

CHAPTER- 2
REVISED SCHEDULE OF REQUIREMENT

PACKAGE I : NORTHERN REGION

SOR HEAD I: IP BASED VIDEO SURVEILLANCE WORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SCHEDULE 'A'						
1.	Supply, Installation, Testing, Commissioning and Integration of IP cameras at stations						
(a)	Full HD fixed dome Type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	840				
(b)	Full HD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No	20032				
(c)	Full HD P/T/Z type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No	2428				
(d)	4K UHD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	774				
2.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RPF/GRP Thana/Post						
(a)	VSS Server Hardware etc. and all accessories required for installation purposes for Video recording, Video Analytic and Facial Recognition system as defined in clause 8.2, 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	151				

(b)	PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	No.	153				
(c)	Digital Key-Board (joystick) and all accessories compatible with P/T/Z cameras as defined in clause 8.5 of chapter 8.	No.	153				
(d)	Large Format Display Monitor (40" or Higher) as defined in clause 8.7 of chapter 8.	No.	306				
(e)	Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days as defined in clause 8.3, 8.4 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	Quantities to be specified by the bidder				
(f)	Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation	No.	302				
(g)	Next Generation Firewall (NGFW) as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	0				
(h)	UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	Set	151				
(i)	19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	No.	151				

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(j)	Supply and fixing of furniture for each Workstation quoted under item no. A.2 (b) i.e. one table (Model: Stylo Make: Godrej or superior), and two chairs (Model: PCH-7046A Make: Godrej or superior).	No.	153				
(k)	2 nos. of 2 Ton Split AC (5 star or better) with external controller unit for AC change over for installation at RPF/GRP Thana/Post	Set	151				
3.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RailTel datacenter(s).						
(a)	VSS Server Hardware for Video Management and Facial Recognition database system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	1				
(b)	Core switch as defined in clause 8.12 of chapter 8 along with all optics (SFP/SFP+ as per solution requirement) and all accessories required for their installation	No.	2				
(c)	Type-III switches as Top of the Rack switch in (1+1) as defined in clause 8.10 of chapter 8 and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	No.	Quantities to be specified by the bidder				
(d)	Next Generation Firewall (NGFW) at RailTel Datacenters as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	2				

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(e)	Storage System for recording of alerts, alarms of cameras of analytics and other applications requirement as defined in clause 8.3 and 8.4 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	240				
(f)	EMS in RailTel Datacenters (Gurugram and Secunderabad) as per specification defined in clause 8.23 of chapter 8						
i.	Hardware	Set	2				
ii.	Software	Set	2				
(g)	Nos. of racks proposed to be commissioned in the Data Centre of RailTel under the proposed solution by the bidder. (Please refer to Note-XVII with corrigendum)	Nos.		800000 x8= 640000 0			
4.	Supply, Installation, Testing and commissioning of software (per camera basis) for Video Management, Video recording, Video Analytic and Facial Recognition system (FRS licenses equal to Nos. of 4K UHD cameras) for the server hardware quoted in Item no. A.2(a) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	151				
5.	Supply, Installation, Testing and commissioning of Graphical User Interface based Client Software (per workstation basis) for workstation as quoted in Item no. A.2(b) along with as defined in clause 8.3 of chapter 8.	No.	153				
6.	Supply, Installation, Testing and Commissioning of IT infrastructure and associated items at Railway Stations						
(a)	Supply of Video Recording & Processing Unit for non RPF stations as per specification defined in clause 8.18 of chapter 8						

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i.	For Category C (Sub-urban) plat- forms/stations	No.	Deleted			
ii.	For Category D and E plat- forms/stations	No.	Quantities to be specified by the bidder			
(b)	Type-I switches as defined in clause 8.8 of chapter 8, optics (SFP-BX as defined in clause 8.13 of chapter-8 and quantity as per so- lution requirement & network de- sign defined in clause 3.B of Chap- ter-3) and all accessories required for their installation. Detailed Bill of Material (BoM) shall be pre- pared and submitted along with the Bid as per SOR Note-VII.	No.	4766			
(c)	Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their instal- lation	No.	1961			
(d)	Type-IV switches as defined in clause 8.11 of chapter 8, optics (SFP+ (10KM), SFP+ (40 KM) Single Fiber, SFP+ (350 mtr.), and SFP 1G (10KM) as defined in clause 8.13 of chapter-8 and quanti- ty as per solution requirement) and all accessories required for their installation	No.	302			
(e)	24 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accesso- ries like power strip, MCB, Fantray, Patch Panel, patch chord, pigtails etc. required for their instal- lation	No.	1961			

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(f)	12 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accessories like power strip, MCB, Fantray, Patch Panel, patch chord, pigtails etc. required for their installation	No.	4766				
(g)	Online UPS system, single phase of rating 1KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	3508				
(h)	Online UPS system, single phase of rating 2KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	421				
(i)	MFCE Earth complete with all accessories. (less than 1 Ohm) as per technical specifications defined in chapter 5 of Section-II (Nos. indicates the site of installation)	No.	902				
(j)	ACDB for AC distribution Box with Lock and key arrangements and ISI mark MCBs of various ratings as per site requirements for installation at sites	No.	1803				
(k)	Panic Switch (IK10 and IP66 rated) with Mushroom Cap Push-Button in Red Color, DPDT contacts 2Amps 24 VDC, Stainless Steel Face Plate with GI Junction Box of suitable size and flasher cum strobe of min. 100dB including all accessories required for installation on platforms at stations	No.	3508				
7.	Supply, Blowing/Pulling/laying of cables, PVC pipe and GI pipe for work at Stations (with accessories on wall or structure etc. along with all accessories required for installation, laying, fixing, clamping and cutting as per specification as defined in chapter 8)						
a.	STP CAT-6	Mtr	601838				

