Spec. No. CC/NT/W-TELE/DOM/A01/26/12493			
			Schedule-1: BOQ (Unpriced)
Bill of Quantity for Package-C1: DWDM Equipment Package under 'Augmentation of Telecom Backbone Network and associated infrastructure Project'			
	Bidder's Name & Address :	To, Power Grid Corporation of India Ltd."Saudamini", Plot No.2, Sector-29, Gurgaon, Haryana - 122 001	
Sl. No.	**Item Description**	**Unit**	**Qty.**
A	***Supply and Installation of BackBone Network (for Details ref Appendix C (BoQ)_Table C1 and C2 for Backbone)***		
i	DWDM Equipment for Backbone N/W Optical Layer (C+L)	Lot	1
ii	Transponder/Muxmonder with Optical Channel Protection module (C+L)	Lot	1
iii	Regenrator modules for Backbone N/W(C+L)	Lot	1
B	***Supply and Installation of Metro Network (for Details ref Appendix C (BoQ)_Table C3 and C4 for Metro)***		
i	DWDM Equipment for Intracity N/W Optical Layer (C+L)	Lot	1
ii	Transponder/Muxmonder with Optical Channel Protection module (C+L)	Lot	1
iii	Regenrator modules for Backbone N/W(C+L)	Lot	1
C	**Supply and Installation of Pluggable 100G and 400G**		
i	400G QSFP-DD LR4	No.	216
ii	400G QSFP-DD FR4	No.	216
iii	400G QSFP-DD DR4	No.	110
iv	100G GREY QSFP(ETH 100G BASE-LR4)	No.	393
v	100G GREY QSFP (ETH 100G BASE-ER4)	No.	95
vi	100G GREY QSFP (ETH 100G BASE-FR1)	No.	200
vii	100G GREY QSFP (ETH 100G BASE-CWDM4)	No.	95
viii	100G GREY QSFP (ETH 100G BASE-LR1)	No.	173
D	**Supply and Installation of Cabinet (for base equipment mentioned at 'A' & 'B' above)**	Lot	1
E	**Supply and Installation of TMN System (as per section 3 of Technical specifications)**		
i	TMN Hardware & Sofware including SDN Controller for DC	Lot	1
ii	TMN Hardware & Sofware including SDN Controller for DR	Lot	1
iii	All other Hardware & Sofware for DCN Network	Lot	1
F	**Supply and Installation of Client Workstations with Client NMS License**		
i	Client Workststion	Nos.	20
ii	Client NMS & SDN License	Nos.	20

G	**Supply and Installation of Craft Terminals**	Nos.	20
H	**Supply and Installation of Test Equipment (As per TS)**		
i	Ethernet Tester	Nos.	7
ii	ODTR	Nos.	20
iii	Fiber Inspection Probe	Nos.	10
I	**Training**		
i	Expert level Training at Manufacturer's Works	Mandays	100
ii	Training at Employer's Office	Mandays	100
J	**Manpower Support (As per TS)**		
i	24x7 Shift Operation (for 36 Man-Month) for 1st Year as a fixed % of Total Ex-works/CIF price component	%	0.0540%
ii	Day Operation (for 60 Man-Month) for 1st Year as a fixed % of Total Ex-works/CIF price component	%	0.0168%
Note:	From 2nd year onwards till 10th year, the price of Manpower Support Charges for the subsequent years shall be with an annual escalation of 10% per year. The first year shall start from the day contractor deploys manpower for operational support on request of Employer.		
K	**Maintenance Services during defect liability period as per TS**		
	1 Year DLP : minimum % of Total Ex-works/CIF price component	%	3%
L	**Maintenance Services after defect liability period as per TS**		
	1st Year AMC : minimum % of Total Ex-works/CIF price component	%	3.25%
	2nd Year AMC : minimum % of Total Ex-works/CIF price component	%	3.50%
	3rd Year AMC : minimum % of Total Ex-works/CIF price component	%	3.75%
	4th Year AMC : minimum % of Total Ex-works/CIF price component	%	4.00%
	5th Year AMC : minimum % of Total Ex-works/CIF price component	%	4.50%
	6th Year AMC : minimum % of Total Ex-works/CIF price component	%	5.00%
	7th Year AMC : minimum % of Total Ex-works/CIF price component	%	5.50%
	8th Year AMC : minimum % of Total Ex-works/CIF price component	%	6.00%
	9th Year AMC : minimum % of Total Ex-works/CIF price component	%	6.50%
Note:			
i	The bidder shall provide the detailed Bill of Material (BoM) including breakup of LOT items, stating all component, their quantity etc.		
ii	Route: Table_C1_Route_Backbone Part 1& Table_C1_Route_Backbone Part 2 Route Details with fiber parameters		
iii	Nodes highlighted in yellow represent Add/Drop sites and are the only permissible locations for regeneration and equalization. No other nodes are authorized for these functions. For remaining sites bidder shall cosider 2 directions sites as ILA and sites having more than 2 directions as ROADM sites without add-drop struture.		
iv.	Bidders are not allowed to add additional locations to place Amplifier(ILA), other than the locations provided in the Appendix-C of TS, Volume-II		

v	Table_C2_Traffic Matrix_Backbon with Route Details
vi	Table_C3_Route_Metro with Route Details with fiber parameters
vii	Table_C4_Traffic Matrix_Metro
viii	In case additional quantities, over and above the quantities estimated by the Contractor in BOM are required for successful completion of the scope of work as per Technical Specification, the contractor shall execute additional quantities of these items for which no additional payment shall be made over and above the lumpsum bid price (unless the scope of work is changed by the Employer).
ix	AMC for BackBone Network(A),Metronetwork(B),Pluggable(C),Cabinet(D),TMN System (E),Client Workstations (F), Craft Terminal(G) for 9 years
x	AMC for Test Equipment (H) for 5 years
xi	Bidder has to offer hardware for Site as per the number of direction mentioned in the network topology.
xii	All Sites in Backbone shall support DC power supply.
xiii	Metro network shall support AC/DC power supply as requested in Table_C3_Route_Metro
xiv	Bidders are not allowed to propose any additional locations for installation of equipment's other than those specified in Appendix-C of TS. Bid shall be rejected in case any Bidder proposes additional locations other than those specified in Appendix-C_BoQ of Technical Specification.

