Republic of the Philippines
Department of Budget and Management
PROCUREMENT SERVICE -
PHILIPPINE GOVERNMENT ELECTRONIC PROCUREMENT SYSTEM
BIDS AND AWARDS COMMITTEE

Bid Bulletin No. 2
13 October 2021

PUBLIC BIDDING NO. 21-131-10

Upgrading of Local Area Network (LAN) – Various IT Equipment for the
Department of Agrarian Reform (DAR) – Central Office

Issued pursuant to Sec. 22.5. of the IRR of RA 9184 to clarify and/or amend certain provisions in the Bidding Document issued for this project, considering the issues raised and clarifications made by prospective bidders during the Pre-Bid Conference held on 06 October 2021, and likewise respond to bidders' written queries received within the prescribed period for filing.

A. AMENDMENTS

ITEM NO.	REFERENCES	REMARKS
1	Section V. Special Conditions of Contract GCC Clause 1 Page 30 xxx ~~The Project Sites are:~~ ~~*PS Warehouse, PS Complex, RR Road Cristobal St., Paco, Manila*~~ <u>The Project Site is:</u> *__Department of Agrarian Reform (DAR) – Central Office, Elliptical Road, Diliman, Quezon City__* xxx xxx ~~For purposes of this Clause the Procuring Entity's Representative at the Project Site is~~ *~~Ms. Catherine Anne Mirabel, OIC-Chief WALD~~*~~.~~ <u>For purposes of this Clause, the Procuring Entity's Representative at the Project Site is</u> *__Mr. Arden D. Bandal, Chief ITSD (DAR)__*. xxx	To amend the **Project Site** and **Authorized Representative**.
2	Section III. Bid Data Sheet ITB Clause 20.2 Item 10 Page 25	

RR. Road, Cristobal St., Paco, Manila
www.ps-philgeps.gov.ph
(02) 689 7750

DBM Compound, General Solano Street, San Miguel, Manila
www.philgeps.gov.ph
(02) 640 6906 | 640 6907 | 640 6908 | 640 6909

	xxx 10. ~~Bidder must conduct internal training with the Department of Agrarian Reform - IT Team.~~ 10. Bidder certification to conduct an internal training with the Department of Agrarian Reform – IT Team. xxx		To amend the **Item No. 10 of the ITB Clause 20.2**.
3	Section VII. Technical Specifications Page 55 ~~**Bidder Certification/s:**~~ 1. ~~Bidder must be an authorized partner/reseller of the brand being offered for a minimum of at least 5years.~~ 2. ~~Bidder must submit associate certification/s for one (1) network & one (1) wireless issued by the principal or manufacturer of the brand being offered.~~ 3. ~~Bidder must conduct internal training with the Department of Agrarian Reform - IT Team.~~		To **delete as these items are already included in the post qualification requirements.** Please refer to **"Appendix 1"** for the amended **Technical Specifications** form
4	Section VII. Technical Specifications Page 55 xxx ~~We commit to deliver the goods under the new packaging and consistent with the physical appearance and color of the sample submitted as required by the Procurement Service.~~ xxx		To **delete as samples are not required for the procurement project**. Please refer to **"Appendix 1"** for the amended **Technical Specifications** form
5	Section VII. Checklist of Technical and Financial Documents Bid Form (Annex "A") Pages 59-60		To **add a row for the Total Bid Price** and **amend the Quantity of Item No. 1 from 3 unit/s to 2 unit/s**. Please refer to **"Appendix 2"** for the amended Bid Form

Table for item 5:

Lot No.	Item No.	Quantity	Item / Description	Unit Price	Total Amount
1	1	~~3 unit/s~~ 2 unit/s	**Core Switch 40-Port 10Gig switch with accessories, 3 years license and support**		
	2	4 unit/s	**Core Switch 16-port 10Gig switch with accessories, 3 years license and support**		
	3	15 unit/s	**LAN Switch 48-port 10Gig 12xmGig, 36x1G,4x10G PoE+ with accessories, 3 years license and support**		
	4	4 unit/s	**PoE+ with accessories, 3 years license and support**		
	5	50 unit/s	**WIFI 6 Indoor AP with accessories, 3 years license and support**		
	6	1 unit/s	**Civil Works and Implementation**		
			TOTAL BID PRICE		

All portions of the Bidding Documents affected by these amendments shall be made to conform to the same.