b.	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D)	Mtr	1466345				
c.	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards)	mtr	1157318				
d	32mm PVC conduit pipe (ISI mark)	Mtr	3117320				
e	32mm PVC flexible pipe,	Mtr	121100				
f	40mm dia. HDPE pipe	Mtr	90150				
g	GI pipe	Mtr	18030				
8.	Supply of Media Converter Pair as defined in clause 8.15 of chapter 8.	No.	76				
9.	Spares @ 8% of supply against item A.1 (a) to A.1(d), A.2 (f), A.6 (b) to A.6 (d) above as defined in clause 3.D.8.1 in chapter 3.	Lot.					
10.	Supply and installation of bracket/fixture/Angle for fixing of camera at stations	No.	826				
11.	Engineering works at RPF/GRP Thana/Post @ Rs. 50,000/-	No.	151				
	Total Cost of Schedule – 'A'						
SN	Description of Item	Unit	Qty.	Incremental % Cost (In Fig.)		Incremental % Cost (In Words.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SCHEDULE – 'B'							

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1	Incremental AMC charges after warranty period as percentage of overall cost (excluding taxes and duties) of Supply portion of Schedule – 'A' over and above 3.5%. Only incremental % cost in addition to 3.5 % mentioned in clause 4.A.3 of Chapter-4 required to fulfill Long Term Maintenance support clause. (E.g. if the annual AMC cost is proposed to be 4% the quoted % should be (+) 0.5 % per annum under column 5 & 6. For five years it should separately be shown as (+) 2.5 % under column 7 & 8. For clarity, detailed scope of AMC be read in clause 4.A.3 of Chapter-4	Year s	5				
	Total Cost of Schedule – 'B'						
	Total Value of Schedule – 'A' and Schedule – 'B'						
	Total Value of SOR in Words:						

SOR HEAD II: SUPPORT ENGINEERS, TRAININGS AND COMMAND AND CONTROL CENTER FOR SURVEILLANCE NETWORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Manpower Support during warranty period						
(a)	L1 support engineer in Field (@ defined per annum rate of Rs.3,00000/-)	Man-Years	302*				
(b)	L2 support engineer in RailTel Datacenter (@ defined per annum rate of Rs. 6,00000/-)	Man-Years	12*				
2.	Training of personnel over and above the on-site training, during the installation, maintenance and supervision period as detailed in the tender document.	Man-weeks	1510				

3.	Supply, Installation, Testing and Commissioning of Command Control Center as per functional requirements and Video wall display as per specification defined in clause 8.26 of chapter 8 and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	No.	1				
	Total Cost of Schedule						
	Total Value of SOR Head-I and SOR Head-II						
	Total Value of SOR in Words:						

PACKAGE II: WESTERN

SOR HEAD I: IP BASED VIDEO SURVEILLANCE WORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs.)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SCHEDULE 'A'						
1.	Supply, Installation, Testing, Commissioning and Integration of IP cameras at stations						
(a)	Full HD Fixed dome type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	758				
(b)	Full HD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	13426				

(c)	Full HD P/T/Z type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No	1731				
(d)	4K UHD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	898				
2.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RPF/GRP Thana/Post						
(a)	VSS Server Hardware etc. and all accessories required for installation purposes for Video recording, Video Analytic and Facial Recognition system as defined in clause 8.2, 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	103				
(b)	PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	No.	107				
(c)	Digital Key-Board (joystick) and all accessories compatible with P/T/Z cameras as defined in clause 8.5 of chapter 8.	No.	107				
(d)	Large Format Display Monitor (40" or Higher) as defined in clause 8.7 of chapter 8.	No.	214				
(e)	Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days as defined in clause 8.3, 8.4 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	Quantities to be specified by the bidder				

(f)	Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation	No.	206				
(g)	Next Generation Firewall (NGFW) as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	0				
(h)	UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	Set	103				
(i)	19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	No.	103				
(j)	Supply and fixing of furniture for each Workstation quoted under item no. A.2(b) i.e. one table (Model: Stylo Make: Godrej or superior), and two chairs (Model: PCH-7046A Make: Godrej or superior).	No.	107				
(k)	2 nos. of 2 Ton Split AC (5 star or better) with external controller unit for AC change over for installation at RPF/GRP Thana/Post	Set	103				
3.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RailTel datacenter(s)						
(a)	VSS Server Hardware for Video Management and Facial Recognition database system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	1				
(b)	Core switch as defined in clause 8.12 of chapter 8 along with all optics (SFP/SFP+ as per solution requirement) and all accessories required for their installation	No.	NIL	NIL	NIL	NIL	NIL

(c)	Type-III switches as Top of the Rack switch in (1+1) as defined in clause 8.10 of chapter 8 and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	No.	Quantities to be specified by the bidder				
(d)	Next Generation Firewall (NGFW) at RailTel Datacenters as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	NIL	NIL	NIL	NIL	NIL
(e)	Storage System for recording of alerts, alarms of cameras of analytics and other applications requirement as defined in clause 8.3 and 8.4 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	240				
(f)	EMS in RailTel Datacenters (Gurugram and Secunderabad) as per specification defined in clause 8.23 of chapter 8						
i.	Hardware	Set	2				
ii.	Software	Set	2				
4.	Supply, Installation, Testing and commissioning of software (per camera basis) for Video Management, Video recording, Video Analytic and Facial Recognition system (FRS licenses equal to Nos. of 4K UHD cameras) for the server hardware quoted in Item no. A.2(a) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	103				
5.	Supply, Installation, Testing and commissioning of Graphical User Interface based Client Software (per workstation basis) for workstation as quoted in Item no. A.2(b) along with as defined in clause 8.3 of chapter 8.	No.	107				