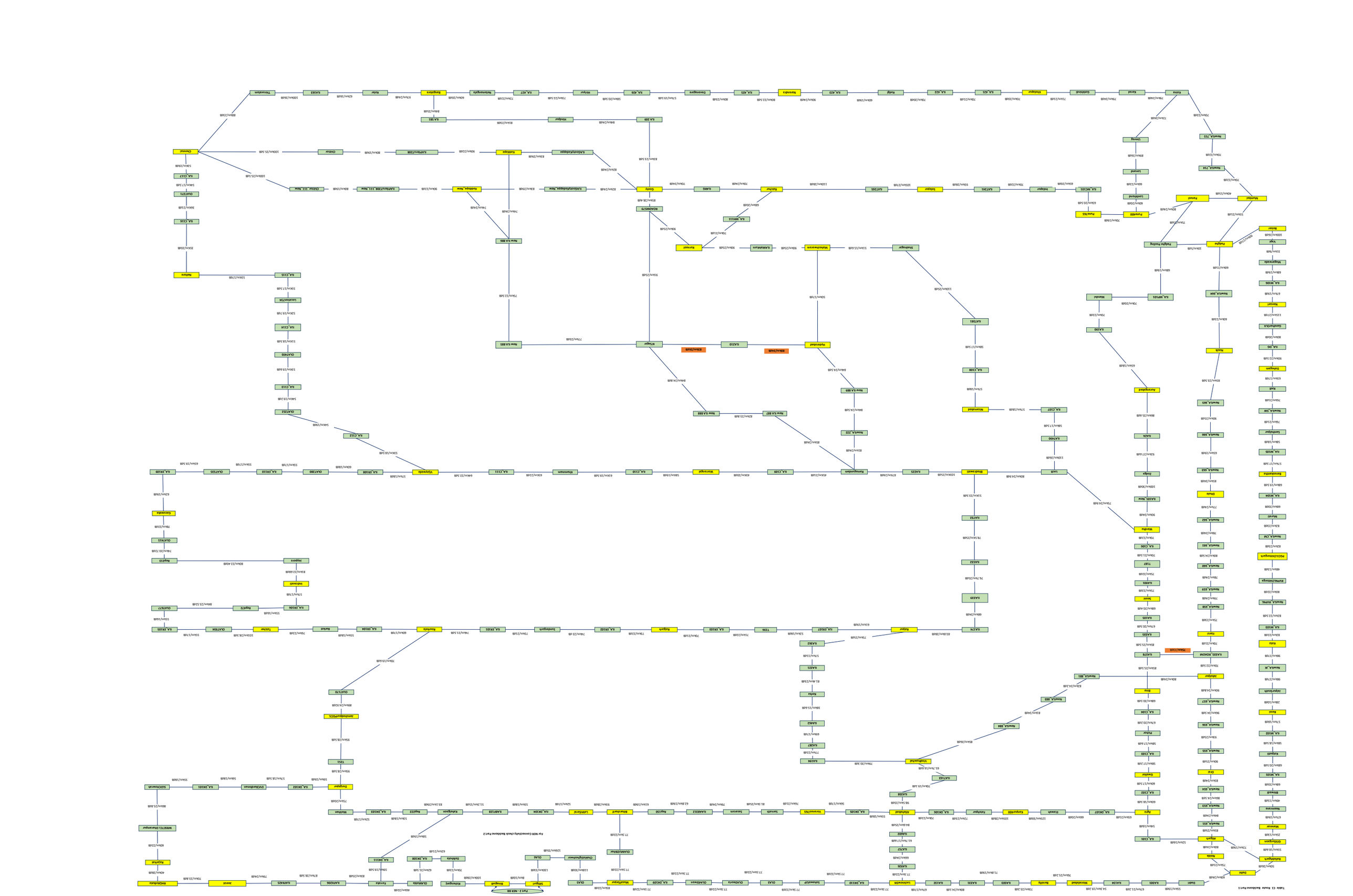


Table C1 Node Backbone Part 1
Duke
Duke
Nicole
Nicole
Elizabeth
Elizabeth
Christopher
Christopher
Adam
Adam
Jason
Jason
Matthew
Matthew
Samantha
Samantha
Joshua
Joshua
Amanda
Amanda
Brandon
Brandon
Stephanie
Stephanie
Daniel
Daniel
Kevin
Kevin
Michael
Michael
Jennifer
Jennifer
Robert
Robert
Ashley
Ashley
Tyler
Tyler
Megan
Megan
Justin
Justin
Brittany
Brittany
Andrew
Andrew
Kimberly
Kimberly
Nicholas
Nicholas
Heather
Heather
Eric
Eric
Melissa
Melissa
Ryan
Ryan
Kelly
Kelly
Sarah
Sarah
Cristina
Cristina
Kyle
Kyle
Kristopher
Kristopher
Kristen
Kristen
Kenneth
Kenneth
Kathleen
Kathleen
Steven
Steven
Jessica
Jessica
Timothy
Timothy
Laura
Laura
Jeffrey
Jeffrey
Amber
Amber
Gregory
Gregory
Rebecca
Rebecca
Brian
Brian
Stephen
Stephen
Larry
Larry
Scott
Scott
Frank
Frank
Donna
Donna
Raymond
Raymond
Carol
Carol
Ruth
Ruth
Sharon
Sharon
Michelle
Michelle
Laura
Laura
Sandra
Sandra
Dorothy
Dorothy
Lisa
Lisa
Nancy
Nancy
Karen
Karen
Betty
Betty
Helen
Helen
Sandra
Sandra
Donna
Donna
Carol
Carol
Ruth
Ruth
Sharon
Sharon
Michelle
Michelle
Laura
Laura
Sarah
Sarah
Kimberly
Kimberly
Deborah
Deborah
Jessica
Jessica
Shirley
Shirley
Cynthia
Cynthia
Angela
Angela
Melissa
Melissa
Brenda
Brenda
Amy
Amy
Anna
Anna
Rebecca
Rebecca
Virginia
Virginia
Kathleen
Kathleen
Pamela
Pamela
Martha
Martha
