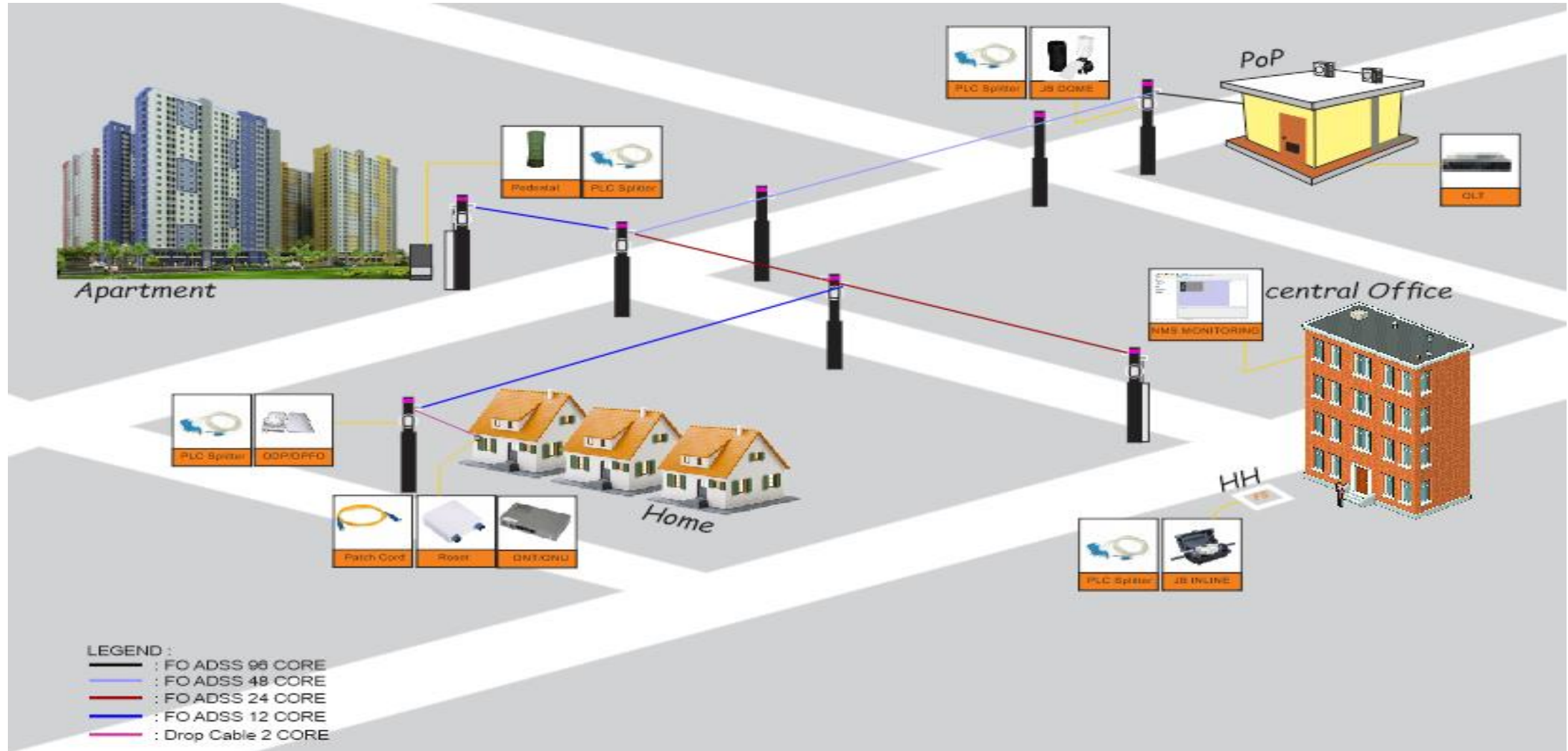


Perencanaan Pembangunan Jaringan FTTx



FTTx networks system



PoP (Point of Presence)



ODN (Optical Distribution Networks)



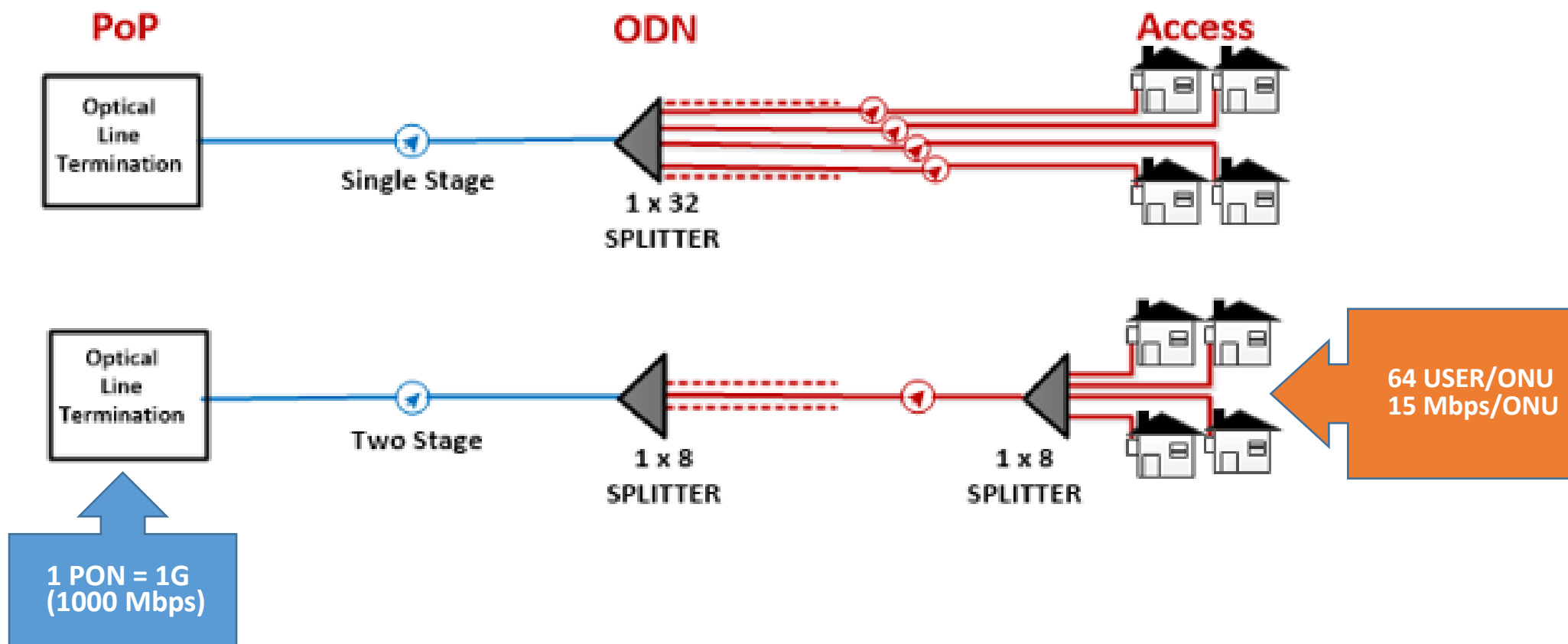
CPE (Customers Premise Equipments)