Amendments/inclusions/clarifications made herein shall be considered an integral part of the Bidding Documents.

The changes made in the Philippine Bidding Documents (6th Edition, July 2020) are deemed integrated in the terms and conditions for this project

ENGR. JAIME M. NAVARRETE JR.
Chairperson, Bids and Awards Committee X

For the purpose of this Bid Bulletin and for better understanding of its contents, the following rules shall apply: (1) strikethrough denotes deletion; (b) underline denotes inclusion or new item/requirement; and "xxx" denotes separation of phrase/s being amended from the rest of the main text.

LOT NO. 1	:	Upgrading of Local Area Network (LAN) – Various IT Equipment for the Department of Agrarian Reform (DAR) Central Office
QUANTITY	:	1 Lot
APPROVED BUDGET PER UNIT	:	Php 21,226,263.85
APPROVED BUDGET FOR THE CONTRACT	:	Php 21,226,263.85

ITEM NO.	AGENCY SPECIFICATIONS	BIDDER'S STATEMENT OF COMPLIANCE*
1	**1. Core Switch 40-Port 10Gig switch with accessories, 3 years license and support**	**Brand and Model:**
	1.1 2 Unit Multilayer Core Switch	
	1.1.1 Must be of the same vendor as the Access and Distribution switches, and Access Points to ensure compatibility and easy troubleshooting	
	1.1.2 Proposed hardware vendor must be placed in the leader quadrant of year 2020 Gartner report for Wired and Wireless	
	1.1.3 1 RU Form Factor 40-port 10Gig switch with Advanced License	
	1.1.4 Must deliver up-to 960 Gbps Full Duplex of switching capacity and 720 Mpps of forwarding rate	
	1.1.5 Must have Stacking system virtualization technology that increases operational efficiency and boosts nonstop communications and scaled system bandwidth	
	1.1.6 Must have Dual redundant, modular power supplies and three modular fans providing redundancy	
	1.1.7 Switch Capabilities • Unified Access Data Plane (UADP) Application-Specific Integrated Circuit (ASIC) ready for next-generation technologies with its programmable pipeline, microengine capabilities, and template-based, configurable allocation of Layer 2 and Layer 3 forwarding, Access Control Lists (ACLs), and Quality-of-Service (QoS) entries • Intel® 2.4-GHz x86 CPU with up to 120 GB of USB 3.0 or up to 960 GB of SATA SSD storage for container-based application hosting • Platinum-rated AC power supplies • Up to 512,000 Flow entries in hardware • Up to 36 MB of unified buffer per ASIC • Up to 64,000 routing entries (IPv4/IPv6) for high-end campus core and aggregation deployments • IPv6 support in hardware, providing wire-rate	

		forwarding for IPv6 networks • IEEE 802.1ba AV Bridging (AVB) built in to provide a better AV experience through improved time synchronization and QoS • Precision Time Protocol (PTP; IEEE 1588v2) provides accurate clock synchronization with sub-microsecond accuracy, making it suitable for distribution and synchronization of time and frequency over the network • Dual-stack support for IPv4/IPv6 and dynamic hardware forwarding table allocations, for ease of IPv4-to-IPv6 migration • Support for both static and dynamic NAT and Port Address Translation (PAT) • Scalable routing (IPv4, IPv6, and multicast) tables and Layer 2 tables • A modern operating system for the enterprise with support for model-driven programmability, on-box Python scripting, streaming telemetry, container-based application hosting, and patching for critical bug fixes. The OS also has built-in defenses to protect against runtime attacks • Stacking technology, a network system virtualization technology that increases operational efficiency and boosts nonstop communications and scaled system bandwidth	
	1.1.8	SD-Access Features: • Policy-based automation from edge to cloud • Segmentation and micro-segmentation made easy, with predictable performance and scalability • Automation and network assurance • Faster launch of new business services and significantly improved issue resolution time • Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or updates to an existing network	
	1.1.9	Advanced security: • Encrypted Traffic Analytics (ETA): You benefit from the power of machine learning to identify and take actions toward threats or anomalies in your network, including malware detection in encrypted traffic and distributed anomaly detection. Additionally, ETA is able to detect vulnerable implementations in encrypted traffic • Support for AES-256 with the powerful MACsec 256-bit encryption algorithm available on all models • Trustworthy systems: Secure Unique Device Identification (SUDI) support for Plug and Play, enabling tamper-proof device identity capability, which secures zero-touch provisioning by allowing your device to show a certificate to the server to be able to get onto your network	
	1.1.10	IP Routing Protocols: • IP unicast routing protocols (including static; Routing Information Protocol version 1 [RIPv1], version 2 [RIPv2], and next generation [RIPng]; and Open Shortest Path First [OSPF] routed access) are supported for small network routing applications with the Network Essentials stack • Advanced IP unicast routing protocols (such as OSPF, Enhanced Interior Gateway Routing Protocol [EIGRP],	