Debra
Debra
Amanda
Amanda
Stephanie
Stephanie
Carolyn
Carolyn
Christine
Christine
Marie
Marie
Janet
Janet
Catherine
Catherine
Frances
Frances
Ann
Ann
Joyce
Joyce
Diane
Diane
Alice
Alice
Julie
Julie
Heather
Heather
Teresa
Teresa
Doris
Doris
Gloria
Gloria
Evelyn
Evelyn
Jean
Jean
Cheryl
Cheryl
Mildred
Mildred
Katherine
Katherine
Joan
Joan
Ashley
Ashley
Judith
Judith
Rose
Rose
Janice
Janice
Kelly
Kelly
Nicole
Nicole
Judy
Judy
Christine
Christine
Kathy
Kathy
Theresa
Theresa
Beverly
Beverly
Denise
Denise
Tammy
Tammy
Irene
Irene
Jane
Jane
Lori
Lori
Marilyn
Marilyn
Kathryn
Kathryn
Louise
Louise
Sara
Sara
Anne
Anne
Jacqueline
Jacqueline
Wanda
Wanda
Madison
Madison
Ava
Ava
Emma
Emma
Olivia
Olivia
Sophia
Sophia
Isabella
Isabella
Mia
Mia
Charlotte
Charlotte
Amelia
Amelia
Harper
Harper
Evelyn
Evelyn
Abigail
Abigail
Emily
Emily
Elizabeth
Elizabeth
Mason
Mason
Logan
Logan
Lucas
Lucas
Oliver
Oliver
Ethan
Ethan
Aiden
Aiden
Jackson
Jackson
Sebastian
Sebastian
Jack
Jack
Owen
Owen
Daniel
Daniel
Henry
Henry
Muhammad
Muhammad
Alexander
Alexander
Michael
Michael
Benjamin
Benjamin
Samuel
Samuel
David
David
Joseph
Joseph
John
John
James
James
William
William
Noah
Noah
Liam
Liam
Jacob
Jacob
Mason
Mason
Ethan
Ethan

Table_C1_Route_Backbone Part 2

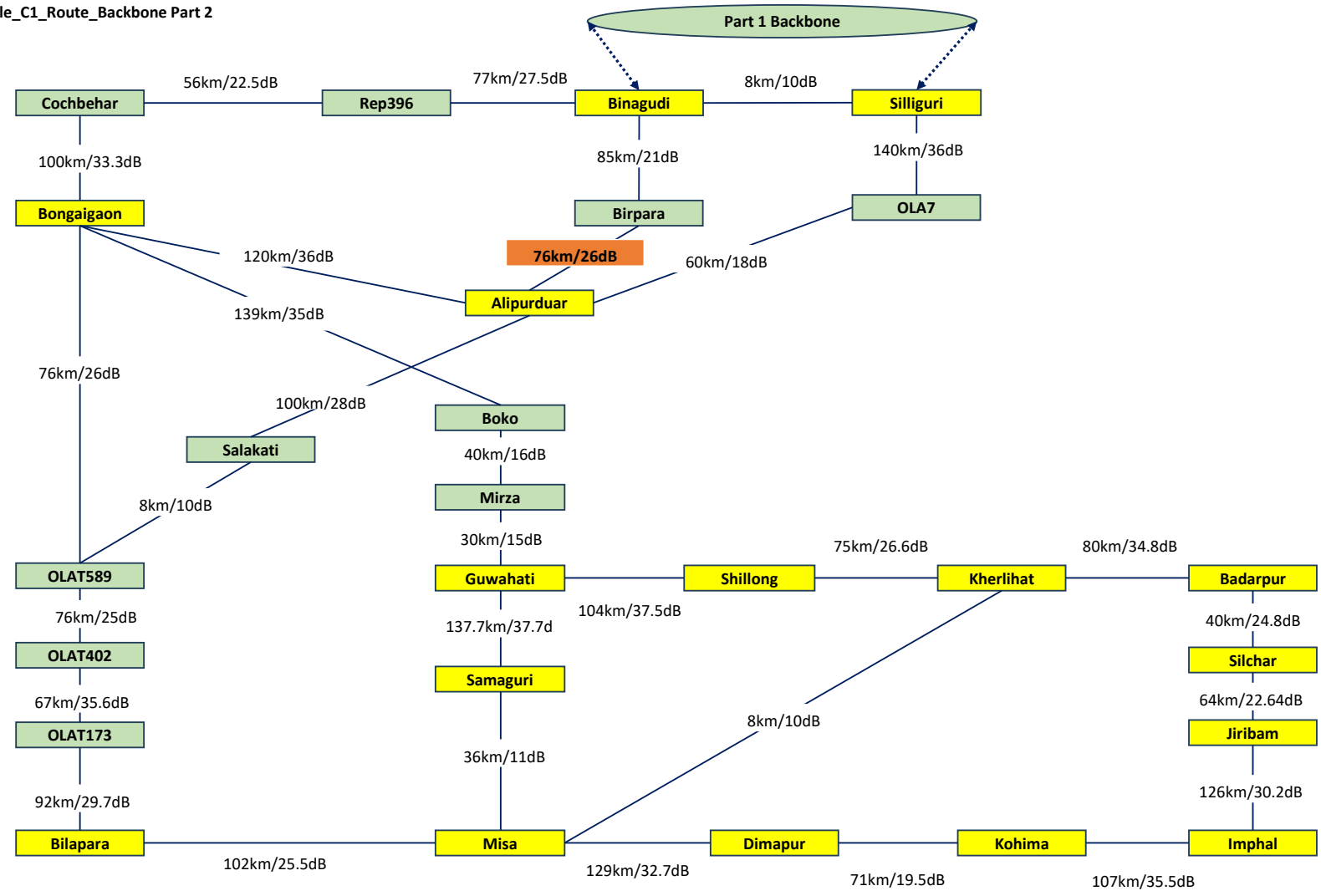
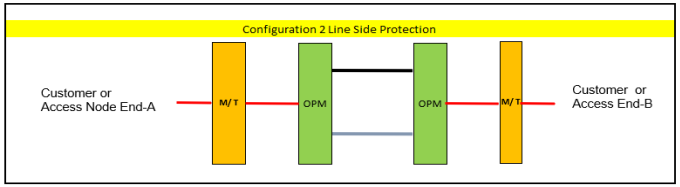