ODN (Optical Distribution Networks)

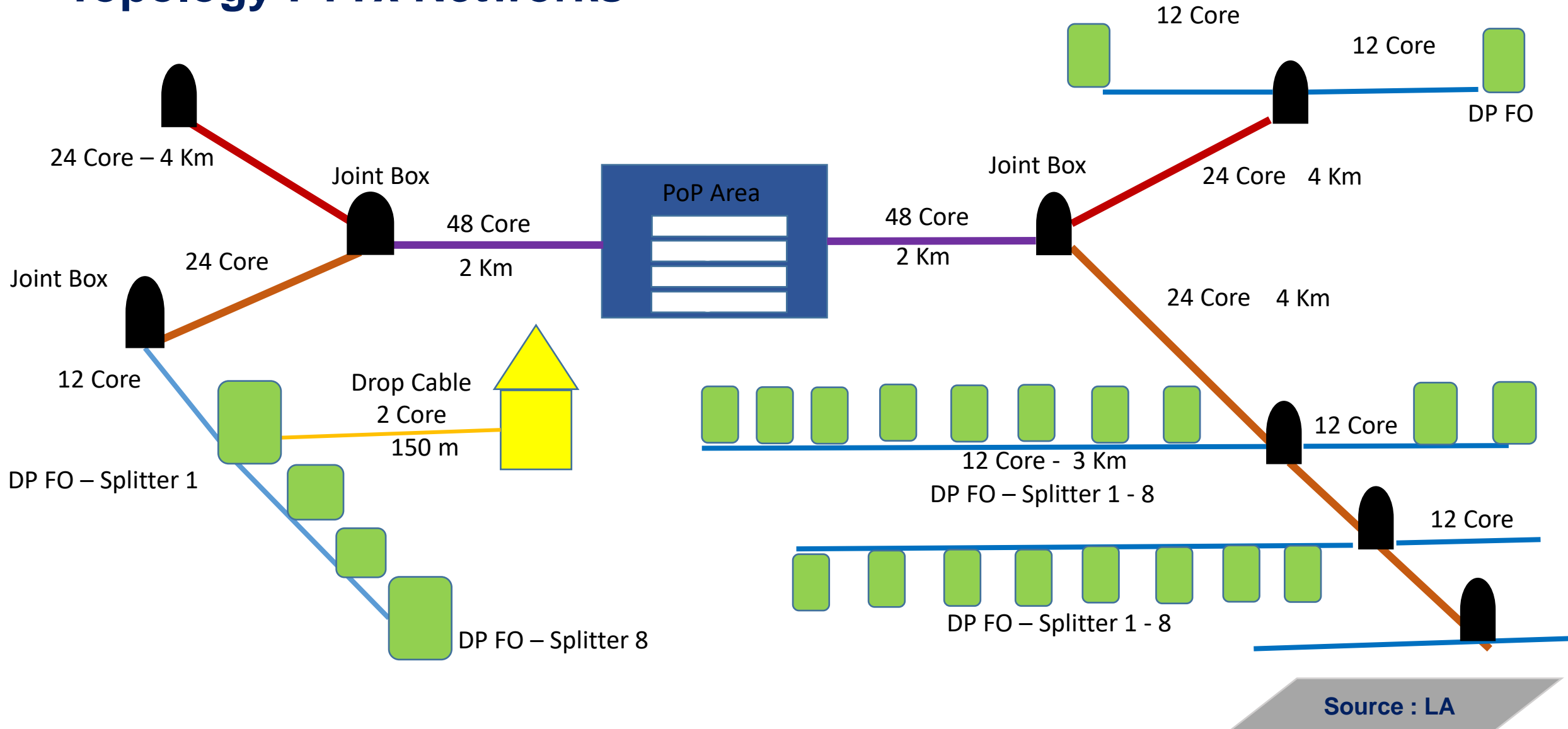
Cable Backbone & Cable Fishbone

- Cable Backbone
 - Capacity : 48/4T, 24/4T
- Cable Fishbone
 - Capacity : 12/2T, 6/1T