		Border Gateway Protocol Version 4 [BGPv4], and Intermediate System-to-Intermediate System Version 4 [IS-ISv4]) are supported for load balancing and for constructing scalable LANs. IPv6 routing (using OSPFv3 and EIGRPv3) is supported in hardware for maximum performance • Protocol-Independent Multicast (PIM) for IP multicast routing is supported, including PIM Sparse Mode (PIM SM), bidirectional PIM, and Source-Specific Multicast (SSM) • IPv6 addressing is supported on interfaces with appropriate show commands for monitoring and troubleshooting	
	1.1.11	Must have 10/100/1000 RJ-45 console and management port	
	1.1.12	Must have the following industry standards: • IEEE 802.1s • IEEE 802.1w • IEEE 802.1x • IEEE 802.1x-Rev • IEEE 802.3ad • IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1p CoS prioritization • IEEE 802.1Q VLAN • IEEE 802.3 10BASE-T specification • IEEE 802.3u 100BASE-TX specification • IEEE 802.3ab 1000BASE-T specification • IEEE 802.3z 1000BASE-X specification • RMON I and II standards • SNMPv1, SNMPv2c, and SNMPv3	
	1.1.13	Must support Operating Temperature of 32° to 104°F (0° to 40°C) Operation up to 6000 feet at 55°C and 13,000 feet at 45°C	
	1.1.14	Must have a minimum of Mean-Time-Between-Failures (MTBF) of 277,310 hrs	
	1.1.15	Must Support Relative Humidity of Ambient (noncondensing) operating: 5% to 90%	
	1.1.16	Must support up to 64,000 Media Access Control (MAC) Entries	
	1.1.17	Must support up to 64,000 IPv4 routes	
	1.1.18	Must support up to 32,000 IPv4 Multicast routes	
	1.1.19	Must support up to 32,000 IPv6 routes	
	1.1.20	Must support up to 16,000 IPv6 Multicast routes	
	1.1.21	Must support up to 512,000 Flow Entries	
	1.1.22	Must support up to 18,000 QoS ACL Entries	

			Brand and Model:
	1.1.23	Must support up to 18,000 Security ACL Entries	
	1.1.24	Must support up to 16 GB DRAM	
	1.1.25	Must support up to 16 GB Flash	
	1.1.26	Must support up to 4094 Total VLAN IDs	
	1.1.27	Must support up to 13,000 STP Virtual Ports for PVST	
	1.1.28	Must support up to 13,000 STP Virtual Ports for MST	
	1.1.29	Must support up to 1000 Total Switched Virtual Interfaces (SVIs)	
	1.1.30	Must support up to 9198 bytes of Jumbo Frames	
	1.2	**Additional Items 2 units**	
	1.2.1	Console Cable 6ft with USB Type A and mini-B	
	1.2.2	8 x 10GE Network Module	
	1.3	**Warranty and Support**	
	1.3.1	3YR Warranty and Solution Support 24x7x4	
2	**2.**	**Core Switch 16-port 10Gig switch with accessories, 3 years license and support**	**Brand and Model:**
	2.1.	**4 Units Multilayer Core Switch**	
	2.1.1	Must be of the same vendor as the Core and Access switches, and Access Points to ensure compatibility and easy troubleshooting	
	2.1.2	Proposed hardware vendor must be placed in the leader quadrant of year 2020 Gartner report for Wired and Wireless	
	2.1.3	1 RU Form Factor 16-port 10Gig switch with Advanced License	
	2.1.4	Must deliver up-to 480 Gbps Full Duplex of switching capacity and 360 Mpps of forwarding rate	
	2.1.5	Must have Stacking system virtualization technology that increases operational efficiency and boosts nonstop communications and scaled system bandwidth	
	2.1.6	Must have Dual redundant, modular power supplies and three modular fans providing redundancy	
	2.1.7	Switch Capabilities • Unified Access Data Plane (UADP) Application-Specific Integrated Circuit (ASIC) ready for next-generation technologies with its programmable pipeline, microengine capabilities, and template-based, configurable allocation of Layer 2 and Layer 3 forwarding, Access Control Lists (ACLs), and Quality-of-Service (QoS) entries • Intel® 2.4-GHz x86 CPU with up to 120 GB of USB 3.0 or up to 960 GB of SATA SSD storage for container-based application hosting • Platinum-rated AC power supplies • Up to 512,000 Flow entries in hardware • Up to 36 MB of unified buffer per ASIC • Up to 64,000 routing entries (IPv4/IPv6) for high-end	