Table C2 Traffic Matrix Backbone

Backbone Traffic Matrix						Client Interface	
S. No.	END A	END B	Capacity Tbps (Line Side 1+1)	Capacity Per Band	Transponder Band Required	400G	100G
1	Delhi	Chennai	18.4	9.2	C-Band	16	28
				9.2	L-Band	16	28
2	Delhi	Mumbai	6	3	C-Band	5	10
				3	L-Band	5	10
3	Mumbai	Chennai	12	6	C-Band	11	16
				6	L-Band	11	16
4	Guwahati	Chennai	3.4	1.7	C-Band	3	5
				1.7	L-Band	3	5
5	Guwahati	Mumbai	3.2	1.6	C-Band	2	8
				1.6	L-Band	2	8
6	Mumbai	Pune400	1.5	0.8	C-Band	1	4
				0.7	L-Band	1	3
7	Hyderabad	Chennai	1.5	0.8	C-Band	1	4
				0.7	L-Band	1	3
8	Delhi	Imphal	0.5	0.4	C-Band	1	0
				0.1	L-Band	0	1
9	Mumbai	Bangalore	1	0.5	C-Band	1	1
				0.5	L-Band	1	1
10	Hyderabad	Mumbai	1.5	0.8	C-Band	1	4
				0.7	L-Band	1	3
11	Hyderabad	Pune400	1	0.5	C-Band	1	1
				0.5	L-Band	1	1
12	Mumbai	RHQKolkata	1	0.5	C-Band	1	1
				0.5	L-Band	1	1
13	Delhi	RHQKolkata	1	0.5	C-Band	1	1
				0.5	L-Band	1	1