6.	Supply, Installation, Testing and Commissioning of IT infrastructure and associated items at Railway Stations					
(a)	Supply of Video Recording & Processing Unit for non RPF stations as per specification defined in clause 8.18 of chapter 8					
i.	For Category C (Sub-urban) platforms/stations	No.	Quantities to be specified by the bidder			
ii.	For Category C (others), D and E platform/stations	No.	Quantities to be specified by the bidder			
(b)	Type-I switches as defined in clause 8.8 of chapter 8, optics (SFP-BX as defined in clause 8.13 of chapter-8 and quantity as per solution requirement & network design defined in clause 3.B of Chapter-3) and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	No.	3228			
(c)	Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	No.	1314			
(d)	Type-IV switches as defined in clause 8.11 of chapter 8, optics (SFP+ (10KM), SFP+ (40 KM) Single Fiber, SFP+ (350 mtr.) and SFP 1G (10KM) as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	No.	206			

(e)	24 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accessories like power strip, MCB, Fantray, Patch Panel, patch chord, pigtails etc. required for their installation	No.	1314				
(f)	12 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accessories like power strip, MCB, Fantray, Patch Panel, patch chord, pigtails etc. required for their installation	No.	3228				
(g)	Online UPS system, single phase of rating 1KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	2160				
(h)	Online UPS system, single phase of rating 2KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	297				
(i)	MFCE Earth complete with all accessories. (less than 1 Ohm) as per technical specifications defined in chapter 5 of Section-II (Nos. indicates the site of installation)	No.	557				
(j)	ACDB for AC distribution Box with Lock and key arrangements and ISI mark MCBs of various ratings as per site requirements for installation at sites	No.	1114				
(k)	Panic Switch (IK10 and IP66 rated) with Mushroom Cap Push-Button in Red Color, DPDT contacts 2Amps 24 VDC, Stainless Steel Face Plate with GI Junction Box of suitable size and flasher cum strobe of min. 100dB including all accessories required for installation on platforms at stations	No.	2160				

7.	Supply, Blowing/Pulling/laying of cables, PVC pipe and GI pipe for work at Stations (with accessories on wall or structure etc. along with all accessories required for installation, laying, fixing, clamping and cutting as per specification as defined in chapter 8)						
a.	STP CAT-6	Mtr	420313				
b.	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D)	Mtr	507165				
c.	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards)	Mtr	760748				
d.	32mm PVC conduit pipe (ISI mark)	Mtr	1621385				
e.	32mm PVC flexible pipe,	Mtr	90500				
f.	40mm dia. HDPE pipe	Mtr	55700				
g.	GI pipe	Mtr	11140				
8.	Supply of Media Convertor Pair as defined in clause 8.15 of chapter 8.	No.	52				
9.	Spares @ 8% of supply against item A.1 (a) to A.1(d), A.2 (f), A.6 (b) to A.6 (d) above as defined in clause 3.D.8.1 in chapter 3.	Lot.					
10.	Supply and installation of bracket/fixture/Angle for fixing of camera at stations	No.	460				
11.	Engineering works at RPF/GRP Thana/Post @ Rs. 50,000/-	No.	103				
	Total Cost of Schedule – 'A'						
SN	Description of Item	Unit	Qty.	Incremental % Cost (In Fig.)		Incremental % Cost (In Words.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SCHEDULE – 'B'						

1	Incremental AMC charges after warranty period as percentage of overall cost (excluding taxes and duties) of Supply portion of Schedule – 'A' over and above 3.5%. Only incremental % cost in addition to 3.5 % mentioned in clause 4.A.3 of Chapter-4 required to fulfill Long Term Maintenance support clause. (E.g. if the annual AMC cost is proposed to be 4% the quoted % should be (+) 0.5 % per annum under column 5 & 6. For five years it should separately be shown as (+) 2.5 % under column 7 & 8. For clarity, detailed scope of AMC be read in clause 4.A.3 of Chapter-4	Year s	5				
	Total Cost of Schedule – 'B'						
	Total Value of Schedule – 'A' and Schedule – 'B'						
	Total Value of SOR in Words:						

SOR HEAD II: SUPPORT ENGINEERS, EMS SYSTEM AND TRAININGS FOR SURVEILLANCE NETWORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Manpower Support during warranty period						
(a)	L1 support engineer in Field (@ defined per annum rate of Rs.3,00000/-)	Man-Years	206*				
(b)	L2 support engineer in RailTel Datacenter (@ defined per annum rate of Rs. 6,00000/-)	Man-Years	12*				
2.	Training of personnel over and above the on-site training, during the installation, maintenance and supervision period as detailed in the tender document.	Man-weeks	1030				
	Total Cost of Schedule						

	Total Value of SOR Head-I and SOR Head-II							
	Total Value of SOR in Words:							

PACKAGE III: EASTERN

SOR HEAD I: IP BASED VIDEO SURVEILLANCE WORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SCHEDULE 'A'						
1.	Supply, Installation, Testing, Commissioning and Integration of IP cameras at stations						
(a)	Full HD Fixed dome type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	1305				
(b)	Full HD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No	22157				
(c)	Full HD P/T/Z type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No	2933				
(d)	4K UHD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	1716				
2.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RPF/GRP Thana/Post						