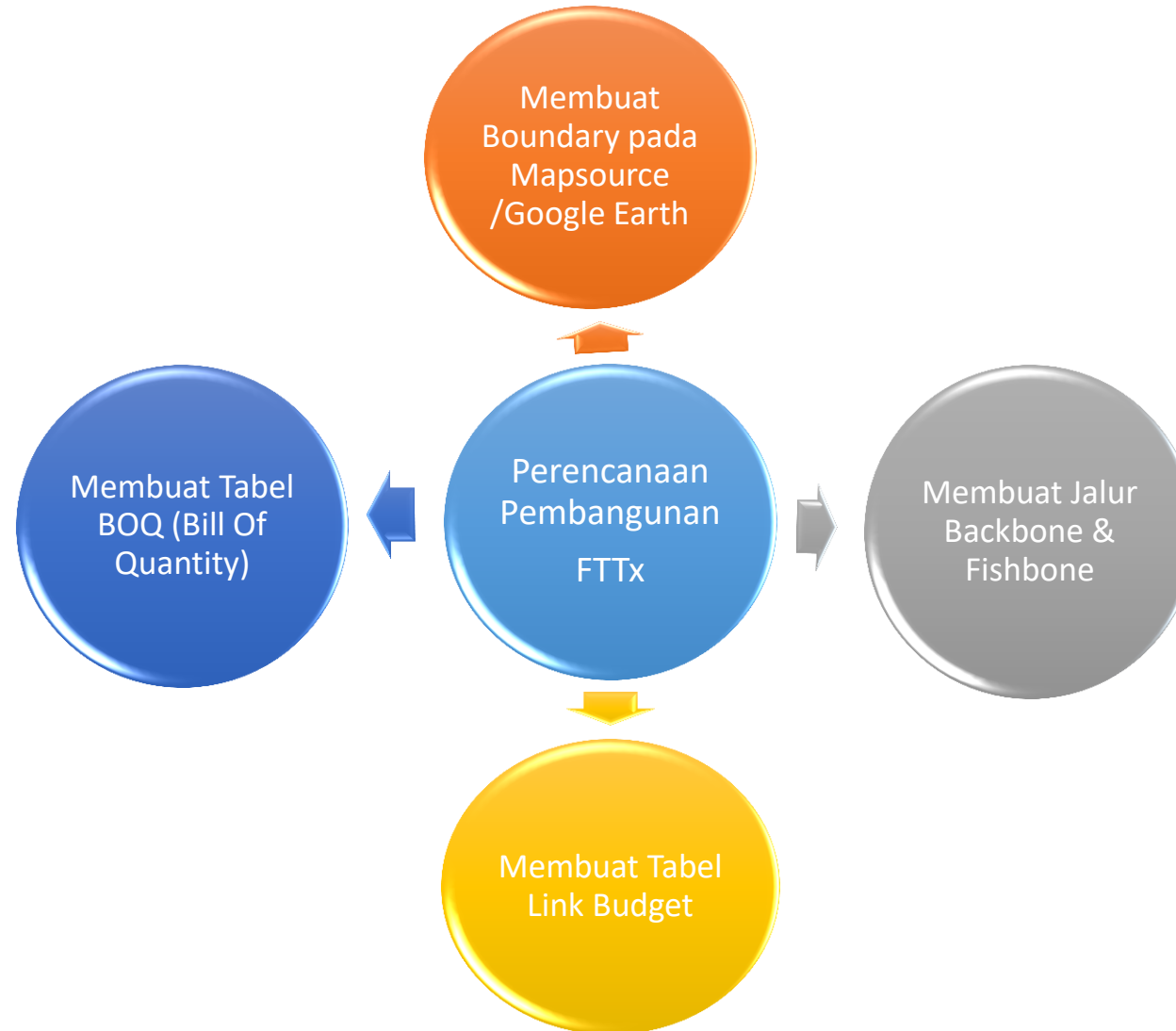
Kombinasi Splitter



Topology FTTx Networks



Perencanaan Pembangunan FTTx



Design Mapping Jaringan FTTx



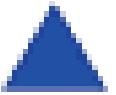
Standar Symbol Design Mapping Jaringan



: PoP (Point of Presence)



: Joint Closure / Main Splitter



: ODP/Splitter



: Pole 7 & 9 Meter



: Kabel Optik 96 Core



: Kabel Optik 48 Core

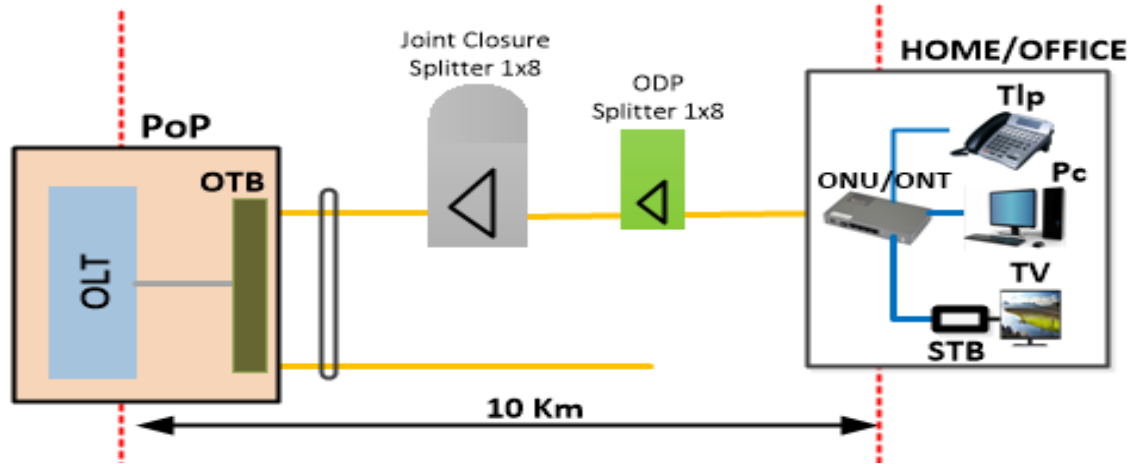


: Kabel Optik 24 Core



: Kabel Optik 12 Core

Link Budget



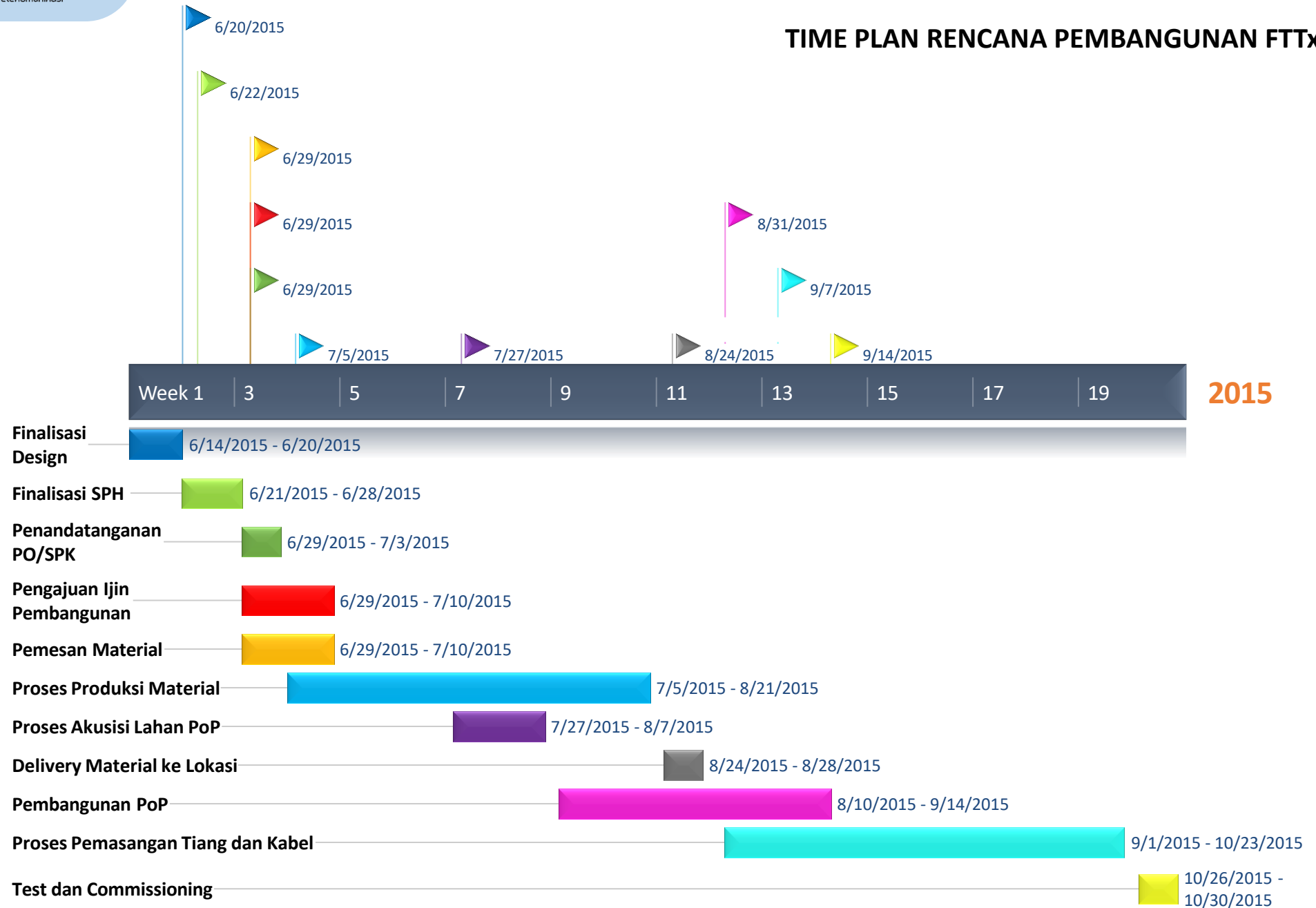
NO	URAIAN		SATUAN	STANDARD REDAMAN (dB)	Volume	TOTAL REDAMAN (dB)
1	Kabel FO		km	0.35	10	3.5
	Splitter	1:2	bh	3.70		
		1:4	bh	7.25		
		1:8	bh	10.38	2	20.76
		1:16	bh	14.10		
		1:32	bh	17.45		
	Konektor	SC/UPC	bh	0.25		
		SC/APC	bh	0.35	4	1.75
	Sambungan	di Kabel Backbone	bh	0.10	2	0.2
		di Kabel Fishbone	bh	0.10	4	0.4
		di Drp Kabel	bh	0.10	8	0.8
TOTAL REDAMAN MURNI						-27.41
TOTAL REDAMAN + TOLERANSI						-28