Route	Route	
Route	Main & Protection Path for Backbone Traffic Matrix For Both C & L Band	
Delhi-Chennai	Main	Delhi-Aligarh-Bina-wardha-LocB-Maheshwaram-gooty-kaddapa_New-Chittor_111_New-Chennai
	Protection	Delhi-Dadri-Lucknow-Allahabad-Vindhyachal-Raipur-Bhadrawati-Ramagundam-Vijaywada-Nellore-Chennai
Delhi-Mumbai	Main	Delhi-Kota-Boiser-Padge-Mumbai
	Protection	Delhi-Orai-Jabalpur-Nasik-Padge-Padge Pooling-Panvel-Mumbai
Mumbai-Chennai	Main	Mumbai-Pune765-Raichur-Gooty-Kaddapa-Chittor-Chennai
	Protection	Mumbai-Koina-Narendra-Bangalore-Kolr-Chennai
Guwahati-Chennai	Main	Chennai-Chittor-Kaddapa-NewILA886-N'Sagar-Ramagundam-Bhadrawati-Raipur-Vindhyachal-Allahabad-Lucknow-Muzzafarpur-Silliguri-Alipurduar-Guwahati
	Protection	Chennai-Nellore-Vijaywada-Guzuwaka-Talchar-Rourkela-Durgapur-Kahalgaon-Farakka-Binagudi-Cochbehar-Bongaigaon-Bilapara-Misa-Samaguri-Guwahati
Guwahati-Mumbai	Main	Guwahati-Alipurduar-Silliguri-Muzzaffarpur-Biharshriff-Allahabad-Vindyachal-Jabalpur-Nasik-Padge-Mumbai
	Protection	Guwahati-Samaguri-Misa-Bilapara-Bongaigaon-Cochbehar-Binagudi-Farakka-Kahalgaon-Durgapur-Rourkela-Raigarh-Raipur-Bhadrawati-Wardha-Aurangabad-Padge Pooling-Mumbai
Mumbai-Pune400	Main	Mumbai-Pune400
	Protection	Mumbai-Koina-Lonikhand-Pune400
Hyderabad-Chennai	Main	Hyderabad-N'sagar-NewILA886-Kaddapa-Chittor-Chennai
	Protection	Hyderabad-MaheshwaramKurnool-ROADM579-Gooty-Hindpur-Chennai
Delhi-Imphal	Main	Delhi-Dadri-Lucknow-Muzzafarpur-Silliguri-Alipurduar-Guwahati-Shillong-Badarpur-Silchar-Imphal
	Protection	Delhi-Ballabhghar-Aligarh-Agra-Allahabad-Biharshirff-Kahalgaon-Farakka-Binagudi-Cochbehar-Bongaigaon-Bilapara-Misa-Dimapur-Imphal
Mumbai-Bangalore	Main	Mumbai-Koina-Narendra-Bangalore
	Protection	Mumbai-Pune765-Raichur-Gooty-Hindpur-Bangalore
Hyderabad-Mumbai	Main	Mumbai-Pune-400-Pune765-Raichur-ILA_MH111-Kurnool-Maheshwaram-Hyderabad
	Protection	Mumbai-Padge-Aurangabad-Wardha-Bhadrawati-Ramagundam-NewILA_222-Hyderabad
Hyderabad-Pune400	Main	Pune400-Pune765-Raichur-ILA_MH111-Kurnool-Maheshwaram-Hyderabad
	Protection	Pune400-Mumbai-Padge-Aurangabad-Wardha-Bhadrawati-Ramagundam-NewILA_222-Hyderabad
Mumbai-RHQKolkata	Main	RHQKolkata-Jeerat-Faraka-Silliguri-Muzzaffarpur-Biharshriff-Allahabad-Vindyachal-Jabalpur-Nasik-Padge-Mumbai
	Protection	RHQKolkata-Rajarhat-Durgapur-Rourkela-Raigarh-Raipur-Bhadrawati-Wardha-Aurangabad-Padge Pooling-Mumbai
Delhi-RHQKolkata	Main	Delhi-Dadri-Lucknow-Muzzafarpur-Silliguri-Jeerat-RHQKolkata
	Protection	Delhi-Ballabhghar-Aligarh-Agra-Allahabad-Biharshirff-Durgapur-Rajarhat-RHQKolkata

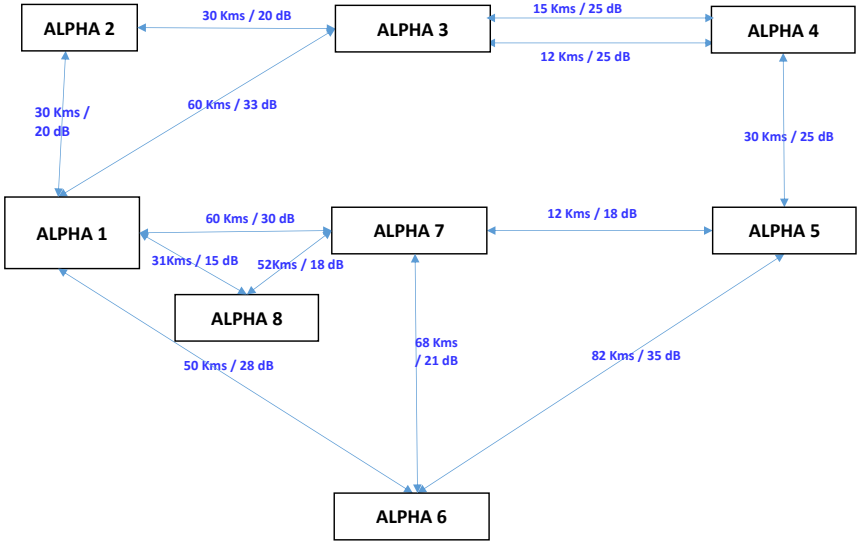
Note:	All the Traffic is Line side protected.
	Bidder has to offer C-Band & L-band Transponder as requested in the Traffic Matrix on Day 1
	Backbone Protection Scenerio:



Note: All Sites in Backbone shall support DC power supply.

