MANGALORE REFINERY & PETROCHEMICALS LTD.
(A Subsidiary of Oil and Natural Gas Corporation Ltd.)
Mangaluru

Corrigendum 01

To

MRPL Tender No. 3200000889 dated 01.08.2024

Supply, Installation, Testing & Commissioning (SITC) of Video Surveillance System & Speed Detection System (ISMS – Phase 2)

With reference to the above tender, bidders are requested to note the following revisions in the tender documents:

Sl No.	Volume	Section No./Clause No.	Page no	Existing Tender Clause	Modification
1)	Volume-I of II	Cover Page / Section-1: Notice Inviting Tender (NIT), Table Sl.No. (8): Bid closing date / time	1 of 449 & 5 of 449	21.08.2024 @ 15:00 Hrs (IST)	28.08.2024 @ 15:00 Hrs (IST)
2)	Volume-I of II	Cover Page / Section-1: Notice Inviting Tender (NIT), Table Sl.No. (9): Date/ Time of Technical Bid opening	1 of 449 & 5 of 449	21.08.2024 @ 15:30 Hrs (IST)	28.08.2024 @ 15:30 Hrs (IST)

3) The following are the revised specifications for Sections 3.1 to Section 3.6, Volume II (Technical Specifications)

3.1 Speed Detection Cameras

1	Video Compression	~~MPEG4,~~ H.264, H.265, MJPEG
2	Video Resolution	1920×1080 or better
3	Frame rate	1920×1080 @ 60 FPS or better
4	Operating frequency	50 Hz
5	Image Sensor	1/2.8" Progressive scan CMOS or better
6	Lens Type	Varifocal Motorized with Remote Focus & Zoom
7	Lens	5 ~ 50 mm or appropriate to capture minimum 3.5 meters lane width from a minimum height of 7 meters
8	Electronic Shutter	1/5 to 1 / 50,000 s or better
9	Multiple Streams	The Camera shall be able to set up and stream out minimum three (3) stream profiles simultaneously. Each stream profile can have its own compression resolution, frame rate and quality independently. Should support minimum two (2) streams at 2 Mega Pixel.
10	Minimum Illumination	Color mode: 0.05 lux or better B/W: 0 lux with IR illumination on
11	Day/Night Mode	Day / Night / Schedule / Customize / Auto
12	S/N Ratio	≥ 55 dB
13	Auto adjustment + Remote Control of Image settings	Brightness, Sharpness, Contrast, White Balance, Backlight Compensation, Gain Control, 3DNR, HLC, Defog, ROI, EIS, Scheduled Profile Settings & Video Title and Time Stamp Overlay
14	Wide Dynamic Range	Minimum 120 dB
15	Privacy Masks	Minimum 8 regions
16	Audio	Full duplex, line in and line out, G.711/ G.726, External microphone input, External line output
17	Local storage	Provision of local storage for minimum 128 GB up to 256GB. In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.
18	Protocol	IPv4, IPv6, ICMP, TCP/IP, UDP, DHCP, PPPoE, RTP/RTSP/RTCP, RTMP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, Multicast, SSL/TLS1.2, ONVIF Profile S, G & T, SIP,
19	Security	Password Protection, IP Address filtering, User Access Log
20	Built in camera Intelligent Video Identification	Number plate capturing with color, Vehicle Identification & Classification Type & Color, capture License Plate, Vehicle, Speed & Direction of Vehicle, monitoring the Traffic Flow

21	Traffic Control	Counting Vehicles based on Vehicles, Lane Management
	Lane coverage	Minimum 2 lanes
22	Alarm Trigger	Motion Detection, IP Conflict, Attributes Event, White/Black List, External Input, Audio Alarm
23	Alarm Action	FTP & SMTP Upload, HTTP Notification, SD Card Record, External Output
24	Alarm I/O	Minimum 1 Input & 1 Output contact for 3rd party interface
25	Interface	RJ 45, 100 Base TX
26	Operating conditions	As per Ambient conditions in all seasons
27	Humidity	Humidity 10-95% RH (condensing)
28	Casing	IP66/IP67, IK10, NEMA 4X or higher, Stainless Steel / or Die cast Aluminium, corrosion-proof
29	Certification	BIS, UL, CE, FCC
30	Power	PoE IEEE 802.3af/ POE+ IEEE 802.3at and 12VDC/24AC/24VDC
31	IR illuminator	Internal IR Illuminator with minimum range of 30 meters based upon requirement of site/focus/area of interest.
32	Functional requirements of Radar / Lidar / LEDDAR	Tracking of 1 ~ 4 Lanes Detection and Speed Accuracy > 98 % Installation height – 2 m to 7 m Speed Detection range – 5 kmph to 200 kmph Speed Detection distance – 5 m to 50 m
33.	Other	The system shall provide customised reports pertaining to speed violations. System shall be capable of providing alerts based on single speed violation (single speed violation) or average speed violation (average speed calculated based on at least 2 simultaneous cameras)
34.	LED Speed Indicators	LED speed indicators of size 0.3 m (height) by 0.6 m (width) to be mounted on the same pole to provide real time information pertaining to the speed of the oncoming vehicle. Speeds shall be displayable in at least 2 colors (red or green), based on configurable speed limits in particular zones.

3.2 ANPR Camera

Features	Minimum Specifications
General	IP True Day/Night Outdoor Fixed Box / Bullet Camera, PoE enabled, ONVIF Compliant, low light visibility, clear visibility under rainy/cloudy/lightning conditions also. Immunity against EMI, RFI & lightning.
Lens	5-50 mm lens (Varifocal, Manual or Motorised Lens) or appropriate to capture minimum 3.5 meters lane width from a height of 1 to 7 meters.
Image Sensor	Minimum 1/3" progressive scan HD CMOS

Features	Minimum Specifications
Shutter Speed	1/50 – 1/10,000 (60fps / 1 input)
Light Sensitivity	Color: 0.5 lx at 50 IRE, F1.2, AGC high or better & Black & White : 0.2 lx at 50 IRE, F1.2, AGC high or better (without IR)
Compression	~~MPEG4,~~ H.264, H.265, MJPEG
Signal System	PAL
Frame Rate	Minimum 30 FPS
Resolution	2 MP or better
Onboard Memory	Shall support SD / Micro SD cards storage of minimum 64 GB.
Video streaming	Multi-streaming (Minimum 4 No. User-defined & configurable - different frame rate, bit rate, resolution, quality, and compression format) support. The camera shall support 128 bit AES encryption.
IR	Shall have IR illumination (built-in or external) with a coverage distance of minimum 20 meters
Image Features	auto-focus, Head Light Compensation (HLC) & WDR of 120 dB or better. Ability to capture & process image/s of multiple vehicles entering/exiting in parallel also.
Casing	IP 66 or better & vandal-proof, with heat resistant & KG3 or better coated glass window. Housing, Mounting accessories, brackets, poles, nuts, bolts, washers shall be of SS; Stainless steel or Die cast Aluminium, corrosion-proof
Miscellaneous	Atmospheric Humidity: upto 95% RH at 38 deg C Operating environment Temperature: 0 to 55 deg. C Camera Housing: IP66, vandal-proof & of Stainless Steel or Die cast Aluminium, corrosion-proof Glass: Heat Resistant Glass with KG3 or better coating.
Certification	BIS, UL, CE, FCC

ANPR Software

Sr. No.	Description
1.	Vehicle Detection and Video Capture Module
a)	The System should automatically detect a vehicle in the camera view using video detection and activate license plate recognition.
2.	License Plate Detection
a)	The System shall automatically detect the license plate in the captured video feed in real-time.
b)	The system shall perform OCR (optical character recognition) of the license plate characters (English alpha-numeric characters in standard fonts).
c)	The System shall store JPEG image of vehicle and license plate and enter the license plate number into an SQL database along with date time stamp and site location details.
d)	System should be able to detect and recognize the English alpha numeric License plate in standard fonts and formats of all vehicles including cars, HCV, and LCV. In case of a non-standard number plate, the system shall register the image and allow the operator (with a rule based, authenticated and commented exception) to manually enter the number plate details. The system should identify the non-standard number plates automatically to provide an alert and enable an auto generation of challan.
e)	The system shall be robust to variation in License Plates in terms of font, size, contrast and color and should work with good accuracy.
3.	The system shall work with the same effectiveness in both day and night mode

4.	Color Detection
a)	The system shall detect the color of all vehicles in the camera view during daytime and label them as per the predefined list of configured system colors. The system will store the color information of each vehicle along with the license plate for each transaction in the database.
b)	The system shall have options to search historical records for post event analysis by the vehicle color or the vehicle color with license plate and date time combinations.
5.	Alert Generation
a)	The system should have option to input certain license plates according to the hot listed categories like "Wanted", "Suspicious", "Stolen", etc by authorized personnel.
b)	The system should be able to generate automatic alarms to alert the control room personnel for further action, in the event of detection of any vehicle falling in the Hot listed categories.
6.	Vehicle Log
a)	The system shall enable easy and quick retrieval of snapshots, video and other data for post incident analysis and investigations.
b)	The system should provide advanced and smart searching facility of License Plates from the database. There should be an option of searching number plates almost matching with the specific number entered (up to 1 and 2 character distance).
7.	Vehicle Make Detection Module
a)	System should be able to identify the make of the vehicle coming in the field of view of the camera with good accuracy.
8.	Vehicle Classification module
a)	System should be able to classify the vehicle into LMV, HMV and 2-wheelers.
9.	The system should have reading accuracy of at least 95% on vehicles including 2 & 4 wheelers which are visible by human eye for English alphanumeric number plates excluding cursive fonts.
10.	The system should be able to do No helmet detection for 2-wheelers.
11.	System should have facility to define routes for commercial vehicle. In case a commercial vehicle is identified on a non-commercial route an alert shall be generated.
12.	System should be easily integrable to vehicle databases like VAHAAN, State RTO database or any other vehicular database that is generated by the state or central government etc.
13.	System should be able to detect Wrong Direction Vehicle Movement in the ANPR camera view and also read the number plate using ANPR technology.

The ANPR system shall be provided with the associated edge processor mounted in a junction box and capable to withstand external harsh conditions.

The ANPR software cost has to be included in the ANPR camera cost in the BoQ / SOR (Sr. No. 2)

3.3 Indoor Dome Camera

Feature	Minimum Specification
General	IP True Day/Night Indoor Dome Camera, PoE enabled, ONVIF compliant
Lens	3 (+/- 1) mm to 9 (+/- 1) mm, to ensure that the horizontal field of view is minimum 100 degrees to maximum 40 degrees.
Light Sensitivity	Color: ~0.5 lx at 50 IRE, F1.2, AGC high or better & Black & White: 0.2 lx at 50 IRE, F1.2, AGC high or better (without IR)
Compression	~~MPEG4,~~ H.264, H.265, MJPEG

Signal System	PAL
Resolution	5 MP or better
Onboard Memory	Shall support SD / Micro SD cards storage of minimum 128 GB.
Video streaming	Multi-streaming (Minimum 3 No. User-defined & configurable - different frame rate, bit rate, resolution, quality, and compression format) support. The camera shall support 128 bit AES encryption.
Image Features	WDR of 100dB or better
Casing	Suitable for indoor use. Mounting accessories (for false ceiling/pole mounting/wall mounting/etc.), including Sealing of cut-out's & all other required accessories shall be by bidder.
Miscellaneous	Atmospheric Humidity: upto 95% RH at 38 deg C Operating environment Temperature: 0 to 55 deg. C Rainfall: 150mm (max) for 1 hour period. Camera Housing: IP66, vandal-proof & of Stainless Steel / Die Cast Aluminium material, corrosion-proof. Glass: Heat Resistant Glass with KG3 or better coating.
Certification	BIS, UL, CE, FCC

3.4 Outdoor Fixed Camera

Features	Minimum Specifications
Image Sensor	CMOS Sensor –progressive scan 5 MP or better
Lens	5 to 50 mm CS mount, Varifocal Motorized with Remote Focus & Zoom Form factor can be bullet or box
Light Sensitivity	Color : 0.5 lx at 50 IRE, F1.2, AGC high or better Black & White : 0.2 lx at 50 IRE, F1.2, AGC high or better
Video Streams	Multi-streaming (Minimum 4 Nos user-defined & configurable - different frame rate, bit rate, resolution, quality, and compression format) support
Signal System	PAL
Video compression	~~MPEG-4,~~ H.264, H.265, MJPEG
Resolution	5 MP
Frame Rate	25 fps or better at full resolution & for all the supported codecs.
Image Settings	Wide Dynamic Range (WDR) ~ 100 DB, Auto/ One-push WB/ ATW/ Manual White Balance; ON/OFF switchable / Auto Flickerless operation; Auto Electronic Shutter;
General	
Approvals	BIS, UL, CE & FCC and EN
Networking	
Connectivity	10/100 mbps Ethernet with CAT-6 cable
Audio	Audio In & Out
Environmental	
Temperature	0°C to 50°C (Operating)
Mechanical	
Casing	Integrated Outdoor Weather proof (suitable for harsh environment) vandal proof casing with IP66. Make to be same as that of the camera. In-built IR. Stainless Steel / Die cast aluminium, corrosion-proof.

3.5 Panoramic / 180 Degree Camera / 360 Degree Camera

Feature	Specifications
1.General	IP True Day/Night Outdoor Fixed 4-lens Dome Camera for general surveillance for a radial distance of approx. 40 meters; capturing clear, identifiable/readable images of objects at a radial distance of approx. 8 meters; at a radial distance of approx. 8 meters; POE Enabled, ONVIF Compliant, low light visibility, clear visibility under rainy/cloudy/lightning conditions also, IR enhancement technology. Immunity against EMI, RFI & lightning. The camera shall have a canopy firmly attached to protect the dome from rains, droplets from all directions.
2.Field of View	For 180 degree Camera – Stitched 180 degree view(Horizontal), adjustable For 360 degree camera – 360 degree view
3.Light Sensitivity	Color: 0.5 lx at 50 IRE, F1.2, AGC high or better & Black & White : 0.2 lx at 50 IRE, F1.2, AGC high or better
4.Compression	MPEG4,H.264,H.265,MJPEG or equivalent
5.Signal System	PAL
6.Resolution	5MP x 4 or better (per lens)
7.Video streaming	Multi-streaming (Minimum 3 No. user-defined & configurable - different frame rate, bit rate, resolution, quality, and compression format) support. The camera shall support 128 bit AES encryption.
8.Image Features	Electronic Image Stabilization & WDR
9.Casing	IP 66 or better & vandal-proof with heat resistant & KG3 or better coated glass window Housing, Mounting accessories, brackets, poles, nuts, bolts, washers shall be of SS / Aluminium, corrosion-proof.
10. Miscellaneous	Atmospheric Humidity: upto 95% RH at 38 deg C Operating environment Temperature: 0 to 55 deg. C Camera Housing: IP66, vandal-proof & of Stainless Steel / Die Cast Aluminium material, corrosion-proof.. Glass: Heat Resistant Glass with KG3 or better coating.

3.6 PTZ Camera

Features	Minimum Specifications
General	IP True Day/Night Outdoor PTZ Dome Camera
Zoom	30x Optical Zoom & 12x Digital Zoom (or better)
Light Sensitivity	Color: 0.5 lx at 50 IRE, F1.2, AGC high or better & Black & White : 0.2 lx at 50 IRE, F1.2, AGC high or better
Compression	~~MPEG4~~/H.264 / H.265/MJPEG ~~or equivalent~~
Signal System	PAL
Resolution	Full HD or better
Video streaming	Multi-streaming (Minimum 4 Nos user-defined & configurable - different frame rate, bit rate, resolution, quality, and compression format) support
Image Features	AutoPan & Patrol Mode, Masking & WDR

Features	Minimum Specifications
Casing	IP 66 or better & vandal-proof; Stainless steel or Die Cast Aluminium
Certification	It should be BIS, FCC, CE, UL certified

4. The following is the revised PTR for Software OEMs (Section 5, Bid Qualification Criteria, Volume 1)

Proven Track Record for Software OEM

1. The proposed VMS application should have been successfully implemented in at least five projects in India / globally (in Oil, Gas & Petrochemicals / Ports / Airports / Homeland Security / Defence / Chemicals / Fertilisers) within the past five years ending the last date of the month previous to the publication of the tender.

2. The proposed ANPR application should have been successfully implemented in at least five projects in India / globally (in Oil, Gas & Petrochemicals / Ports / Airports / Homeland Security / Defence / Chemicals / Fertilisers) within the past five years ending the last date of the month previous to the publication of the tender.

3. The proposed speed detection software / system should have been successfully implemented in at least two projects in India / globally (in Oil, Gas & Petrochemicals / Ports / Airports / Homeland Security / Defence / Chemicals / Fertilisers) within the past five years ending the last date of the month previous to the publication of the tender.

The response to pre-bid queries (Technical) is attached to this Corrigendum as Annexure 1

The response to pre-bid queries (Commercial) is attached to this Corrigendum as Annexure 2

Bidders shall submit copy of these documents along with the technical–commercial bid, **<u>duly signed and stamped</u>**, as a token of having read and understood the same.

Annexure 1 – Response to Technical Queries

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
1	Awiros	Vol 1 : 438 of 449	Preamble to schedule of Rates	10. Speed Detection Software & Customization	As we understand, in the S.No. 10 under speed detection software & customization, this is the base software which is required for traffic Application (ANPR & Speed Detection). We request you to confirm if are understanding is correct.	Speed detection software and ANPR software have different functional requirements. Please refer to the corrigendum for ANPR software requirements.
2	Awiros	Vol 2 : 44 of 96	3.9. Speed Detection Software & Customisation	The speed detection software system shall be certified by any government accredited laboratory for speeds from 40 KMPH to 200 KMPH with variation of less than 2% at various speed thresholds. The test shall have been performed on a third-party camera.	We understand this is RADAR/Lidar solution and our platform can seamlessly be integrated with selected/existing partner solutions. This clause applies to RADAR/Lidar provider.	The clause pertains to the speed detection solution using RADAR / LIDAR / LEDDAR.
3	Awiros		General Query	ANPR BOQ	as we understand, all ANPR local data is getting aggregated centrally under Speed Detection Software which is mentioned under S.No. 10. Request you to please confirm if our understanding is correct.	The ANPR data shall be analysed by the field LPU and then shared with the central server. Please refer to the corrigendum.
4	Awiros		General Query	Speed Detection Camera	We recommend using server-based Video Analytics which is more accurate due to use of AI and deep learning.	Server based video analytics shall not be accepted.

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
5	Axis Communications		Section 3.1	Speed Detection Camera Minimum Illumination: Color mode: 0.005 lux@F1.6 or better B/W: 0 lux with IR illumination on	Since such low light color reproduction is pretty difficult to achieve at such lower aperture levels , would request if the same can be modified to 0.05 lux @ fstop value of 1.5 .	Accepted. Please refer to the corrigendum for the revised specifications.
6	Axis Communications		Section 3.1	Speed Detection Camera Wide Dynamic Range: Minimum 140 db	We do understand that this camera is being used for traffic application and to compensate BLC , we are able to achieve the same results with 120db WDR . please allow to quote for the same .	The Wide Dynanmic Range should be minimum 120 dB. Please refer to the corrigendum for revised specifications.
7	Axis Communications		Section 3.5	Panoramic cameras - 360 deg 10. Miscellaneous - Atmospheric Humidity: upto 95% RH at 38 deg C, Operating environment Temperature: 0 to 55 deg. C, Camera Housing: 1P66, vandal-proof & of Stainless Steel / Aluminium material, Glass: Heat Resistant Glass with KG3 or better coating.	Our glass comes with Hydrophilic coating with prevents water being accumulated on glass , would request to allow us to quote with this change .	Tender terms shall prevail
8	Axis Communications		Section 3.3	Indoor Dome Camera Camera Housing: IP66, vandal-proof & of Stainless Steel / Aluminium material.	Since indoor environment has limited exposure to moisture and dust , would request you to relax this clause to IP52 .	Tender terms shall prevail

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
9	Neural	Vol 1 : 438 of 449	Preamble to schedule of Rates	10. Speed Detection Software & Customization	As we understand, in the S.No. 10 under speed detection software & customization, this is the base software which is required for traffic Application (ANPR & Speed Detection). We request you to confirm if are understanding is correct.	Speed detection software and ANPR software have different functional requirements. Please refer to the corrigendum for ANPR software requirements.
10	Neural	Vol 2 : 44 of 96	3.9. Speed Detection Software & Customisation	The speed detection software system shall be certified by any government accredited laboratory for speedsfrom 40 KMPHto 200 KMPHwith variation of less than 2% at various speed thresholds. The test shall have been performed on a third-party camera.	We understand this is RADAR/Lidar solution and our platform can seamlessly be integrated with selected/existing partner solutions. This clause applies to RADAR/Lidar provider.	The clause pertains to the speed detection solution using RADAR / LIDAR / LEDDAR.
11	Neural		General Query	ANPR BOQ	as we understand, all ANPR local data is getting aggregated centrally under Speed Detection Software which is mentioned under S.No. 10. Request you to please confirm if our understanding is correct.	ANPR data shall get aggregated under the ANPR software. Please refer the corrigendum for details.
12	Neural		General Query	Speed Detection Camera	We recommend using server- based Video Analytics which is more accurate due to use of AI and deep learning.	Tender terms shall prevail
13	Neural	Page 21 of 96	2.6.2 Spares	Video Surveillance I. Camera (all types) 5 % of each type, rounded off to the higher number with minimum being 1)	We recommend to consider one each of all types	Tender terms shall prevail
14	Neural		2.6.2 Spares	II. Servers 1 No.	We request to Remove Servers from spares List	Tender terms shall prevail

Corrigendum 1 - Tender No. 3200000889 Bidder's Seal & Signature

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
15	Neural		2.6.2 Spares	III SAN/NAS Box 1 No.	We request to Remove SAN/NAS from the spares list	Tender terms shall prevail
16	Neural		2.6.2 Spares	Networking III. All Passive Components such as patch cords (Ethernet & OFC), pigtails, splicing kits, splicing enclosures (all types) At least 100 numbers each	We request to revised the Qty as 100 numbers each will be v high side (As CAMC will be the bidder scope it will be on required basis as needed.)	The quantity can be considered as 10 Nos.
17	Neural		2.6.2 Spares	IV. Hard disks (of the type and capacity used in storage) At least 5 numbers each	We request to consider Two numbers of HDD as spares	Tender terms shall prevail
18	Neural	Page 23 of 96	2.6.6 Warranty Service Level Requirements – SLA	4. The various Service Level Requirements and related penalties for default are given below:		
19	Neural				1. We request and recommend to considering 72 hrs from the call loggingtime – for all high severity events 2. Penalties per day of delay /per fault/ per Occasion should be 5000.00 for High Severity and 3. For Low severity event RS.1000.00	Tender terms shall prevail
20	Neural	Page 26 of 96	2.6.8 Resident Support	II. The bidder shall replace any part that fails during contract at no cost to Purchaser, under "UNLIMITED PART REPLACEMENT" in CAMC	We request and recommend if anyitemsfail/damageduringthe CAMC due to uncontrollable natural be bill to Client on actuals.	Tender terms shall prevail

Corrigendum 1 - Tender No. 3200000889

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
21	Neural		2.6.9 Penalty Clause	If the system/any component is down for more than 24 hours, Rs.10,000/day will be deducted from the CAMC bills. In case of non- availability of the system on the subsequent days, Purchaser has the right to get the job done by any other agency with the spares available in site stock at the risk, cost and responsibility of the contractor.	We request and recommend to consider , any component is down for more than 96 hrs , 2500.00 /day will be deducted from the CAMC Bills.	Tender terms shall prevail
22	Neural	Page 30 of 96	3.1. Speed Detection Cameras	8. Electronic Shutter 1/5 to 1 / 50,000 s or better	We recommend to consider 1/5 to 1/10000or better	Tender terms shall prevail
23	Neural			10. Minimum Illumination Color mode: 0.005 lux @ F1.6 or better B/W: 0 lux with IR illumination	We recommend to consider Minimum illumination color mode 0.05 lux or better and B/W 0 lux with IR illuminations	Accepted. Please refer to the corrigendum for the revised specifications
24	Neural			14. Wide Dynamic Range Minimum 140 dB	We recommend to consider WDR Minimum 120dB or Better	Accepted. Please refer to the corrigendum for the revised specifications
25	Neural			17. Local storage Minimum 128 GB and should support up to 256GB. In the event of failure of connectivity to the central server the camera shall record video locally on the SD card automatically. After the connectivity is restored these recordings shall be automatically merged with the server recording such that no manual intervention is required to transfer the SD card based recordings to server.	**Please clarify 128 GB or High should be part of supply for all camera or provision should be available on cameras**	The local storage requirement is only a provision that should be available on the camera

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
26	Neural	Page 33 of 96	3.3. Indoor Dome Camera	Lens 3 mm - 9 mm	We request to consider 3-4 to 10-12mm as per OEM's	+ / - 1 mm shall be accepted as long as the horizontal field of view for indoor dome cameras is minimum 100 degrees to maximum 40 degrees. Please refer to the corrigendum for the revised specifications
27	Neural	Page 34 of 96	3.4. Outdoor Fixed Camera	Lens 5 to 50 mm CS mount, Varifocal Motorized with Remote Focus & Zoom	**1.** Can we offer bullet IR camera with 5-40mm lens or better Lens with inbuild varifocal lens. **2.** Request to consider 5- 7 to 40-50mm lens. 3. Request to consider in build VARIFOCAL LENS 4. We request to consider 5-40mm lens or better with built in varifocal lens for: ANPR, Speed, and outdoor camera lens also	Tender terms shall prevail
28	Neural			Casing Integrated Outdoor Weather proof (SS - suitable for harsh environment) vandal proof casing with IP61. Make to be same as that of the camera. In-built IR. Stainless steel or better	We request to consider vandal proof outdoor housing as per OEM's recommendation (Stainless steel will be specific to few OEM's and non-availability).	The casing can be SS or die cast alumunium, with IP 66 rating. Please refer to the corrigendum for the revised specifications

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
29	Neural	Page 45 of 96	3.10. Video Storage System (SAN)	1. External Storage FC SAN with required storage to record all the cameras as per the parameters mentioned in the tender document & management software. The storage shall have the usable storage capacity calculated by the bidder + 20% spare space, using RAID 5. The minimum usable storage capacity shall be 230 TB. Calculations shall be submitted as part of detail engineering. To be ONVIF Compliant.	· As per tender storage mention 230TB Min with RAID 5 (Recording parameter mention as 30 days 15fps @ 5mp with 50 active motion recording) · As most of the OEM have H.265 with compression technology 230TB is high can we offer storage as per requirement meeting the Recording Parameter.	Tender terms shall prevail
30	Neural	Page 50 of 96	3.16. Field UPS	General Online UPS of sufficient power rating (Min. 1KVA) to provide uninterrupted & conditioned power supply to field cameras & active networking components	**Please confirm RAW power will be provided by the client at all the UPS points near to junction box.**	Raw power shall be provided near to the junction box. It shall be the responsibility of the bidder to tap the power and lay the electrical cables from the tapping point to the junction box in scope of this tender. There is a BoQ item (Sr No. 27) accordingly in the tender document.

Corrigendum 1 - Tender No. 3200000889 Bidder's Seal & Signature

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
31	Neural	Page 51 of 96	3.17. Solar powered kits	General All year round, robust solar panels for POE outdoor fixed cameras. The solar kit shall basically power a wireless access point which shall in turn provide POE power to camera (Total minimum 45 W)	· Qty of solar power kit is only 2 Nos, please clarify the purpose of Solar powered kits. · How many Hours' batteries charge is required	There are two remote locations where solar power cameras are to be provided, with wireless connectivity. The aerial distance from each of these points to the refinery location is 1.6 km and 2.4 km. There is clear line of sight available. On the refinery side, mounting infrastructure (tower) is available, however, the installation including accessories and configuration will be in the scope of the bidder. On the street side, the mounting shall be on the pole (BoQ item, to be provided by bidder) and the the installation including accessories and configuration will be in the scope of the bidder
32	Neural	Page 43 of 96	3.18. Wireless Access Points		· Qty of wireless access points is only 2 Nos, please clarify the purpose of wireless access points. · What will be the distance required for Tx and Rx and tower to install the wireless will be client scope or bidder	There are two remote locations where solar power cameras are to be provided, with wireless connectivity. The aerial distance from each of these points to the refinery location is 1.6 km and 2.4 km. There is clear line of sight available. On the refinery side, mounting infrastructure (tower) is available, however, the installation including accessories and configuration will be in the scope of the bidder. On the street side, the mounting shall be on the pole (BoQ item, to be provided by bidder) and the the installation including accessories and configuration will be in the scope of the bidder

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SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
33	Neural	Page 43 of 96	3.9. Speed Detection Software & Customisation	· The system shall have a video-based speed violation detection feature that uses a special camera (minimum specifications of ANPR camera) to capture the license plate and the vehicle speed.	There is contradiction is speed detection requirement. Pg 32 of RFP under speed detection cameras mentioned about Radar/Lidar/Leddar based speed detection whereas under the specification of Speed detection software , it is specified as Video based speed violation detection. As we understand , bidder is free to proposed Radar/Lidar or Video based speed detection meeting the functional objectives of the project. Kindly confirm.	Speed detection should use either Radar / Lidar / Leddar. Video analytics based speed detection solution shall not be accepted.
34	Neural	Page 43 of 96	3.9. Speed Detection Software & Customisation	The system shall have a video-based speed violation detection feature that uses a special camera (minimum specifications of ANPR camera) to capture the license plate and the vehicle speed.	For enhanced interoperability across different camera brands, it is strongly recommended to consider for ONVIF-compliant "software . In the view of same , we request to include ONVIF compliant speed detection software & amend the clause as follows : ""The system shall have a video- based speed violation detection feature that uses a special camera (minimum specifications of ANPR camera) to capture the license plate and the vehicle speed. Proposed speed detection software should be ONVIF Profile S , G ,T & M compliant. Documentary evidence to be submitted along with bid."""	All video based softwares shall necessarily be ONVIF compliant

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35	Neural	Page 46 of 96		ANPR + Speed Monitoring - Recording resolution - 2 MP at 15fps with 100% motion & 30 Days	We understand that continous recording of ANPR & Speed cameras is required along with ANPR & Speed events data for 30 days. Kindly confirm the understanding.	Correct
36	Norden	8 of 449	5. Bid-Qualification Criteria (BQC): 5.1 Technical Criteria General	1. All systems and components must be in compliance with CE, FCC, BIS (with Test Report) and UL certifications.	1. All systems and components must be in compliance with CE, FCC, BIS (with Test Report) and UL certifications. Request you to not ask Test reports as all the certificates are based on test reports and due to lot of design & components details in test reports, it is difficult to share.	The Test reports for all compliances should be available and produced if and when required by the Consultant / MRPL
37	Norden	30 of 96	SECTION 3 Technical Specifications 3.1. Speed Detection Cameras	13. Auto adjustment + Remote Control of Image settings: Brightness, Sharpness, Contrast, White Balance, Backlight Compensation, Gain Control, 3DNR, HLC, Defog, ROI, EIS, Scheduled Profile Settings & Video Title and Time Stamp Overlay	13. Auto adjustment + Remote Control of Image settings: Brightness, Sharpness, Contrast, White Balance, Backlight Compensation, Gain Control, 3DNR, HLC, Defog, ROI, EIS, Scheduled Profile Settings & Video Title and Time Stamp Overlay Request you to remove EIS as this is required in PTZ or very high zoom cameras where on full zoom, it is difficult to get the stable image.	Tender terms shall prevail

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
38	Norden	31 of 96	SECTION 3 Technical Specifications 3.1. Speed Detection Cameras	21. Lane coverage: Minimum 3 lanes	21. Lane coverage: Minimum 2 lanes Request you to ask 2 lanes coverage to capture the number plates as at 2MP, we can have the accuracy in 2 lanes max.	Lane coverage of minimum 2 lanes is acceptable. Please refer to the corrigendum for the revised specifications
39	Norden	32 of 96	SECTION 3 Technical Specifications 3.1. Speed Detection Cameras	32. Functional requirements of Radar / Lidar / LEDDAR: Tracking of 1 ~ 4 Lanes Detection and Speed Accuracy > 99.5 % Installation height – 2 m to 7 m Speed Detection range – 5 kmph to 200 kmph Speed Detection distance – 5 m to 50 m	32. Functional requirements of Radar / Lidar / LEDDAR: Tracking of 1 ~ 4 Lanes Detection and Speed Accuracy > 95 % Installation height – 2 m to 7 m Speed Detection range – 5 kmph to 200 kmph Speed Detection distance – 5 m to 50 m Request you to ask minimum 95% accuracy in place of 99.5% as it is very difficult to get so high accuracy in India with different types of number plates specially when traffic is high or different weather conditions.	The Detection and Speed Accuracy shall be > 98 %. Please refer to the corrigendum for the revised specifications

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40	Norden	32 of 96	SECTION 3 Technical Specifications 3.1. Speed Detection Cameras	Other: The system shall provide customised reports pertaining to speed violations. System shall be capable of providing alerts based on single speed violation (single speed violation) or average speed violation (average speed calculated based on at least 2 simultaneous cameras)	Other: The system shall provide customised reports pertaining to speed violations. System shall be capable of providing alerts based on single speed violation (single speed violation) ~~or average speed violation (average speed calculated based on at least 2 simultaneous cameras)~~ Request you to ask only single speed violation as it is very difficul to have average speed calculation in a built-in alogrithm based cameras.	Tender terms shall prevail
41	Norden	32 of 96	SECTION 3 Technical Specifications 3.2. ANPR Camera	General: IP True Day/Night Outdoor Fixed Box Camera, PoE enabled, ONVIF Compliant, low light visibility, clear visibility under rainy/cloudy/lightning conditions also. Immunity against EMI, RFI & lightning.	General: IP True Day/Night Outdoor Fixed Box/ Bullet Camera, PoE enabled, ONVIF Compliant, low light visibility, clear visibility under rainy/cloudy/lightning conditions also. Immunity against EMI, RFI & lightning. Request you to ask Bullet camera alos in option as you have asked motorized varifocal lens which i possible in Bullet type only.	Fixed Box / Bullet camera shall be acceptable. Please refer to the corrigendum for the revised specifications

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42	Norden	32 of 96	SECTION 3 Technical Specifications 3.2. ANPR Camera	Lens: 5-50 mm lens (Varifocal, Motorised Lens) or appropriate to capture minimum 3.5 meters lane width from a minimum height of 7 meters.	Lens: 5-50 mm lens (Varifocal, Manual or Motorised Lens) or appropriate to capture minimum 3.5 meters lane width from a minimum height of 7 meters. Request you to ask manual varifocal lens if the requirement is of Box type cameras as most of the OEMs do not have support of motorized lens in box type cameras.	Manual or motorised lens shall be acceptable. Please refer to the corrigendum for the revised specifications
43	Norden	32 of 96	SECTION 3 Technical Specifications 3.2. ANPR Camera	Compression: MPEG4, H.264, H.265, MJPEG	Compression: ~~MPEG4,~~ H.264, H.265, MJPEG Request you to remove MPEG4 as this is very old compression and H.264 is the advance version of the same.	Compression: H.264, H.265, MJPEG. Please refer to the corrigendum for the revised specifications
44	Norden	33 of 96	SECTION 3 Technical Specifications 3.2. ANPR Camera	IR: auto-focus, Head Light Compensation (HLC) & WDR of 120 dB or better.	IR: auto/remote-focus, Head Light Compensation (HLC) & WDR of 120 dB or better. Request you to ask remote focus in option as auto focus is applicable only for motorized lens which comes in Bullet type cameras.	Tender terms shall prevail

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45	Norden	33 of 96	SECTION 3 Technical Specifications 3.2. ANPR Camera	Casing: IP 66 or better & vandal-proof, with heat resistant & KG3 or better coated glass window. Housing, Mounting accessories, brackets, poles, nuts, bolts, washers shall be of SS; Stainless steel or better	Casing: IP 66 or better & vandal-proof, with heat resistant & KG3 or better coated glass window. Housing, Mounting accessories, brackets, poles, nuts, bolts, washers shall be of SS; Stainless steel or Die Cast Aluminim with corrosion resistance or better It is very difficult to have such type of cameras in SS type housing so request you to allow Die Cast Alluminium hosuing with corrosion resistance property.	Casing: IP 66 or better & vandal-proof, with heat resistant & KG3 or better coated glass window. Housing, Mounting accessories, brackets, poles, nuts, bolts, washers shall be of SS; Stainless steel or Die Cast Alumunium or better. Please refer to the corrigendum for the revised specifications
46	Norden	33 of 96	SECTION 3 Technical Specifications 3.3. Indoor Dome Camera	Compression: MPEG4, H.265, MJPEG	Compression: ~~MPEG4,~~ H.264, H.265, MJPEG Request you to remove MPEG4 as this is very old compression and H.264 is the advance version of the same.	Compression: H.264, H.265, MJPEG. Please refer to the corrigendum for the revised specifications
47	Norden	34 of 96	SECTION 3 Technical Specifications 3.4. Outdoor Fixed Camera	Lens: 5 to 50 mm CS mount, Varifocal Motorized with Remote Focus & Zoom	Lens: 5 to 50 mm CS or Board mount, Varifocal Manual or Motorized with Remote Focus & Remote/ Manual Zoom Request you to accept the suggested changes as CS mount is applicable for Box Cameras and Box Cameras is not having support for Motorized lens or ask Bullet Camera with Board mount option.	Form factor can be bullet or box, however, the lens has to be varifocal and motirised.

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
48	Norden	34 of 96	SECTION 3 Technical Specifications 3.4. Outdoor Fixed Camera	Video compression: MPEG-4, H.265	Video compression: ~~MPEG-4~~, H.264, H.265 Request you to remove MPEG4 as this is very old compression and H.264 is the advance version of the same.	Compression: H.264, H.265, MJPEG. Please refer to the corrigendum for the revised specifications
49	Norden	35 of 96	SECTION 3 Technical Specifications 3.4. Outdoor Fixed Camera	Image Settings: Wide Dynamic Range (WDR) ~ 100 DB, Auto/ One-push WB/ ATW/ Manual White Balance; ON/OFF switchable Flickerless operation; Auto Electronic Shutter;	Image Settings: Wide Dynamic Range (WDR) ~ 100 DB, Auto/ One-push WB/ ATW/ Manual White Balance; ON/OFF switchable or Auto Flickerless operation; Auto Electronic Shutter; Request you to accept Auto flickerless option also in place of ON/OFF as most of the OEMs are having auto support.	Auto flickeless operation is acceptable.
50	Norden	35 of 96	SECTION 3 Technical Specifications 3.4. Outdoor Fixed Camera	Casing: Integrated Outdoor Weather proof (SS - suitable for harsh environment) vandal proof casing with IP61. Make to be same as that of the camera. In-built IR. Stainless steel or better	Casing: Integrated Outdoor Weather proof (SS/ Aluminium - suitable for harsh environment) vandal proof casing with IP66. Make to be same as that of the camera. In-built IR. Stainless steel/ Aluminium or better It is very difficult to have such type of cameras in SS type housing so request you to allow Die Cast Alluminium hosuing with corrosion resistance property.	Casing: Integrated Outdoor Weather proof (SS/ Aluminium - suitable for harsh environment) vandal proof casing with IP66. Make to be same as that of the camera. In-built IR. Stainless steel/ Die Cast Aluminium or better. Please refer to the corrigendum for the revised specifications