BOQ (Bill Of Quantity)

NO	Items	Satuan	Volume	Unit Price	Total
A	Material Optical Distribution Networks (ODN)				
1	FO ADSS SS 100 6/1T	meter			
2	FO ADSS SS 100 24/4T	meter			
3	FO ADSS SS 100 48/8T	meter			
4	Joint Closure 24 Cores	unit			
5	Outdoor Enclosure for Splitter (1:16)	unit			
6	PLC Splitter 1*8	unit			
7	Fixing Slack	unit			
8	Pole 7 Meter (4x3x2,5 inch)	unit			
9	Pole 9 Meter (5x4x2,5 inch)	unit			
10	Aksesoris Tiang (Steelband, Deadend/Suspention, Buckle)	set			
B	Material POP				
1	UPS (4000 W)	unit			
2	Battery (12 Volts, 100 Ah)	unit			
3	Rack Battery & Wiring Cable	unit			
4	AC Split ½ PK berikut pemasangan	lot			
5	Material Listrik (Panel 6 Group, Kabel, Power Outlet , Saklar+Lampu 2 set)	lot			
6	OTB 96 Core (Include Pigtail & SC Adapter)	unit			
7	Manageable Switch L2 10G BDCOM S-5612	units			
8	SFP Cooper 1000 Base	pair			
9	SFP Bidi 10G, 1 Pair 40KM	unit			
10	OLT 16 PON, 2TE, 2AC BDCOM P-3616	pcs			
11	ONU 4 FE	unit			
12	Patch Chord SC/SC 10 meter	pcs			
13	UTP Patch Chord 2 meter (CAT 5E, Belden)	unit			
14	Open Rack 42U	Unit			

Time Line Pembangunan FTTx

TIME PLAN RENCANA PEMBANGUNAN FTTx



PoP Equitment Specification



Open Rack 42 U



OLT BDCOM P 3616



Manageable Switch BDCOM S 5612



Manageable Switch BDCOM S 3928 GX



Optical Termination Box



UPS 4000 VA – 48 V & Battery 12 V 100 Ah

ODN Equitment Specification

Joint Closure Type Inline



PLC Splitter



ODP/DPFO



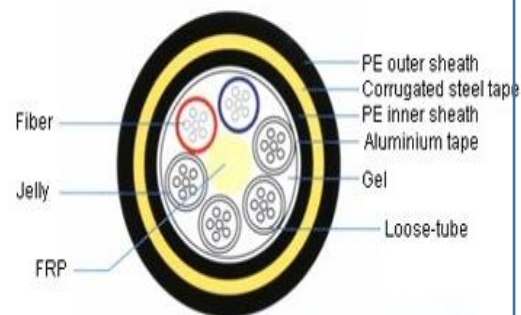
Pedestal



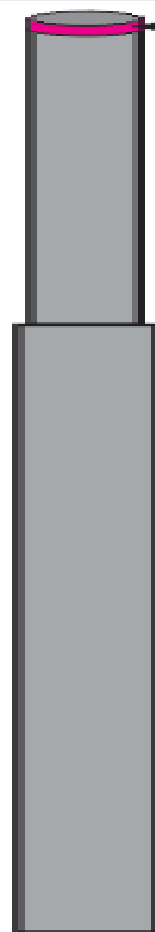
Joint Closure Type Dome



Kabel Optik Type G 652 D



Pole`s & Accessories



Deadend

Braket



Buckle



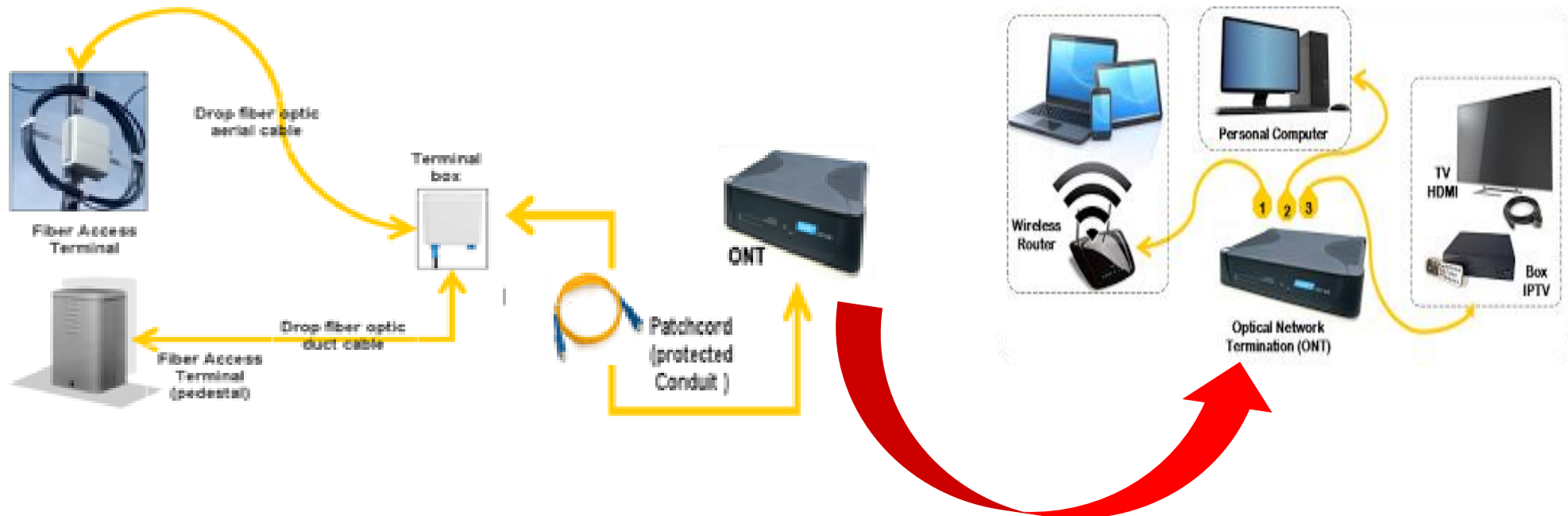
Steelband



Customer Premise Equipments (CPE)