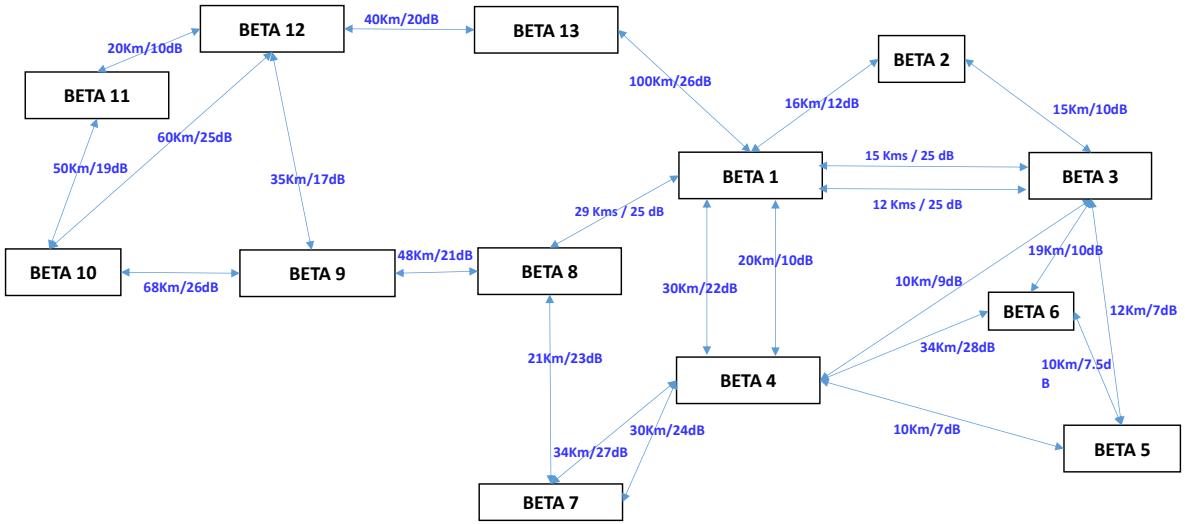
Table_C3_Route_Metro

1. Alpha Metro Network



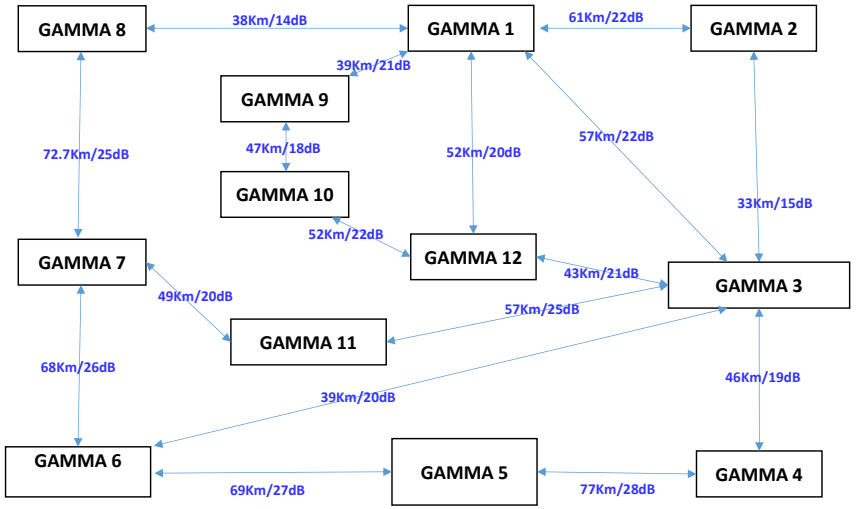
Site	Power Supply Module Required
ALPHA 1	DC Power Supply module Required
ALPHA 2	AC Power Supply module Required
ALPHA 3	AC Power Supply module Required
ALPHA 4	AC Power Supply module Required
ALPHA 5	DC Power Supply module Required
ALPHA 6	AC Power Supply module Required
ALPHA 7	AC Power Supply module Required
ALPHA 8	AC Power Supply module Required

2. Beta Metro Network



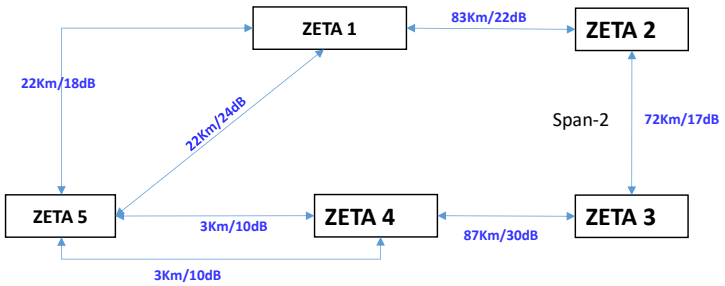
Site	Power Supply Module Required
Beta 1	DC Power Supply module Required
Beta 2	AC Power Supply module Required
Beta 3	AC Power Supply module Required
Beta 4	AC Power Supply module Required
Beta 5	DC Power Supply module Required
Beta 6	AC Power Supply module Required
Beta 7	AC Power Supply module Required
Beta 8	AC Power Supply module Required
Beta 9	AC Power Supply module Required
Beta 10	AC Power Supply module Required
Beta 11	AC Power Supply module Required
Beta 12	**DC Power Supply module Required**
Beta 13	**DC Power Supply module Required**

3. Gamma Metro Network



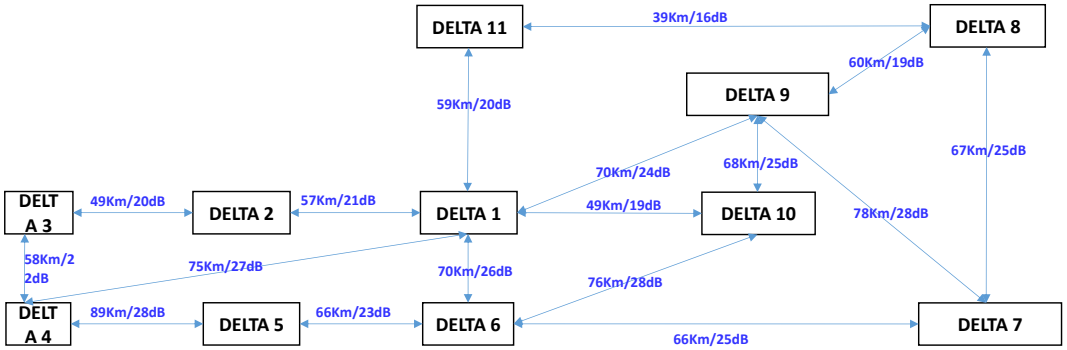
Site	Power Supply Module Required
Gamma 1	DC Power Supply module Required
Gamma 2	AC Power Supply module Required
Gamma 3	AC Power Supply module Required
Gamma 4	AC Power Supply module Required
Gamma 5	DC Power Supply module Required
Gamma 6	AC Power Supply module Required
Gamma 7	AC Power Supply module Required
Gamma 8	AC Power Supply module Required
Gamma 9	AC Power Supply module Required
Gamma 10	AC Power Supply module Required
Gamma 11	AC Power Supply module Required
Gamma 12	**DC Power Supply module Required**