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51	Norden	36 of 96	SECTION 3 Technical Specifications 3.5. Panoramic / 180 Degree Camera / 360 Degree Camera	1. General: IP True Day/Night Outdoor Fixed 4-lens Dome Camera for general surveillance for a radial distance of approx. 40 meters; capturing clear, identifiable/readable images of objects at a radial distance of approx. 8 meters; at a radial distance of approx. 8 meters; POE Enabled, ONVIF Compliant, low light visibility, clear visibility under rainy/cloudy/lightning conditions also, IR enhancement technology. Immunity against EMI, RFI & lightning. The camera shall have a canopy firmly attached to protect the dome from rains, droplets from all directions.	1. General: IP True Day/Night Outdoor Fixed 4/8-lens Dome Camera for general surveillance for a radial distance of approx. 40 meters; capturing clear, identifiable/readable images of objects at a radial distance of approx. 8 meters; at a radial distance of approx. 8 meters; POE Enabled, ONVIF Compliant, low light visibility, clear visibility under rainy/cloudy/lightning conditions also, IR enhancement technology. Immunity against EMI, RFI & lightning. ~~The camera shall have a canopy firmly attached to protect the dome from rains, droplets from all directions.~~ Request you to allow 8 lens options also as some OEMs are using 8 lens to have 360 degree view. Also, please remove the canopy option as every OEMs are having their own design to prtect the camera from rains.	Tender terms shall prevail

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52	Norden	36 of 96	SECTION 3 Technical Specifications 3.5. Panoramic / 180 Degree Camera / 360 Degree Camera	6. Resolution: 5MP x 4 or better (per lens)	6. Resolution: 4MP x 4 or 2MP x 8 or better (per lens) Request you to accept the 4MP resolution (4MP*4=16MP) for 180 degree and 2MP resolution (2MP*8=16MP) for 360 degree view for wider participations.	Tender terms shall prevail
53	Norden	36 of 96	SECTION 3 Technical Specifications 3.5. Panoramic / 180 Degree Camera / 360 Degree Camera	8. Image Features: Electronic Image Stabilization & WDR	8. Image Features: ~~Electronic Image Stabilization &~~ WDR Request you to remove EIS as this is required in PTZ or very high zoom cameras where on full zoom, it is difficult to get the stable image.	Tender terms shall prevail

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54	Norden	36 of 96	SECTION 3 Technical Specifications 3.5. Panoramic / 180 Degree Camera / 360 Degree Camera	9. Casing: IP 66 or better & vandal-proof IP 66 or better & vandal-proof with heat resistant & KG3 or better coated glass window Housing, Mounting accessories, brackets, poles, nuts, bolts, washers shall be of SS	9. Casing: IP 66 or better & vandal-proof IP 66 or better & vandal-proof with heat resistant & KG3 or better coated glass window Housing, Mounting accessories, brackets, poles, nuts, bolts, washers shall be of SS or Die Cast Aluminim with corrosion resistance It is very difficult to have such type of cameras in SS type housing so request you to allow Die Cast Alluminium hosuing with corrosion resistance property.	Please refer to the corrigendum for the revised specifications
55	Norden	43 of 96	SECTION 3 Technical Specifications 3.9. Speed Detection Software & Customisation	3.9. Speed Detection Software & Customisation	Request you to cahnge it to ANPR Software & Customisation as speed software asked built-in inside the cameras and customization is not possible in built-in camera algorithm. Also, it is clearly mention that this software required for - (minimum specifications of ANPR camera).	Please refer to the Corrigendum for the specifications of the ANPR software

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56	Norden	52 of 96	SECTION 3 Technical Specifications 3.20. Cables & Networking Accessories	OFC Cable: 24 core, Uni-tube, Armoured, Direct Burial 62.5 µm /125 µm MM FO Cable Four-Fibre, Uni-tube Construction, Gel Filled, Multimode Optical Fibre Cable (OFC) With 4 Nos. 62.5/125 Microns Colour Coded Fibres As Per G.651 Standards, Eccst Armour, Embedded Steel Wire / FRP Strength Members, Water swellable/Water Blocking Tape & Outer UV Resistant And Fire Retardant LSZH Sheath Having Anti-Termite And Anti-Rodent Properties, Suitable For Direct/Duct Burial	OFC Cable: 24 core, Uni-tube, Armoured, Direct Burial 62.5 µm /125 µm MM FO Cable Four-Fibre, Uni-tube Construction, Gel Filled, Multimode Optical Fibre Cable (OFC) With 4 Nos. 62.5/125 Microns Colour Coded Fibres As Per G.651 Standards, Eccst Armour, Embedded Steel Wire / FRP Strength Members, Water swellable/Water Blocking Tape & Outer UV Resistant And Fire Retardant HDPE Sheath Having Anti-Termite And Anti-Rodent Properties, Suitable For Direct/Duct Burial Requesting you to change the LSZH jacket to HDPE Jacket as it is Anti-Termite	Both LSZH and HDPE jackets are acceptable

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57	Norden	53 of 96	SECTION 3 Technical Specifications 3.20. Cables & Networking Accessories	Pigtails: Pigtail with semi-tight buffer PA/PBT, Ø 0.9 mm, yellow, multimode G651 50/125(OM3/OM4) or single mode G652.D 9/125 µm (OS1, OS2), length 1 m. Fitted with one LC connector in acc. with IEC 61754-20. Zirconia (ceramic) ferrule with a PC polished end face geometry, connectors tuned in accordance with IEC 61755-3-1 and qualified in acc. with IEC 61753-1 for category U (uncontrolled environment). material PEI / UL 94 V-0, strain relief and white plastic dust cover Mechanical specifications: Mating cycles: delta IL < 0.2 dB after 500 mating cycles Pull-out force fiber pigtail: ≥ 5 N	Pigtails: Pigtail with semi-tight buffer PA/PBT, Ø 0.9 mm, yellow, multimode G651 50/125(OM3/OM4) or single mode G652.D 9/125 µm (OS1, OS2), length 1.5 m. Fitted with one SC connector in acc. with IEC 61754-20. Zirconia (ceramic) ferrule with a PC polished end face geometry, connectors tuned in accordance with IEC 61755-3-1 and qualified in acc. with IEC 61753-1 for category U (uncontrolled environment). material PEI / UL 94 V-0, strain relief and white plastic dust cover Mechanical specifications: Mating cycles: delta IL < 0.2 dB after 500 mating cycles Pull-out force fiber pigtail: ≥ 5 N Requesting to amend as per above to allow wider participation.Requesting you to change LC to SC connector as per the Patch cord specification mentioned.	Length can be 1 m /1.5 m. SC / LC connector shall be acceptable, provided the relevant and appropriate accecories are included in the overall passive networking solution.
58	Sparsh	Page No: - 30	3.1. Speed Detection Cameras	3. Frame rate	1920×1080 @ 60 FPS or better **Read Clause as: -** Frame rate: - 1920×1080 @ 30 FPS or better **Justification: -** Many of OEM have STQC Certificate on 30FPS so we request you please accept our suggestion and change it.	Tender terms shall prevail

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59	Sparsh	Page No: - 30	3.1. Speed Detection Cameras	14. Wide Dynamic Range	Minimum 140 dB **Read Clause as: -** Minimum 120 dB **Justification: -** Many of OEM have STQC Certificate on 120db WDR so we request you please accept our suggestion and change it.	The Wide Dynanmic Range should be minimum 120 dB. Please refer to the corrigendum for revised specifications.
60	Sparsh	Page No: - 30	3.1. Speed Detection Cameras	15. Privacy Masks	Minimum 8 regions **Read Clause as: -** Minimum 4 regions **Justification: -** Many of OEM have STQC Certificate on 4 Regions so we request you please accept our suggestion and change it.	Tender terms shall prevail
61	Sparsh	Page No: - 31	3.1. Speed Detection Cameras	18. Protocol	IPv4, IPv6, ICMP, TCP/IP, UDP, DHCP, PPPoE, RTP/RTSP/RTCP, RTMP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, Multicast, SSL/TLS1.2, ONVIF, Profile S, G & T, SIP, **Read Clause as: -** Remove "SIP"	Tender terms shall prevail

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62	Sparsh	Page No: - 31	3.1. Speed Detection Cameras	20. Built in camera Intelligent Video Identification	Number plate capturing with color, Vehicle Identification & Classification Type & Color, capture License Plate, Vehicle, Speed & Direction of Vehicle, monitoring the Traffic Flow **Read Clause as: -** This Analytics can run through Camera/Server Software	Tender terms shall prevail
63	Sparsh	Page No: - 31	3.1. Speed Detection Cameras	21. Traffic Control	Counting Vehicles based on Vehicles, Lane Management **Read Clause as: -** This feature can run through Camera/Server Software	Tender terms shall prevail
64	Sparsh	Page No: - 31	3.1. Speed Detection Cameras	28. Casing	IP66/IP67, IK10, NEMA 4X or higher **Read Clause as: -** **IP66/IP67/NEMA 4X, IK10 or higher**	Tender terms shall prevail

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65	Sparsh	Page No: - 31 Page No: - 33 Page No: - 34 Page No: - 35 Page No: - 37	3.1. Speed Detection Cameras 3.2. ANPR Camera 3.3. Indoor Dome Camera 3.4. Outdoor Fixed Camera 3.6. PTZ Camera	Certification	BIS, UL, CE, FCC **Read Clause as: -** BIS/UL, CE, FCC **Justification: -** • BIS is an Indian equivalent certificate to UL and is covered as mandatory certification for CCTV cameras as per CRO. • DPIIT (Department for Promotion of Industry and Internal Trade) has issue a office memorandum on 28.03.2022 where "......Bureau of Indian Standards Confirmed that Indian Standard IS:13252 available for CCTV Cameras is equivalent to UL/CE Certificate".... Procuring entities to indicate the BIS standard(Indian standard IS:13252) only, in the procurement of CCTV Cameras". So request you kindly accept our suggestion and Change it.	Tender terms shall prevail
66	Sparsh	Page No: - 32	3.4. Outdoor Fixed Camera	Lens	5-50 mm lens (Varifocal, Motorised Lens) or appropriate to capture minimum 3.5 meters lane width from a minimum height of 7 meters. **Read Clause as: -** 5-50 mm lens (Varifocal Lens) **Justification: -** As per the standard technology for CS Mount Lens Motorised Lens is not possible so we request you please changes it Bullet Camera or Varifical Lens).	The form factor can be bullet or box, however, the motorised varifocal functionality is required. Please refer to the revised specifications.

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SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
67	Sparsh	Page No: - 35	3.4. Outdoor Fixed Camera	Casing	Integrated Outdoor Weather proof (SS - suitable for harsh environment) vandal proof casing with IP61. Make to be same as that of the camera. In-built IR. Stainless steel or better **Read Clause as: -** Integrated Outdoor Weather proof (SS - suitable for harsh environment/corrosion proof) vandal proof casing with IP61. Make to be same as that of the camera. In-built IR. Stainless steel or better	Please refer to the corrigendum for revised specifications.
68	Techno Services Pvt Ltd	51	3.19	Speed Display LED Monitors	Does not specify the 'Digit size' for the speed display. Please specify	The digit sizes should be between 30 cm and 40 cm.
69	Techno Services Pvt Ltd	95 - 96	5.3 | XIX	Information Security Notification: Device Testing & Certification	We understand from 5.3 Clause (Pages 66 to 96) that STQC certified CCTV Cameras have to offered. Please confirm that we should offer CCTV Camera models with STQC certification and PPO -MII.	Bidders have to ensure that quoted products receive the required STQC certification prior to supply of the product, without which the Consultant can advise MRPL to reject the same.
70	Techno Services Pvt Ltd	51	3.17	Solar Powered Kits	Total Min. 45W is specified for Solar power. Kindly advise the Max. power requirement which includes: - WL Access Point - POE Camera with IR Illumination ON during the night.	Bidders should consider minimum solar power of 45 W, or as required by the selected components (router and camera), whichever is higher.

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71	Techno Services Pvt Ltd	51	3.18	Wireless Access Points	Point to Point Wireless Access point (range 2.6KM) is considered. Please advise: - Typical distance from the field access point to the other end of the reciever at base station. - Clear Line of Sight between Point to Point. (No obstruction by Vegetation / buildings).	There are two remote locations where solar power cameras are to be provided, with wireless connectivity. The aerial distance from each of these points to the refinery location is 1.6 km and 2.4 km. There is clear line of sight available. On the refinery side, mounting infrastructure (tower) is available, however, the installation including accessories and configuration will be in the scope of the bidder. On the street side, the mounting shall be on the pole (BoQ item, to be provided by bidder) and the the installation including accessories and configuration will be in the scope of the bidder
72	Techno Services Pvt Ltd	35	3.5	Panoramic / 180 Degree Camera / 360 Degree Camera	20 Mpx Panoramic - Multisensor (4x5Mpx.) cameras are special cameras and not common in CCTV deployment. Therefore request you to exempt the STQC certification for only Panoramic Cameras 180° (17) and 360° (1).	Tender terms shall prevail
73	Transit	TPI		FAT- TPI	We kindly request permission to conduct multiple FATs as the material becomes available, either at our office location or at the OEM site.	TPI shall be undertaken for all components prior to dispatch and supply.

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74	Transit	VMS			We need to supply separate ANPR and speed detection software, even if these features are built into the camera. Could you please clarify this requirement?	ANPR and speed detection softwares have to be provided separately. ANPR processing shall happen through an LPU whereas speed detection shall happen through Radar / LIDAR / LEDDAR. Please refer to the corrigendum for ANPR software requirements.

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Annexure 2 – Response to Commercial Queries

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
1	Achieva Systems Private Limited				Is that JV allowed for participating in this tender?	No, JV is not allowed for this tender.
2	Achieva Systems Private Limited				Is that MSE exempted from experience of previous project execution?	MSE's are not exempted from experience for previous project execution. Please read the tender document carefully.
3	Aurionpro Solutions Limited	1	Bid Closing date & Time	Bid Closing date & Time	We are getting into Festive Holidays from 15 August to 19 August - Independece Day and Raksha Bandhan - with a long week end. Looking at complexity of the bid where we need to compile a lot of documents including from OEMs, Subject Matter Experts, etc. , may we kinly request you to extend bid submission till 6 Sept 2024?	Please refer to the Corrigendum
4	Aurionpro Solutions Limited	9	Definition of Similar Work	Definition of Similar Work	May we kindly request you to accept projects done for State Govt under Safe City Surveillance /State Govt. Transportation Dept (monitoring bus depots, bus stands across the geopgraphy-multilocations, etc.) ?	Safe city and city surveillance projects shall be accepted.

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
5	Awiros	Vol 1 : 8 of 449	5.1 Technical Criteria Software OEM	2. The proposed ANPR application should have been successfully implemented in at least five projects in India (in Oil, Gas & Petrochemicals / Ports / Airports / Homeland Security / Defence / Chemicals / Fertilisers) within the past five years ending the last date of the month previous to the publication of the tender.	AI and deep learning is an evolving field, every week we get new models by research scientists those are improved versions from the previous solutions. Under Government of India Startup ecosystem many such startups have developed much better solutions in performance using these evolving models. Such barriers on referenced deployment may devoid the buyers to get latest solutions/ technologies. At the same it is detrimental to governments initiatives to encourage startups. We accordingly request you to wave such industry specific experience so that new technologies can be presented for evaluation and may help you select the best available product.	Please see the corrigendum for revised PTR criteria.

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
6	Awiros	Vol 1 : 8 of 449	5.1 Technical Criteria Software OEM	3. The proposed speed detection software / system should have been successfully implemented in at least two projects in India (in Oil, Gas & Petrochemicals / Ports / Airports / Homeland Security / Defence / Chemicals / Fertilisers) within the past five years ending the last date of the month previous to the publication of the tender.	AI and deep learning is an evolving field, every week we get new models by research scientists those are improved versions from the previous solutions. Under Government of India Startup ecosystem many such startups have developed much better solutions in performance using these evolving models. Such barriers on referenced deployment may devoid the buyers to get latest solutions/ technologies. At the same it is detrimental to governments initiatives to encourage startups. We accordingly request you to wave such industry specific experience so that new technologies can be presented for evaluation and may help you select the best available product.	Tender terms shall prevail

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7	Neural	Vol 1 : 8 of 449	5.1 Technical Criteria Software OEM	2. The proposed ANPR application should have been successfully implemented in at least five projects in India (in Oil, Gas & Petrochemicals / Ports / Airports / Homeland Security / Defence / Chemicals / Fertilisers) within the past five years endingthe last date of the month previousto the publication of the tender.	AI and deep learning is an evolving field, every week we get new models by research scientists those are improved versions from the previous solutions. Under Government of India Startup ecosystem many such startups have developed much better solutions in performance usingthese evolving models. Such barriers on referenced deployment may devoid the buyers to get latest solutions/ technologies. At the same it is detrimental to governments initiatives to encourage startups. We accordingly request you to wave such industry specific experience so that new technologies can be presented for evaluation andmay help you select the best available product.	Please see the corrigendum for revised criteria.

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8	Neural	Vol 1 : 8 of 449	5.1 Technical Criteria Software OEM	3. The proposed speed detection software / system should have been successfully implemented in at least two projects in India (in Oil, Gas & Petrochemicals / Ports / Airports / Homeland Security / Defence / Chemicals / Fertilisers) within the past five years ending the last date of the month previous to the publication of the tender.	AI and deep learning is an evolving field, every week we get new models by research scientists those are improved versions from the previous solutions. Under Government of India Startup ecosystem many such startups have developed much better solutions in performance usingthese evolving models. Such barriers on referenced deployment may devoid the buyers to get latest solutions/ technologies. At the same it is detrimental to governments initiatives to encourage startups. We accordingly request you to wave such industry specific experience so that new technologies can be presented for evaluation andmay help you select the best available product.	Tender terms shall prevail
9	Neural	Vol 1 : 355	Terms of Payments	PAYMENTS: The following are the payment terms for the project: For Capex · 50 % against supply of items with TPI · 20 % against installation of the items · 10 % against commissioning of the entire system · 20 % against UAT, system documentation and handover	We recommend to consider below payment terms for Capex · 75 % against supply of items with TPI · 10 % against installation of the items · 10 % against commissioning of the entire system · 5% against UAT, system documentation and handover	Tender terms shall prevail

SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
10	Neural	Vol 1 : 355	Terms of Payments	For Opex (CAMC) · The entire Opex amount shall be divided into 16 equal quarterly instalments · The equal quarterly instalments shall be paid against submission of quarterly invoice and respective SLA calculations.	We recommend to consider below payment terms for OPEX (CAMC) · The entire Opex amount shall be divided into 16 equal quarterly instalments · The equal quarterly instalments shall be paid in advance of every Quarterly against submission of quarterly invoice.	Tender terms shall prevail
11	Secutech	8	5.1.1 PTR	Software OEM Prequalification	In the PTR for IT and Networking OEM, the requirements call for the Global Criteria Experience and Among TOP 10 in the World. Since Software plays a very important role, we would request the Global PTR of the Software OEM shall be accepted	Global PTR for software OEM shall be acceptable.
12	Secutech	5	Clause no 4	EMD	As there is a relaxation provided for MSME for the Clause No 4, Sub Clause 16 ie Turnover Criteria, we assume that a similar relaxation is provided for EMD for MSME applicatants	The relaxation is for "MSE" only, please note
13	Secutech	239	4.19	A bank Guarantee may be accepted by the OWNER towards Earnest Money Deposit of Security deposit or otherwise, as the case may be, provided the amount of such Bank Guarantee is not less than Rs.1 (one) lakh. Such Bank Guarantee shall be issued by a scheduled bank in India acceptable to the OWNER and shall be strictly in the format prescribed by the OWNER for the specific purpose for which the Bank Guarantee is required to be furnished.	Emd shall be acceptable from Nationalized bank	EMD from a scheduled bank is acceptable

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SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
14	Transit	[ANNEXURE - III TO SPECIAL CONDITIONS OF CONTRACT] PAYMENT TERMS FOR CONTRACTS ON ITEM RATE BASIS	355	Payment terms The following are the payment terms for the project: - For Capex o 50 % against supply of items with TPI o 20 % against installation of the items o 10 % against commissioning of the entire system o 20 % against UAT, system documentation and handover	We kindly request your consideration in modifying the payment terms outlined in the tender document. Due to the scale of this significant project and our need to manage fund rotations effectively, we are seeking your support in the following revised payment structure: Capex: 80% of the payment against the supply of items, contingent upon Third- Party Inspection (TPI). 20% upon the completion of the project, encompassing installation, commissioning of the entire system, User Acceptance Testing (UAT), system documentation, and final handover. This adjustment is crucial for us to effectively manage our financial commitments and ensure smooth execution of the project. We would greatly appreciate your understanding and support in accommodating these revised payment terms.	Tender terms shall prevail

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SL. NO.	BIDDER NAME	PAGE NO.	CLAUSE NO.	SUBJECT	BIDDER'S QUERY	OWNER'S REPLY
15	Transit	BOQ	448	Provision of additional onsite engineer (beyond the requirement of 2 engineers) for operation & maintenance of all components onsite during Warranty and CAMC	Our understanding is that we are required to provide monthly charges for two engineers. This decision is contingent upon MRPL's determination of whether a Purchase Order (PO) for manpower will be issued. Additionally, please note that this amount is not included in the L1 evaluation for commercial aspects. Please give your confirmation .	Item 42 of the SOR specifies *"Provision of additional onsite engineer (beyond the requirement of 2 engineers) for operation & maintenance of all components onsite during Warranty and CAMC"*. This refers to the requirement of additional manpower, **beyond the mandatory 2 engineers required during the Warranty & CAMC period**. This is an optional item, and shall not be included in the commercial evaluation.
16	Transit	Contract period.		Contract period.	We have to supply and installation both do withing 8 month or is there specific time frame for Supply	The total time frame for the project completion is 8 months. It is expected that the supply should be completed within 4 months.
17	Transit	Supply		Supply of material	Can we make multiple deliveries with multiple bills, or do we need to deliver everything in a single lot? Please confirm.	Multiple deliveries with multiple bills shall be accepted.
18	Transit	Local content		PPLC	Since this evaluation is based on the total order value, please confirm PPLC is also included in the total estimated quoted amount.	MRPL is not liable to comment on the estimated budget based on PP-LC or otherwise
19	Transit	E-Procurement site issue			We have found only a single 545-page PDF document. Is this the only document, or are there additional ones? Additionally, we could not locate this tender on the e-procurement site. Could you please check and advise us on where we can submit our bid?	The tender has to be submitted on the etendering site www.tenderwizard.com. Please refer to the tender document.

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