(a)	VSS Server Hardware etc. and all accessories required for installation purposes for Video recording, Video Analytic and Facial Recognition system as defined in clause 8.2, 8.3 and 8.18 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	149				
(b)	PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	No.	152				
(c)	Digital Key-Board (joystick) and all accessories compatible with P/T/Z cameras as defined in clause 8.5 of chapter 8.	No.	152				
(d)	Large Format Display Monitor (40" or Higher) as defined in clause 8.7 of chapter 8.	No.	304				
(e)	Storage System at RPF/GRP Thana/Post sites for recording of cameras from cluster of stations for 30 days as defined in clause 8.3, 8.4 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	Quantities to be specified by the bidder				
(f)	Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation	No.	298				
(g)	Next Generation Firewall (NGFW) as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	0				
(h)	UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	Set	149				

(i)	19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	No.	149				
(j)	Supply and fixing of furniture for each Workstation quoted under item no. A.2(b) i.e. one table (Model: Stylo Make: Godrej or superior), and two chairs (Model: PCH-7046A Make: Godrej or superior).	No.	152				
(k)	2 nos. of 2 Ton Split AC (5 star or better) with external controller unit for AC change over for installation at RPF/GRP Thana/Post	Set	149				
3.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RailTel datacenter(s)						
(a)	VSS Server Hardware for Video Management and Facial Recognition database system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	1				
(b)	Core switch as defined in clause 8.12 of chapter 8 along with all optics (SFP/SFP+ as per solution requirement) and all accessories required for their installation	No.	NIL	NIL	NIL	NIL	NIL
(c)	Type-III switches as Top of the Rack switch in (1+1) as defined in clause 8.10 of chapter 8 and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	No.	Quantities to be specified by the bidder				
(d)	Next Generation Firewall (NGFW) at RailTel Datacenters as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	NIL	NIL	NIL	NIL	NIL

(e)	Storage System for recording of alerts, alarms of cameras of analytics and other applications requirement as defined in clause 8.3 and 8.4 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	240				
(f)	EMS in RailTel Datacenters (Gurugram and Secunderabad) as per specification defined in clause 8.23 of chapter 8						
i.	Hardware	Set	2				
ii.	Software	Set	2				
4.	Supply, Installation, Testing and commissioning of software (per camera basis) for Video Management, Video recording, Video Analytic and Facial Recognition system (FRS licenses equal to Nos. of 4K UHD cameras) for the server hardware quoted in Item no. A.2(a) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	149				
5.	Supply, Installation, Testing and commissioning of Graphical User Interface based Client Software (per workstation basis) for workstation as quoted in Item no. A.2(b) along with as defined in clause 8.3 of chapter 8.	No.	152				
6.	Supply, Installation, Testing and Commissioning of IT infrastructure and associated items at Railway Stations						
(a)	Supply of Video Recording & Processing Unit for non RPF stations as per specification defined in clause 8.18 of chapter 8						
i.	For Category C (Sub-urban) platforms	No.	Quantities to be specified by the bidder				

ii.	For Category C (others), D and E stations	No.	Quantities to be specified by the bidder			
(b)	Type-I switches as defined in clause 8.8 of chapter 8, optics (SFP-BX as defined in clause 8.13 of chapter-8 and quantity as per solution requirement & network design defined in clause 3.B of Chapter-3) and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	No.	5340			
(c)	Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	No.	2288			
(d)	Type-IV switches as defined in clause 8.11 of chapter 8, optics (SFP+ (10KM), SFP+ (40 KM) Single Fiber, SFP+ (350 mtr.) and SFP 1G (10KM) as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their installation	No.	298			
(e)	24 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accessories like power strip, MCB, Fantray, Patch Panel, patch chord, pigtails etc. required for their installation	No.	2288			

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(f)	12 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accessories like power strip, MCB, Fantray, Patch Panel, patch chord, pigtails etc. required for their installation	No.	5340				
(g)	Online UPS system, single phase of rating 1KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	3664				
(h)	Online UPS system, single phase of rating 2KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	334				
(i)	MFCE Earth complete with all accessories. (Less than 1 Ohm) as per technical specifications defined in chapter 5 of Section-II (Nos. indicates the site of installation)	No.	928				
(j)	ACDB for AC distribution Box with Lock and key arrangements and ISI mark MCBs of various ratings as per site requirements for installation at sites	No.	1855				
(k)	Panic Switch (IK10 and IP66 rated) with Mushroom Cap Push-Button in Red Color, DPDT contacts 2Amps 24 VDC, Stainless Steel Face Plate with GI Junction Box of suitable size and flasher cum strobe of min. 100dB including all accessories required for installation on platforms at stations	No.	2690				
7.	Supply, Blowing/Pulling/laying of cables, PVC pipe and GI pipe for work at Stations (with accessories on wall or structure etc. along with all accessories required for installation, laying, fixing, clamping and cutting as per specification as defined in chapter 8)						
a.	STP CAT-6	Mtr	702775				

b.	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D)	Mtr	2424630				
c.	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards)	mtr	1326945				
d	32mm PVC conduit pipe (ISI mark)	Mtr	4343050				
e	32mm PVC flexible pipe,	Mtr	158500				
f	40mm dia. HDPE pipe	Mtr	92750				
g	GI pipe	Mtr	18550				
8.	Supply of Media Converter Pair as defined in clause 8.15 of chapter 8.	No.	75				
9.	Spares @ 8% of supply against item A.1 (a) to A.1(d), A.2 (f), A.6 (b) to A.6 (d) above as defined in clause 3.D.8.1 in chapter 3.	Lot.					
10.	Supply and installation of bracket/fixture/Angle for fixing of camera at stations	No.	730				
11.	Engineering works at RPF/GRP Thana/Post @ Rs. 50,000/-	No.	149				
	Total Cost of Schedule – 'A'						
SN	Description of Item	Unit	Qty.	Incremental % Cost (In Fig.)		Incremental % Cost (In Words.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SCHEDULE – 'B'						