4. Zeta Metro Network



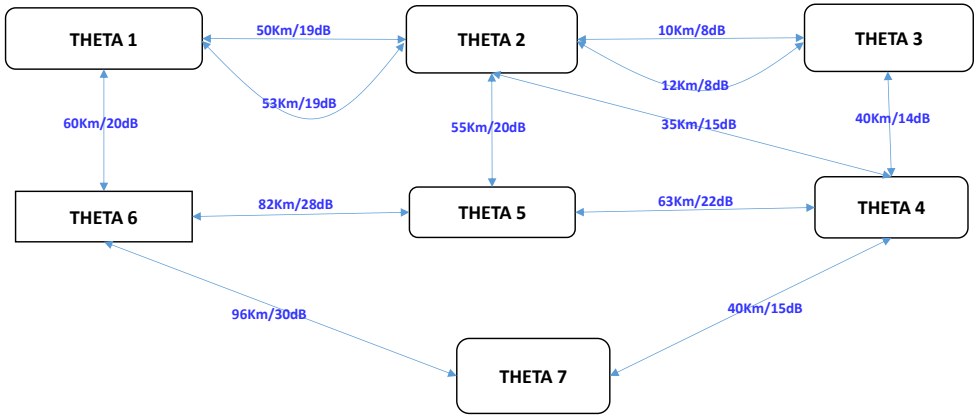
Site	Power Supply Module Required
Zeta 1	DC Power Supply module Required
Zeta 2	AC Power Supply module Required
Zeta 3	AC Power Supply module Required
Zeta 4	AC Power Supply module Required
Zeta 5	AC Power Supply module Required

5. Delta Metro Network



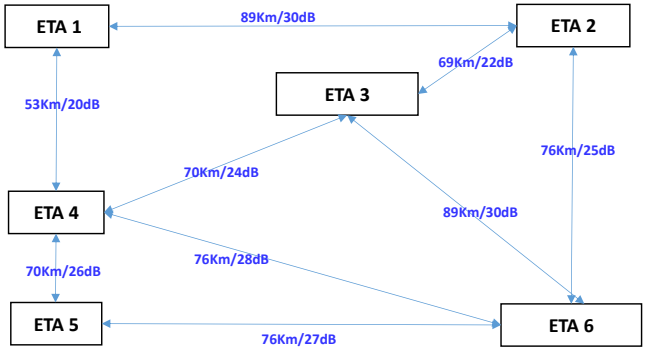
Site	Power Supply Module Required
DELTA1	DC Power Supply module Required
DELTA2	AC Power Supply module Required
DELTA3	AC Power Supply module Required
DELTA4	AC Power Supply module Required
DELTA5	AC Power Supply module Required
DELTA6	AC Power Supply module Required
DELTA7	AC Power Supply module Required
DELTA8	AC Power Supply module Required
DELTA9	AC Power Supply module Required
DELTA10	DC Power Supply module Required
DELTA11	AC Power Supply module Required

6. Theta Metro Network



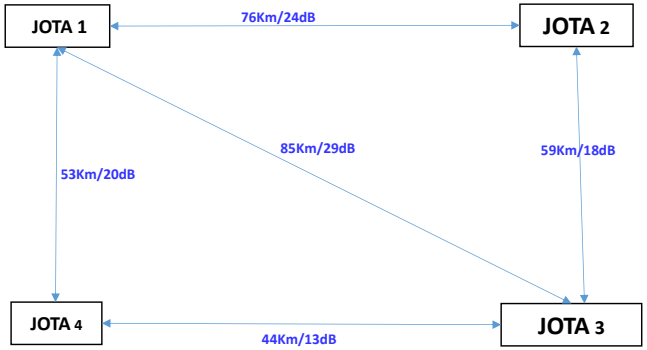
Site	Power Supply Module Required
Theta 1	DC Power Supply module Required
Theta 2	AC Power Supply module Required
Theta 3	AC Power Supply module Required
Theta 4	AC Power Supply module Required
Theta 5	DC Power Supply module Required
Theta 6	AC Power Supply module Required
Theta 7	AC Power Supply module Required

7. ETA Metro Network



Site	Power Supply Module Required
ETA 1	DC Power Supply module Required
ETA 2	AC Power Supply module Required
ETA 3	AC Power Supply module Required
ETA 4	DC Power Supply module Required
ETA 5	AC Power Supply module Required
ETA 6	AC Power Supply module Required

8. JOTA Metro Network



Site	Power Supply Module Required
LOTA 1	DC Power Supply module Required
LOTA 2	AC Power Supply module Required
LOTA 3	AC Power Supply module Required
LOTA 4	DC Power Supply module Required