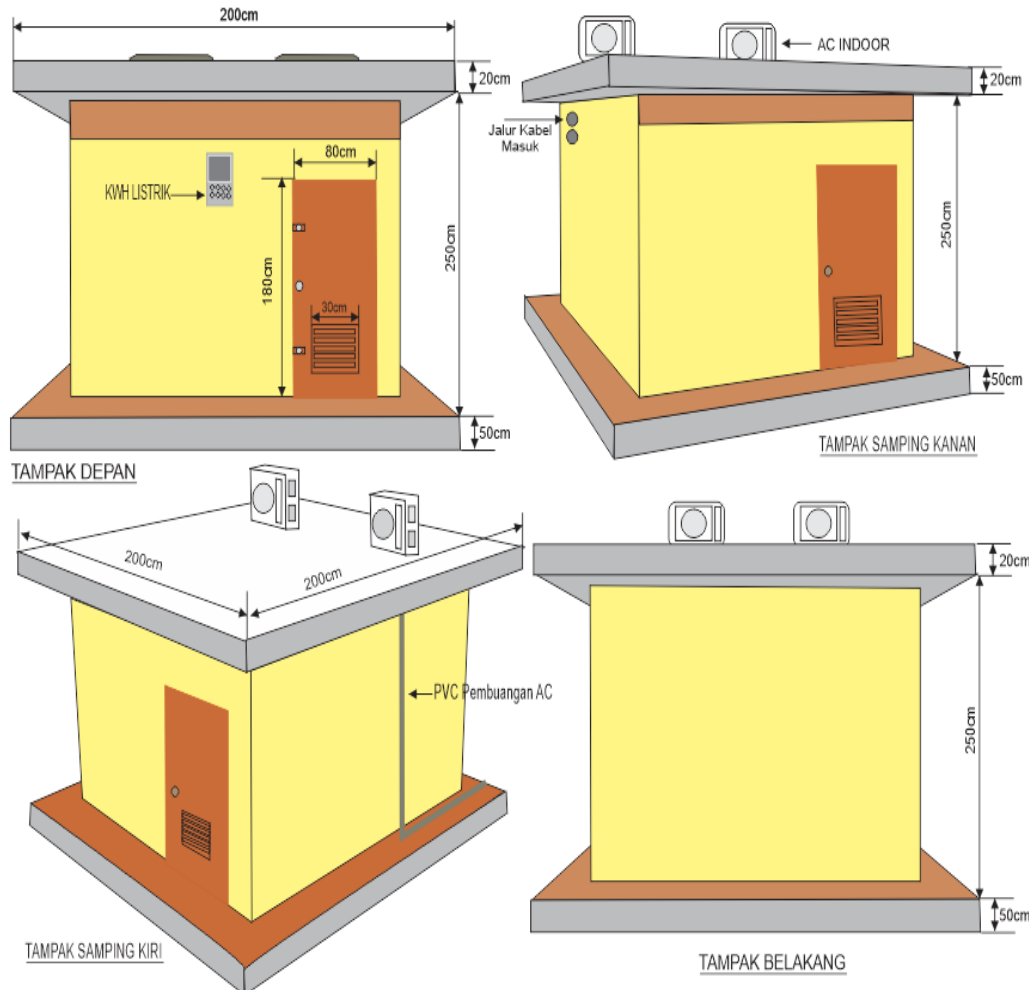
Perangkat yang terpasang di CPE :

- Drop Cable 2 Core Round Type G 657
- Fiber Outlet
- SC Adaptor.
- Patchcord SC-SC panjang 3 mm
- Optical Network Unit (ONU)



PoP (Point of Presence)

PoP (Point of Presence)

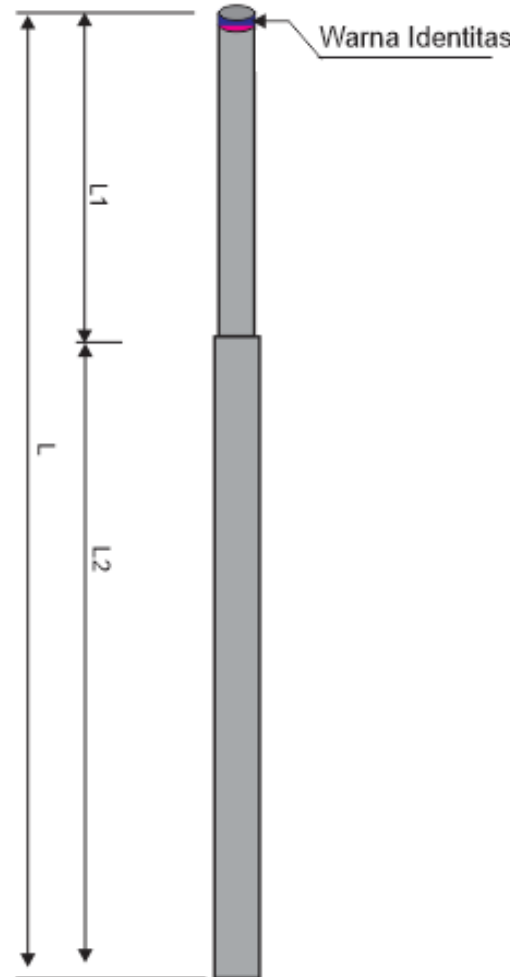


- Bangunan luas 2m x 2m dan tinggi langit-langit 2.5m
- Dinding tembok bata finishing acian dan cat
- Lantai keramik
- Pintu Plat Besi 80 x 180 cm dengan ketebalan plat 2 mm dan Ventilasi udara
- Ventilasi udara 30 x 30 cm dengan Wire Mesh dilapisi Kain Nonwoven (Kain Filter)
- Compressor (Outdoor Unit) dan dipasang Teralis

ODN (Optical Distribution Networks)

