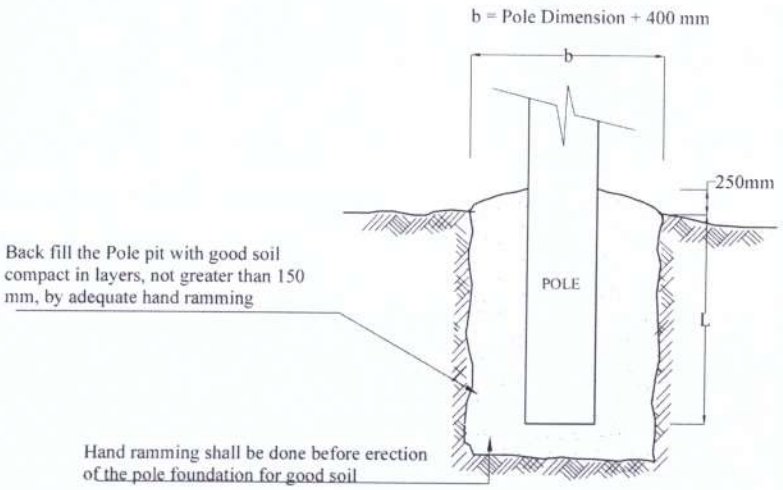




G.I. THIMBLE

All dimension are in mm

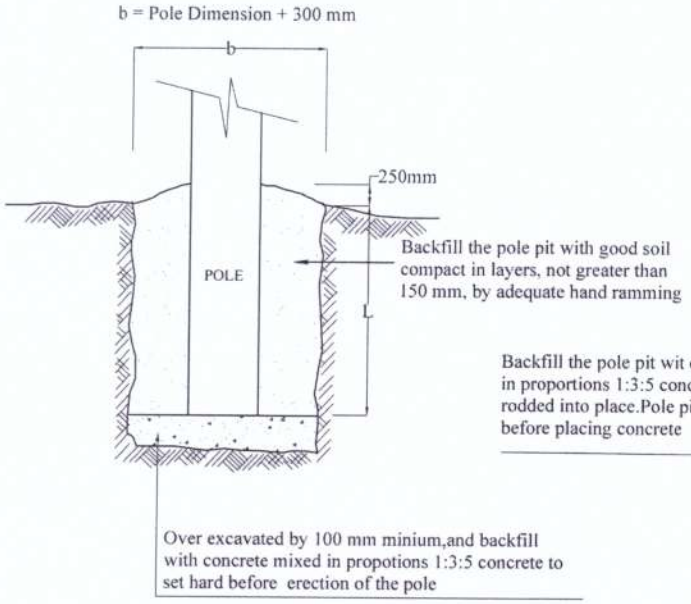
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	TYPICAL LV OUTRIGGER BRACKET AND CROSS ARM FOR CRADLE GUARD	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
DISTRIBUTION COORDINATION BRANCH	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-26
		SOURCE : DCS -03 : 1997



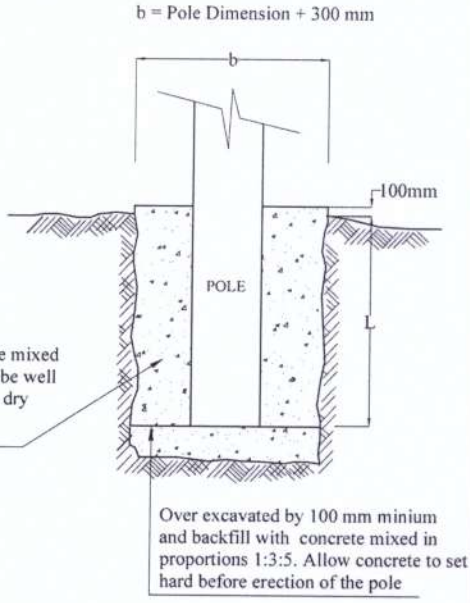
POLE BARRIED LENGTH - L

8.3m = 1.4 Metres
9.0 m = 1.50 Meters

GOOD SOIL POLE FOUNDATION



POOR SOIL POLE FOUNDATION



WATER LOGGED POOR SOIL FOUNDATION

MATERIAL REQUIRED FOR CONCRETING			
Foundation Type	Cement (Kg)	Sand (Cu. ft)	Metal (Cu. ft)
Poor Soil	**10.0**	**1.0**	**1.7**
Water Logged Poor Soil	**150**	**14**	**24**

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE FOUNDATION TYPES

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

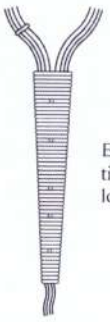
DRAWN : Lalani | EDITED : Harsha

DATE : May 2020 | REV NO :

DRG NO : LV-27

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



Each wire lapped 8 times binding in loose wires

SPLICING DETAIL

ARRANGEMENT OF LINE STAYS

SIDE ELEVATION

CODE (LV/MV)	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 50 1	Clamp Stay GI	Nos.	01
B 07 10 1	Washers GI	Nos.	01
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 08 10 1	Stay Wire GS 7/3.15mm	Kg	4.5
B 09 05 1	Stay Assembly LV	Kg	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
C10 10 1	Stay Insulators LT	Nos.	01

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

STAY ARRANGEMENT

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

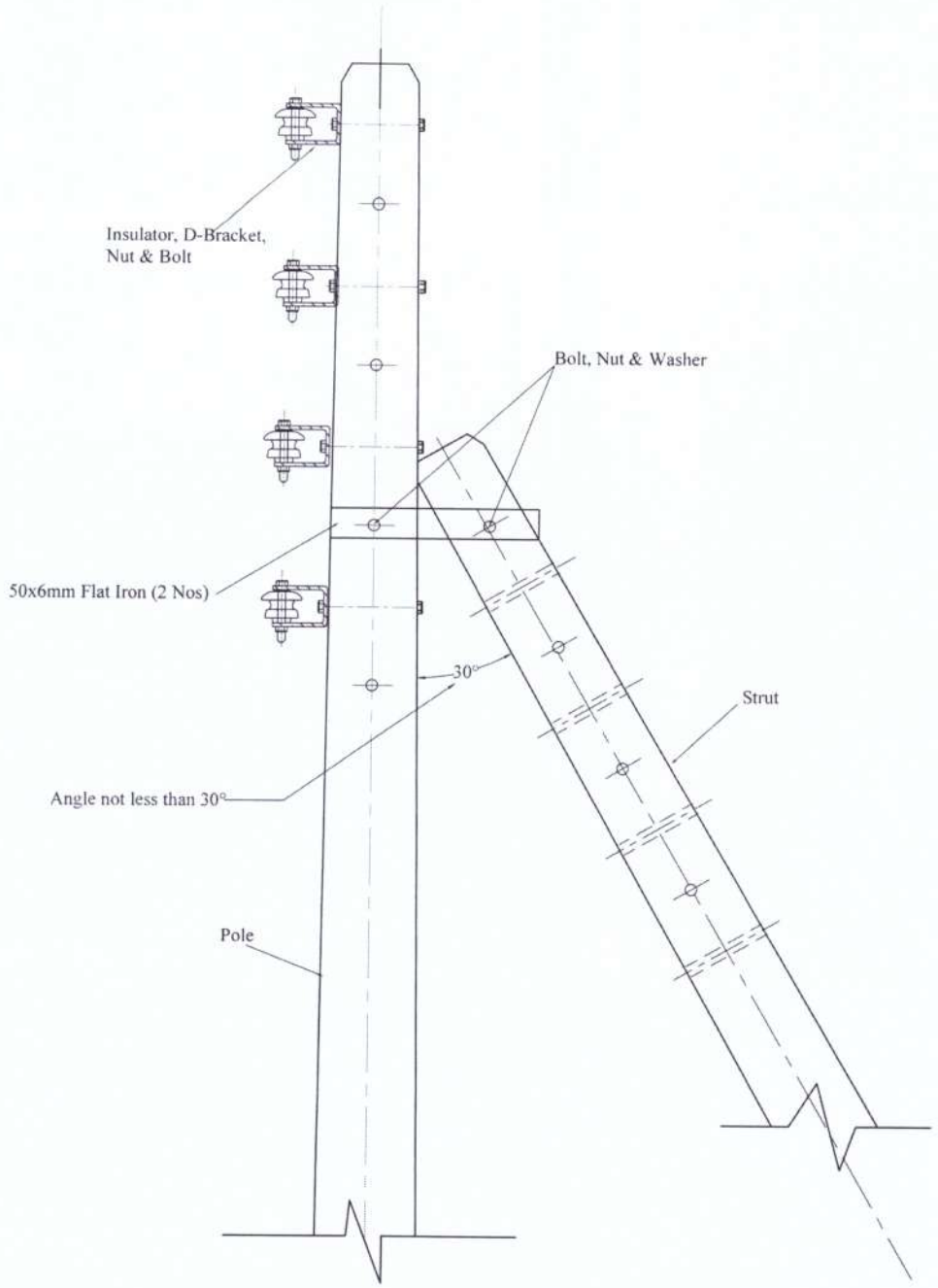
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO :

DRG NO : LV-28

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	RC Poles 8.3m	Nos.	01
B 02 55 1	Bracket Strut GI	Nos.	01
B 07 10 1	GI Washer	Nos.	02
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	02

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

STRUT ARRANGEMENT

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

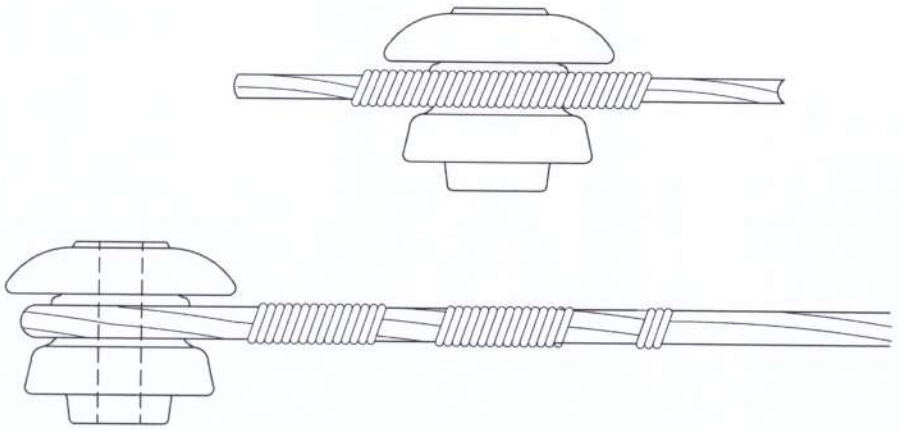
DATE : May 2021 | REV NO : -

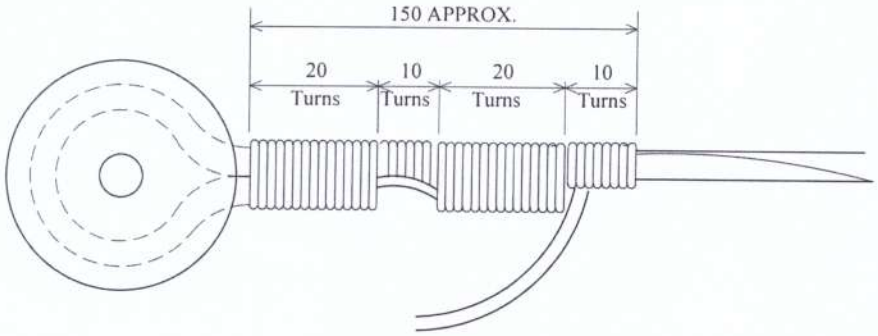
DRG NO : LV-29

SOURCE : DCS -03 : 1997

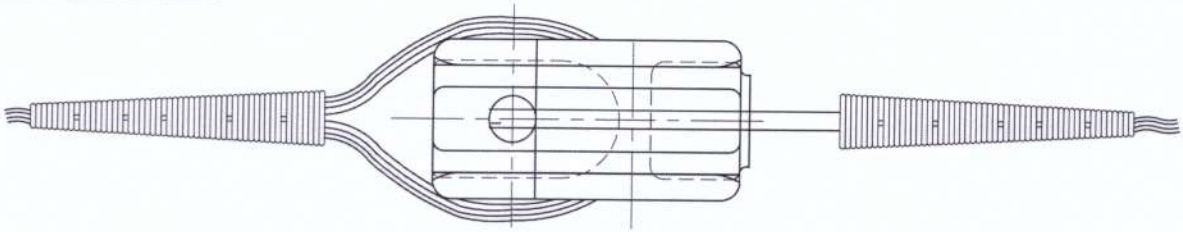
CEB Approved Construction Standards
Chairman - Dist. Coord. Committee

LV INSULATORS





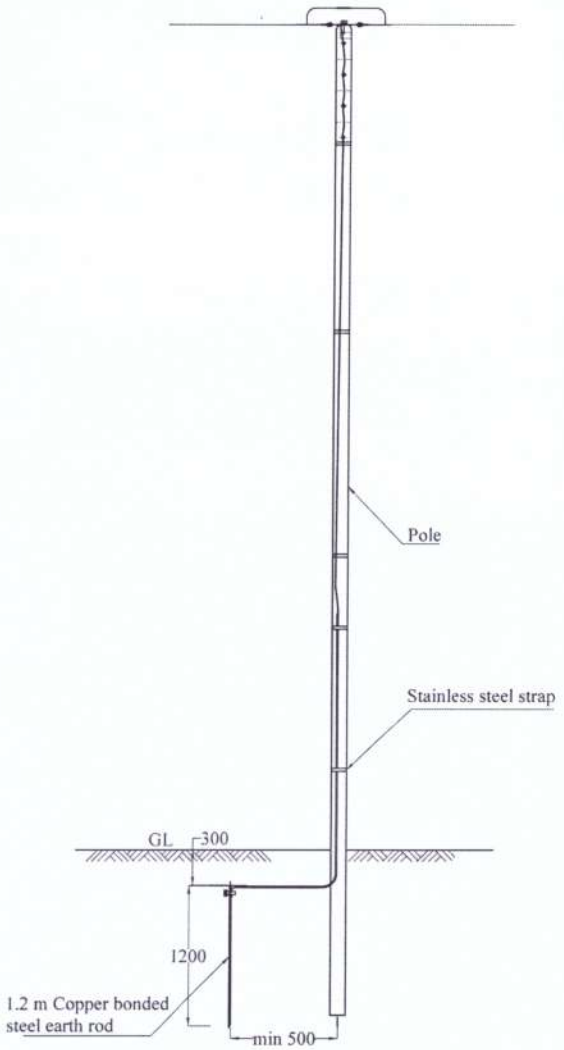
LV STAY INSULATORS



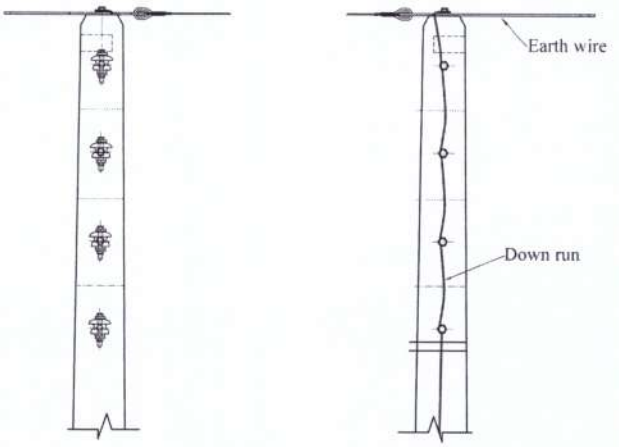
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	LV INSULATOR BINDING & LV STAY INSULATOR BINDING	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
DISTRIBUTION COORDINATION BRANCH	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-30
		SOURCE : DCS -03 : 1997

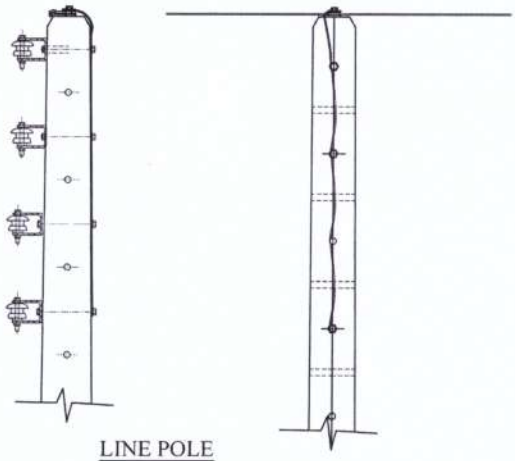
CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



SHACKLE POLE



TERMINAL POLE



LINE POLE

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED		
			Line Pole	Shackle Pole	Terminal Pole
B 03 70 1	Stainless Steel Strap	Mtr.	--	03	03
B 17 05 1	Buckles for Stainless steel Strap	Nos.	--	04	04
B 07 10 1	GI Washer 16mm	Nos.	05	05	05
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	01	01	01
B 22 05 1	Earth Clip Tension	Nos.	--	01	01
J 03 25 1	Clip Earth GI LT	Nos.	01	--	--
J 03 10 1	Wire GI No.8	kg	0.1	0.3	0.3
J 03 39 1	Copper Bonded Earth Rod	Nos.	--	01	01
J 03 70 1	Brass Sleeves	Nos.	--	01	01
J 04 15 2	Wire Binding GI No. 14	kg	--	0.01	--

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

LV EARTHING ARRANGEMENT

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

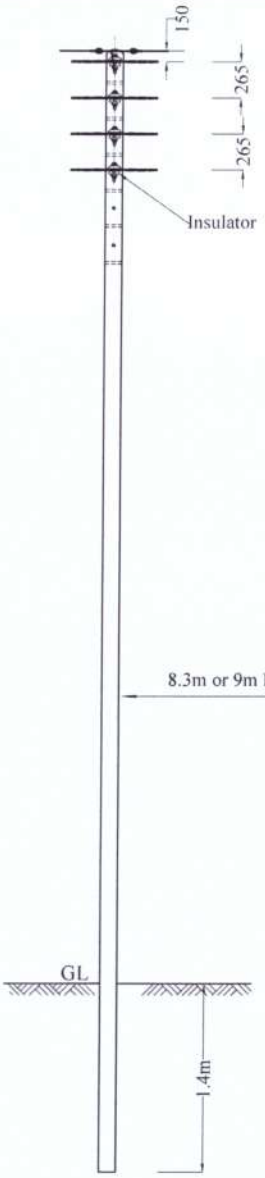
SCALE : Not to Scale

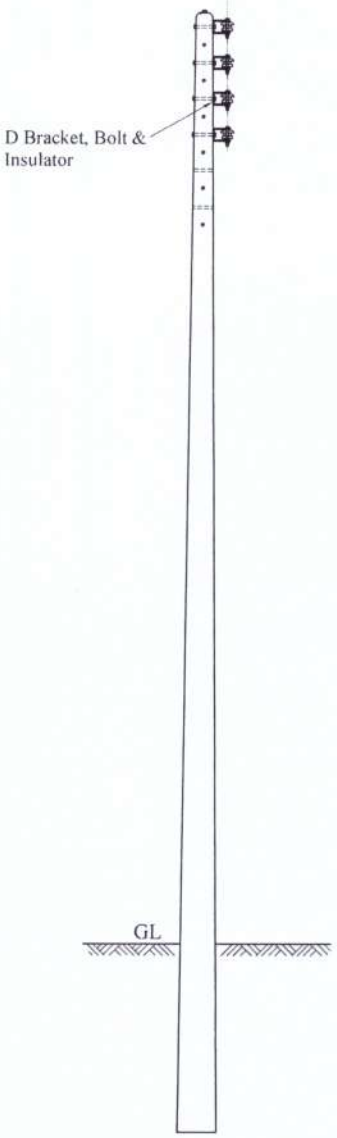
DRAWN : Lalani | EDITED : Harsha

DATE : May 2024 | REV NO : -

DRG NO : LV-31

SOURCE : DCS -03 : 1997





CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulators & Bolt	Nos.	04
B 07 10 1	GI Washer	Nos.	05
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	05
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
C 01 10 1	Insulator LT 90 x 75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
J 03 25 1	Clip Earth GI LT	Nos.	01

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENTS FOR LV LINE POLE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

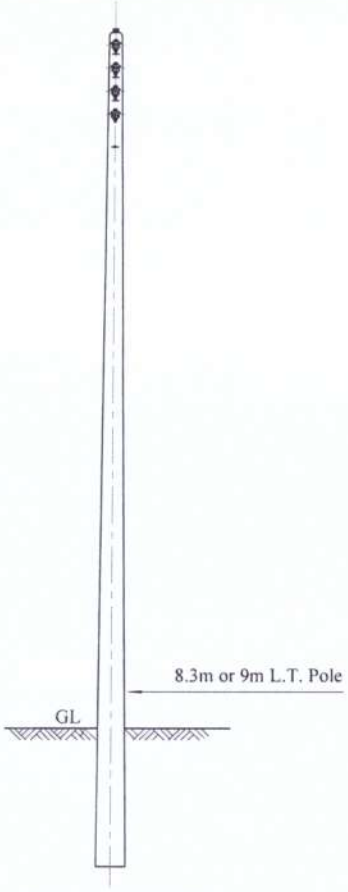
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

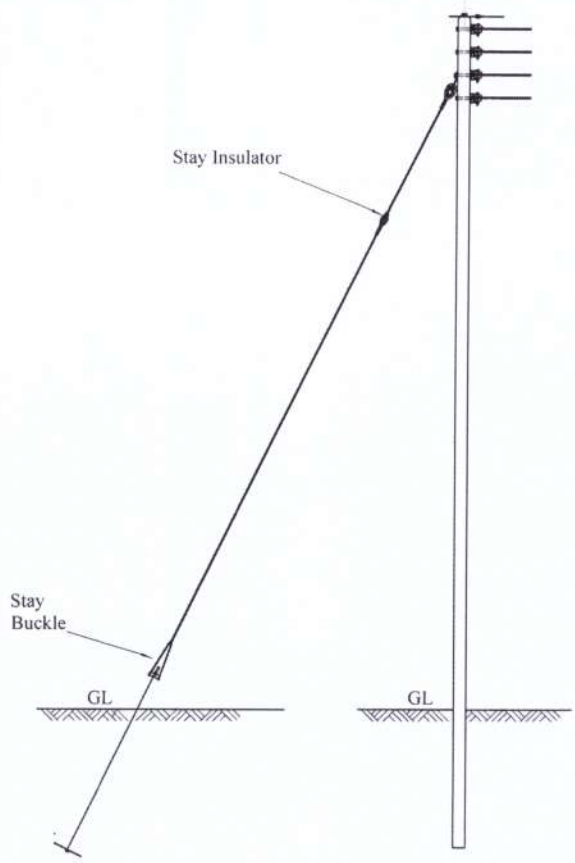
DATE : May 2021 | REV NO:

DRG NO: LV-32

SOURCE : DCS -03 : 1997



FRONT ELEVATION



END ELEVATION

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	RC Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulators & Bolt	Nos.	04
B 07 10 1	GI Washer	Nos.	05
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	05
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
C 01 15 1	Stay Insulator LT	Nos.	01
D 06 10 2	No.11 Al Binding Wire	kg	0.2
D 02 50 1	Stay Clamp GI	Nos.	01
And material requirement for terminal point earthing arrangement			

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

TERMINAL POLE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

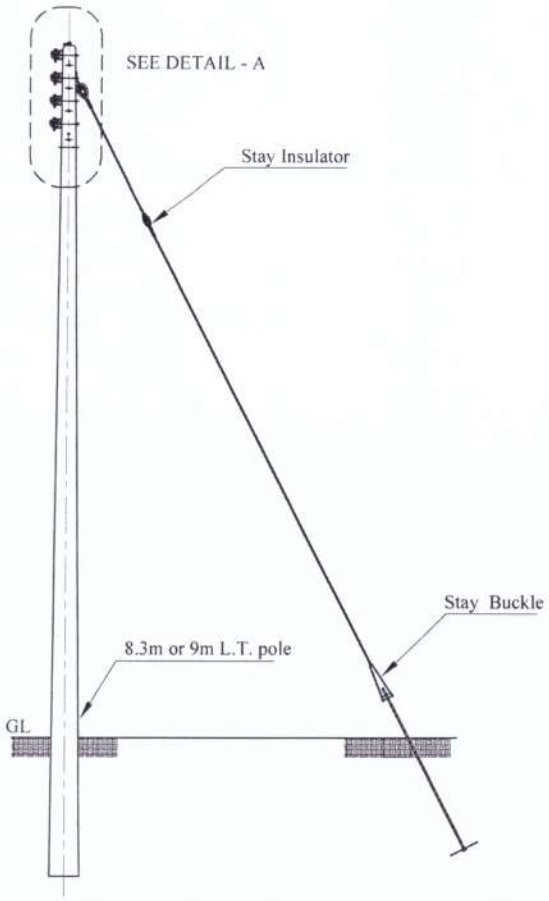
DRAWN : Lalani | EDITED : Harsha

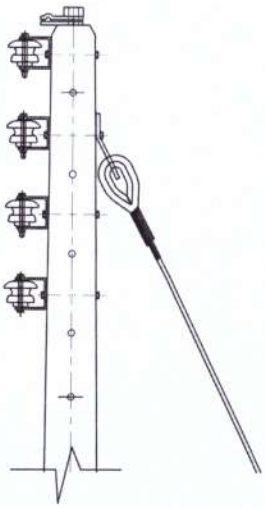
DATE : May 2021 | REV NO :

DRG NO : LV-33

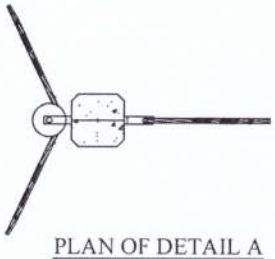
SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee





DETAIL A



PLAN OF DETAIL A

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	RC Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulators & Bolt	Nos.	04
B 07 10 1	GI Washer	Nos.	05
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	05
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly LV	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
C 01 15 1	Stay Insulator LT	Nos.	01
D 06 10 1	No.11 Al Binding Wire	kg	0.2
B 02 50 1	Stay Clamp GI	Nos.	01
And material requirement for line pole earthing arrangement			

All dimension are in mm

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

ANGLE POLE STAY ARRANGEMENT

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

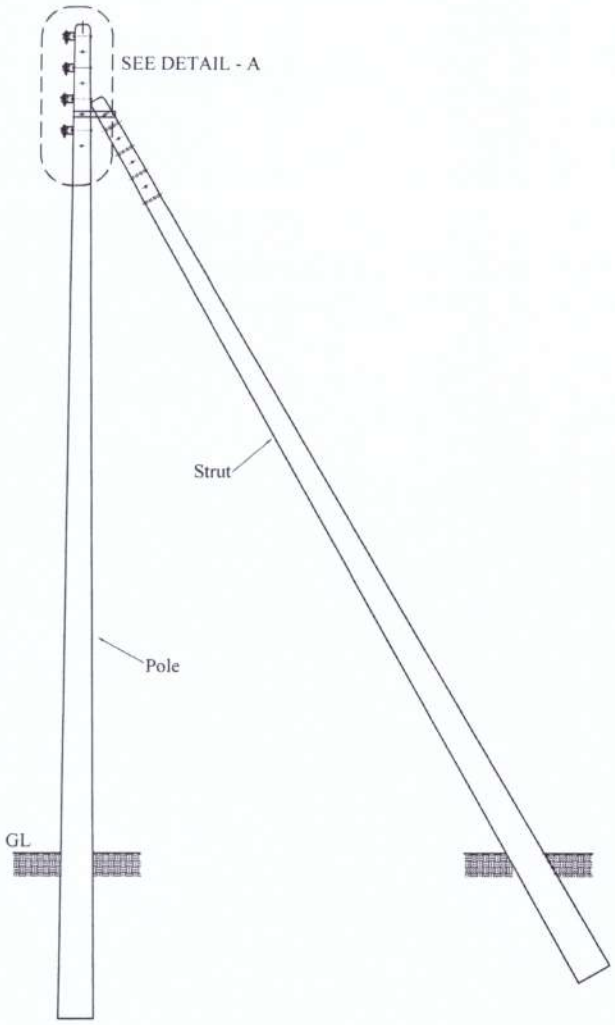
SCALE : Not to Scale

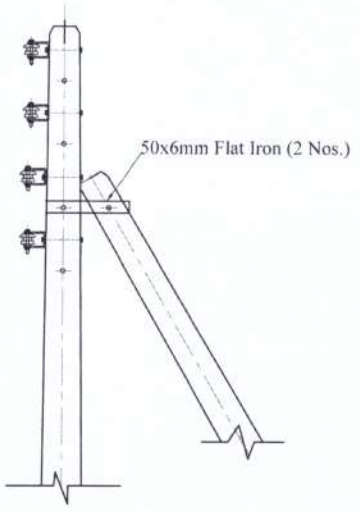
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO :

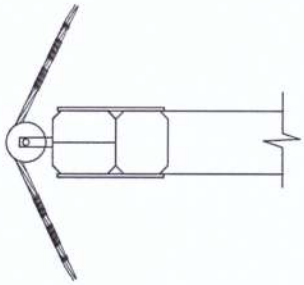
DRG NO : LV-34

SOURCE : DCS -03 : 1997





DETAIL A



PLAN OF DETAIL A

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	RC Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulators & Bolt	Nos.	04
B 07 10 1	GI Washer	Nos.	06
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	06
B 08 10 1	Stay Wire, G.S 7/3 15mm	kg	4.5
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 1	No.11 Al Binding Wire	kg	0.2
D 03 30 1	Bracket Strut GI	Nos.	01
And material requirement for line pole earthing arrangement			

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

LV ANGLE POLE STRUT ARRANGEMENT

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

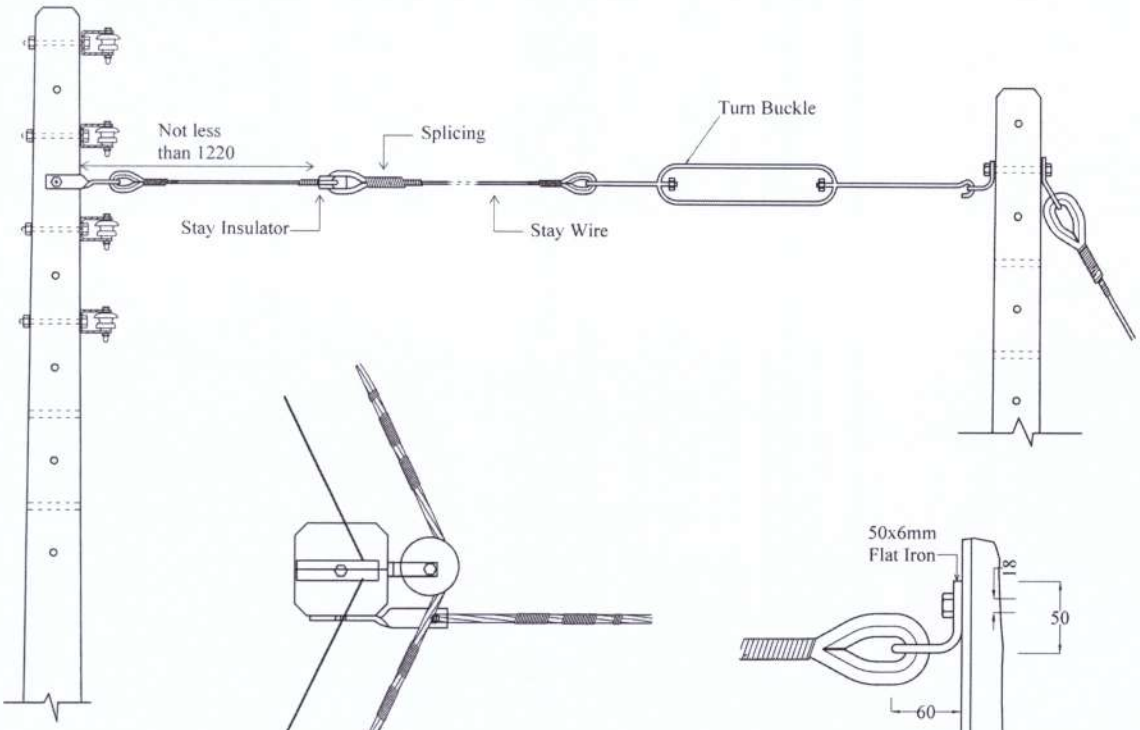
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

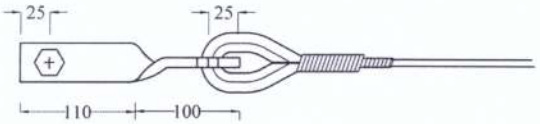
DRG NO : LV-35

SOURCE : DCS -03 : 1997



VIEW ON POLE TOP

FIXING OF POLE BRACKET

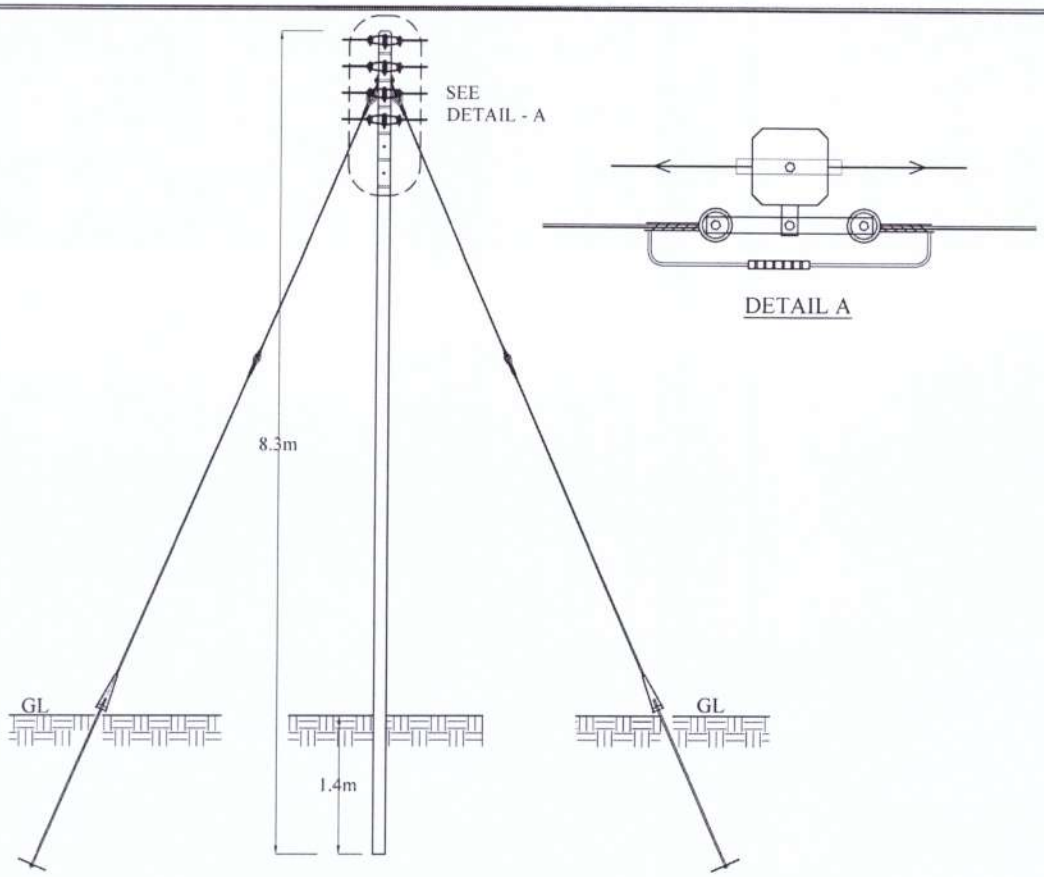


CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
-------	Flying Stay Assembly LT	Nos.	01
A 02 13 1	RC Poles 8.3m	Nos.	01
B 07 10 1	GI Washer	Nos.	02
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	02
B 08 10 1	Stay Wire, G.S 7/3 15mm	kg	10
B 09 05 1	Stay Assembly LT	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	03
C 01 10 1	Stay Insulator LT	Nos.	01
C 01 15 1	Stay Clamp GI	Nos.	01

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	ANGLE POLE FLYING STAY ARRANGEMENT	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : DV-36
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



DETAIL A

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 03 30 1	Shackle Straps	Nos.	08
B 07 10 1	GI Washer	Nos.	06
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	12
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	06
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	09
B 09 05 1	Stay Assembly	Nos.	02
B 10 10 2	Thimbles 7/3.18mm	Nos.	02
C 01 10 1	Insulator LT 90x75mm	Nos.	08
C 01 15 1	Stay Insulator LT	Nos.	02
D 06 10 2	No.11 Al Binding Wire	kg	0.4
B 02 50 1	Stay Clamp	Nos.	02
W 07 25 1	Compression Non Tension Sleeves 7/3.40 and Material Requirement for Shackle Earthing Arrangement	Nos.	08

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

SHACKLE POLE (LINE)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

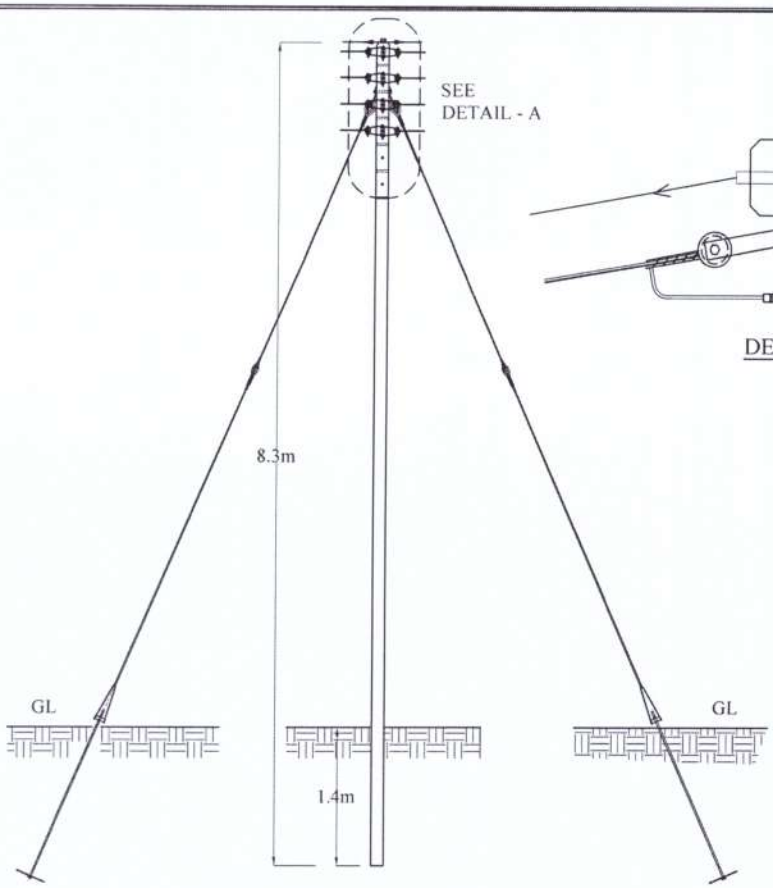
SCALE : Not to Scale

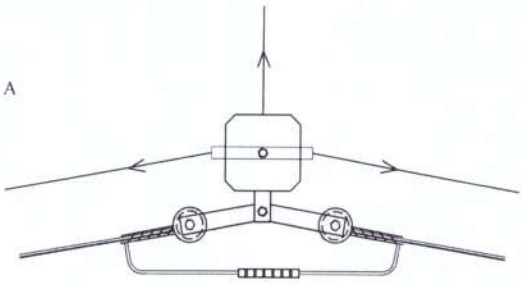
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : DV-37

SOURCE : DCS -03 : 1997





DETAIL A

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 03 30 1	Shackle Straps	Nos.	08
B 07 10 1	GI Washer	Nos.	06
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	12
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	07
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	13.5
B 09 05 1	Stay Assembly	Nos.	03
B 10 10 2	Thimbles 7/3.18mm	Nos.	03
C 01 10 1	Insulator LT 90x75mm	Nos.	08
C 01 15 1	Stay Insulator LT	Nos.	03
D 06 10 2	No.11 Al Binding Wire	kg	0.4
B 02 50 1	Stay Clamp	Nos.	03
W 07 25 1	Compression Non Tension Sleeves 7/3.40 and Material Requirement for Shackle Earthing Arrangement	Nos.	08

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

SHACKLE POLE (ANGLE)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

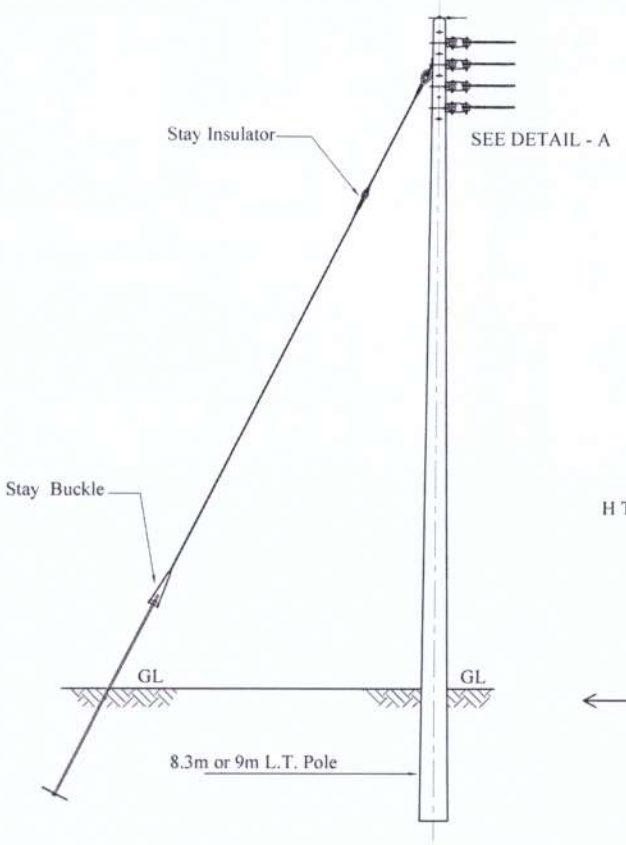
DRAWN : Lalani | EDITED : Harsha

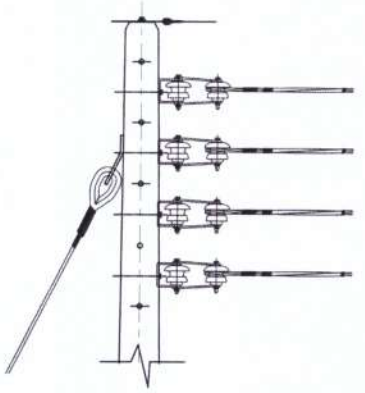
DATE : May 2021 | REV NO :

DRG NO : LV-38

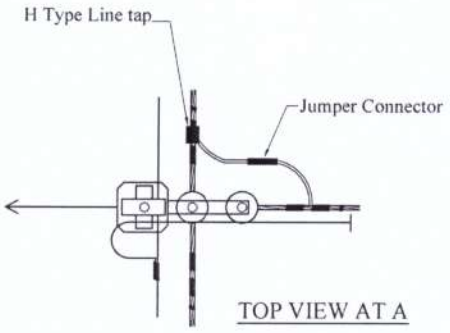
SOURCE : DCS -03 : 1997

CEB Approved Construction Standards - Chairman - Dist. Coord. Committee





DETAIL A



TOP VIEW AT A

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 03 30 1	Shackle Straps	Nos.	04
B 07 10 1	GI Washer	Nos.	01
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	01
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
C 01 15 1	Stay Insulator LT	Nos.	01
D 06 10 2	No.11 Al Binding Wire	kg	0.4
B 02 50 1	Stay Clamp	Nos.	01
D 07 20 1	H Type Compression Line Tap	Nos.	04
D 12 92 1	Compression Jumper Connector and Material Requirement for Terminal Point Earthing Arrangement	Nos.	08

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

90° T-OFF FROM LINE POLE / ANGLE POLE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

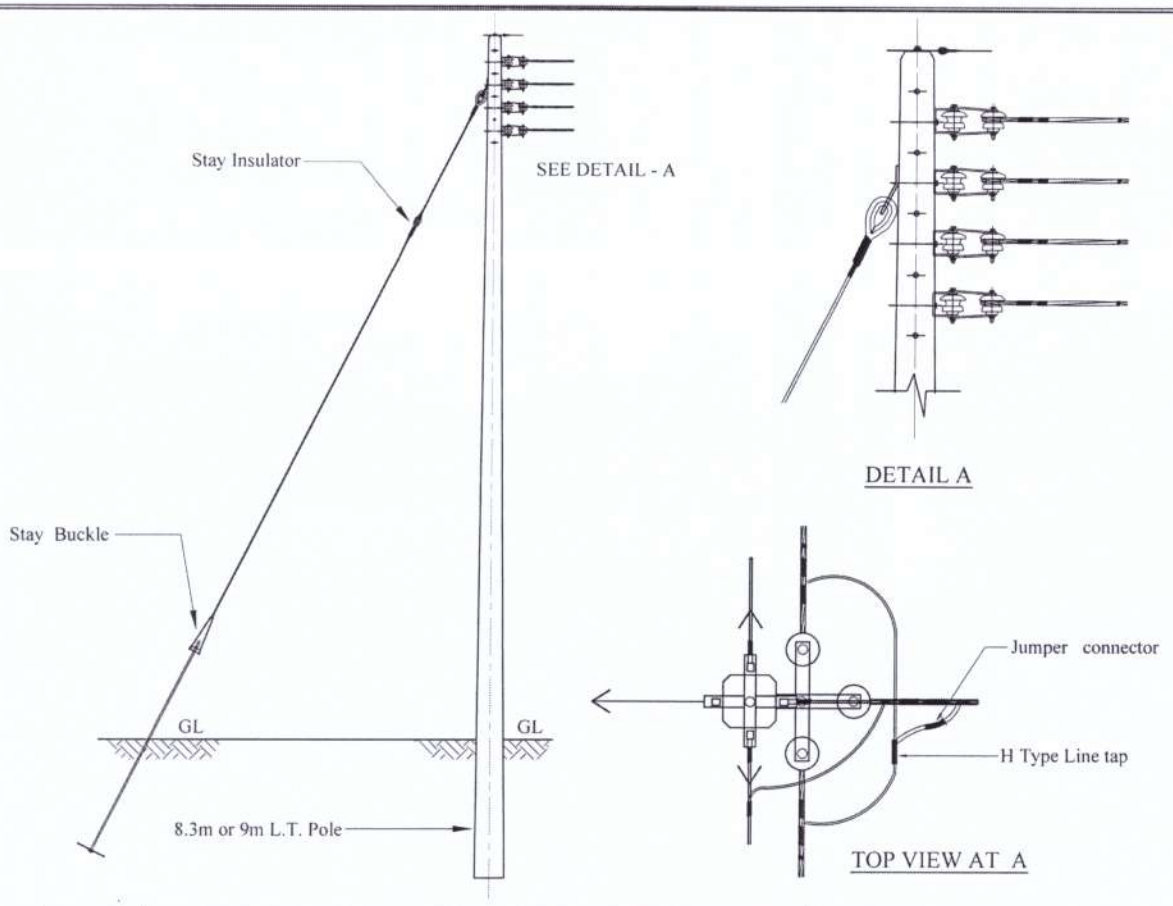
DRAWN : Lalani | EDITED : Harsha

DATE : May 2024 | REV NO :

DRG NO : LV-39

SOURCE :- DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 03 30 1	Shackle Straps	Nos.	04
B 07 10 1	GI Washer	Nos.	01
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	01
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
C 01 15 1	Stay Insulator LT	Nos.	01
D 06 10 2	No.11 Al Binding Wire	kg	0.2
B 02 50 1	Stay Clamp GI	Nos.	01
D 07 20 1	H Type Compression Line Tap	Nos.	04
B 22 05 1	Earth Clamp Tension	Nos.	01
J 04 15 2	Wire Binding No. 15 GI	kg	0.002
D 12 92 1	Compression Jumper Connector	Nos.	08

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

90° T-OFF FROM (LINE) SHACKLE POLE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

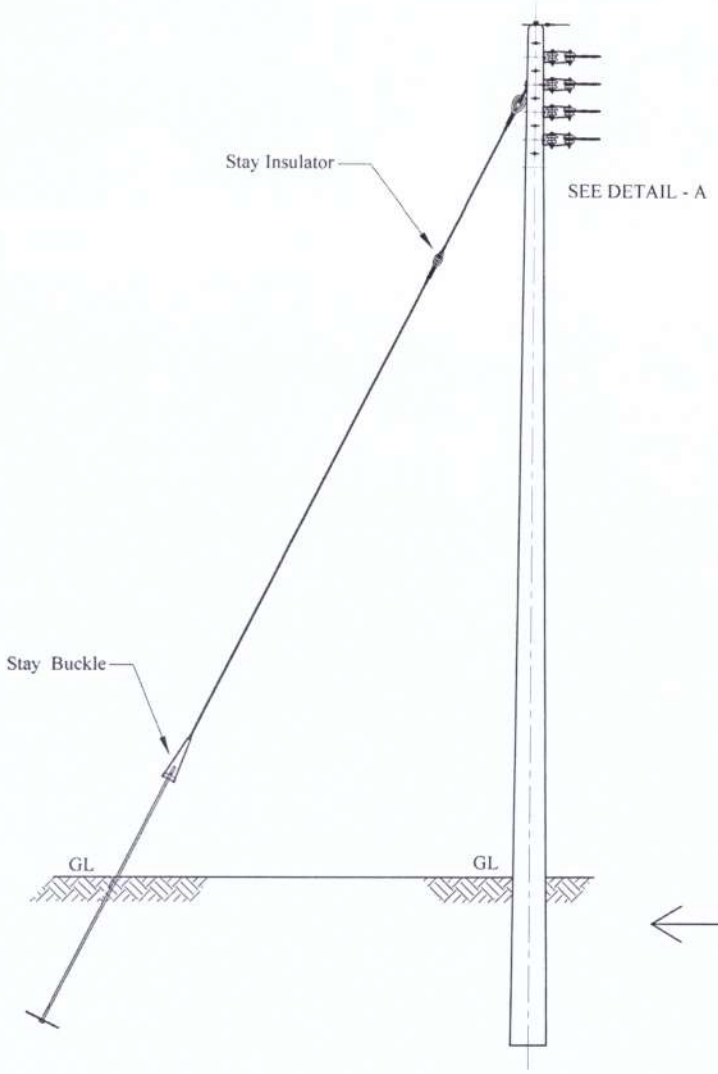
DRAWN : Lalani | EDITED : Harsha

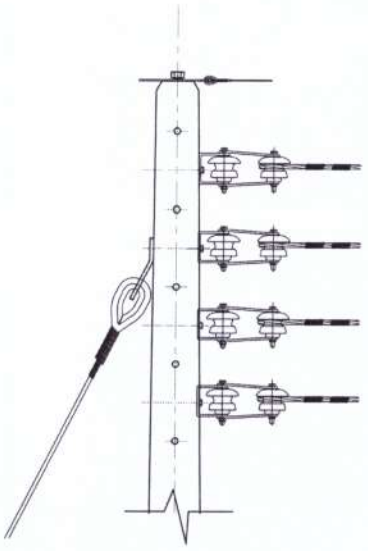
DATE : May 2021 | REV NO :

DRG NO. : LV-40

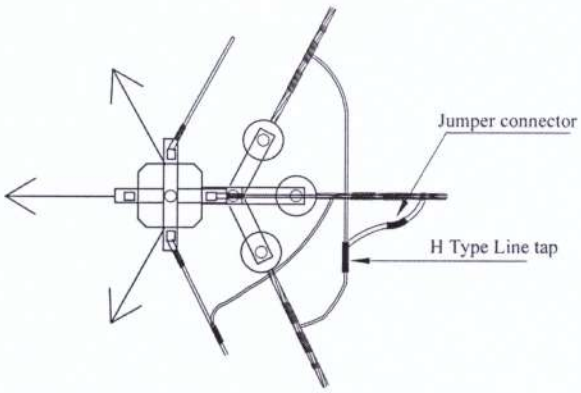
SOURCE : DCS -03 : 1997

CEB Approved Construction Standards - Chairman - Dist. Coord. Committee





DETAIL A



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 03 30 1	Shackle Straps	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
D 07 20 1	H Type Compression Line Tap	Nos.	04
B 22 05 1	Earth Clamp Tension	Nos.	01
J 04 15 2	GI Wire Binding No. 14	kg	0.002
D 12 92 1	Compression Jumper Connector	Nos.	08

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

90° T-OFF FROM (ANGLE) SHACKLE POLE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

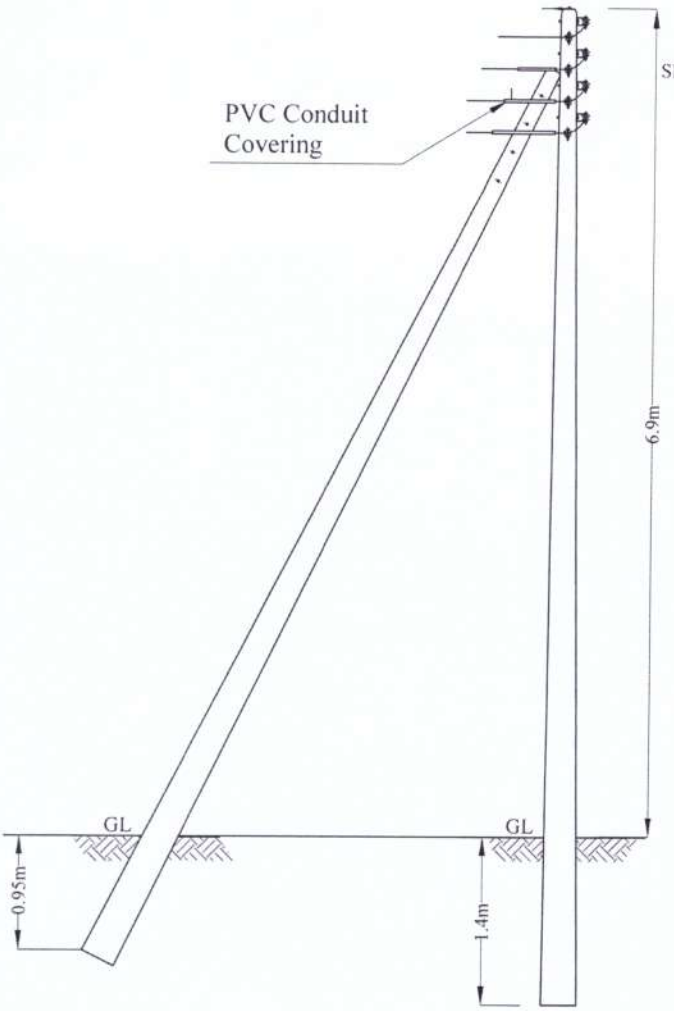
DRAWN : Lalani | EDITED : Harsha

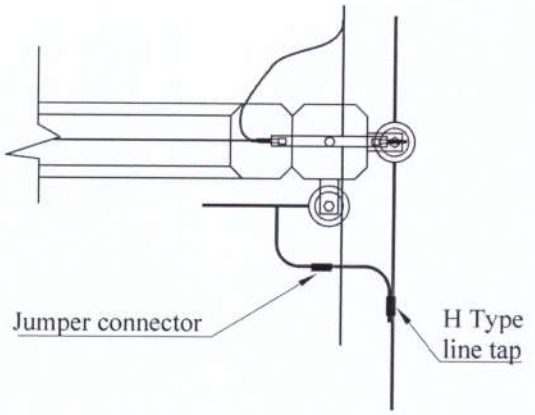
DATE : May 2021 | REV NO :

DRG NO : LV-41

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee





DETAIL A

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	02
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	08
B 07 10 1	GI Washer	Nos.	09
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	08
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	19
C 01 10 1	Insulator LT 90 x 75mm	Nos.	08
D 06 10 2	No.11 Al Binding Wire	kg	0.5
D 02 55 1	GI Flat Iron Strut Clamp	Nos.	01
D 07 20 1	H Type Compression Line Tap	Nos.	04
D 12 92 1	Compression Jumper Connector	Nos.	08

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

90° T-OFF FROM STRUT POLE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

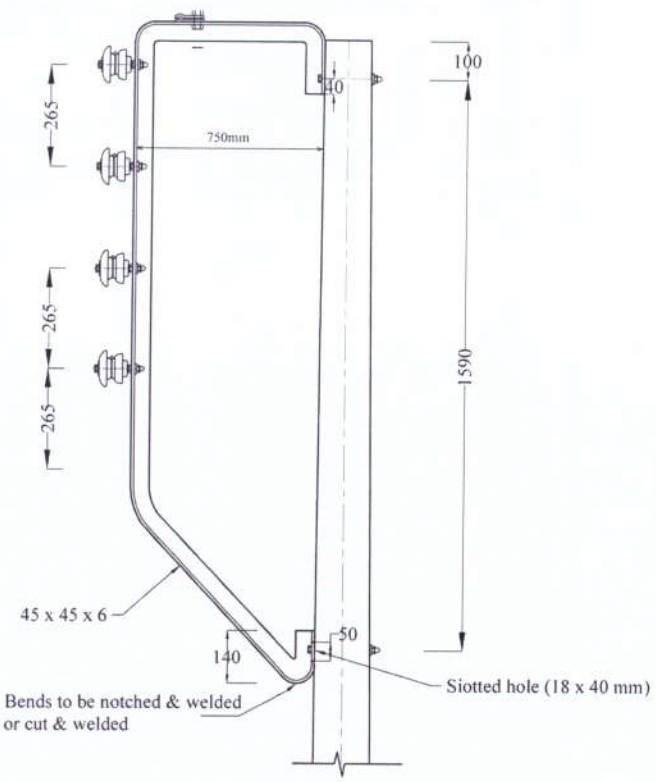
DRAWN : Lalani EDITED : Harsha

DATE : May 2021 REV NO : -

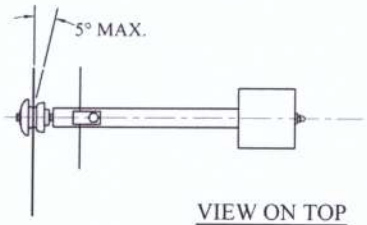
DRG NO : LV-42

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



SIDE ELEVATION



VIEW ON TOP

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	02
B 07 10 1	GI Washer No.11	Nos.	06
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	02
C 01 10 1	Insulator LT 90 x 75mm	Nos.	04
D 06 10 1	GI Washer	Nos.	03
H 06 10 1	No.11 Al Binding Wire	kg	0.25
	Bracket LV Outrigger (50x50mm) Angle Iron	Nos.	01

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

LV INTERMEDIATE SUPPORT OFFSET ARRANGEMENT

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

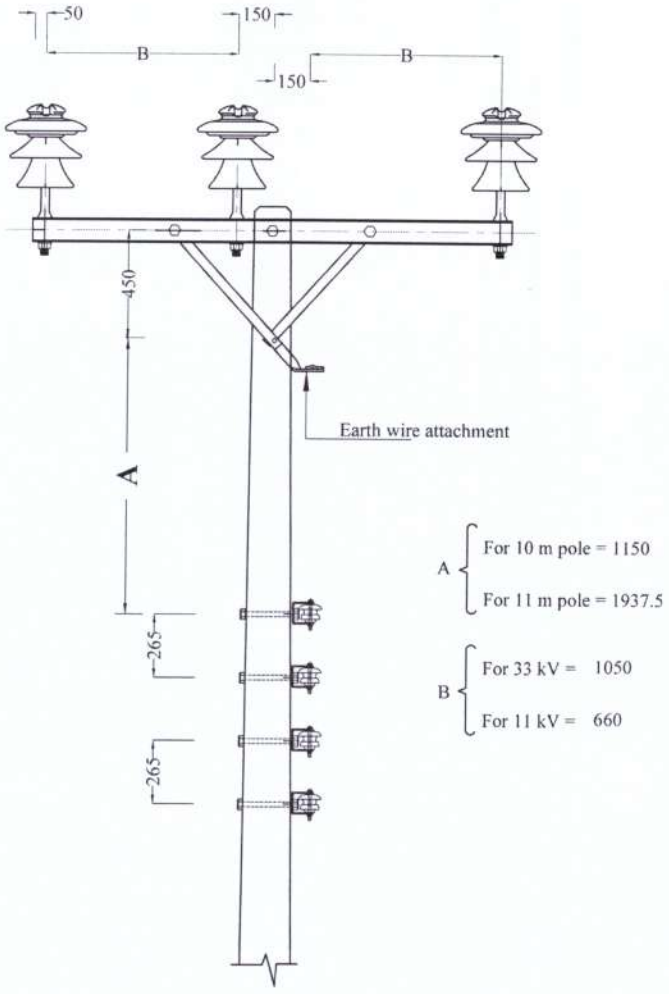
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : LV-43

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
C 01 10 1	Insulator LT 90 x 75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
J 02 10 1	Wire GS No.8	kg	0.25

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV & LV COMBINE RUN 10m/11m POLES (PIN POINT)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

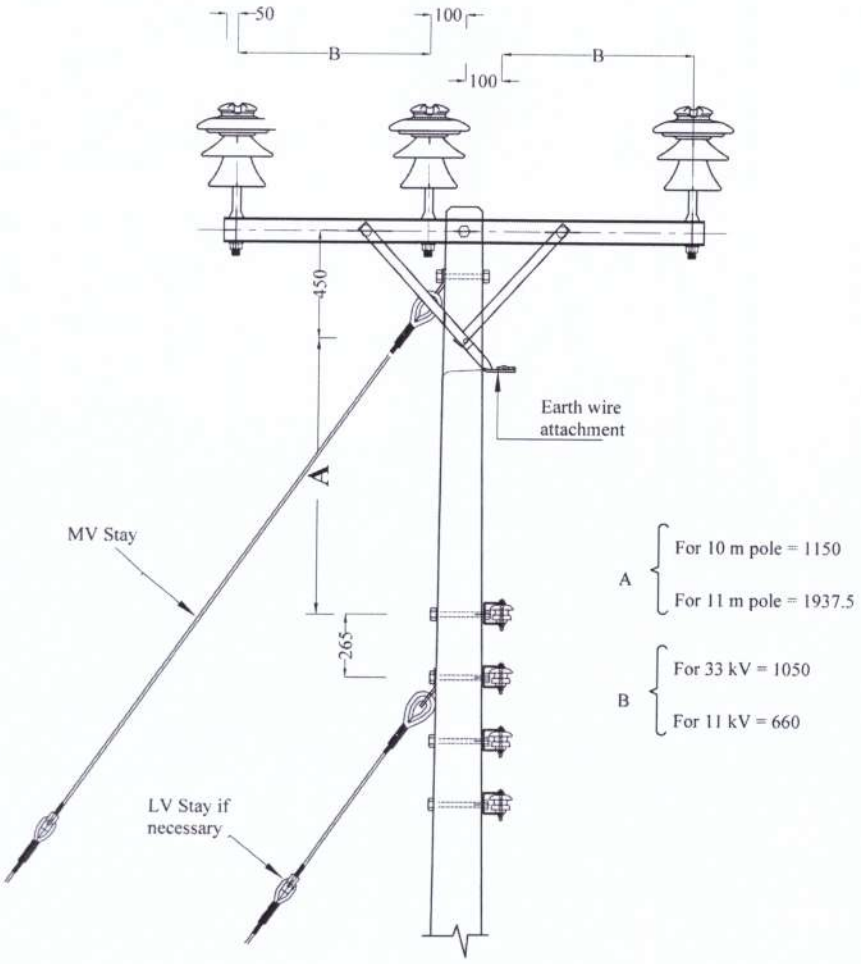
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : LV-44

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
B 02 50 1	Stay Clamp GI	Nos.	01
C 01 10 1	Insulator LT 90 x 75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.25
J 02 10 1	Wire GS No.8	kg	0.25

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV & LV COMBINE RUN 10m/11m POLES (ANGLE POINT STAY)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

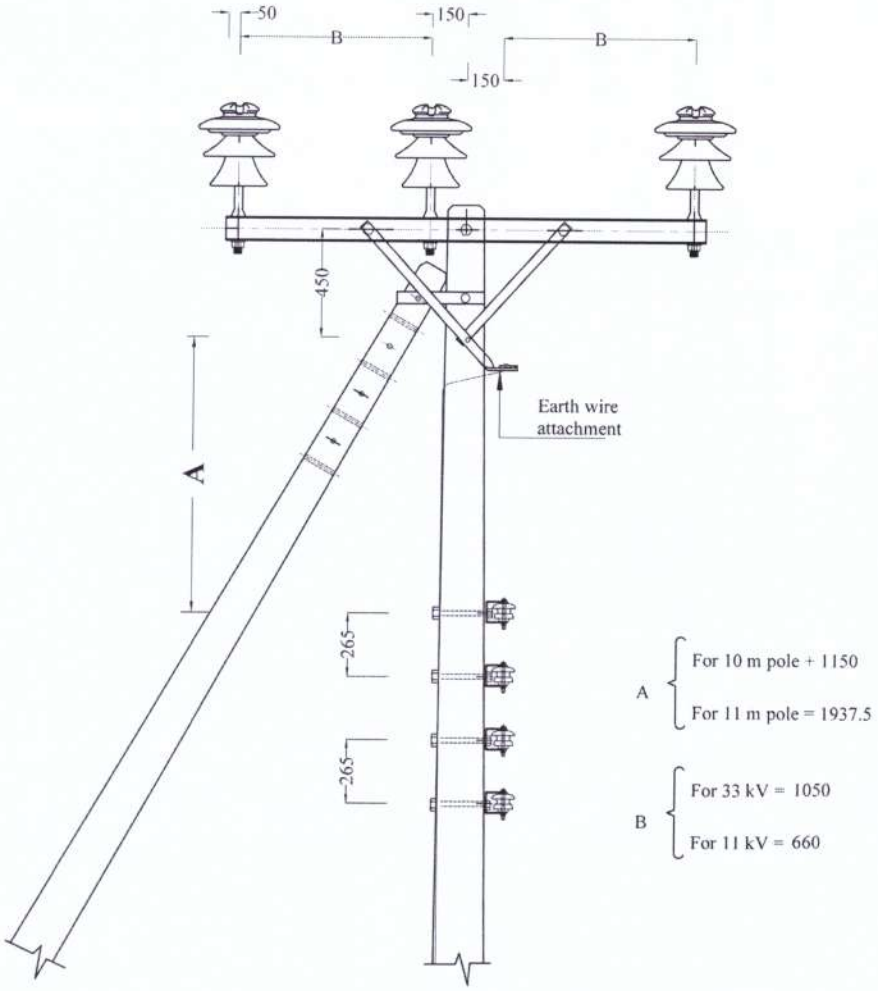
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : LV-45

SOURCE : DCS -03 : 1997



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
C 01 10 1	Insulator LT 90 x 75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
J 02 10 1	Wire GS No.8	kg	0.25

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV & LV COMBINE RUN 10m/11m POLES (ANGLE POINT STRUT)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

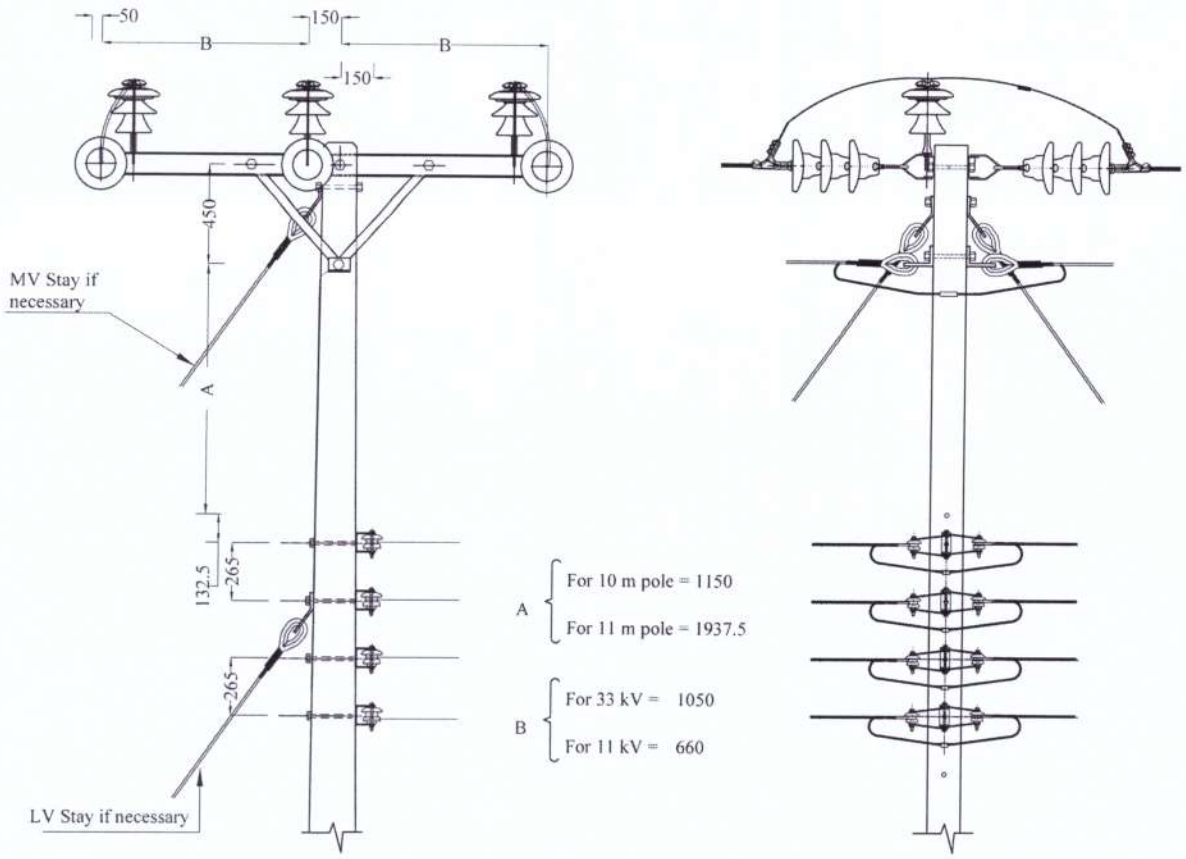
DRAWN : Lalani EDITED : Harsha

DATE : May 2021 REV NO : -

DRG NO : LV-46

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 03 30 1	Shackle Straps	Nos.	08
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	12
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
B 02 50 1	Stay Clamp GI	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
J 03 10 1	Wire GS No. 8	kg	0.25
W 07 25 1	Sleeves 7/3.40	Nos.	08

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV & LV COMBINE RUN 10m/11m POLE SHACKLE POINT (LINE/ANGLE)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

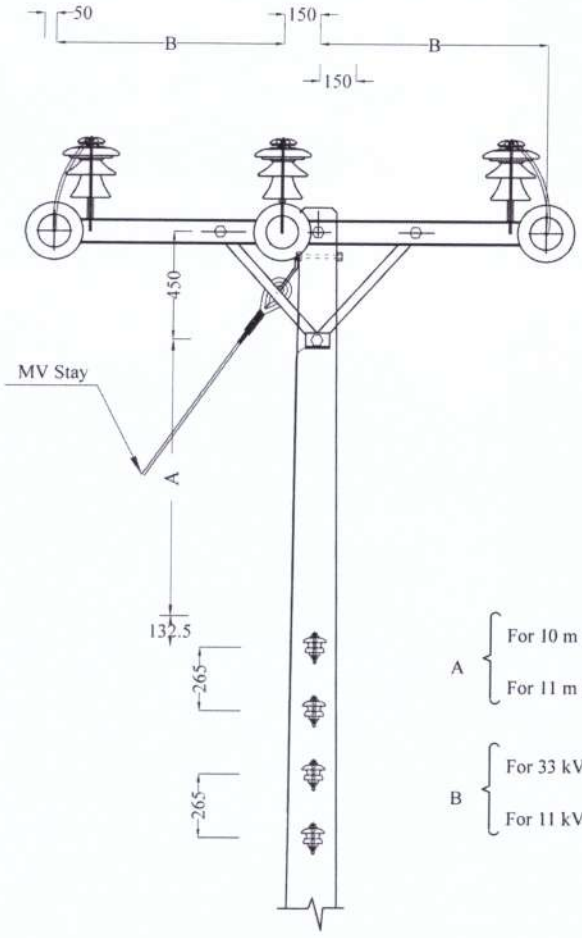
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO :

DRG NO : LV-47

SOURCE : DCS -03 : 1997

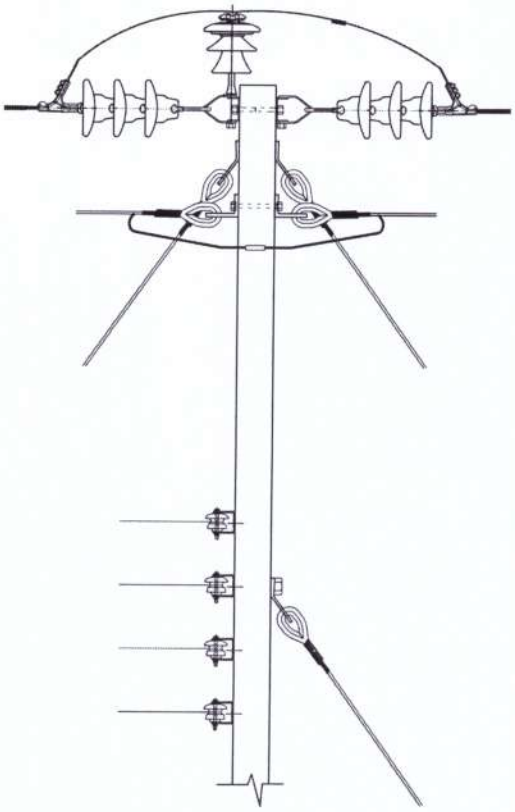
CEB Approved Construction Standards - Chairman - Dist. Coord. Committee



A { For 10 m pole = 1150 / For 11 m pole = 1937.5

B { For 33 kV = 1050 / For 11 kV = 660

FRONT ELEVATION



END ELEVATION

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
B 02 50 1	Stay Clamp GI	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV & LV COMBINE RUN 10m POLE (TERMINAL POLE OF LV LINE)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

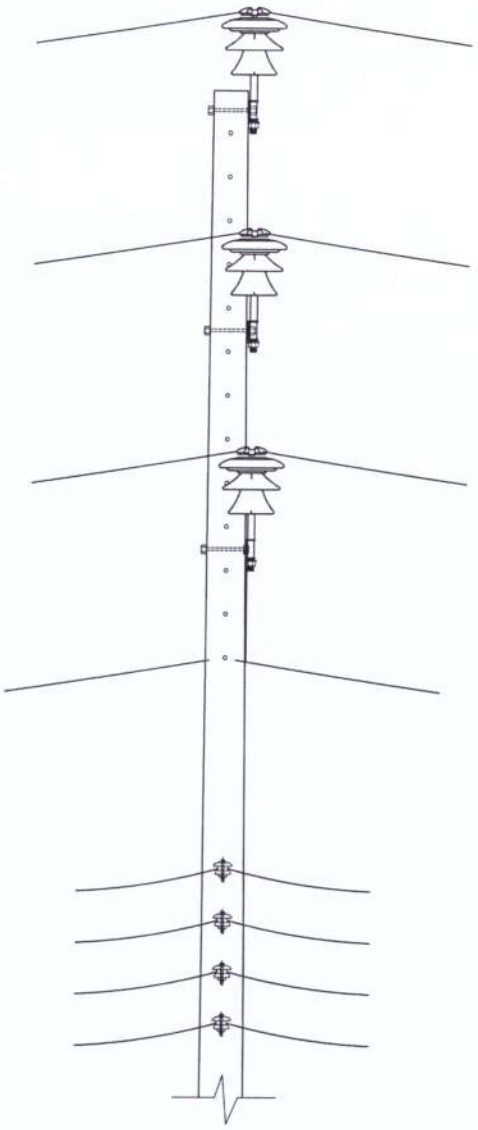
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

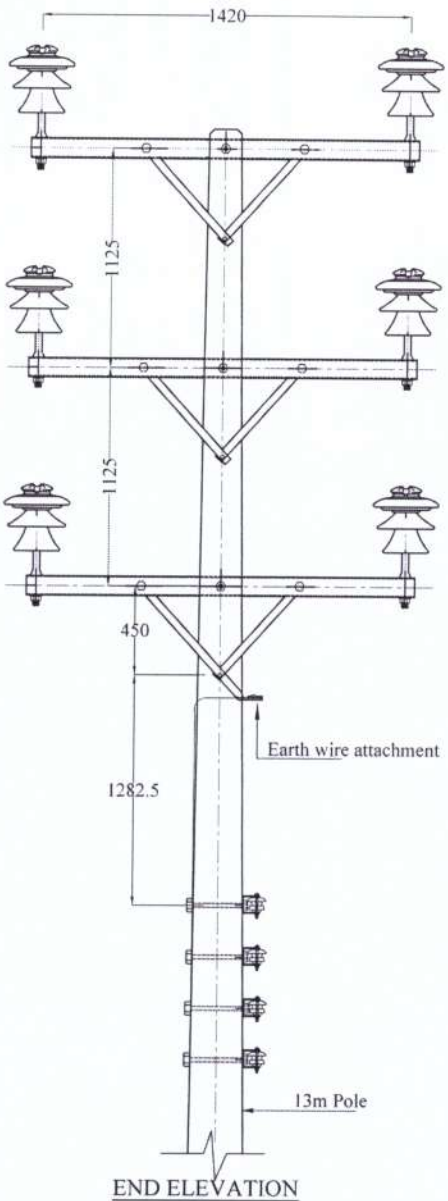
DRG NO : LV-48

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards - Chairman - Dist. Coord. Committee



FRONT ELEVATION



END ELEVATION

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	06
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV DOUBLE CIRCUIT MV & LV COMBINE RUN ON 13m POLES (PIN POINT)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

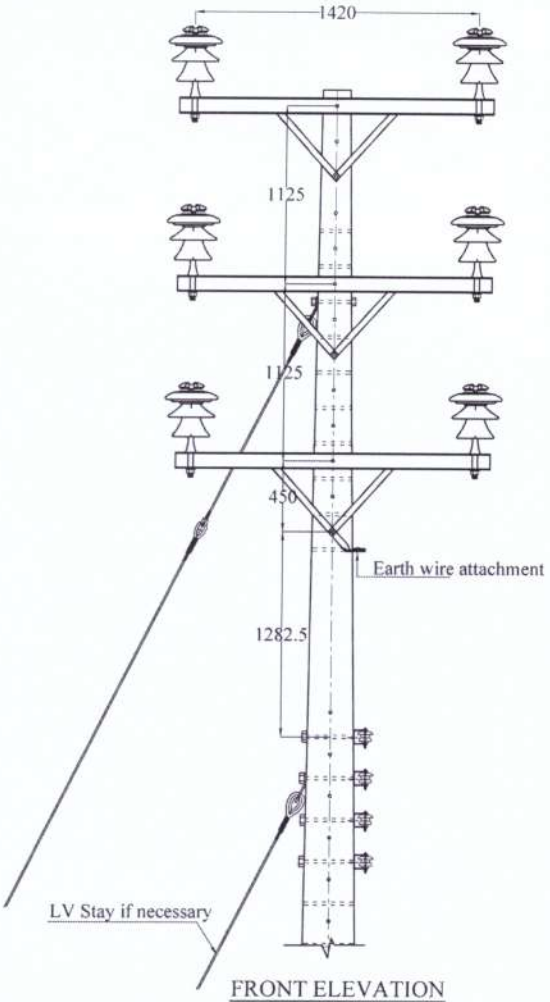
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

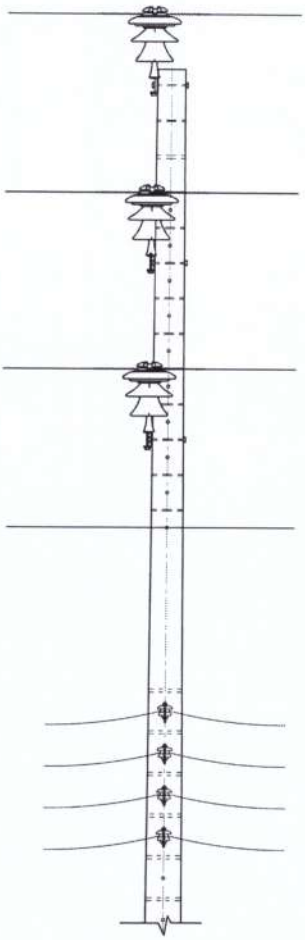
DATE : May 2021 | REV NO : -

DRG NO : LV-49

SOURCE : DCS -03 : 1997



FRONT ELEVATION



END ELEVATION

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	12
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
B 02 50 1	Stay Clamp GI	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
J 03 10 1	Wire GS No. 8	kg	0.25

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV DOUBLE CIRCUIT & LV COMBINE RUN ON 13m POLES (ANGLE POINT STAY)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

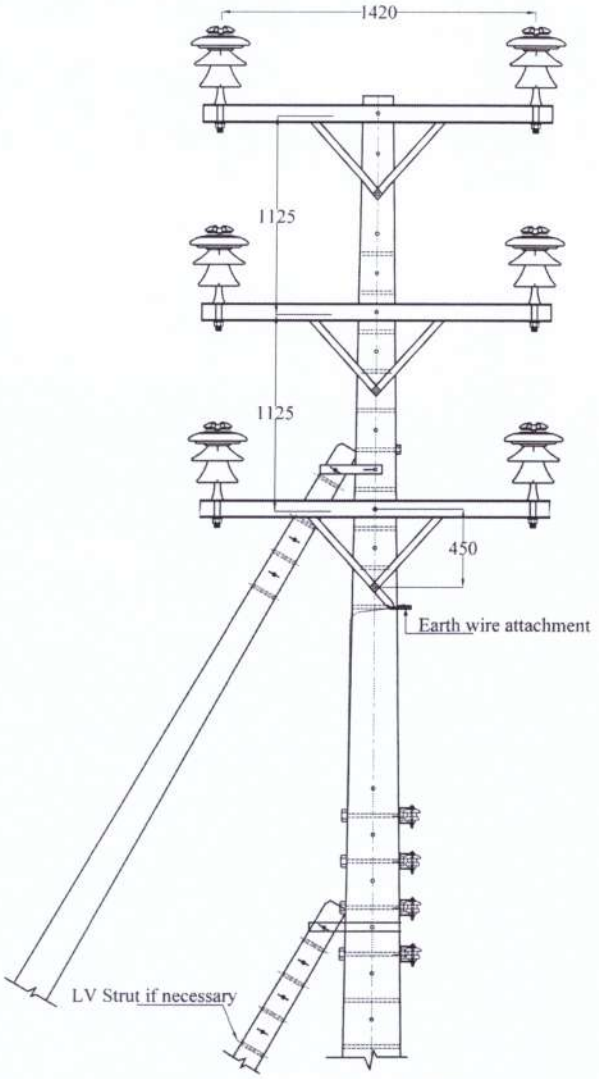
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

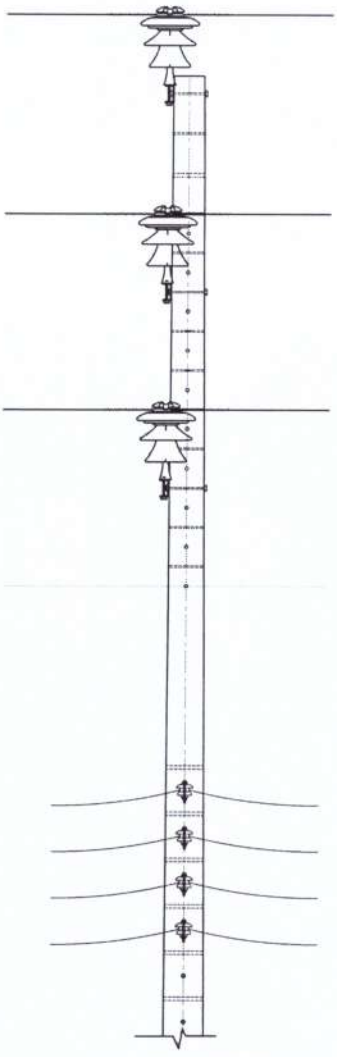
DATE : May 2021 | REV NO :

DRG NO : LV-50

SOURCE : DCS -03 : 1997



FRONT ELEVATION



END ELEVATION

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 11 1	R C Poles 8.3m	Nos.	01
B 02 10 1	D Brackets W/O Insulator & Bolt	Nos.	04
B 07 10 1	GI Washer	Nos.	06
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	06
B 07 55 1	Strut Bracket	Nos.	01
C 01 10 1	Insulator LT 90 x 75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
J 03 10 1	Wire GS No. 8	kg	0.25

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV DOUBLE CIRCUIT & LV COMBINE RUN ON 13m POLES (ANGLE POINT STRUT)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

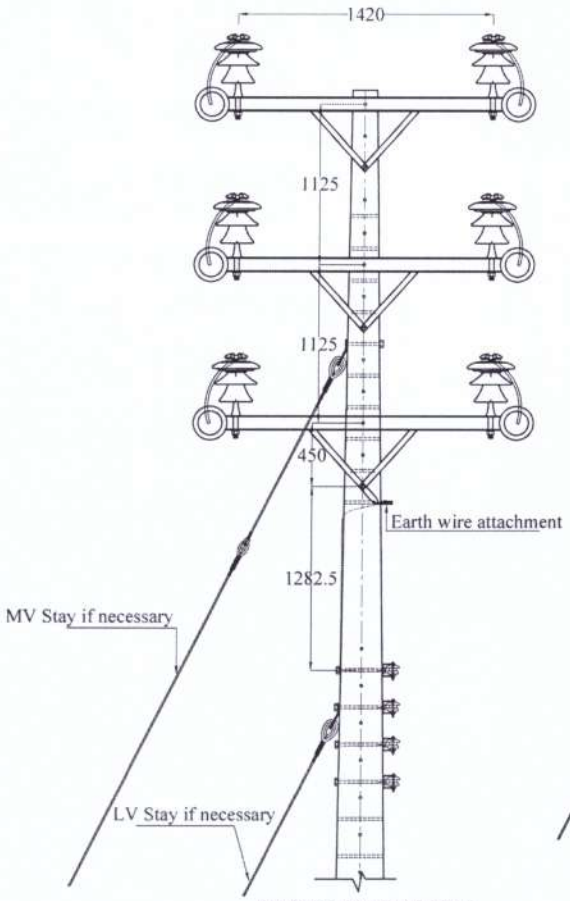
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

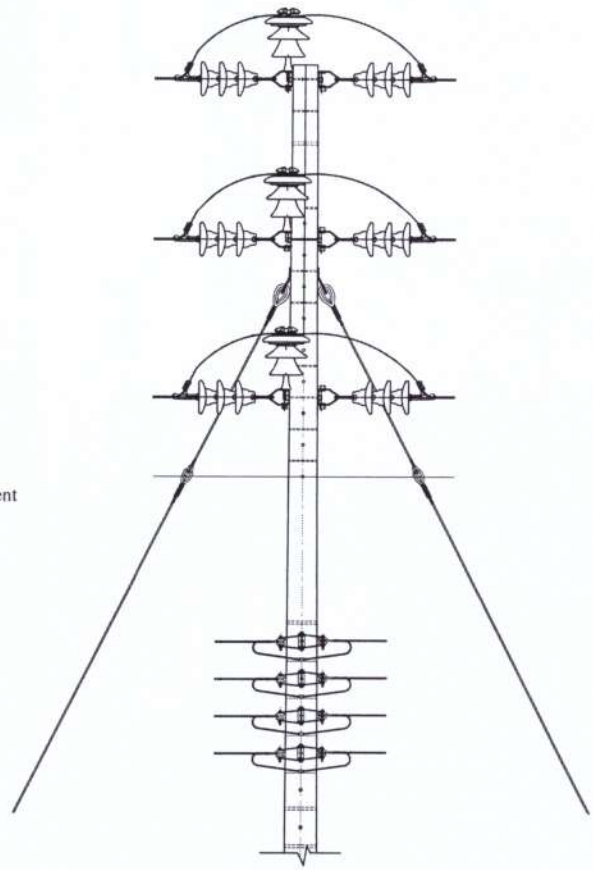
DRG NO : LV-51

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



FRONT ELEVATION



END ELEVATION

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 03 30 1	Shackle Straps	Nos.	08
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	12
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
B 02 50 1	Stay Clamp GI	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2
J 03 10 1	Wire GS No. 8	kg	0.25
W 07 25 1	Sleeves 7/3.40	Nos.	08

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV DOUBLE CIRCUIT & LV COMBINE RUN ON 13m POLE (SHACKLE POINT STRUT)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