Table_C4_Traffic Matrix_Metro

Metro Traffic Matrix					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	ALPHA 1	ALPHA 2	2.6	C-Band	5	6
			2.6	L-Band	5	6
2	ALPHA 1	ALPHA 3	2.6	C-Band	5	6
			2.5	L-Band	5	5
3	ALPHA 1	ALPHA 4	2.5	C-Band	5	5
			2.5	L-Band	5	5
4	ALPHA 1	ALPHA 5	2.5	C-Band	5	5
			2.5	L-Band	5	5
5	ALPHA 1	ALPHA 6	2.5	C-Band	5	5
			2.5	L-Band	5	5
6	ALPHA 1	ALPHA 7	2.5	C-Band	5	5
			2.5	L-Band	5	5
7	ALPHA 1	ALPHA 8	2.5	C-Band	5	5
			2.5	L-Band	5	5
					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	BETA 1	BETA 2	1.2	C-Band	2	4
			1.2	L-Band	2	4
2	BETA 1	BETA 3	1.2	C-Band	2	4
			1.2	L-Band	2	4
3	BETA 1	BETA 4	1.1	C-Band	2	3
			1.1	L-Band	2	3
4	BETA 1	BETA 5	1.2	C-Band	2	4
			1.2	L-Band	2	4
5	BETA 1	BETA 6	1.5	C-Band	3	3
			1.5	L-Band	3	3
6	BETA 1	BETA 7	1.2	C-Band	2	4
			1.2	L-Band	2	4
7	BETA 1	BETA 8	1.1	C-Band	2	3
			1.1	L-Band	2	3
8	BETA 1	BETA 9	1.1	C-Band	2	3
			1.1	L-Band	2	3
9	BETA 1	BETA 10	1.2	C-Band	2	4
			1.1	L-Band	2	3
10	BETA 1	BETA 11	1.5	C-Band	3	3
			1.5	L-Band	3	3
11	BETA 1	BETA 12	1.1	C-Band	2	3
			1.1	L-Band	2	3
12	BETA 1	BETA 13	1.1	C-Band	2	3
			1.1	L-Band	2	3

					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	GAMMA 1	GAMMA 2	1.2	C-Band	2	4
			1.2	L-Band	2	4
2	GAMMA 1	GAMMA 3	1.2	C-Band	2	4
			1.2	L-Band	2	4
3	GAMMA 1	GAMMA 4	1.2	C-Band	2	4
			1.2	L-Band	2	4
4	GAMMA 1	GAMMA 5	1.2	C-Band	2	4
			1.2	L-Band	2	4
5	GAMMA 1	GAMMA 6	1.2	C-Band	2	4
			1.2	L-Band	2	4
6	GAMMA 1	GAMMA 7	1.2	C-Band	2	4
			1.2	L-Band	2	4
7	GAMMA 1	GAMMA 8	1.2	C-Band	2	4
			1.2	L-Band	2	4
8	GAMMA 1	GAMMA 9	1.2	C-Band	2	4
			1.2	L-Band	2	4
9	GAMMA 1	GAMMA 10	1.2	C-Band	2	4
			1.2	L-Band	2	4
10	GAMMA 1	GAMMA 11	1.2	C-Band	2	4
			1.2	L-Band	2	4
11	GAMMA 1	GAMMA 12	1	C-Band	2	2
			1	L-Band	2	2

					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	Zeta 1	Zeta 2	0.1	C-Band	0	1
			0.1	L-Band	0	1
2	Zeta 1	Zeta 3	0.1	C-Band	0	1
			0.1	L-Band	0	1
3	Zeta 1	Zeta 4	0.1	C-Band	0	1
			0.1	L-Band	0	1
4	Zeta 1	Zeta 5	0.2	C-Band	0	2
			0.2	L-Band	0	2

					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	DELTA1	DELTA2	0.5	C-Band	1	1
			0.5	L-Band	1	1
2	DELTA1	DELTA3	0.5	C-Band	1	1
			0.5	L-Band	1	1
3	DELTA1	DELTA4	0.5	C-Band	1	1
			0.5	L-Band	1	1
4	DELTA1	DELTA5	0.5	C-Band	1	1
			0.5	L-Band	1	1
5	DELTA1	DELTA6	0.5	C-Band	1	1
			0.5	L-Band	1	1
6	DELTA1	DELTA7	0.5	C-Band	1	1
			0.5	L-Band	1	1
7	DELTA1	DELTA8	0.5	C-Band	1	1
			0.5	L-Band	1	1
8	DELTA1	DELTA9	0.5	C-Band	1	1
			0.5	L-Band	1	1
9	DELTA1	DELTA10	0.5	C-Band	1	1
			0.5	L-Band	1	1
10	DELTA1	DELTA11	0.5	C-Band	1	1
			0.5	L-Band	1	1

					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	Theta 1	Theta 2	0.4	C-Band	1	0
			0.2	L-Band	0	2
2	Theta 1	Theta 3	0.4	C-Band	1	0
			0.2	L-Band	0	2
3	Theta 1	Theta 4	0.5	C-Band	1	1
			0.5	L-Band	1	1
4	Theta 1	Theta 5	0.4	C-Band	1	0
			0.2	L-Band	0	2
5	Theta 1	Theta 6	0.4	C-Band	1	0
			0.2	L-Band	0	2
6	Theta 1	Theta 7	0.4	C-Band	1	0
			0.2	L-Band	0	2

					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	ETA 1	ETA 2	0.7	C-Band	1	3
			0.7	L-Band	1	3
2	ETA 1	ETA 3	0.6	C-Band	1	2
			0.6	L-Band	1	2
3	ETA 1	ETA 4	0.7	C-Band	1	3
			0.7	L-Band	1	3
4	ETA 1	ETA 5	0.6	C-Band	1	2
			0.6	L-Band	1	2
5	ETA 1	ETA 6	0.7	C-Band	1	3
			0.7	L-Band	1	3

					Interface	
S. No.	**END A**	**END B**	**Capacity Tbps (Line Side 1+1)**	**Transponder Band Required**	**400G**	**100G**
1	JOTA 1	JOTA 2	0.1	C-Band	0	1
			0.1	L-Band	0	1
2	JOTA 1	JOTA 3	0.1	C-Band	0	1
			0.1	L-Band	0	1
3	JOTA 1	JOTA 4	0.1	C-Band	0	1
			0.1	L-Band	0	1

Metro Protection Scenerio:

