



Oil & Gas Regulatory Authority

Government of Pakistan

TENDER NOTICE

TURN KEY SOLUTION FOR SUPPLY, INSTALLATION, CONFIGURATION AND SUPPORT SERVICES OF NETWORKING (nodes), NETWORK SWITCHES, GIGABYTE (fiber optic) BACKBONE AND GLASS PARTITION FOR THE SERVER ROOM, IT SECTION AND R&I SECTION FOR E-OFFICE UNDER TENDER ENQUIRY NO.11/2019

- The Oil and Gas Regulatory Authority (OGRA) invites sealed bids/proposals from well-reputed firms/suppliers having
 minimum five (05) years experience of similar works/assignments and registered with Income Tax & Sales Tax Departments
 for turn key solution of E-Office infrastructure at OGRA's Head Office Building located at 54-B, Fazl-ul-Haq Road, Blue Area,
 Islamabad under Tender Enquiry No. 11 of 2019.
- The Tender Documents containing detailed information, terms & conditions etc. are available on the websites of PPRA (www.ppra.org.pk) and OGRA (www.ogra.org.pk). These documents can also be obtained from office of the undersigned from 09:00 a.m. to 05:00 pm on any working day i.e. Monday to Friday.
- The sealed bids/proposals will be received latest by November 26, 2019 by 11:00 a.m., and will be opened on the same day
 at 11:30 a.m. at 3rd floor of office building by OGRA's Bid Opening Committee, in the presence of bidders who opt to be
 present
- 4. OGRA reserves the right to accept/cancel/reject any or all proposals, as per PPRA Rules, 2004.

Joint Executive Director (Admin)
Oil & Gas Regulatory Authority

54-B. Fazl-ul-Hag Road, Blue Area, Islamabad, PH: 051-9244373, FAX: 051-9244143

DONATE FOR DIAMER-BASHA AND MOHMAND DAM

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ئىينڈر نوٹس

شینڈراکلوائری نبر 2019/11 کے تحت ای آفس کیلیئے سرور دوم ، آئی ٹی سیٹشن اور آراینڈ آئی سیٹشن کیلیئے نبیٹ ورک سونچر ، میریکا بائٹ (فائبر آیڈ) بیک بون ایڈ گلاس یارٹیٹش کی فراہمی ، تصیب ، مشیک بیشن ایڈ سیورٹ سرومز کیلیئے ٹرن کی (Tum Key) سالوثن

- 1 آگل اینڈیکس ریگولیٹری اضارٹی (اوگرا) کوٹینڈ رانگوائز کی نمبر2019 10 11 کے تحت اوگراہیڈ آفس بلڈیگ واقع 8-54 فیصل می روڈ بلیواریا اسلام آبادیٹس افواسٹر کچر کے ٹرن کی (Turn Key) سالوش کیلئے انکم کیکس ویپلز ٹیکس ڈیپارٹسنٹس کے ساتھ درجسڑ ڈاورمماٹل کا مول کا کم از کم پانٹی (05) سالہ تجربدر کھنے والی معروف فرموں اسپلائزز سے سریمہر پیشکشٹیں انتجاویز مطلوب ہیں۔
- 2 مفصل معلومات اور شرائط وضوابط وغیره پر بغی ٹینڈردستادیزات ہیر لکا دیب سائٹ(www.ppra.org.pk)اور اوگرا کی دیب سائٹ (www.ogra.org.pk) پر دستیاب ہیں۔ دستاد بڑات کی بھی ایم کارلینی موموان تاجمد کوئٹن 60:00 ہے جسک زیر تخطی کے دفتر سے بھی حاصل کی جاسکتی ہیں۔
- 3 سربمبر چنگنشیں/ تباویز مورخه 2**0 نومبر2019 کو 11:00 ب**یج تک وصول کی جا کمیں گی اورا ہی دن 11:30 بیجا اوگرا کی بڈاو پٹنگ کیلیٹی کی جانب ہے تحرفو فلور پر حاضر آمدہ چیکٹش دہندگان کی موجود کی مٹر کھولی جا کمیں گی۔
 - 4 اوگرا پیرارولز2004 کے تحت کی ایک یا جملہ تجاویز کومنظور امنسوخ امستر دکرنے کا حق محفوظ رکھتا ہے۔

جوائف ایگزیکٹوڈائریکٹر(ایڈمن) آکل اینڈگیس ریگولیٹری اتھارٹی

B-54، فضل حق روڈ، بليواريا اسلام آباد فون:53-9244373 • 051-9244373 فين

DONATE FOR DIAMER-BASHA AND MOHMAND DAI

TENDER NOTICE

TURN KEY SOLUTION FOR SUPPLY, INSTALLATION, CONFIGURATION AND SUPPORT SERVICES OF NETWORKING (nodes), NETWORK SWITCHES, GIGABYTE (fiber optic) BACKBONE AND GLASS PARTITION FOR THE SERVER ROOM, IT SECTION AND R&I SECTION FOR E-OFFICE UNDER TENDER ENQUIRY NO.11/2019

- 1. The Oil and Gas Regulatory Authority (OGRA) invites sealed bids/proposals from well-reputed firms/suppliers having minimum five (05) years experience of similar works/assignments and registered with Income Tax & Sales Tax Departments for turn key solution of E-Office infrastructure at OGRA's Head Office Building located at 54-B, Fazl-ul-Haq Road, Blue Area, Islamabad under Tender Enquiry No. 11 of 2019.
- 2. The Tender Documents containing detailed information, terms & conditions etc. are available on the websites of PPRA (www.ppra.org.pk) and OGRA (www.ogra.org.pk). These documents can also be obtained from office of the undersigned from 09:00 a.m. to 05:00 pm on any working day i.e. Monday to Friday.
- 3. The sealed bids/proposal will be received latest by November 26, 2019 by 11:00 a.m., and will be opened on the same day at 11:30 a.m. at 3rd floor of office building by OGRA's Bid Opening Committee, in the presence of bidders who opt to be present.
- 4. OGRA reserves the right to accept/cancel/reject any or all proposals, as per PPRA Rules, 2004.

Joint Executive Director (Admin)

OIL AND GAS REGULATORY AUTHORITY
54-B, Fazl-ul-Haq Road, Blue Area, Islamabad
PH: 051-9244373. FAX: 051-9244143

54-B, FAZLUL-HAQ ROAD, BLUE AREA, ISLAMABAD

TENDER DOCUMENTS

TURN KEY SOLUTION FOR SUPPLY, INSTALLATION, CONFIGURATION AND SUPPORT SERVICES OF NETWORKING (nodes), NETWORK SWITCHES, GIGABYTE (fiber optic) BACKBONE AND GLASS PARTITION FOR THE SERVER ROOM, IT SECTION AND R&I SECTION FOR E-OFFICE UNDER TENDER ENQUIRY NO.11/2019

The Oil and Gas Regulatory Authority (OGRA) invites sealed bids/proposals from well-reputed firms/suppliers having minimum five (05) years experience of similar works/assignments and registered with Income Tax and Sales Tax Departments for turn key solution of E-Office infrastructure at OGRA's Head Office Building located at 54-B, Fazl-ul-Haq Road, Blue Area, Islamabad under Tender Enquiry No. 11 of 2019.

General Terms & Conditions:

- 1) The bidder should submit a single package containing two separate sealed envelopes. One envelope should contain Technical/Prequalification Proposal (Annex-I) and the other envelope should contain Financial Proposal (Annex-II), both showing the Tender Enquiry No. 11 of 2019 and marked as "TECHNICAL PROPOSAL" and "FINANCIAL PROPOSAL", respectively.
- The firm should be registered with Income Tax and Sales Tax Departments (registration numbers and NTN numbers should be clearly mentioned and valid documentary evidence be attached).
- 3) The bidder will be required to submit a bid security/earnest money equal to 3% of the total quoted value of bid along with financial proposal in the shape of **Call Deposit** in favor of OGRA, payable at Islamabad.
- 4) Any bid not accompanied by the required value of call deposit shall be rejected.
- 5) The firm should have a minimum of five (05) years' experience of similar assignments and should have also setup/arrangement at Islamabad/Rawalpindi to conveniently provide post installation/support services etc. as and when required to OGRA.

- 6) The bid validity period will be three (03) months, starting from the last date of bid submission.
- Sealed bids/proposals are required to be delivered at OGRA Office, Plot No. 54-B, Faz-lul-Haq Road, Blue Area, Islamabad latest by November 26, 2019 on or before 11:00 a.m. The Bid Opening Committee of OGRA will open the Technical/Pre-qualification proposals (Annex-I) in the first instance at 11:30 on the same date i.e. November 26, 2019 in the presence of bidders or their authorized representatives who may like to be present. Subsequently, technical/pre-qualification proposals shall be evaluated by OGRA Bid Evaluation Committee as per criteria given at Annex-III.
- 8) The bidder/firm will be required to submit bid/proposal for E-Office infrastructure as per scope of work, specification and layout design given at **ANNEX-IV**.
- 9) Bids, which are not accompanied by the documents mentioned at Clause No. 2 & 3 shall be declare Non-responsive and their financial proposal will be returned unopened.
- 10. The Bid Opening Committee will open the financial proposals (Annex-II) of only those bidders whose technical/pre-qualification proposals are accepted, on a date and time to be communicated to them in advance, in the presence of the bidders or their authorized representatives, who may like to be present.
- 11) Only one authorized representative per bidder shall be allowed to attend the opening of bids.
- 12) The successful bidder should be required to deposit a "Performance Bond" equivalent to 5% of the total value of the quoted amount through a Call Deposit in favor of OGRA payable at Islamabad. If the bidder fails to deposit performance bond within one week of the receipt of the purchase/work order, the same shall be treated as cancelled and the earnest money shall be forfeited.
- 13) 3% earnest money of the un-successful bidders shall be released within 30 days. However, 5% performance bond shall be released to successful bidder after completion of all works in all respects and also completion of warranty periods of the equipment/machinery installed and expiry of post support services etc.
- 14) Original and latest undertaking/affidavit on judicial paper that the firm has not been blacklisted by any Government/Semi Government Autonomous or any State-Owned Organization.
- 15) Interested firms may visit the office of OGRA at any time during working hours (Monday to Friday, 9:00 a.m. to 5:00 p.m.) for inspection to see the site and to fully understand how subject infrastructure/works to be carried out.

- 16) The successful bidder/firm shall be bound to prepare/provide turn key solution for the subject E-Office infrastructure as per layout designs and specifications given at **Annex-IV**.
- 17) The work/purchase order will be awarded to the lowest evaluated bidder **on lump sum** basis.
- 18) The time for completion of subject task/turn key solution of E-Office infrastructure in all respect will be 60 days from the date of receipt of Work/Purchase Order, extendable on mutual consent.
- 19) The rates quoted by the bidder are fixed and no inflation/escalation will be paid by OGRA during the currency of the project.
- 20) Payment of the bill(s) will be subject to the completion of task/project as per scope of work, specification/layout design at **Annex-IV** and deduction of all applicable government taxes.
- 21) The proposals should not have any over-writings or cutting. The bids with any of the aforementioned deficiencies may not be considered.
- OGRA reserves the right to accept or reject any or all proposals or extend the closing date without assigning any reason as per PPRA Rules 2004.

(Ejaz Ahmad Gohar)

Joint Executive Director (Admin)

54-B, FAZAL-UL-HAQ ROAD, BLUE AREEA, ISLAMABAD

TECHNICAL/PRE-QUALIFICAITON PROPOSAL

TURN KEY SOLUTION FOR SUPPLY, INSTALLATION, CONFIGURATION AND SUPPORT SERVICES OF NETWORKING (nodes), NETWORK SWITCHES, GIGABYTE (fiber optic) BACKBONE AND GLASS PARTITION FOR THE SERVER ROOM, IT SECTION AND R&I SECTION FOR E-OFFICE UNDER TENDER ENQUIRY NO.11/2019

Name of Firm	
Address	
(Telephone, Cell, Fax & E-mail)	
Year of Establishment	
Sales Tax Registration No.	
(attach documentary evidence)	
NTN No.	
(attach documentary evidence)	
(Annual Turnover supported by Income Tax Return) F.Y 2017-18, 2018-19.	
Banker's Name & Contact Details	
Experience related to similar assignments	
Whether bid security/earnest money at the rate	Yes:
of Rs. 3% is enclosed with Financial Proposal.	No:
Assignments in Hand (Current)	
Clientage	
(Attach separate Annexure, if any)	
Latest Affidavit	
(that the firm has not been blacklisted by private, Govt., Semi Govt. and Autonomous Body etc. and is not involved in any litigation throughout the country)	

Contact Person:	
Contact No	Name & Designation
Date:	Authorized Signature & Stamp

54-B, FAZAL-UL-HAQ ROAD, BLUE AREEA, ISLAMABAD



TURN KEY SOLUTION FOR SUPPLY, INSTALLATION, CONFIGURATION AND SUPPORT SERVICE OF NETWORKING (nodes), NETWORK SWITCHES, GIGABYTE (fiber optic) BACKBONE AND GLASS PARTITION FOR THE SERVER ROOM, IT SECTION AND R&I SECTION FOR E-OFFICE UNDER TENDER ENQUIRY NO.11/2019

The pre-qualification proposals will be evaluated as per the following criteria: -

Grading	Marks
Experience related to similar assignments	40
Clientage	15
Assignment in Hands (Current)	10
Financial Position	15
Office Setup, Infrastructure, Machinery & Equipment's/ tools etc. (Please attach list)	10
Managerial capability	10
Total Marks	100

Note: Minimum score required to pass for Pre-qualification is 60%.

FINANCIAL	PROPOSAL

TURN KEY SOLUTION FOR SUPPLY, INSTALLATION, CONFIGURATION AND SUPPORT SERVICE OF NETWORKING (nodes), NETWORK SWITCHES, GIGABYTE (fiber optic) BACKBONE AND GLASS PARTITION FOR THE SERVER ROOM, IT SECTION AND R&I SECTION FOR E-OFFICE UNDER TENDER ENQUIRY NO.11/2019

S.No	Description	Qty
	Head No. 1: Computer Hardware	
1	24Ports L3 Core Switch	01
2	24Ports L2 Switch	02
3	48 Ports L2 Switch	05
4	1000/10g Base LX-SFP Transceiver Module	21
5	Passive Networking nodes	185
6	Centralized Power from IT Server Room to all floor switches	-
7	Switch cabinets	08
	Head No. 2: Repair/maintenance of Building	
8	Glass Partition	As per attached documents/design
9	Heat proof Sheet	01
	Head No. 3: Machinery and Equipment	
10	Air Conditioner	04
11	Bio Matric Door Lock	04
12	CCTV System	08
	Lump sum Rate for completion of job as per of work etc. and including all taxes.	Rs(in words)

Note: - The Successful bidder shall submit bill(s) as per the above manner/form (B.O.Q) for each head separately enabling OGRA to spare funds.

E-OFFICE INFRASTRUCTURE

Turn key solution for the supply, installation, configuration and support services of networking (nodes), network switches, gigabyte (fiber optic) backbone and glass partitions for the Server Room, IT Section and R & I Section.

- 1. Scope of work
- 2. Summary of Works
- 3. Specifications/ Layout Designs

1. SCOPE OF WORK

- i) Hardware, software installation, configuration and maintenance for all networking nodes & switches. One (01) year support service for all the networking nodes and network switches will be solely responsibility of the vendor.
- ii) Must be treated as a Turn key solution and an intended vendor must offer all items, in case of any discrepancy or less item bid will be rejected/ work order will be cancelled and earnest money will be forfeited.
- iii) Product Support Services must be within 48 hours hardware replacement under warranty period as described in detailed specifications. During the time of replacement under warranty, the vender will arrange temporary provide replacement of the critical hardware/item.
- iv) In case of failure or malfunctioning of hardware equipment/component, a free replacement and installation of the device/part will be the responsibility of the vendor and on exchange bases as free of cost under warranty.
- v) Technical Support services should include resolution of complaints related to all equipments, networking nodes and switches.
- vi) All operating system support, compatibility issues and setup/configuration of LAN services are the responsibility of equipment provider.
- vii) The vendor should ensure that office work shall not be disturbed during networking/ construction/ renovation, an especial care should be given to the connectivity of old network to the end users. If there is any disturbance occurred during work, it should be immediately fixed/ solution provided.
- viii)The drivers/applications support CD/media must be provided for hardware equipment compatible with the OS respectively.
- ix) If any hardware devices having end of life must be communicated to OGRA, moreover, nearly end of life hardware devices will not be acceptable.
- x) Vender will responsible for all types of IT equipment being delivered.
- xi) Hands on training on active components (network switches, bio-matric door looks, etc) will be provided to OGRA's technical team.
- xii) 24 x 7 availability of hotline.

Note: The Vendor is solely responsible to provide the support services for the offered product even the support for the same product would have been discontinued by the OEM.

2. **SUMMARY OF WORKS**

Specifications for IT infrastructure upgradation and layout designs for networking, Server Room, IT Section and R&I Section for E-Office

Sr. No	Description	Qty
1.	24 Ports L3 Core Switch	01
2.	24 Ports L2 switch	02
3.	48 Ports L2 switch	05
4.	1000/10g Base SX-SFP Transceiver Module	21
5.	Passive Networking nodes	185
6.	Centralized Power from IT Server Room to all the floor switches	-
7.	Switch Cabinets	08
8.	Glass Partition	As per attached documents/design
9.	Heat Proof sheet	01
10.	Air Conditioner	04
11.	Bio matric door lock	04
12.	CCTV System	08

3. <u>TECHNICAL SPECFICTIONS</u>

Sr. No. 1) Layer 3 Manageable Core Switch

Qty. 1

- Brand: CISCO/ ALLIED TELESIS/ DELL/ HP or equivalent
- 10/100/1000Base 16/24 SFP ports, having the below specs.
- Support up to 8 x 10Gbit ports, it is preferred that the switch be equipped with outof-band 10/100/1000BaseT Ethernet port for management
- The switch bandwidth 144 Gbps or more, should have non-blocking architecture. All ports must operate on highest possible speed simultaneously
- The maximum number of stored MAC addresses in the switching table, routing table of the switch must store of IPv4 routes.
- The switch must support the IEEE protocols.
- The switch should provide dynamic assignment of user access policies L2-L3 on ports
- Must have the ability to track user authentication in Microsoft Active Directory and automatically manage access to network resources without the use of certificates connected devices or additional software, must support standard SNMP versions.
- The switch must support the network traffic log file of authentication devices and authenticating users.
- The switch must support cloud management system is preferred.
- Switch must be covered official local warranty for a period of not less than 1 years.

Sr. No 2) Layer 2 Manageable Switch Qty. 2

- Brand: CISCO/ ALLIED TELESIS/ DELL/ HP or equivalent
- 10/100/1000BaseT ports not less than 24, SFP ports not less than two (02) of 10 giga supported, it is preferred that the switch be equipped with out-of-band 10/100/1000BaseT Ethernet port for management
- Operating system with the ability to restart an individual process without a full reset switch, bandwidth 48 Gbps or more.
- Support the storage of MAC addresses in the switching table.
- Must support the IEEE family protocols: 802.3, etc.
- Must support BFD for static routing and dynamic routing protocols.
- Should provide dynamic assignment of user access policies L2-L3 on ports
- Should support intrusion detection mechanism, prevent the spread of worms and viruses, suppression of attacks such as DoS.
- Must have the ability to track user authentication in Microsoft Active Directory and automatically manage access to network resources without the use of certificates connected devices or additional software, must support standard SNMP versions.
- The switch must support the network traffic log file of authentication devices and authenticating users.
- The switch must support cloud management system is preferred.
- Switch must be covered official local warranty for a period of not less than 1 years.

- Brand: CISCO/ ALLIED TELESIS/ DELL/ HP or equivalent
- 10/100/1000BaseT ports not less than 48, SFP ports not less than two (02) of 10 giga supported, it is preferred that the switch be equipped with out-of-band 10/100/1000BaseT Ethernet port for management
- Operating system with the ability to restart an individual process without a full reset switch, bandwidth 96 Gbps or more.
- Support the storage of MAC addresses in the switching table.
- Must support the IEEE family protocols: 802.3, etc.
- Must support BFD for static routing and dynamic routing protocols.
- Should provide dynamic assignment of user access policies L2-L3 on ports
- Should support intrusion detection mechanism, prevent the spread of worms and viruses, suppression of attacks such as DoS.
- Must have the ability to track user authentication in Microsoft Active Directory and automatically manage access to network resources without the use of certificates connected devices or additional software, must support standard SNMP versions.
- The switch must support the network traffic log file of authentication devices and authenticating users.
- The switch must support cloud management system is preferred.
- Switch must be covered official local warranty for a period of not less than 1 years.