Pole`s & Accessories

1 Accessories Pole



2 Standard Pole 7 & 9 m

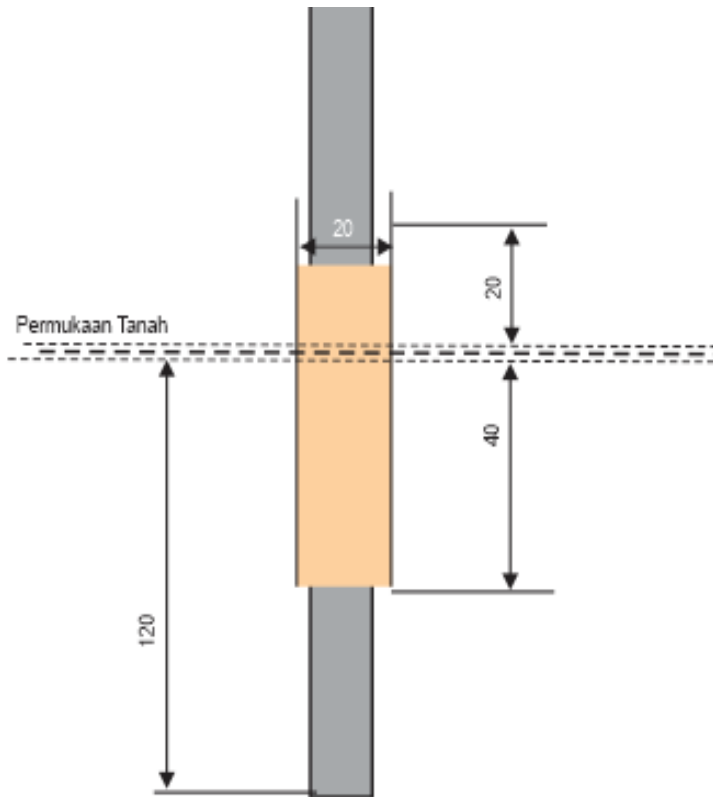
Spesifikasi Tiang

URAIAN	UNIT	T-7	T-9
PANJANG TOTAL (L1+L2)	Meter	7000	9000
PANJANG DIATAS TANAH	Meter	5800	7500
BAGIAN ATAS (L1)			
DIAMETER LUAR	Inchi	3	3
TEBAL PIPA	mm	3	3
PANJANG SECTION	Meter	1.2	3
BAGIAN TENGAH (L2)			
DIAMETER LUAR	Inchi	4	4
TEBAL PIPA	mm	3	3
PANJANG SECTION	Meter	6	6
BEBAN KERJA NORMAL	KG	110	140

Standard Pemasangan Pole 7 & 9 Meter

1

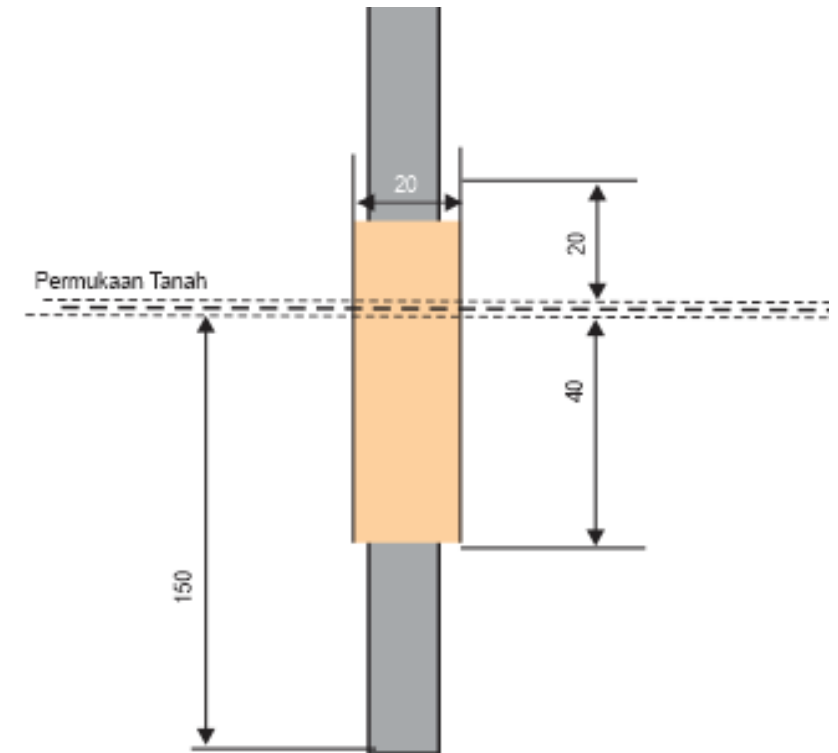
Pole 7 meter



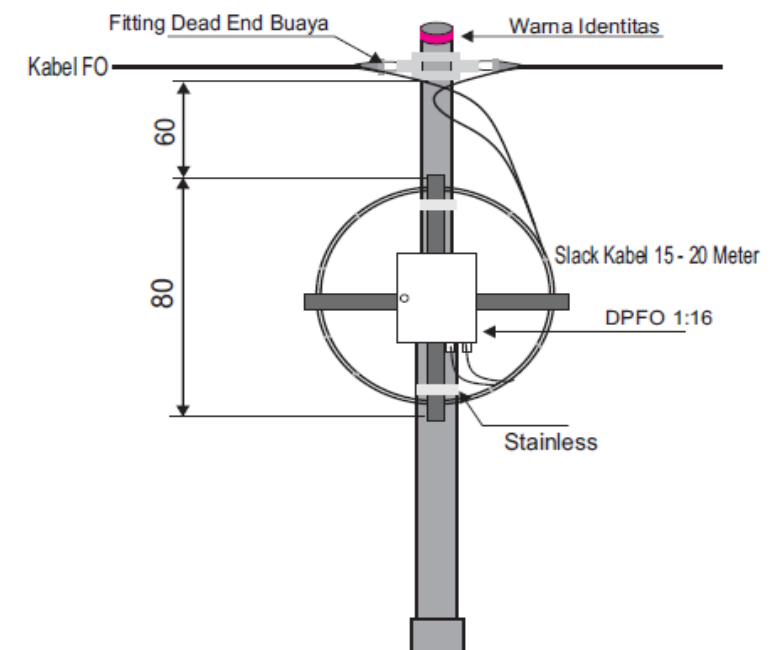
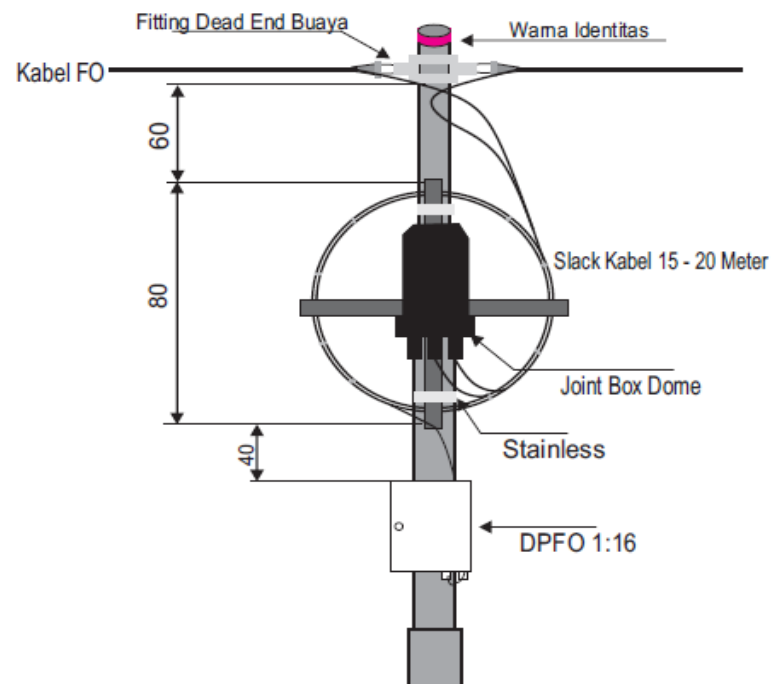
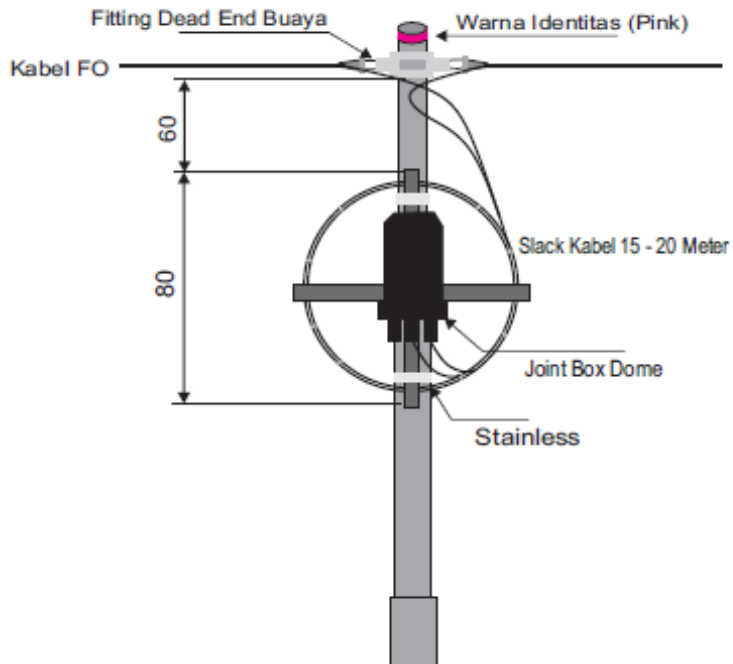
- Pole 9 m ditanam dengan kedalaman 150cm dan Pole 7 m ditanam dengan kedalaman 120 cm, dan sisanya di atas permukaan tanah.
- Pondasi beton Pole sepanjang 60 cm, dengan 40 cm tertanam di dalam tanah, dan 20 cm di permukaan tanah. Diameter beton 20 cm
- Jarak antar tiang maksimal 80m (Span 80)

2

Pole 9 meter

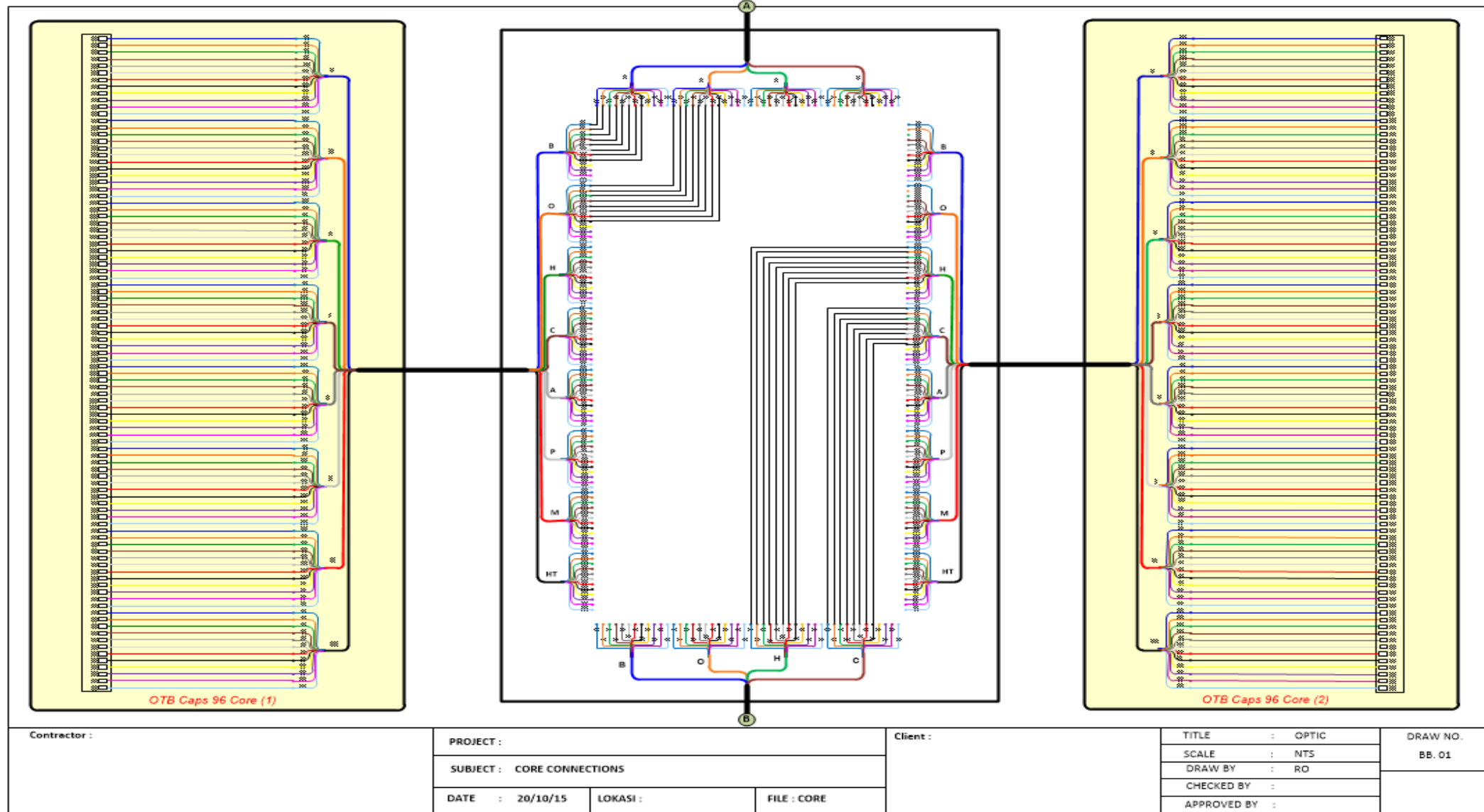


Standard Pemasangan Joint Box and ODP/DPFO

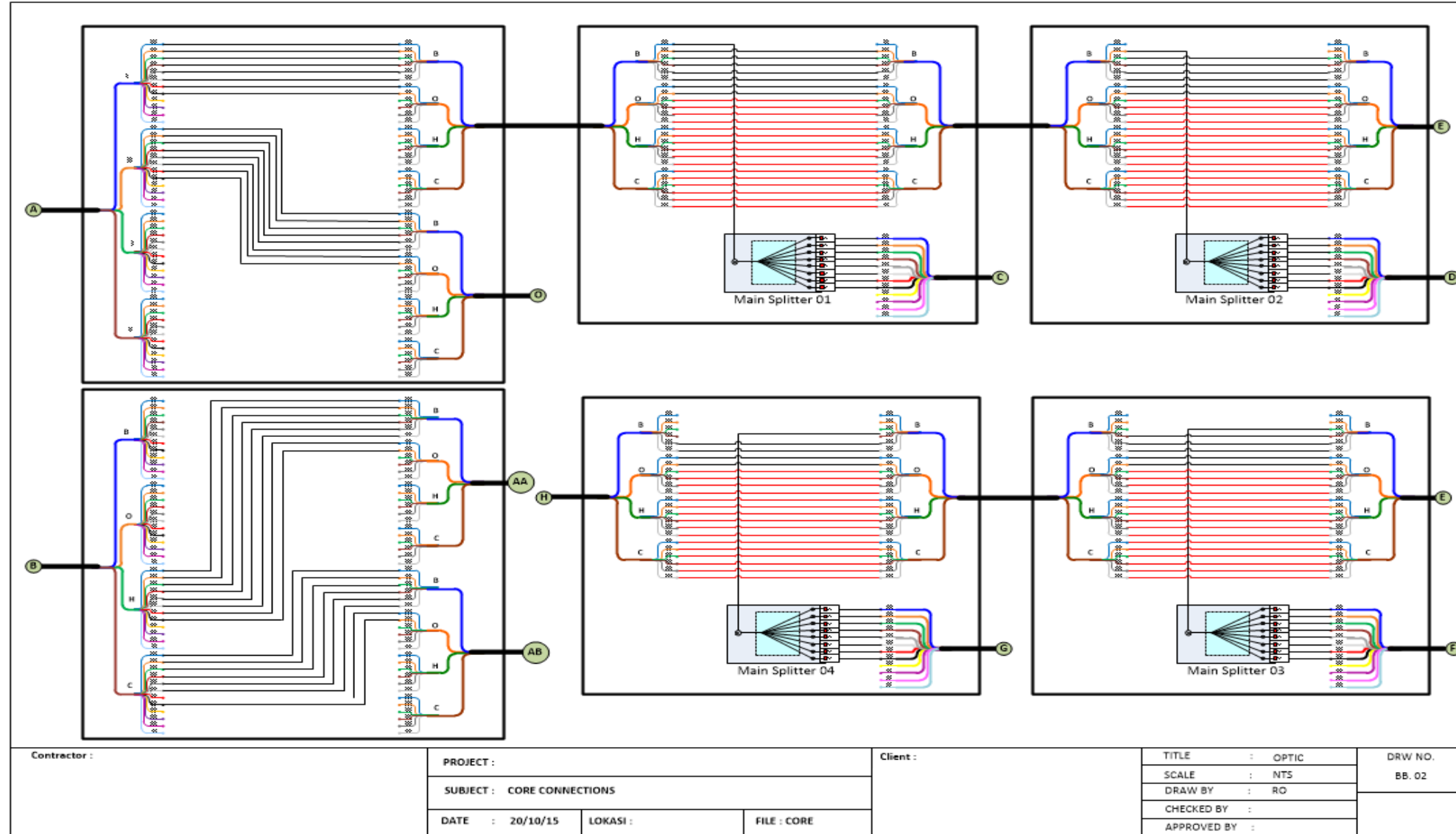


CORE MANAGEMENT

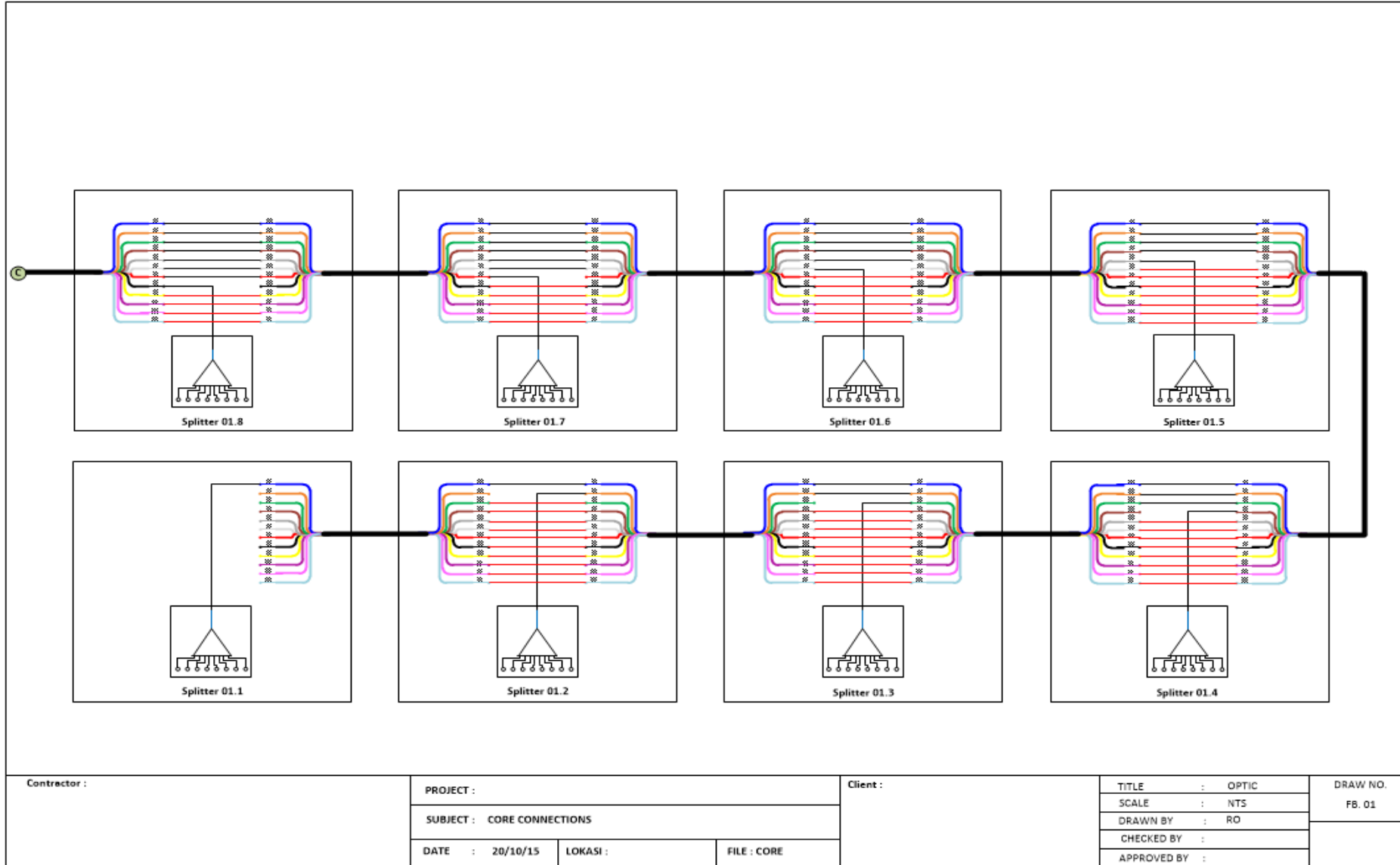
• Point Of Presence (PoP)



• Backbone



• Fishbone



That's all, thanks