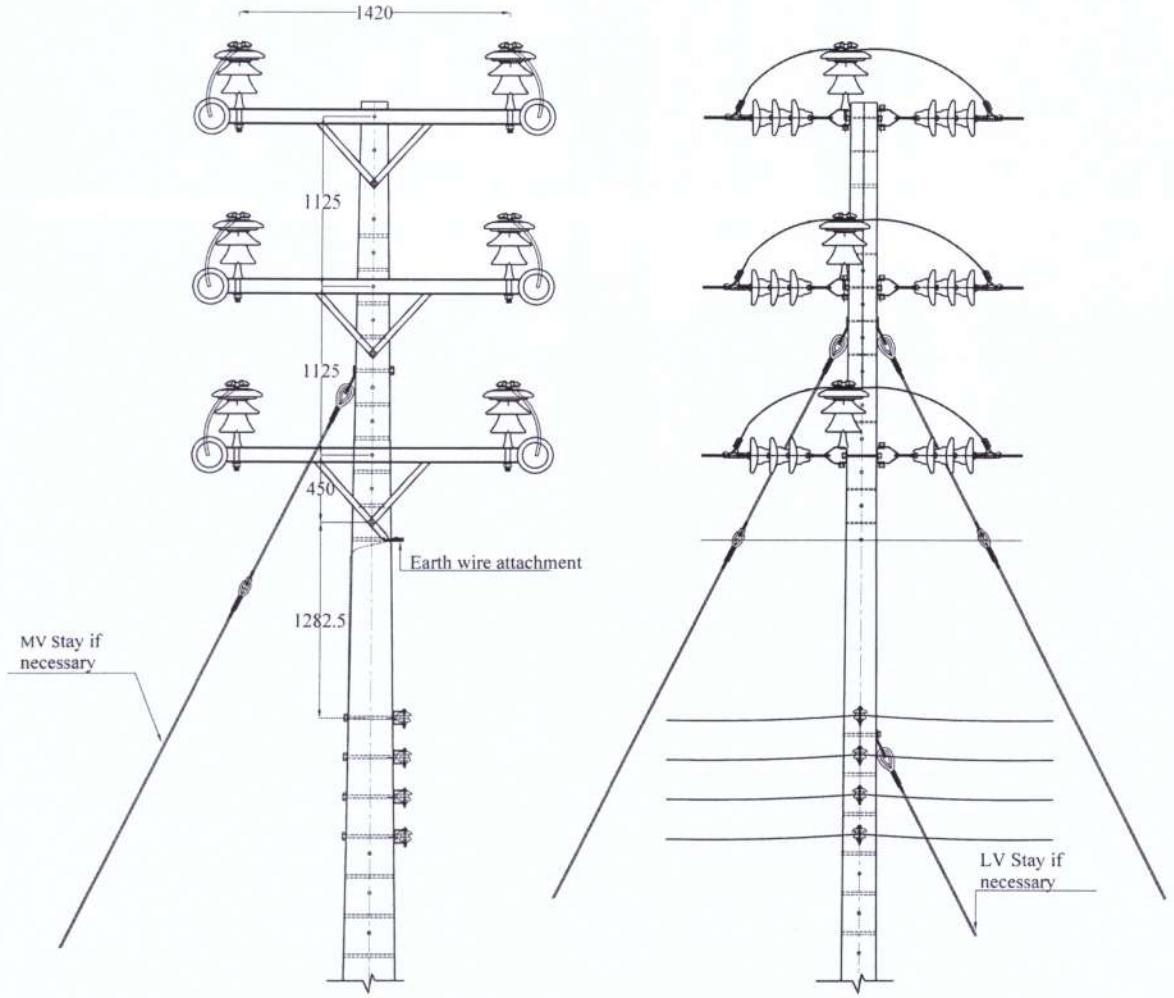
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : LV-52

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 02 10 1	D Brackets W/O Insulators & Bolts	Nos.	04
B 07 10 1	GI Washer	Nos.	04
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	04
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.18mm	Nos.	01
B 02 50 1	Stay Clamp GI	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
C 01 10 1	Insulator LT 90x75mm	Nos.	04
D 06 10 2	No.11 Al Binding Wire	kg	0.2

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENT FOR MV DOUBLE CIRCUIT & LV COMBINE RUN ON 13m POLE (TERMINAL POLE OF LV LINE)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

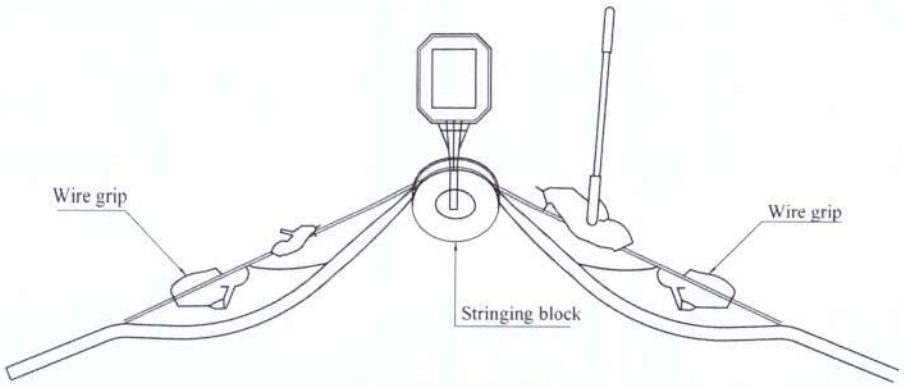
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

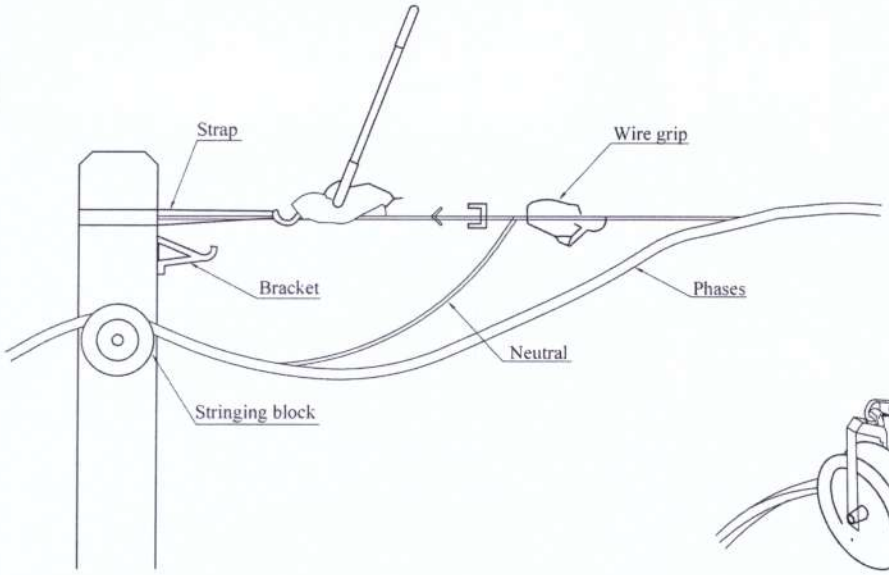
DATE : May 2021 | REV NO : -

DRG NO : LV-53

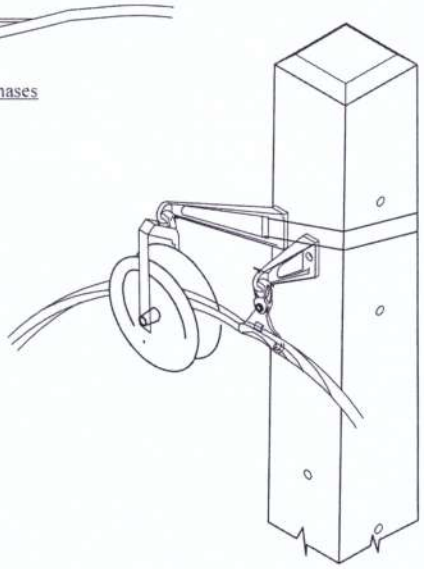
SOURCE : DCS -03 : 1997



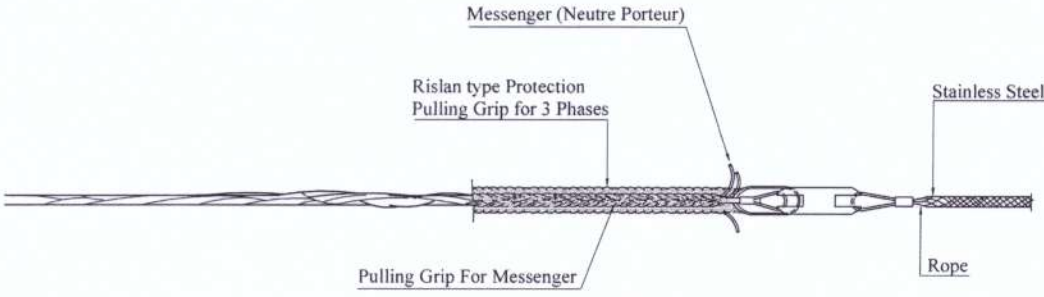
LARGE ANGLE POINT



TERMINAL POLE



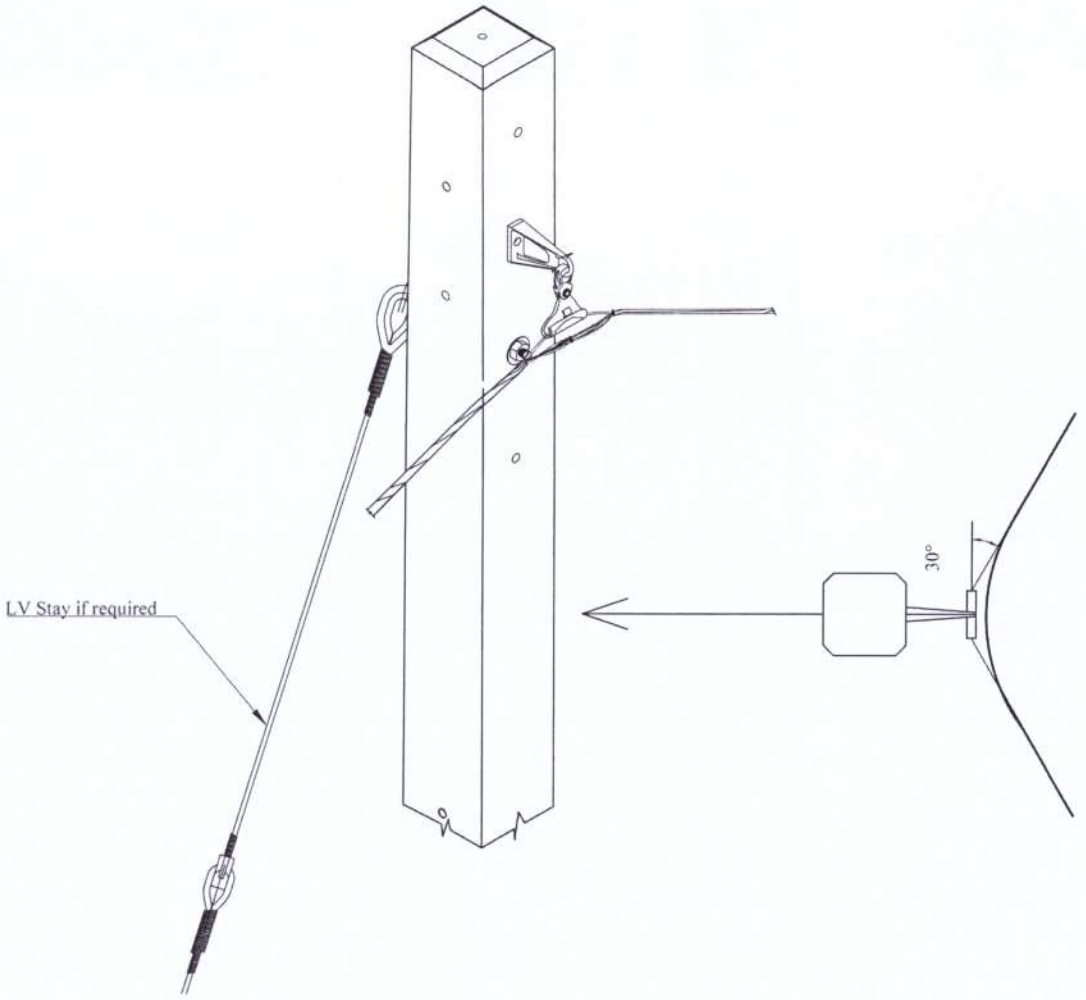
SUSPENSION POINT



ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	STRINGING OF ABC	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-54
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 07 10 1	GI Washer	Nos.	01
B 07 45 1	Bolts & Nuts GI 120x16mm	Nos.	01
B 16 05 1	Suspension Assembly for ABC	Nos.	01
B 12 05 1	Ties, Nylon for ABC	Nos.	03

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENTS FOR AERIAL BUNDLED CONDUCTOR SUSPENSION POINT SMALL ANGLE (0^0 - 30^0)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

DRAWN : Lalani EDITED : Harsha

DATE : May 2021 REV NO :

DRG NO : LV-55

SOURCE : DCS -03 : 1997

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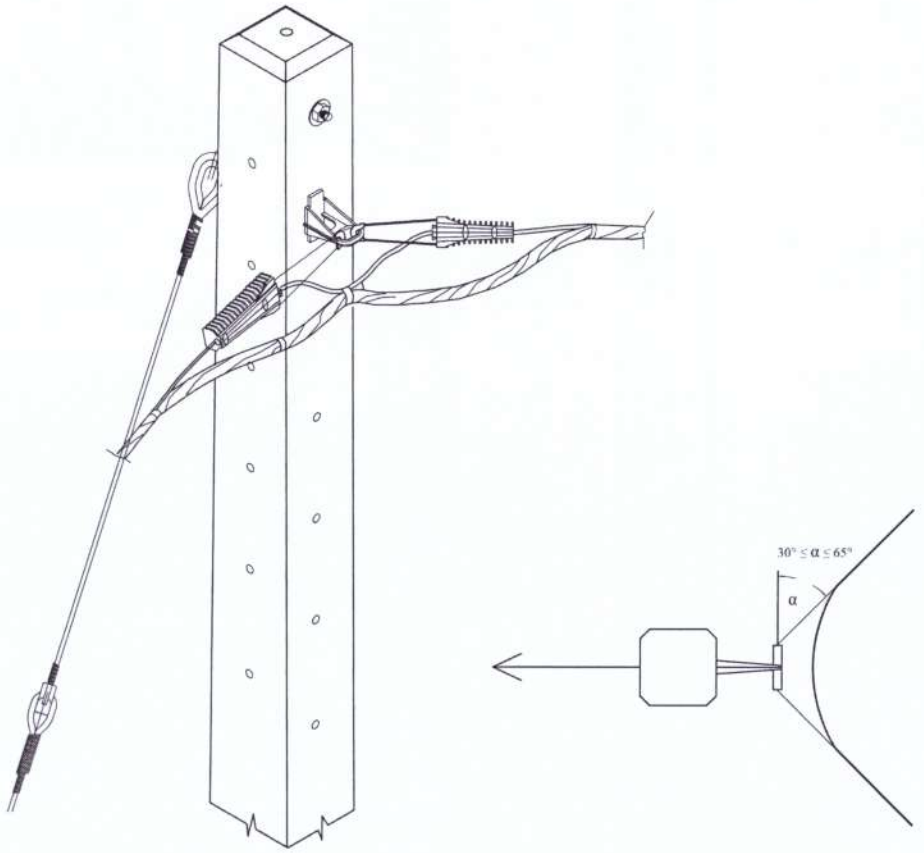

CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 07 10 1	GI Washer	Nos.	01
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	01
B 16 10 1	Large Angle Assembly for ABC	Nos.	01
B 12 05 1	Ties, Nylon for ABC	Nos.	05
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.15mm	Nos.	01
B 03 70 1	Strap Stainless Steel	Mtr.	1.5
B 17 05 1	Buckles for Stainless Steel Strap	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
----	GI Stay Clamp	Nos.	01

ALL DIMENSIONS ARE IN mm

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENTS FOR AERIAL BUNDLED CONDUCTOR SUSPENSION POINT LARGE ANGLE (30^0-65^0)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO :

DRG NO : LV-56

SOURCE : DCS -03 : 1997

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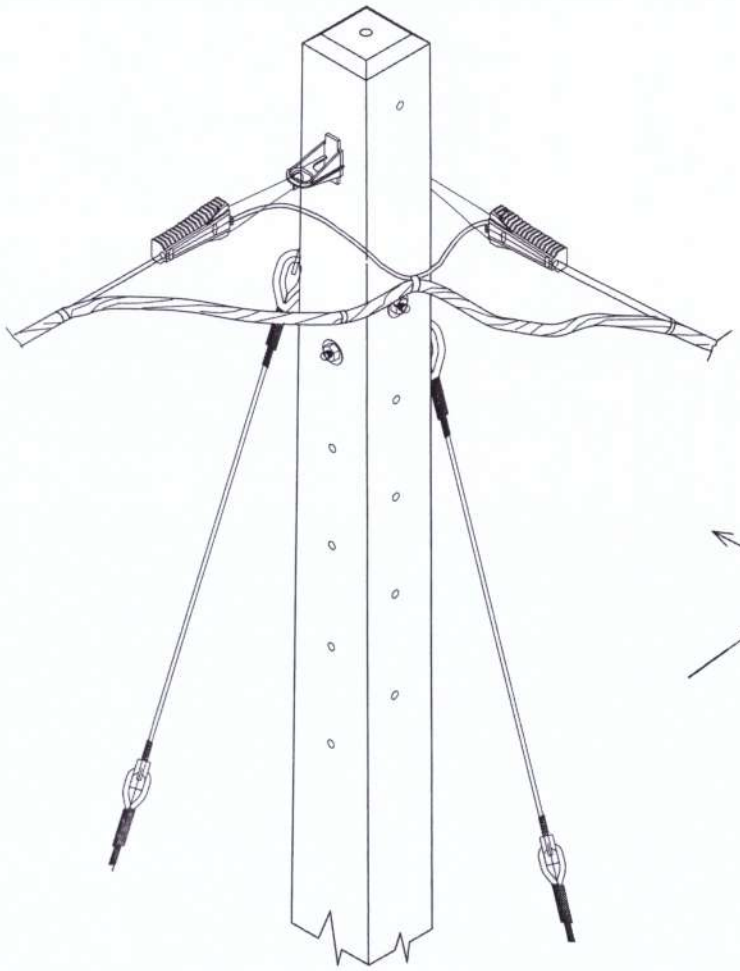
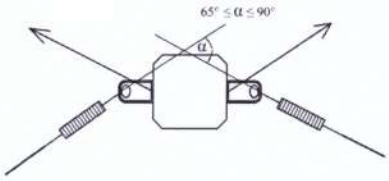




CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 07 10 1	GI Washer	Nos.	02
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	04
B 16 10 1	Dead End Assembly for ABC	Nos.	02
B 12 05 1	Ties, Nylon for ABC	Nos.	05
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	09
B 09 05 1	Stay Assembly	Nos.	02
B 10 10 2	Thimbles 7/3.15mm	Nos.	02
B 02 50 1	GI Stay Clamp	Nos.	02
B 03 70 1	Strap Stainless Steel	Mtr.	1.5
B 17 05 1	Buckles for Stainless Steel Strap	Nos.	02
C 01 15 1	Stay Insulator LT	Nos.	02

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENTS FOR AERIAL BUNDLED CONDUCTOR LARGE ANGLE POINT (65° - 90° ANGLE)

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

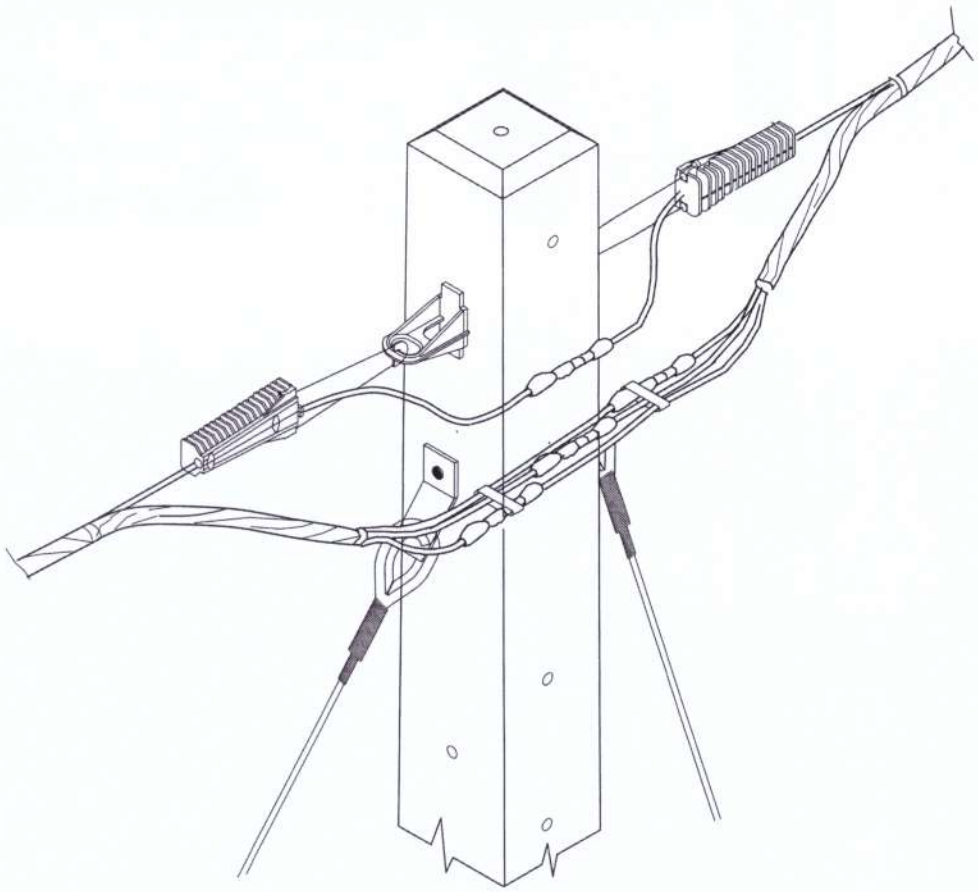
SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : LV-57

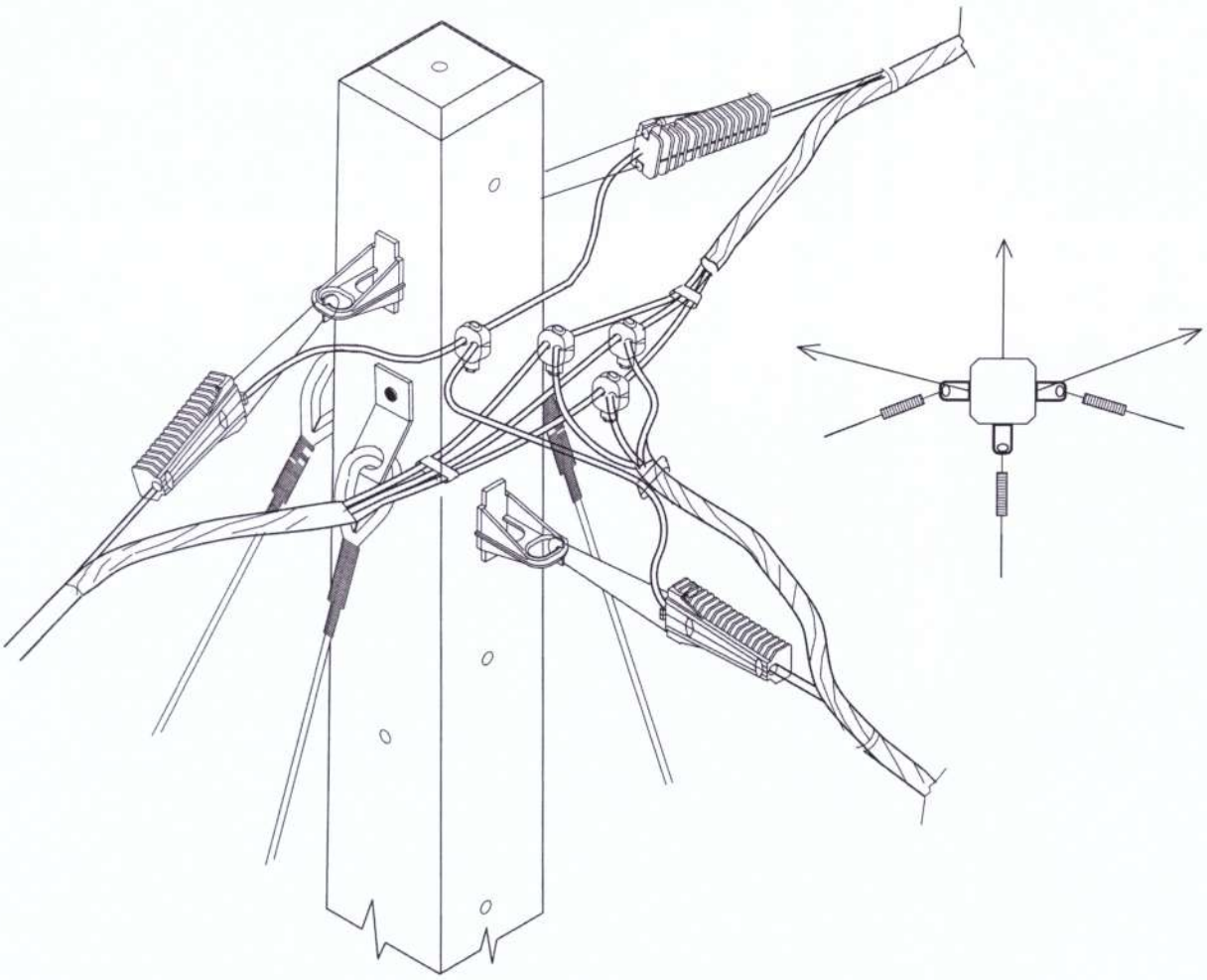
SOURCE : DCS -03 : 1997



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 07 10 1	GI Washer	Nos.	03
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	03
B 16 10 1	Dead End Assembly for ABC	Nos.	02
B 12 05 1	Ties, Nylon for ABC	Nos.	07
B 03 70 1	Strap Stainless Steel	Nos.	1.5
B 17 05 1	Buckles for Stainless Steel Strap	Nos.	02
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	09
B 09 05 1	Stay Assembly	Nos.	02
B 10 10 2	Thimbles 7/3.15mm	Nos.	02
B 02 50 1	GI Stay Clamp	Nos.	02
C 01 15 1	Stay Insulator LT	Nos.	02
D 12 20 1	Pre Insulated Sleeves 70mm² for ABC	Nos.	03
D 12 50 1	Pre Insulated Sleeves 50mm² for ABC	Nos.	01

ALL DIMENSIONS ARE IN mm

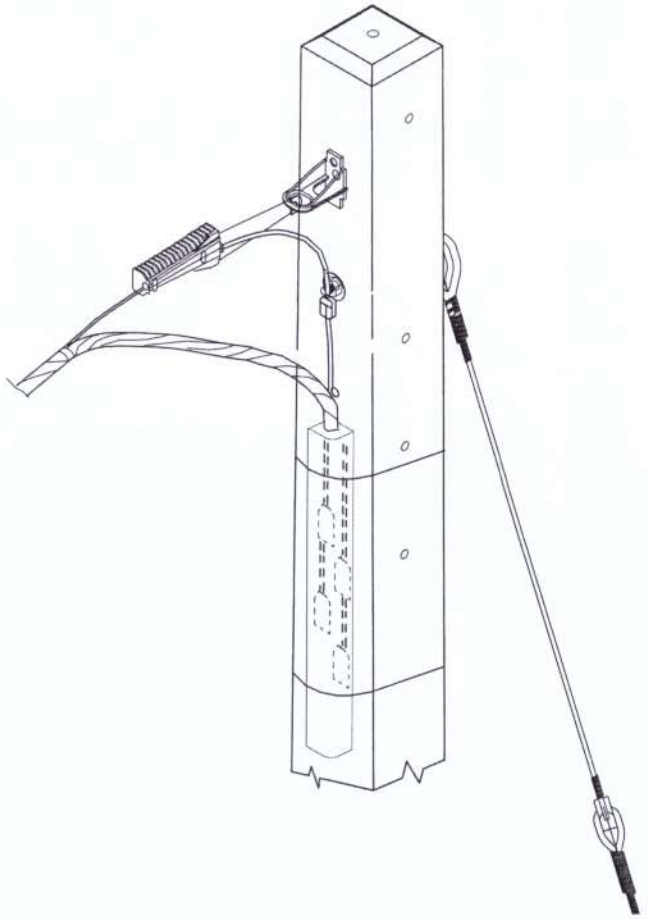
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	POLE TOP ARRANGEMENTS FOR AERIAL BUNDLED CONDUCTOR SHACKLE POINT	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-58
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
B 07 10 1	GI Washer	Nos.	01
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	01
B 16 10 1	Dead End Assembly for ABC	Nos.	01
B 12 05 1	Ties, Nylon for ABC	Nos.	08
D 12 90 1	Connection Piercing for ABC	Nos.	04
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.15mm	Nos.	01
B 02 50 1	GI Stay Clamp	Nos.	01
B 03 70 1	Strap Stainless Steel	Mtr.	0.75
B 17 05 1	Buckles for Stainless Steel Strap	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01

ALL DIMENSIONS ARE IN mm

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	POLE TOP ARRANGEMENTS FOR AERIAL BUNDLED CONDUCTOR 90° ANGLE T-OFF ASSEMBLY	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-59
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 07 10 1	GI Washer	Nos.	01
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	01
B 16 10 1	Dead End Assembly for ABC	Nos.	01
B 12 05 1	Ties, Nylon for ABC	Nos.	05
B 03 70 1	Stainless Steel Strap for ABC	m	02
D14 10 1	Terminal Cap ABC (3x70 50sqm)	Nos.	01
B 17 05 1	Buckles Strap Stainless Steel for ABC	Nos.	03
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.15mm	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
B 02 50 1	GI Stay Clamp	Nos.	01

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENTS FOR AERIAL BUNDLED CONDUCTOR DEAD-END POINT

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

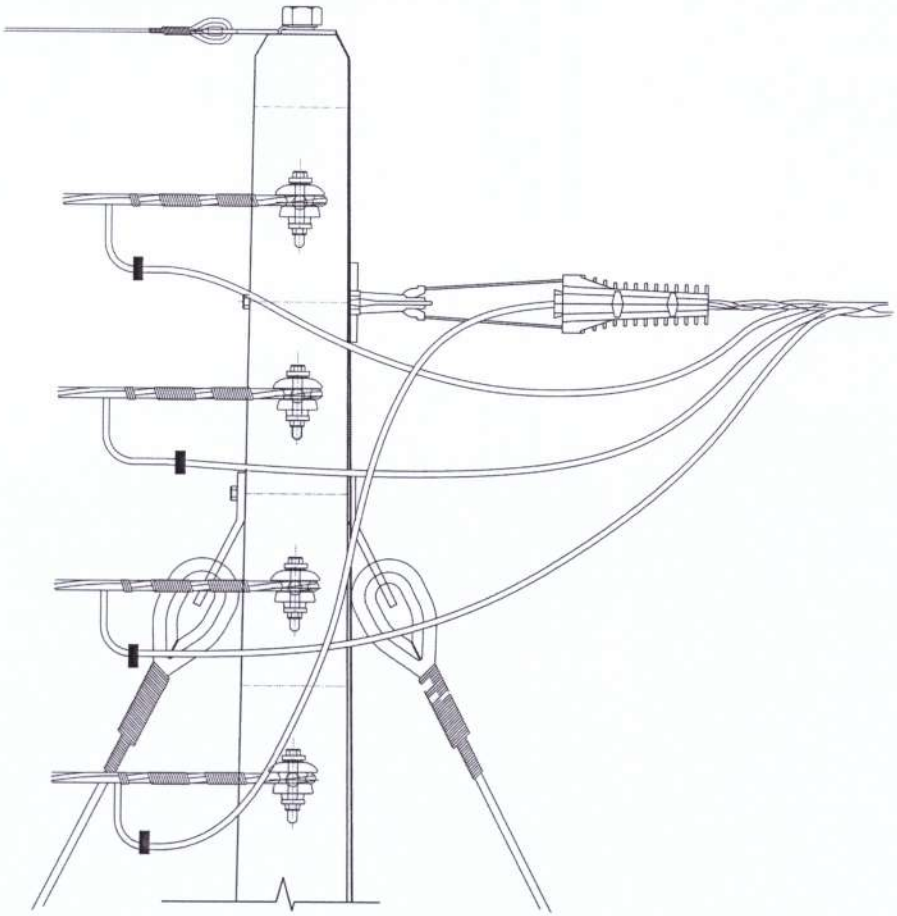
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO :

DRG NO : LV-60

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards - Chairman - Dist. Coord. Committee



CODE	ITEM DESCRIPTION	UNIT	QUANTITY REQUIRED
A 02 13 1	R C Poles 8.3m	Nos.	01
B 07 10 1	GI Washer	Nos.	01
B 07 55 1	Bolts & Nuts GI 200x16mm	Nos.	01
B 16 10 1	Dead End Assembly for ABC	Nos.	01
B 12 05 1	Ties, Nylon for ABC	Nos.	05
B 03 70 1	Strap Stainless Steel	m	02
B 17 05 1	Buckles for Strap Stainless Steel	Nos.	03
B 08 10 1	Stay Wire, G.S 7/3.15mm	kg	4.5
B 09 05 1	Stay Assembly	Nos.	01
B 10 10 2	Thimbles 7/3.15mm	Nos.	01
B 02 50 1	GI Stay Clamp	Nos.	01
C 01 15 1	Stay Insulator LT	Nos.	01
D 12 20 1	Pre Insulated Sleeves 70mm² for ABC	Nos.	03
D 12 50 1	Pre Insulated Sleeves 50mm² for ABC	Nos.	01

ALL DIMENSIONS ARE IN mm

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

POLE TOP ARRANGEMENTS FOR LV BARE CONDUCTOR TERMINATION WITH EXTENSION OF ABC LINE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

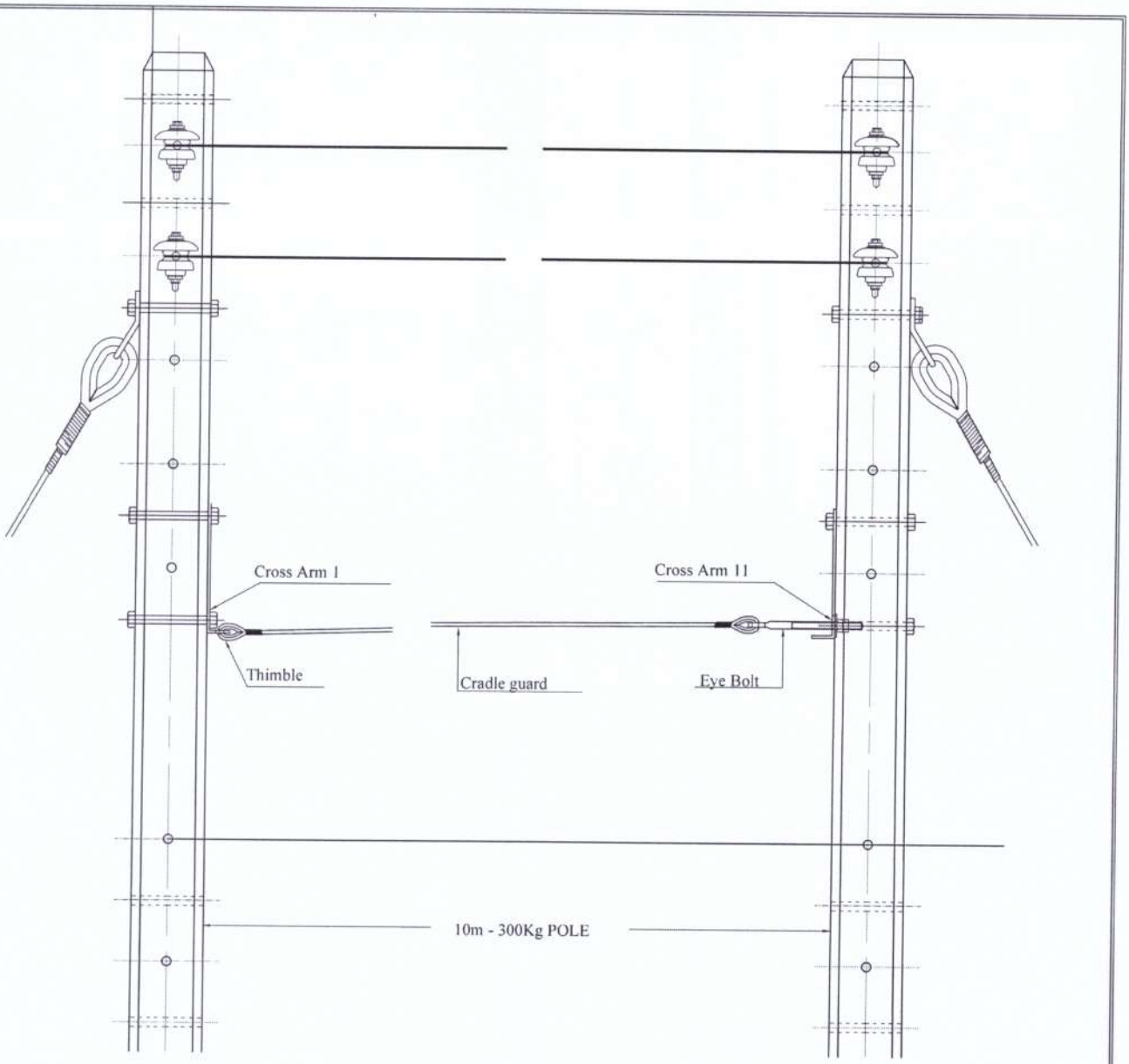
SCALE : Not to Scale

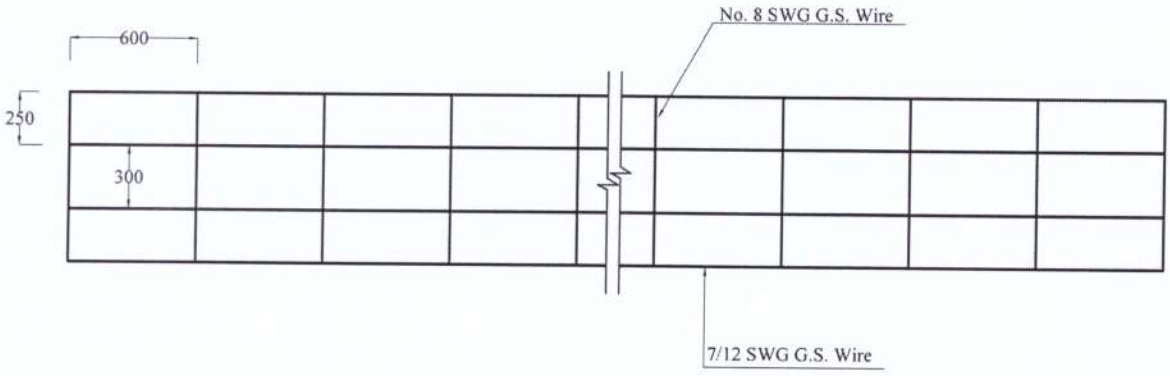
DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

DRG NO : LV-61

SOURCE : DCS -03 : 1997





ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

CRADLE GUARD FOR LV LINE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE :	Not to Scale
DRAWN : Lalani	EDITED : Harsha
DATE : May 2021	REV NO : -
DRG NO :	LV-62
SOURCE :	DCS -03 : 1997

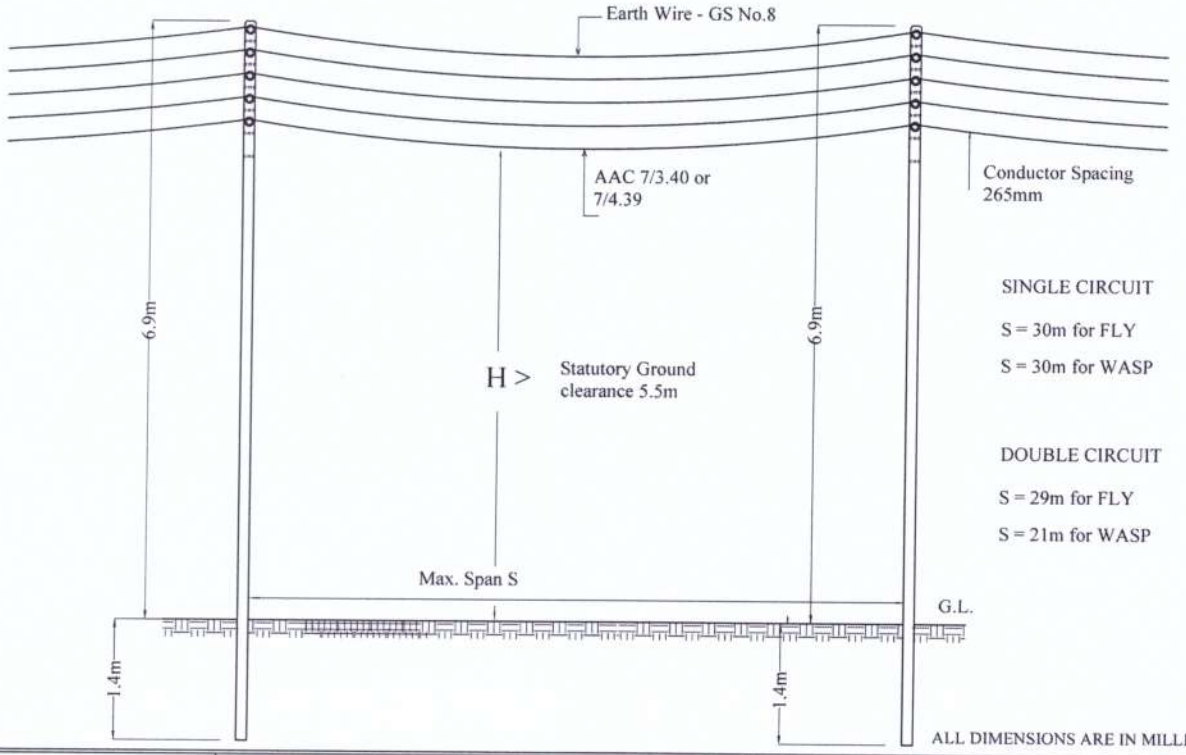
CEB Approved Construction Standards
Chairman - Dist. Coord. Committee

8.3m - LV POLE

3 Phase Along the road

8.3M - LV POLE

3 Phase Across the road

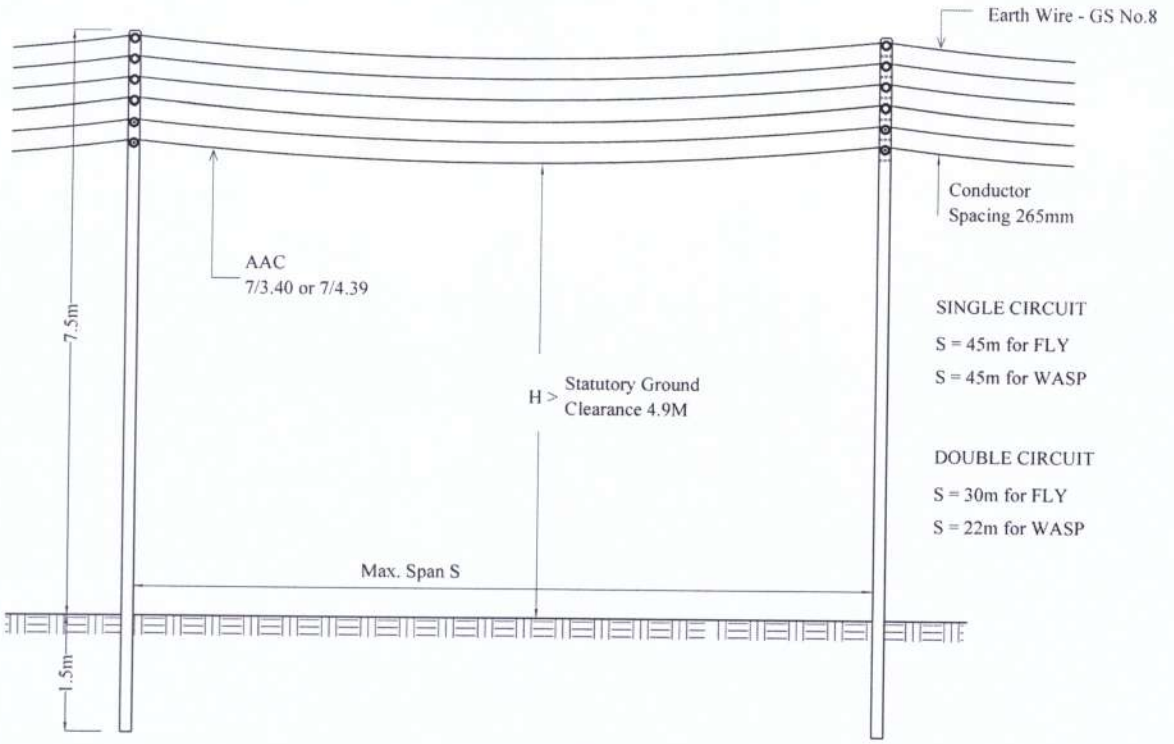


ALL DIMENSIONS ARE IN MILLIMETERS

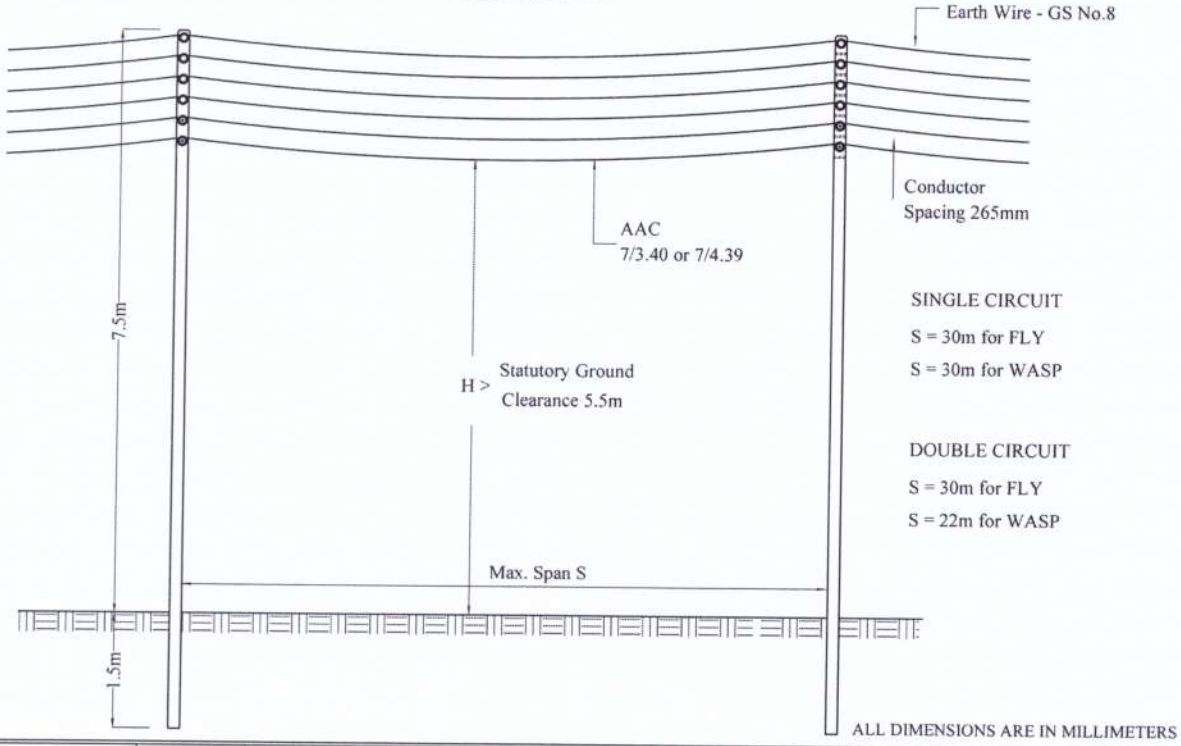
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONDUCTOR CONFIGURATION FOR 8.3m LV POLE LINE	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-63
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

CEB Approved Construction Standards - Chairman - Dist. Coord. Committee

9.0m L.V. POLE
3 Phase (Including Street Lamp Wire)
along the Roads



9.0m L.V. POLE
3 Phase (Including Street Lamp Wire)
across the Road



ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

CONDUCTOR CONFIGURATION FOR 9.0m LV POLE LINE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

DATE : May 2021 | REV NO : -

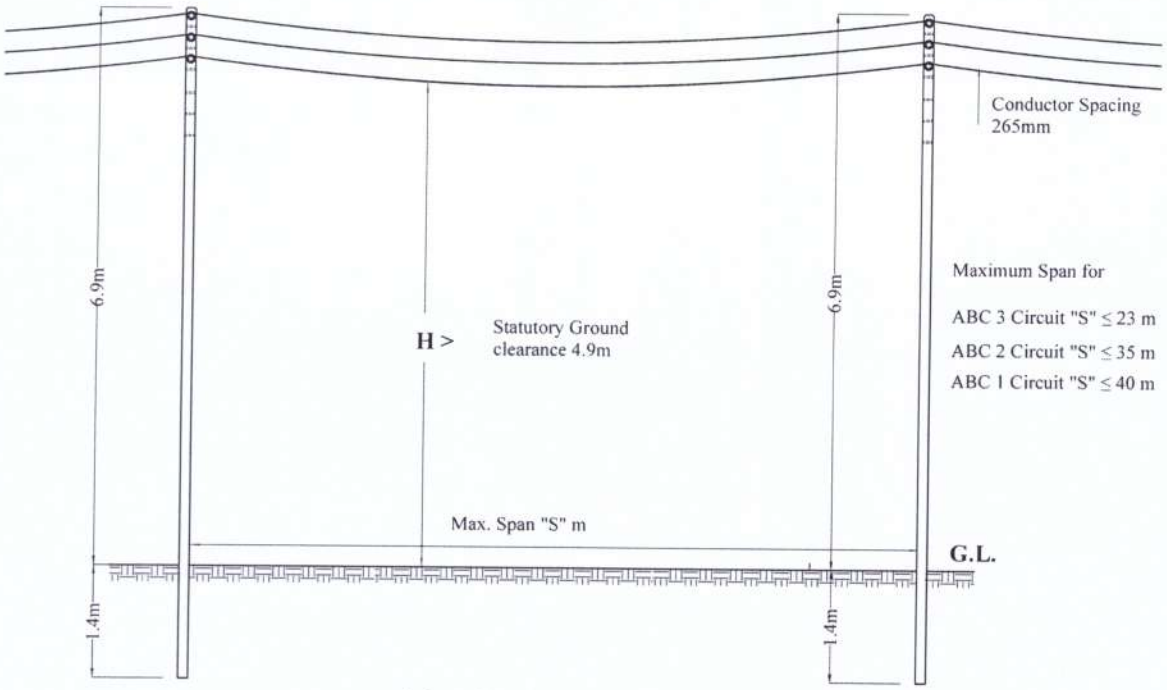
DRG NO : LV-64

SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee

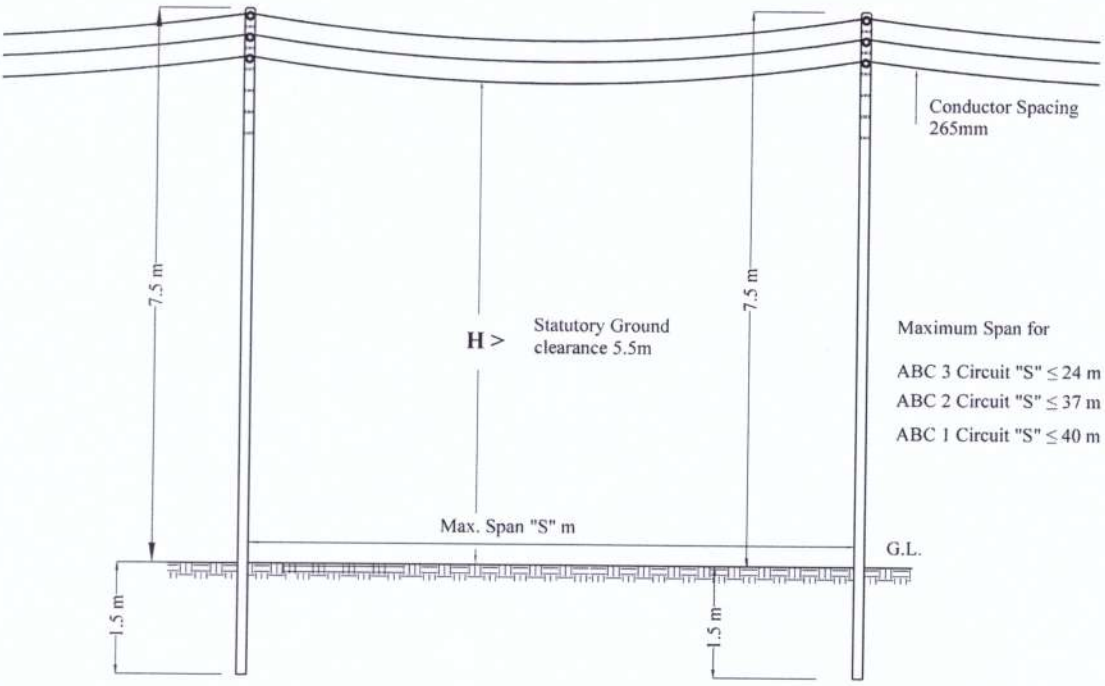
8.3m - LV POLE

Arial Bundal Conductor 3 Circuits



9.0 m - LV POLE

Arial Bundal Conductor 3 Circuits



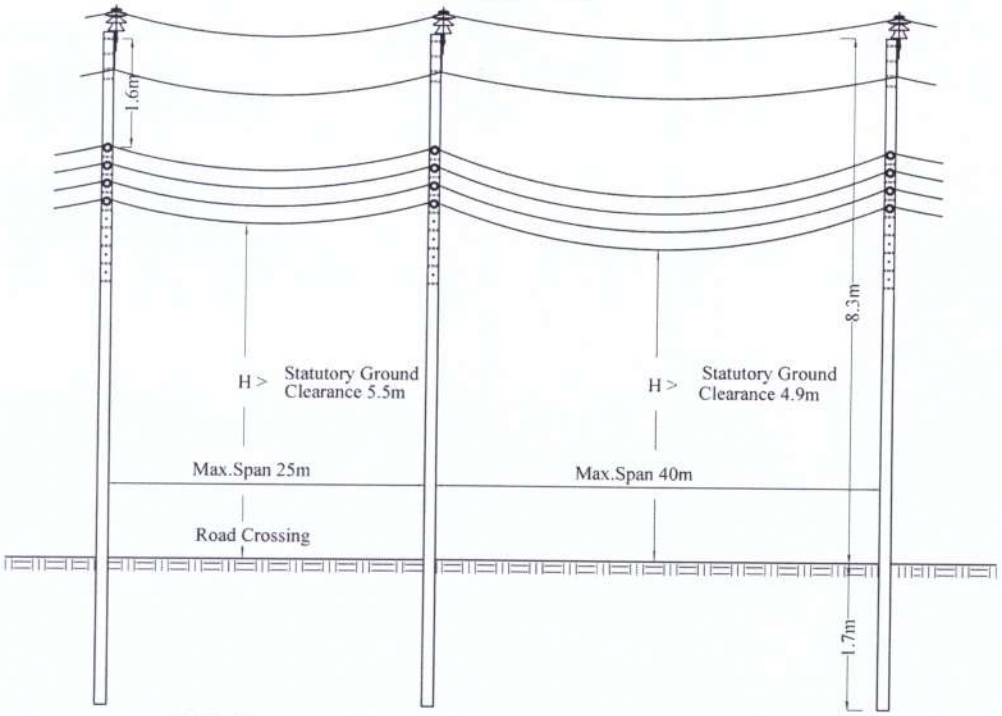
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONDUCTOR CONFIGURATION FOR AERIAL BUNDLED CONDUCTOR LINES USING 8.3m/9m POLES	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-65
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

10m POLE

Combined Run - 33kV and L.V. on same Pole

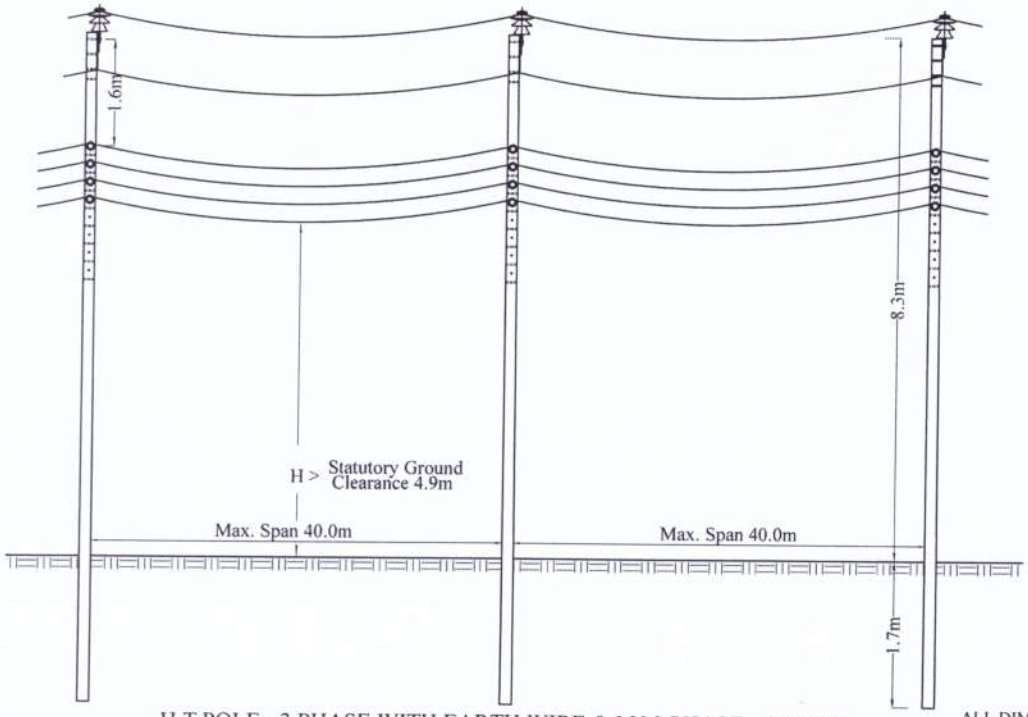
Across the Road



H.T POLE - 3 PHASE WITH EARTH WIRE & LV 3 PHASE - 4 WIRE

10m POLE

Combined Run - 33kV and L.V. on same Pole Accessible to Traffic



H.T POLE - 3 PHASE WITH EARTH WIRE & LV 3 PHASE - 4 WIRE

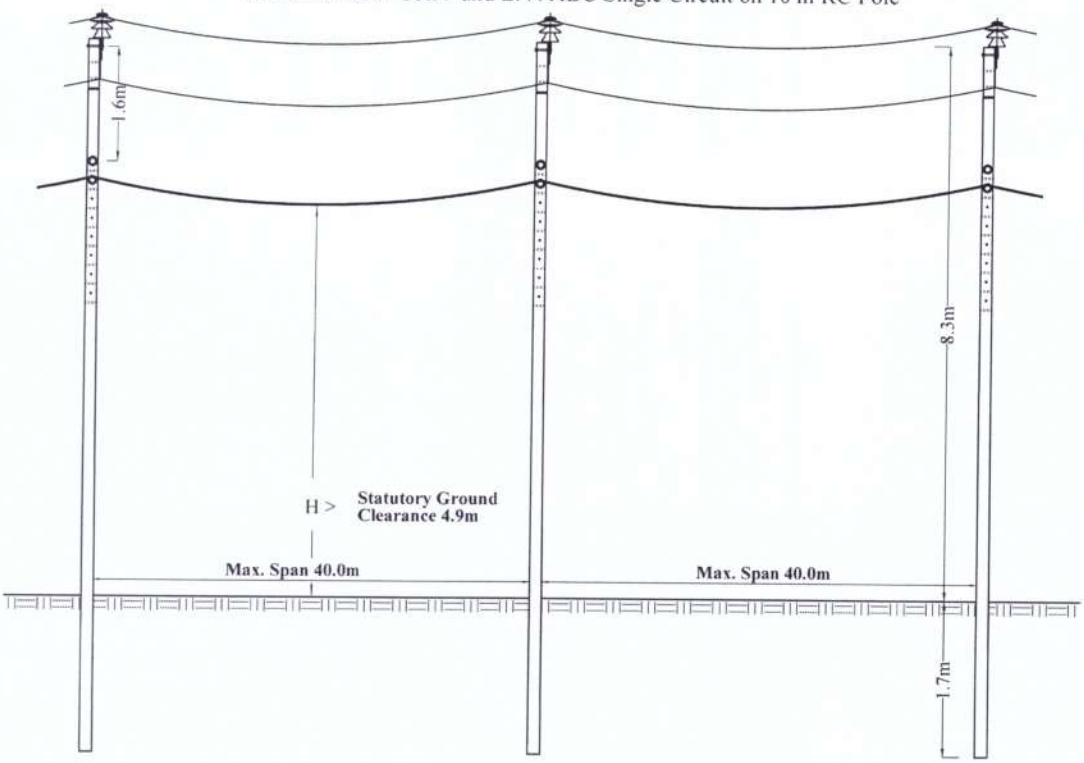
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	MV & LV COMBINED RUN USING 10m POLES	DRAWN : Lalani EDITED : Harsha
		DATE : May 2021 REV NO :
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-66
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

CEB Approved Construction Standards - Chairman - Dist. Coord. Committee

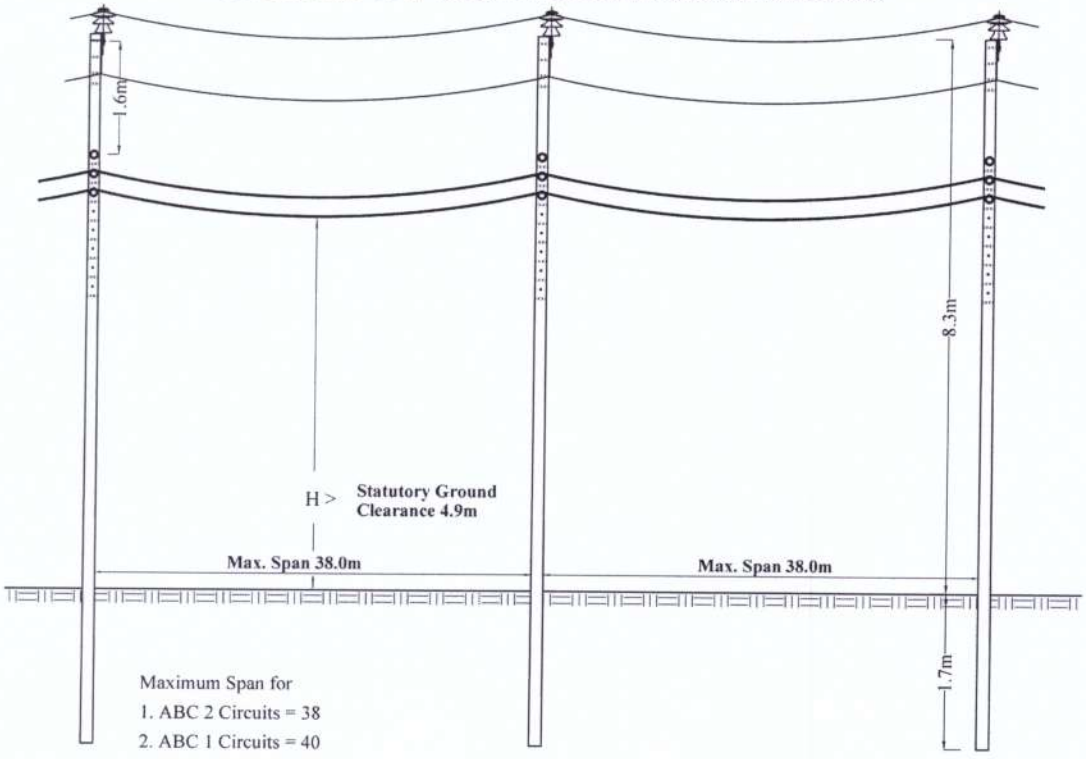
10m POLE

Combined Run - 33kV and L.V. ABC Single Circuit on 10 m RC Pole



10m POLE

Combined Run - 33kV and L.V. ABC Double Circuit on 10 m RC Pole



Maximum Span for

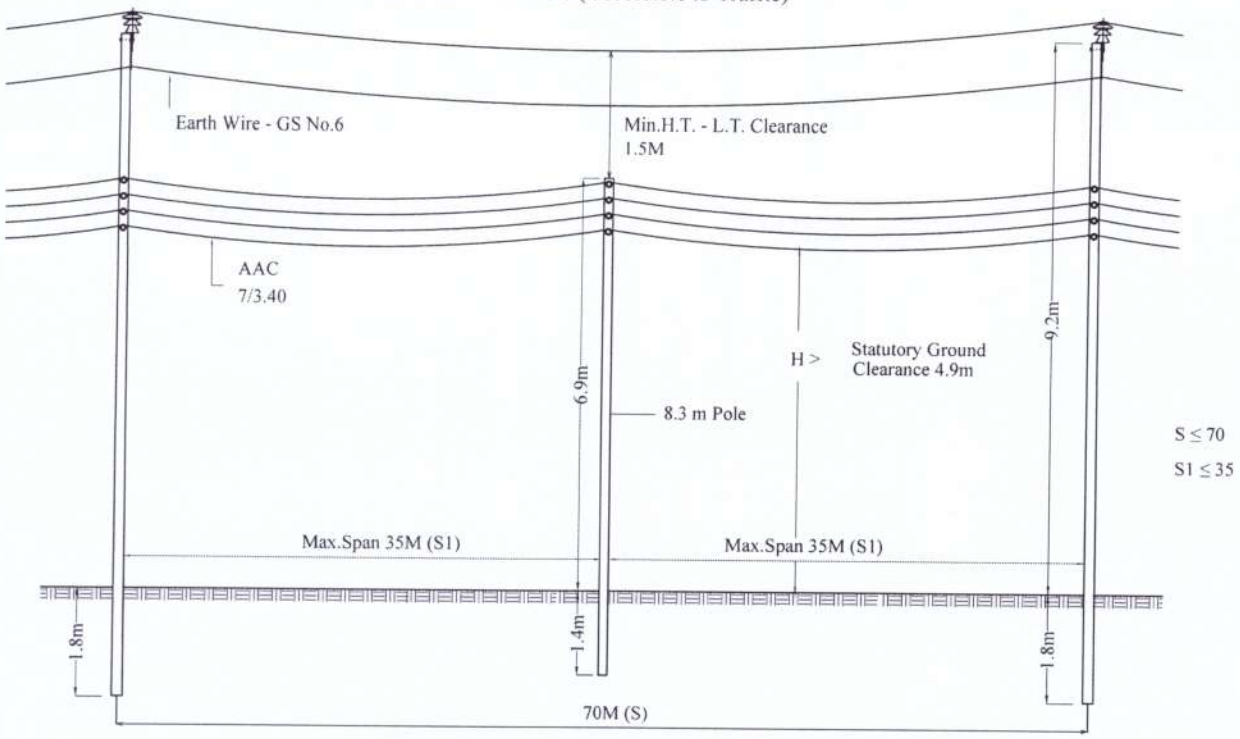
1. ABC 2 Circuits = 38
2. ABC 1 Circuits = 40

ALL DIMENSIONS ARE IN MILLIMETERS

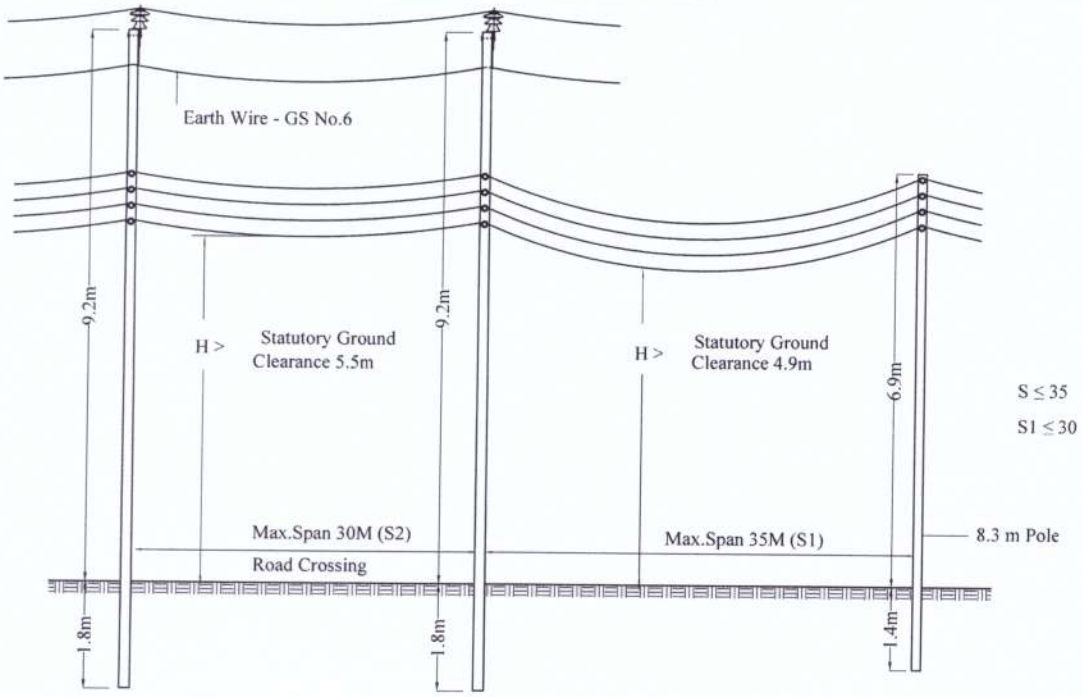
CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONDUCTOR CONFIGURATION FOR COMBINED RUN MV & LV ABC LINES USING 10m POLES	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO :
DISTRIBUTION COORDINATION BRANCH	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-67
		SOURCE : DCS -03 : 1997

CEB Approved Construction Standards - Chairman - Dist. Coord. Committee

11m POLE
Combined Run - 33kV & LV with
Intermediate LV Pole (accessible to Traffic)



11m POLE
Combined Run - 33kV & LV with
Intermediate LV Pole Line across the Road

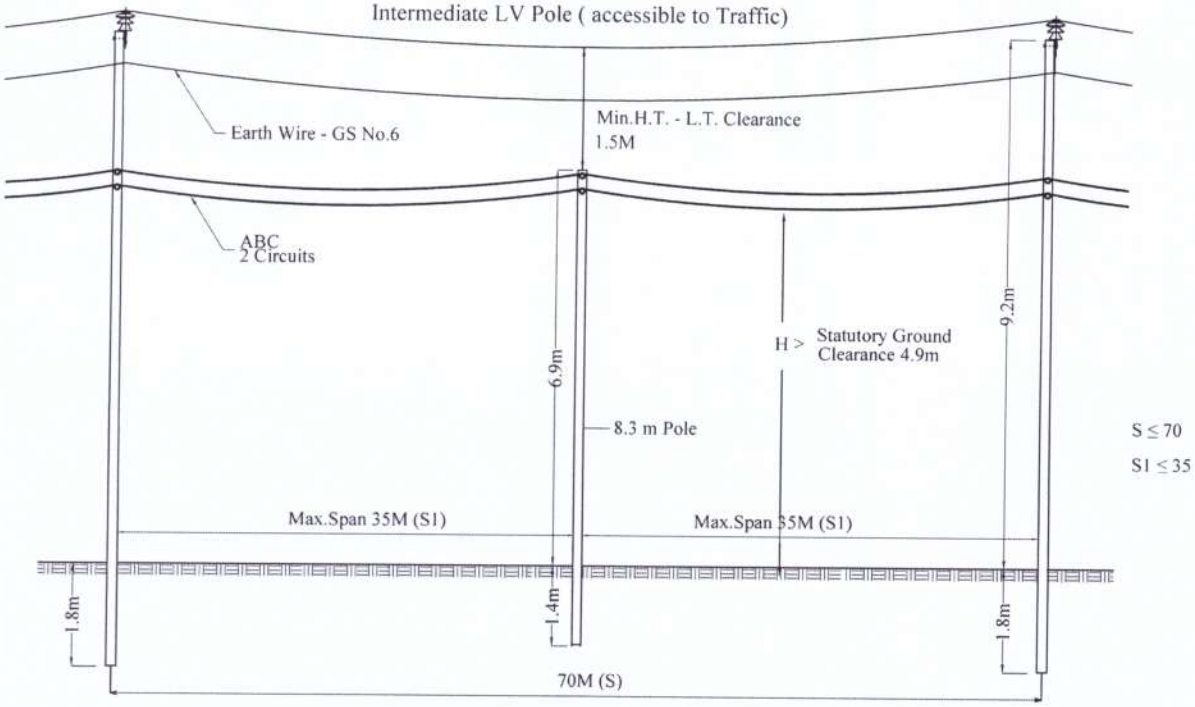


ALL DIMENSIONS ARE IN MILLIMETERS

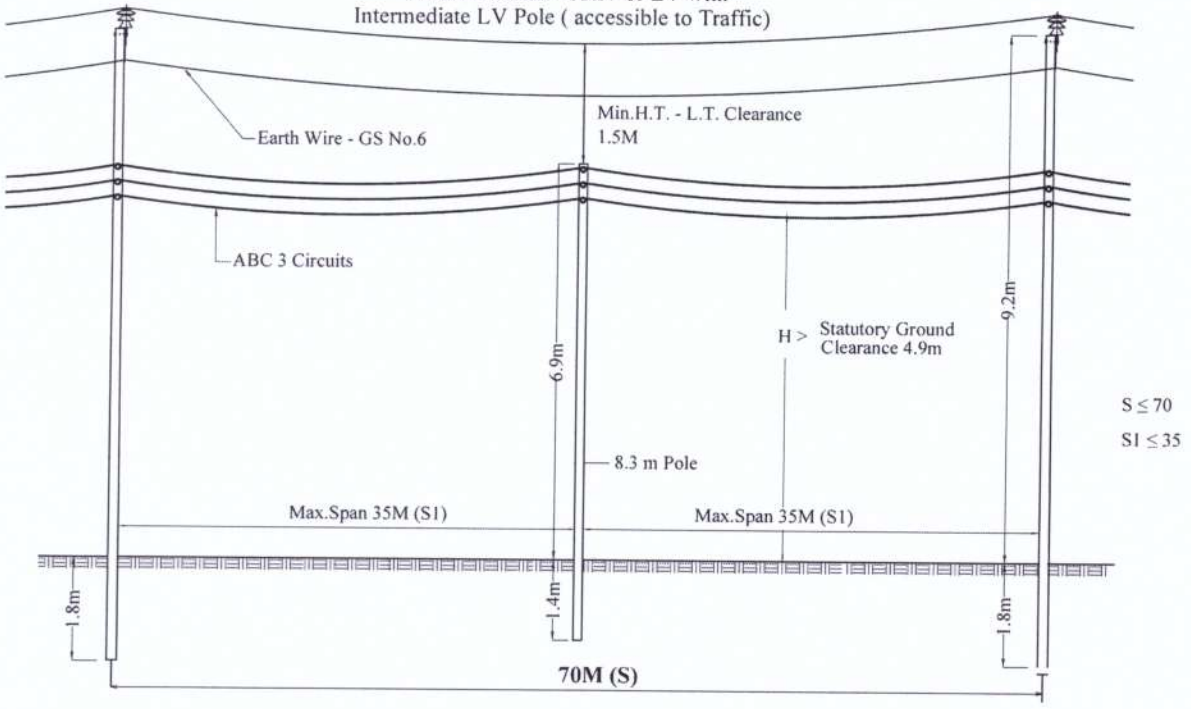
CEYLON ELECTRICITY BOARD DISTRIBUTION COORDINATION BRANCH	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONDUCTOR CONFIGURATION FOR COMBINED RUN MV & LV USING 11m POLES	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : EV-68
		SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee

11m POLE
Combined Run - 33kV & LV with
Intermediate LV Pole (accessible to Traffic)



11m POLE
Combined Run - 33kV & LV with
Intermediate LV Pole (accessible to Traffic)



Maximum Span for
ABC 3 Circuit = 23
ABC 2 Circuit = 35
ABC 1 Circuit = 35

ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD

DISTRIBUTION COORDINATION BRANCH

DISTRIBUTION CONSTRUCTION STANDARD : DCS-3

CONDUCTOR CONFIGURATION FOR COMBINED RUN MV & LV ABC WITH INTERMEDIATE LV POLE USING 11m POLE

Extract of
CEB Distribution Construction Standard
DCS-03 : 1997

SCALE : Not to Scale

DRAWN : Lalani | EDITED : Harsha

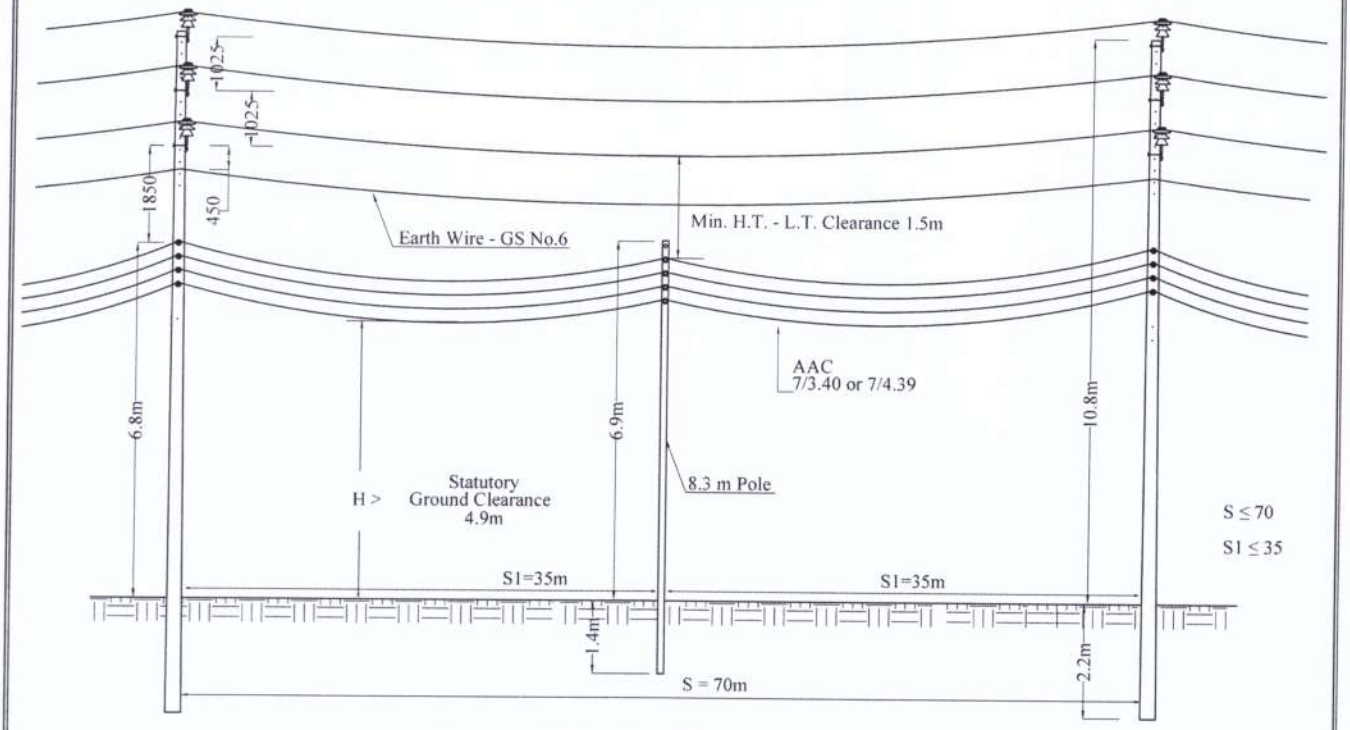
DATE : May 2021 | REV NO :

DRG NO : LV-69

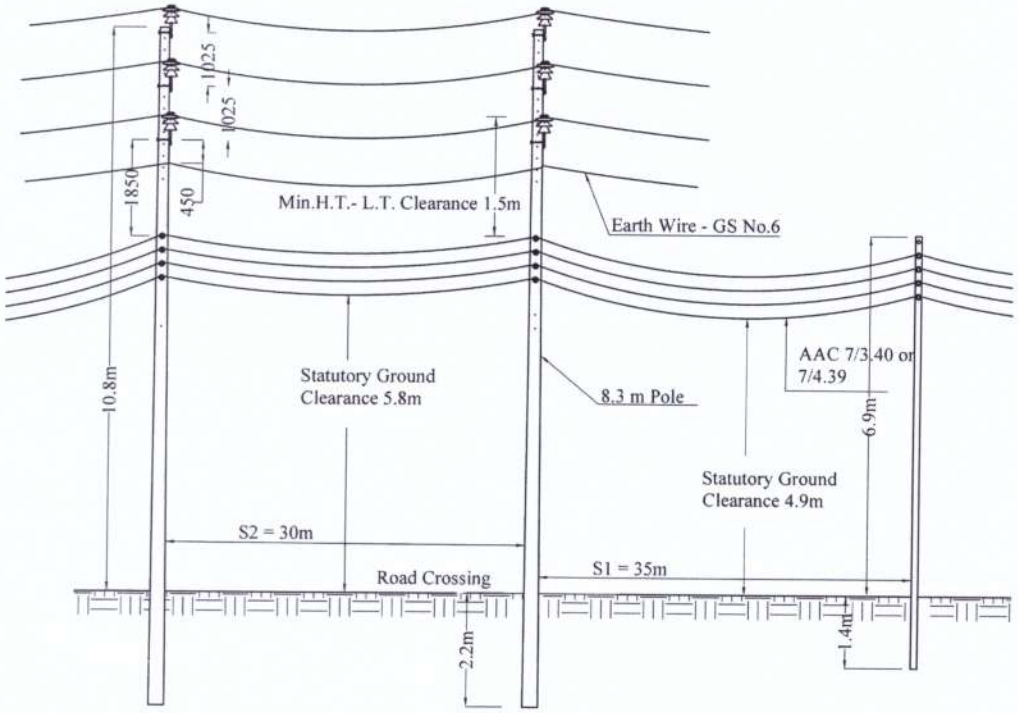
SOURCE : DCS -03 : 1997

CEB Approved Construction Standards
Chairman - Dist. Coord. Committee

13m Pole Combined Run 33 kV double circuit and LV with
Intermediate LV Pole (Accessible to Traffic)



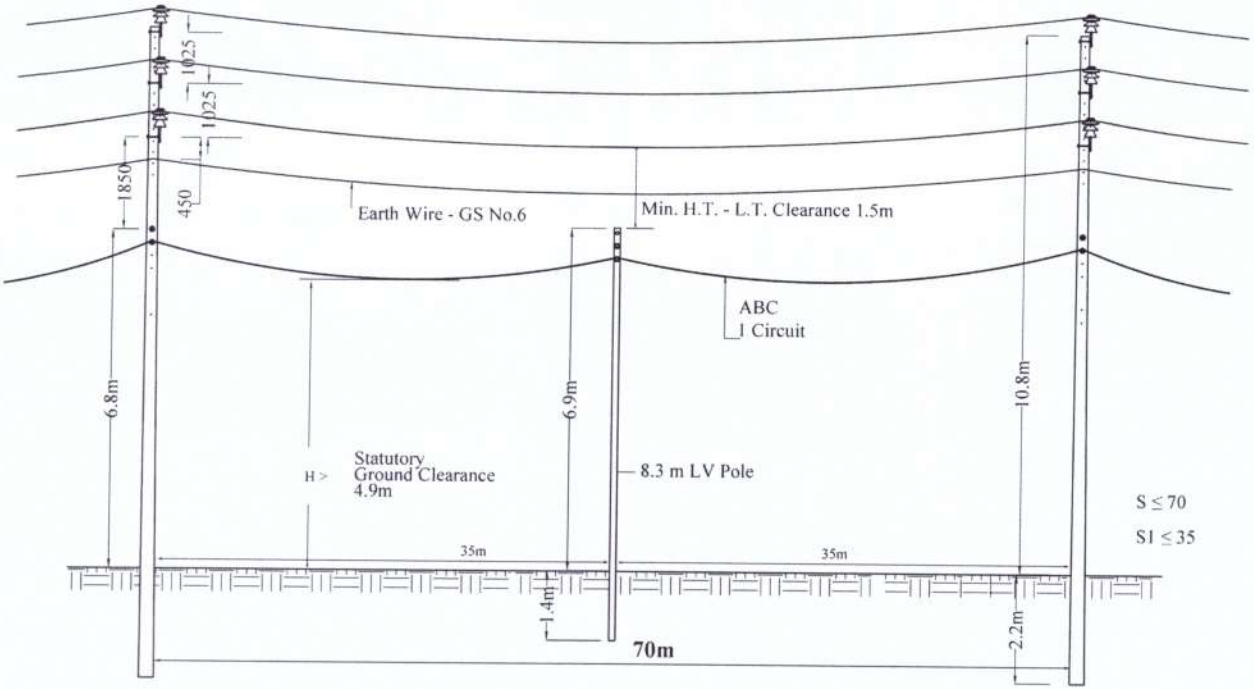
13m Pole Combined Run 33 kV Double Circuit and LV
Line with Intermediate LV Pole Across the Road



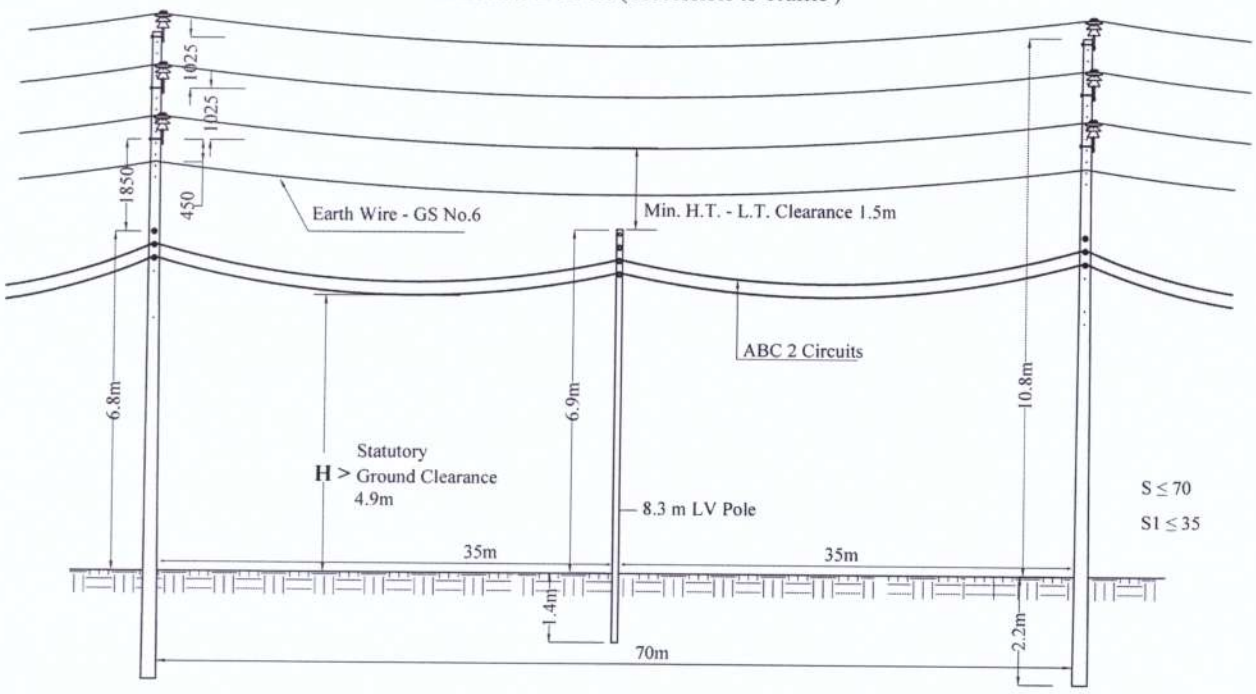
ALL DIMENSIONS ARE IN MILLIMETERS

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONDUCTOR CONFIGURATION FOR MV DOUBLE CIRCUIT & LV COMBINED RUN USING 13m POLE WITH INTERMEDIATE LV POLE	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-70
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997

13m Pole Combined Run 33 kV double circuit and LV with Intermediate LV Pole (Accessible to Traffic)



13m Pole Combined Run 33 kV double circuit and LV with Intermediate LV Pole (Accessible to Traffic)



ALL DIMENSIONS ARE IN mm

CEYLON ELECTRICITY BOARD	DISTRIBUTION CONSTRUCTION STANDARD : DCS-3	SCALE : Not to Scale
	CONDUCTOR CONFIGURATION FOR COMBINED RUN MV DOUBLE CIRCUIT & LV ABC COMBINED RUN USING 13m POLE WITH INTERMEDIATE LV POLE	DRAWN : Lalani / EDITED : Harsha
		DATE : May 2021 / REV NO : -
	Extract of CEB Distribution Construction Standard DCS-03 : 1997	DRG NO : LV-71
DISTRIBUTION COORDINATION BRANCH		SOURCE : DCS -03 : 1997