Sr. No 4) SFP Qty. 21/ as required

1000/10g Base SX-SFP Transceiver Module

Sr. No 5) Passive Networking

Complete ducting/Laying/termination/installation of Passive network with proper Tagging, and fluke testing.

Sr. No	Description	Qty.
1	Giga Cable UTP CAT6 (AWG 23 UTP), PVC, 4 pairs, Category 6 U/UTP Cable (with cross-shaped separator) offer the possibility to deploy unshielded Category 6/Class E systems when installed with Cat-6 RJ45 Jacks. (UL listed /SNAG proof).	185 Nodes
2	CAT 6 Patch Panel	

3	CAT6 I/O (RJ45 K6 Jack, Cat 6, UTP, shuttered (tool-less termination) along with cable manager is preferred.
4	8 Core MM imported fiber for back bone
5	ODF along with supporting accessories Rack mount with sliding tray pre-loaded with SC Duplex couplers Fluke Testing of Copper Nodes & OTDR testing of fiber links.
6	Faceplate Single/Dual Shutter
7	Patch Cords CAT 6, 1 meter and 3 - 5 meters to workstations
8	Dura Duct, Pipe and Accessories (Adamjee or any good brand)
9	Fluke Testing
10	05 years performance warranty of passive system in favor of Oil and gas regulatory authority.
11	The Supplier must provide a letter from the manufacturer of equipment confirming the legal delivery to the territory of Pakistan, and valid manufacturer authorization letter in favor of Oil and gas regulatory authority.

Sr. No 6) Centralized Power for floors network switches

Supply and laying of Power cable (Pakistan cable or equivalent) with Power buttons and breakers (USA / European/ equivalent brand) for Centralized power from IT Server to all floor network switches.

Sr. No 7) Network Switch cabinet

Sr. No	Description	Qty.
1	Supply and installation of Rack (imported) for core switch with fans and PDU at Server Room	01
2	Supply and installation of Rack (imported) for 24 ports and 48 ports network switches with fans and PDU at all floors	07

Sr. No 8.a) Glass Partition for Server Room/IT Section

Sr. No	Description	Qty.
1	12mm or higher Tempered Glass Partition with 1.6 mm or higher Aluminum color silver	
2	Glass Door with lock, handle all allied accessories	
3	Sheeter film	
4	Window Blinds (7x3) ft.	As Per
5	Lights, Power socket supply and installation	Annexure A
6	Wall mount fans supply and installation	
7	White wash/plaster/repairing of walls/ceiling	
8	Excavation/Dumping of waste material at appropriate place/ cleaning of OGRA's work site.	

Sr. No 8.b) Glass Partition for R & I Section

Sr. No	Description	Qty.
1	12mm or higher Tempered Glass Partition with 1.6 mm or higher Aluminum color silver	
2	Glass Door with lock, handle all allied accessories	
5	Lights, Power socket supply and installation	As Per
6	Wall mount fans supply and installation	Annexure B
7	White wash/plaster/repairing of walls/ceiling	
8	Excavation/Dumping of waste material at appropriate place/ cleaning of OGRA's work site.	

Sr. No 9) Heat Proof sheet

For IT Section main window (7 x 3) Ft

Sr. No 10) Air conditioner Qty. As per Annexes A&B

AC/inverter Daikin or equivalent wall mount

Sr. No. 11) Biometric Door Lock Qty. 4

CPU: 400 MHz minimum or equivalent

Type of Scanner: Optical finger print scanner

Operation Mode: Fingerprint + PIN

Memory: 32MB flash

Door latch type: Double tongue

lock switch: yes

Fingerprint placement: any angle Length of password: 6 minimum

Back-up unlock mechanism: 9 VDC battery & mechanical key

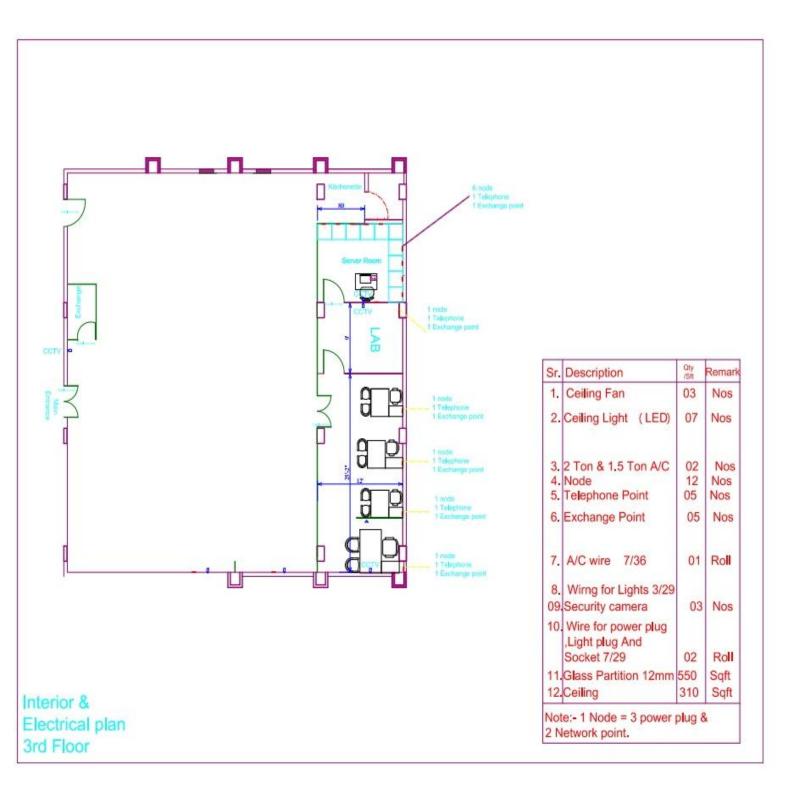
Display Language: English

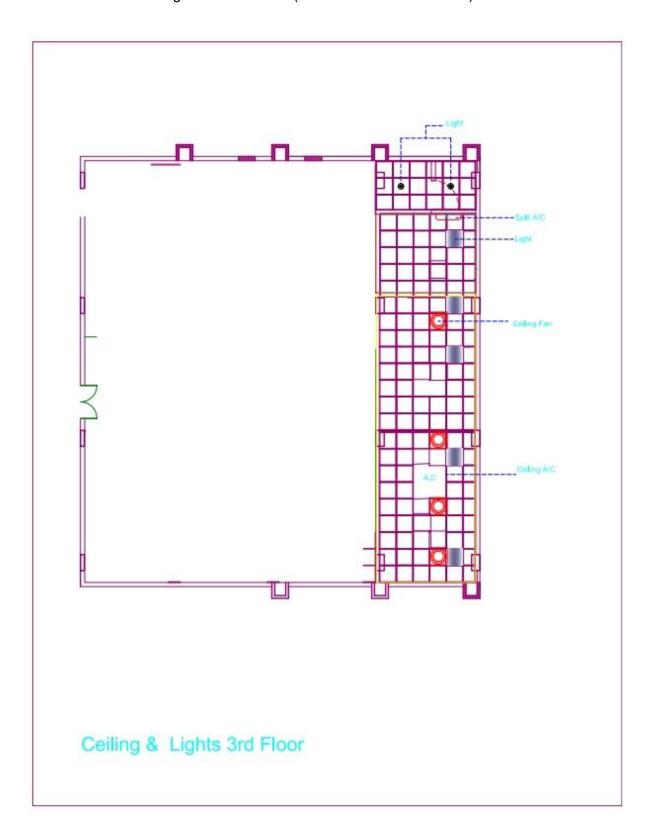
Sr. No. 12) CCTV Solution

Supply and installation of 8 x IP camera 2MP IR Bullet Dome or above NVR embedded 4K 8MP 2 bay, 8 channel, 4 or 6 TB Storage

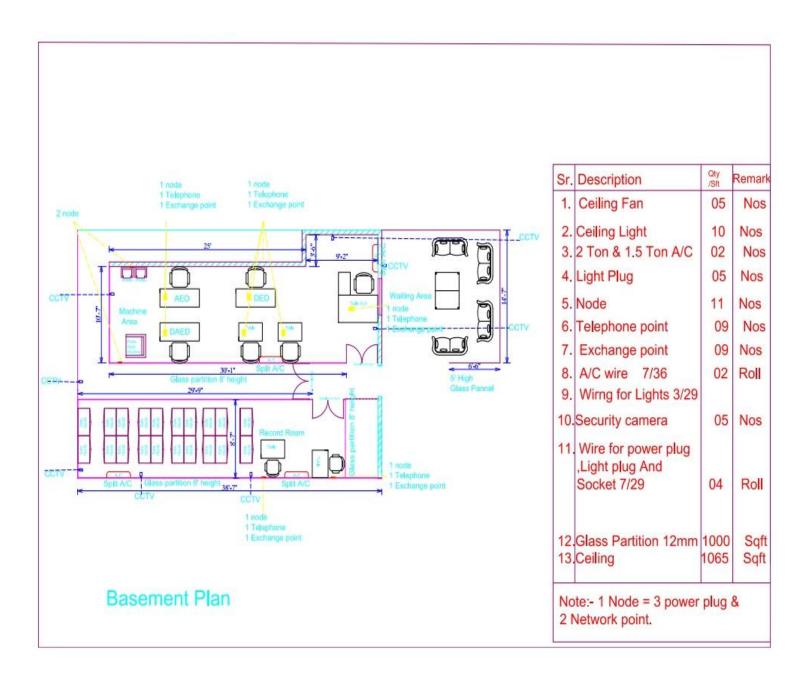
Note: - The Layout designs for IT Infrastructure Upgradation, Server Room, IT Section, R&I Section are enclosed at Annex-A and Annex-B with approximate covered area. The vendor will invoice to OGRA as per actual covered area and items provided against the tender for infrastructure upgradation, passive networking (including I/O, network switches, cabinets, patch panels, cabling, ducting, backbone, fiber optic, etc.) and construction/renovation of server room, IT section & R&I section for e-office.

Layout Design Plan of 3rd Floor (Server Room & IT Section)

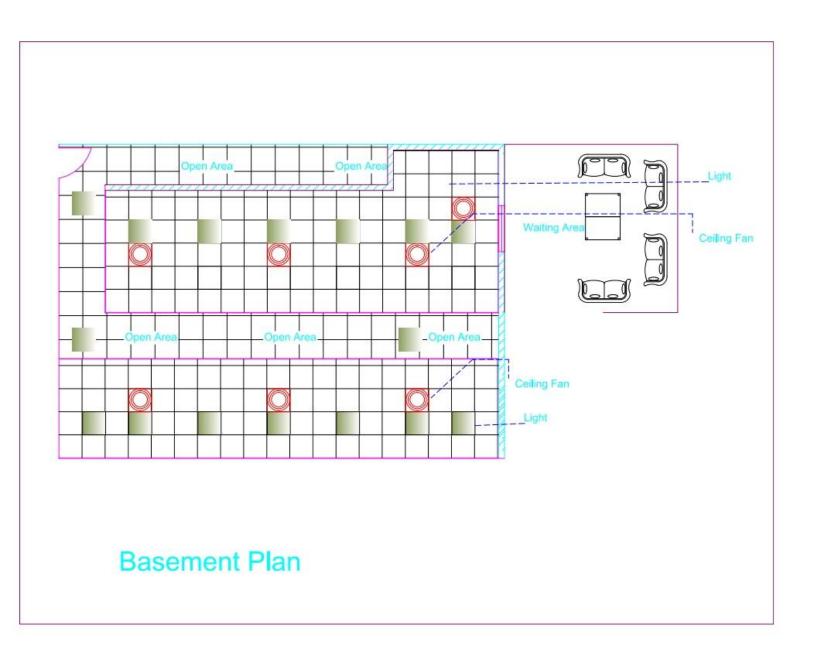




Layout Design Plan of Basement (R&I Section & Record Room)



Ceiling Plan of Basement (R&I Section & Record Room)



Passive Network /Switch Plan of OGRA's Building Floors