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1	Incremental AMC charges after warranty period as percentage of overall cost (excluding taxes and duties) of Supply portion of Schedule – 'A' over and above 3.5%. Only incremental % cost in addition to 3.5 % mentioned in clause 4.A.3 of Chapter-4 required to fulfill Long Term Maintenance support clause. (E.g. if the annual AMC cost is proposed to be 4% the quoted % should be (+) 0.5 % per annum under column 5 & 6. For five years it should separately be shown as (+) 2.5 % under column 7 & 8. For clarity, detailed scope of AMC be read in clause 4.A.3 of Chapter-4	Year s	5				
	Total Cost of Schedule – 'B'						
	Total Value of Schedule – 'A' and Schedule – 'B'						
	Total Value of SOR in Words:						

SOR HEAD II: SUPPORT ENGINEERS, EMS SYSTEM AND TRAININGS FOR SURVEILLANCE NETWORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Manpower Support during warranty period						
(a)	L1 support engineer in Field (@ defined per annum rate of Rs.3,00000/-)	Man-Years	298*				
(b)	L2 support engineer in RailTel Datacenter (@ defined per annum rate of Rs. 6,00000/-)	Man-Years	12*				
2.	Training of personnel over and above the on-site training, during the installation, maintenance and supervision period as detailed in the tender document.	Man-weeks	1490				
	Total Cost of Schedule						

Total Value of SOR Head-I and SOR Head-II									
Total Value of SOR in Words:									

PACKAGE IV: SOUTHERN

SOR HEAD I: IP BASED VIDEO SURVEILLANCE WORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SCHEDULE 'A'						
1.	Supply, Installation, Testing, Commissioning and Integration of IP cameras at stations						
(a)	Full HD Fixed dome type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	1010				
(b)	Full HD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No	16567				
(c)	Full HD P/T/Z type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No	2144				
(d)	4K UHD Box/Bullet type IP colour camera along with housing and mount and all accessories required for installation purposes as defined in clause 8.1 of chapter 8.	No.	1126				
2.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RPF/GRP Thana/Post						

(a)	VSS Server Hardware etc. and all accessories required for installation purposes for Video recording, Video Analytic and Facial Recognition system as defined in clause 8.2, 8.3 and 8.18 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	149				
(b)	PC Workstation as defined in clause 8.6 of chapter 8 for viewing, monitoring and system management including 24" monitor, all required licensed software, spike buster 500VA UPS with backup for 30 minutes power failure without interruption, and all other required accessories	No.	152				
(c)	Digital Key-Board (joystick) and all accessories compatible with P/T/Z cameras as defined in clause 8.5 of chapter 8.	No.	152				
(d)	Large Format Display Monitor (40" or Higher) as defined in clause 8.7 of chapter 8.	No. *	304				
(e)	Storage System at RPF/GRP Thana/Post for recording of cameras from cluster of stations for 30 days as defined in clause 8.3, 8.4 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	Quantities to be specified by the bidder				
(f)	Type-III switches as defined in clause 8.10 of chapter 8 and all accessories required for their installation	No.	298				
(g)	Next Generation Firewall (NGFW) as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	0				
(h)	UPS 2x10KVA connected in parallel redundant mode in separate chassis as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	Set	149				

(i)	19" 42U racks as per specification defined in clause 8.22 of chapter 8 and all accessories like electrical fitting (power strip, MCB etc.), Fantray, Patch Panel etc. required for installation of the equipment	No.	149				
(j)	Supply and fixing of furniture for each Workstation quoted under item no. A.2(b) i.e. one table (Model: Stylo Make: Godrej or superior), and two chairs (Model: PCH-7046A Make: Godrej or superior).	No.	152				
(k)	2 nos. of 2 Ton Split AC (5 star or better) with external controller unit for AC change over for installation at RPF/GRP Thana/Post	Set	149				
3.	Supply, Installation, Testing and Commissioning of IT infrastructure, applications and associated items at RailTel datacenters (Gurugram and Secunderabad)						
(a)	VSS Server Hardware for Video Management and Facial Recognition system as defined in clause 8.2, 8.3 of chapter 8 and all accessories required for installation purposes. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	1				
(b)	Core switch as defined in clause 8.12 of chapter 8 along with all optics (SFP/SFP+ as per solution requirement) and all accessories required for their installation	No.	2				
(c)	Type-III switches as Top of the Rack switch (1+1) as defined in clause 8.10 of chapter 8 and all accessories required for their installation. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	No.	Quantities to be specified by the bidder				
(d)	Next Generation Firewall (NGFW) at RailTel Datacenters as defined in clause 8.14 of chapter 8 along with management software & hardware and all accessories required for their installation	No.	2				

(e)	Storage System for recording of alerts, alarms of cameras of analytics and other applications requirement as defined in clause 8.3 and 8.4 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	TB	240				
(f)	EMS in RailTel Datacenters as per specification defined in clause 8.23 of chapter 8						
i.	Hardware	Set	2				
ii.	Software	Set	2				
(g)	Nos. of racks proposed to be commissioned in the Data Centre of RailTel under the proposed solution by the bidder. (Please refer to Note-XVII with corrigendum)	Nos.			800000x8 Y= 6400000/		
4.	Supply, Installation, Testing and commissioning of software (per camera basis) for Video Management, Video recording, Video Analytic and Facial Recognition system (FRS licenses equal to Nos. of 4K UHD cameras) for the server hardware quoted in Item no. A.2(a) as defined in clause 8.3 of chapter 8. Detailed Bill of Material (BoM) shall be prepared and submitted along with the Bid as per SOR Note-VII.	Set	149				
5.	Supply, Installation, Testing and commissioning of Graphical User Interface based Client Software (per workstation basis) for workstation as quoted in Item no. A.2(b) along with as defined in clause 8.3 of chapter 8.	No.	152				
6.	Supply, Installation, Testing and Commissioning of IT infrastructure and associated items at Railway Stations						
(a)	Supply of Video Recording & Processing Unit for non RPF stations as per specification defined in clause 8.18 of chapter 8						

i.	For Category C (Sub-urban) plat- forms	No.	Quantities to be speci- fied by the bidder				
ii.	For Category C (others), D and E stations	No.	Quantities to be speci- fied by the bidder				
iii.	For Category F stations	No.	Deleted				
(b)	Type-I switches as defined in clause 8.8 of chapter 8, optics (SFP-BX as defined in clause 8.13 of chapter-8 and quantity as per so- lution requirement & network de- sign defined in clause 3.B of Chap- ter-3) and all accessories required for their installation. Detailed Bill of Material (BoM) shall be pre- pared and submitted along with the Bid as per SOR Note-VII.	No.	4039				
(c)	Type-II switches as defined in clause 8.9 of chapter 8, optics (SFP-BX (10KM) Single Fiber, SFP+ (10KM) and SFP+ (40 KM) Single Fiber as defined in clause 8.13 of chapter-8 and quantity as per solution requirement) and all accessories required for their instal- lation	No.	1617				
(d)	Type-IV switches as defined in clause 8.11 of chapter 8, optics (SFP+ (10KM), SFP+ (40 KM) Single Fiber, SFP+ (350 mtr.) and SFP 1G (10KM) as defined in clause 8.13 of chapter-8 and quanti- ty as per solution requirement) and all accessories required for their installation	No.	298				
(e)	24 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accesso- ries like power strip, MCB, Fan tray, Patch Panel, patch chord, pig- tails etc. required for their installa- tion	No.	1617				

(f)	12 Fibre FMS (SC-APC Type) as per specifications defined in clause 8.20 of chapter 8, 19" 9U racks as per specification defined in clause 8.21 of chapter 8 and all accessories like power strip, MCB, Fan tray, Patch Panel, patch chord, pig-tails etc. required for their installation	No.	4039				
(g)	Online UPS system, single phase of rating 1KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	2631				
(h)	Online UPS system, single phase of rating 2KVA UPS along with Battery suitable for 1hr back-up as per specifications defined in clause 8.16 of chapter 8 and all accessories required for installation	No.	379				
(i)	MFCE Earth complete with all accessories. (less than 1 Ohm) as per technical specifications defined in chapter 5 of Section-II (Nos. indicates the site of installation)	No.	676				
(j)	ACDB for AC distribution Box with Lock and key arrangements and ISI mark MCBs of various ratings as per site requirements for installation at sites	No.	1352				
(k)	Panic Switch (IK10 and IP66 rated) with Mushroom Cap Push-Button in Red Color, DPDT contacts 2Amps 24 VDC, Stainless Steel Face Plate with GI Junction Box of suitable size and flasher cum strobe of min. 100dB including all accessories required for installation on platforms at stations	No.	2631				
7.	Supply, Blowing/Pulling/laying of cables, PVC pipe and GI pipe for work at Stations (with accessories on wall or structure etc. along with all accessories required for installation, laying, fixing, clamping and cutting as per specification as defined in chapter 8)						
a.	STP CAT-6	Mtr	521175				

b.	12 Core metal strengthened outdoor unarmored Optic Fiber Cable (ITU-T G.652.D)	Mtr	1721405				
c.	PVC insulated 3 core 4 Sq. mm (1.1 KV grade) outdoor strengthened Copper Cable for UPS supply distribution (as per BIS/ISI standards)	mtr	941558				
d	32mm PVC conduit pipe (ISI mark)	Mtr	3103018				
e	32mm PVC flexible pipe,	Mtr	111450				
f	40mm dia. HDPE pipe	Mtr	67600				
g	GI pipe	Mtr	13520				
8.	Supply of Media Converter Pair as defined in clause 8.15 of chapter 8.	No.	75				
9.	Spares @ 8% of supply against item A.1 (a) to A.1(d), A.2 (f), A.6 (b) to A.6 (d) above as defined in clause 3.D.8.1 in chapter 3.	Lot.					
10.	Supply and installation of bracket/fixture/Angle for fixing of camera at stations	No.	555				
11.	Engineering works at RPF/GRP Thana/Post @ Rs. 50,000/-	No.	149				
	Total Cost of Schedule – ‘A’						
SN	Description of Item	Unit	Qty.	Incremental % Cost (In Fig.)		Incremental % Cost (In Words.)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SCHEDULE – ‘B’						

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1	Incremental AMC charges after warranty period as percentage of overall cost (excluding taxes and duties) of Supply portion of Schedule – 'A' over and above 3.5%. Only incremental % cost in addition to 3.5 % mentioned in clause 4.A.3 of Chapter-4 required to fulfill Long Term Maintenance support clause. (E.g. if the annual AMC cost is proposed to be 4% the quoted % should be (+) 0.5 % per annum under column 5 & 6. For five years it should separately be shown as (+) 2.5 % under column 7 & 8. For clarity, detailed scope of AMC be read in clause 4.A.3 of Chapter-4	Year s	5				
	Total Cost of Schedule – 'B'						
	Total Value of Schedule – 'A' and Schedule – 'B'						
	Total Value of SOR in Words:						

SOR HEAD II: SUPPORT ENGINEERS, EMS SYSTEM AND TRAININGS FOR SURVEILLANCE NETWORK AT STATIONS

SN.	Description of Item	Unit	Qty.	Unit Rate in Fig (in Rs.)	Total Cost in Fig. (in Rs.)	Unit Rate in words (in Rs.)	Total Cost in words (in Rs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Manpower Support during warranty period						
(a)	L1 support engineer in Field (@ defined per annum rate of Rs.3,00000/-)	Man-Years	298*				
(b)	L2 support engineer in RailTel Datacenter (@ defined per annum rate of Rs. 6,00000/-)	Man-Years	12*				
2.	Training of personnel over and above the on-site training, during the installation, maintenance and supervision period as detailed in the tender document.	Man-weeks	1490				
	Total Cost of Schedule						

	Total Value of SOR Head-I and SOR Head-II						
	Total Value of SOR in Words:						

Note	
I	<p>a) Before quoting please see relevant para of Chapter 8 Technical Specifications.</p> <p>b) Unit rate quoted against SOR above should be CIP destination inclusive of all duties, taxes, insurance and freight etc. (with break-up as per Performa attached as Annexure- A,B and C of this Chapter). The materials as per SOR are required to be delivered within the delivery period as indicated in Bid Data Sheet (BDS, Chapter 5) to the sites as decided by the respective Regional GM/EDs.</p> <p>c) It shall be the responsibility of Bidder to transport the equipment to site for the Installation & Commissioning. Charges for the same should be included in items under SOR Head-I and II of packages. Materials not installed / not to be installed need to be shipped to location as decided by RGM/Executive Director of the Region. SOR items against which Installation is not separately mentioned, installation shall be considered within the scope of supply itself.</p> <p>d) The Schedule of Requirement has been divided into two parts, viz. SOR Head-I and SOR Head-II of packages.</p> <p>e) The bidder must ensure that the capacity of storage system supplied at the RPF/GRP Thana/Post should be supplied with an additional 10% capacity over and above the capacity required for 30 days recording computed on the basis of cameras mentioned for RPF/GRP Thana/Post from day one (refer clause 8.3 and 8.4 of Chapter-8). The storage capacity should be calculated considering RAID 5/6 configuration. The additional capacity is required to meet the compliance requirement of keeping the flagged/marked images/video footage as a evidence required by the RPF/GRP/Appropriate authority for investigation purpose and also to cater the requirements of provision of any new cameras on the station.</p> <p>In case more storage capacity in addition to the above mentioned is required in the storage system then the cost towards the additional capacity in terms of Tera Byte (TB) would be calculated on pro-rata basis.</p>
II	<p>In item no. B 1 of Schedule –‘B’, of SOR Head-I of packages, if however the bidder feels that his AMC Cost is less than 3.5% per annum, he should give suitable discount in equipment/supply item pricing. For AMC he will be paid @ 3.5% per annum only. If the vendor quotes a higher base rate for AMC he will be paid at his quoted rate per annum and five year differential cost shall be added to equipment cost for evaluation.</p>
III	<p>For item no. 1 of SOR Head-II of packages, if the bidder feels that the Manpower support can be given at rates lower than the rates as defined, then he should adjust the differential amount in the equipment/supply pricing, and he will be paid according to the defined rates only. However, if the bidder quotes a higher base rate than the rates as defined then he will be paid at his quoted rate and the differential shall be taken for evaluation.</p> <p>The bidder is supposed to quote for the manpower requirement of 2-years period of warranty period post Maintenance Supervision period, as during this period the contractor shall be responsible for proper maintenance supervision of the system free of cost for a period of twelve months from the date of provisional acceptance (for more details please refer to section 4.A.2.5)</p> <p>* Quantities mentioned are the bare minimum requirement of the purchaser, however if bidder feels that larger manpower strength is required to maintain the installed network, then bidder is free to revisit the quantities mentioned. The bidder would also be required to deploy the same number of manpower resources during the 12 months period of maintenance supervision as quoted for the item no. 1 of SOR Head-II of packages of SOR for the commercial bid.</p>
IV	<p>Since, RailTel is also implementing Wi-Fi work at railway stations, therefore, the existing available infrastructure may be utilized by the purchaser for implementation of VSS system and such items used may not be considered as a part of Supply orders.</p>

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V	<p>Bidder should submit the soft copy (Word/Excel/PDFs format) of offer in DVDs/USB's. Bill of Material (BOM) must be in PDF as well as Excel format (except price bid). Bidder is allowed to quote only for a single Make/Model of the quoted items along with the offer.</p> <p>The above stipulation of single OEM Make/Model applies to items viz. different types of cameras, servers, Video Recording & Processing Unit, workstation, storage, large format display monitors, VMS Softwares, VA, FRS, switches (Type I, II, III & IV may be of different OEM make/model but there will be only one OEM make/model against one type of switches), Firewall and EMS.</p> <p>DIFFERENT OEM(S) ACROSS PACKAGES IS NOT PERMITTED. OFFERS WITHOUT PARTICULARS OF MAKE/MODEL OR MULTIPLE OEMS OF SAME ITEM SHALL BE LIABLE TO SUMMARILY REJECTED.</p>																																																															
VI	<p>Bidder must validate all the quantities quoted in their technical solution proposed supported by calculations, datasheets and design documents duly vetted by respective OEM(s) as same would be required for the technical evaluation of the offer. Bidder would be responsible for ensuring the complete system is operational and meeting the requirements as mentioned in the RFP. However, if at any stage before the issuance of FAC for the system installed, it is found that the system performance is not compliant with the functional requirements and specifications given in the RFP document, the bidder shall be liable/obliged to supply additional hardware/systems at no additional cost to the purchaser, required to meet the functional requirements and specifications mentioned in the RFP document at no additional cost to the purchaser. Purchaser's engineer decision in this context will be final.</p>																																																															
VII	<p>The Bill of Material will be prepared for Schedule of Requirement against each item of SOR. This Bill of Material will be called "Bill of Material for Schedule of Requirement" and will comprised of duly filled rates of each item. And will be prepared according to Note (I) to (IV) above. The Un-priced copy of the same BOM should be submitted with the technical/credential Bid for evaluation. The Bid (credential without the BOM will be summarily rejected). The Format of "Bill of Material for Schedule of Requirement" is as below:</p> <table border="1"> <thead> <tr> <th>SN</th> <th>Item</th> <th>Unit</th> <th>Unit rate</th> <th>Qty</th> <th>SOR A 1 (a)</th> <th>SOR A 1 (b)</th> <th>SOR A 1 (c)</th> <th>SOR A 2</th> <th>-----</th> <th>-----</th> <th>-----</th> <th>-----</th> <th>SOR A15</th> <th>SOR B1(a)</th> <th>SOR B1(b)</th> <th>SOR B1(c)</th> <th>SOR B2</th> <th>-----</th> <th>-----</th> <th>SOR B18</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>(to be provided by bidder)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>(to be provided by bidder)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	SN	Item	Unit	Unit rate	Qty	SOR A 1 (a)	SOR A 1 (b)	SOR A 1 (c)	SOR A 2	-----	-----	-----	-----	SOR A15	SOR B1(a)	SOR B1(b)	SOR B1(c)	SOR B2	-----	-----	SOR B18	1	(to be provided by bidder)																				2	(to be provided by bidder)																			
SN	Item	Unit	Unit rate	Qty	SOR A 1 (a)	SOR A 1 (b)	SOR A 1 (c)	SOR A 2	-----	-----	-----	-----	SOR A15	SOR B1(a)	SOR B1(b)	SOR B1(c)	SOR B2	-----	-----	SOR B18																																												
1	(to be provided by bidder)																																																															
2	(to be provided by bidder)																																																															
VIII	<p>The offered solution for video management system, FRS, video analytic system softwares, server and storage hardware sizing should be duly vetted and supported with certifications issued by OEM.</p>																																																															
IX	Deleted																																																															
X	Deleted																																																															
XI	<p>The bidder should submit the Type approval certificate from DOT (TEC) or Technical Specification Evaluation Certificate (TSEC) given by BSNL QA wing for HDPE Duct of 40 mm, as per TEC specification numbered as TEC GR No. GR/TX/CDS-008/03/March '11 with all latest amendments for multiple colors including Orange, Red and Blue color.</p>																																																															
XII	Deleted																																																															

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XIII	The bidder is required to supply the EMS tool including all hardware and software in a centralized set-up in the RailTel Datacenters (Gurugram and Secunderabad) in DC and DR configuration. The monitoring services at all stations/RPF Chowki/Thana under the region will be provided from the centralized set-up through the clients installed at all the Stations/RPF Chowki/Thana.
XIV	Deleted
XV	Along with the server, bidder is required to propose necessary hardware/software required for remote management of servers like IPMI Port with KVM over LAN or equivalent. Remote management functionalities includes remote OS/Software updation/installation, reboot, shutdown etc.
XVI	Deleted
XVII	<p>Rack Space at Datacenters and associated charges:</p> <p>Rack Space at Datacenters and associated charges: RailTel will provide Racks at Gurugram and Hyderabad datacenter for hosting VSS Cloud infrastructure as defined in the tender. Bidders are requested to optimize the number of racks requirement in the datacenters. Rack requirement is associated with cost and bidder will be charged INR 8 Lacks/annum/rack for 8 years (for evaluation purposes) in the tender for the proposed rack/racks requirements. The Bidder must provide rack space requirements (in terms of Nos. of racks, in new SOR items 3 (g) under the column Qty.) in their technical offer keeping load available on each rack ($\leq 5\text{KVA}$) for the complete solution (for DC & DR) for all components like Server, Switching, Routers, Storage etc. In case later the actual requirement is found to be more than the quoted Nos. of racks, bidder will be deducted the actual amount on additional racks out of their payment for the entire period of the contract including AMC period). Otherwise this cost shall be borne by RailTel/Railways. Note:- Space for number of racks will be subjected to the availability of space in datacenters.</p>
XVIII	The supply of items shall be done in phased manner strictly in line with the progress of the work. Successful bidder is required to discuss project progress and planning of supply material in consultation with the purchaser. Dumping of material shall not be permitted and no payment shall be released for such items.
XIX	<p>Central Command control center has been provisioned in Northern Region package. Therefore, all successful bidder of other packages are required to share API of their quoted VMS to ensure integration with central command and control center to achieve desired functionality as mentioned in the tender document.</p> <p>Further, VMS Application should be based on the open software platform and industry standards, a system that can connect and integrate with other VMS Applications using software development kit (SDK) which offers easy to use Application Programming Interface (API) and support most commonly used programming languages. VMS application should have open standard architecture (no proprietary database) and interoperability with other VMS applications to meet the desired functional requirement of the project.</p>
XX	Deleted
XXI	<u>The tentative list of stations (subject to change marginally) is being uploaded so that the vendors may assess the actual requirements of various items likely to be proposed.</u>
XXII	<u>SFP+ (10Km/40Km) for the switches proposed at RailTel MPLS backbone for connecting adjoining stations through existing RailTel fibers and Type-IV switches at Cat-A1, A & B stations & Type-II switches at Category C, D & E stations shall be within the scope of bidder.</u>

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Annexure-A

Price Schedule for Indigenous Items

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Annexure-C

Price Schedule for Service Items

SN	Item Description	Total Qty	SAC Code	Basic Unit Price exclu- sive of all levies and charges	GST/CGST/ IGST		Other Charges and Levies, if any	Unit price (all inclu- sive)
					%	Amt		
1	2	3		4	5	6	7	8

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