		campus core and aggregation deployments
		• IPv6 support in hardware, providing wire-rate forwarding for IPv6 networks
		• IEEE 802.1ba AV Bridging (AVB) built in to provide a better AV experience through improved time synchronization and QoS
		• Precision Time Protocol (PTP; IEEE 1588v2) provides accurate clock synchronization with sub-microsecond accuracy, making it suitable for distribution and synchronization of time and frequency over the network
		• Dual-stack support for IPv4/IPv6 and dynamic hardware forwarding table allocations, for ease of IPv4-to-IPv6 migration
		• Support for both static and dynamic NAT and Port Address Translation (PAT)
		• Scalable routing (IPv4, IPv6, and multicast) tables and Layer 2 tables
		• With modern operating system for the enterprise with support for model-driven programmability, on-box Python scripting, streaming telemetry, container-based application hosting, and patching for critical bug fixes. The OS also has built-in defenses to protect against runtime attacks
		• Stacking technology, a network system virtualization technology that increases operational efficiency and boosts nonstop communications and scaled system bandwidth
2.1.8	SD-Access Features:	
		• Policy-based automation from edge to cloud
		• Segmentation and micro-segmentation made easy, with predictable performance and scalability
		• Automation and network assurance
		• Faster launch of new business services and significantly improved issue resolution time
		• Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or updates to an existing network
2.1.9	Advanced security:	
		• Encrypted Traffic Analytics (ETA): You benefit from the power of machine learning to identify and take actions toward threats or anomalies in your network, including malware detection in encrypted traffic and distributed anomaly detection. Additionally, ETA is able to detect vulnerable implementations in encrypted traffic
		• Support for AES-256 with the powerful MACsec 256-bit encryption algorithm available on all models
		• Trustworthy systems: Secure Unique Device Identification (SUDI) support for Plug and Play, enabling tamper-proof device identity capability, which secures zero-touch provisioning by allowing your device to show a certificate to the server to be able to get onto your network
2.1.10	IP Routing Protocols:	
		• IP unicast routing protocols (including static; Routing Information Protocol version 1 [RIPv1], version 2 [RIPv2], and next generation [RIPng]; and Open Shortest Path First [OSPF] routed access) are supported for small network routing applications with the Network Essentials

		stack • Advanced IP unicast routing protocols (such as OSPF, Enhanced Interior Gateway Routing Protocol [EIGRP], Border Gateway Protocol Version 4 [BGPv4], and Intermediate System-to-Intermediate System Version 4 [IS-ISv4]) are supported for load balancing and for constructing scalable LANs. IPv6 routing (using OSPFv3 and EIGRPv6) is supported in hardware for maximum performance • Protocol-Independent Multicast (PIM) for IP multicast routing is supported, including PIM Sparse Mode (PIM SM), bidirectional PIM, and Source-Specific Multicast (SSM) • IPv6 addressing is supported on interfaces with appropriate show commands for monitoring and troubleshooting
	2.1.11	Must have 10/100/1000 RJ-45 console and management port
	2.1.12	Must have the following industry standards: • IEEE 802.1s • IEEE 802.1w • IEEE 802.1x • IEEE 802.1x-Rev • IEEE 802.3ad • IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1p CoS prioritization • IEEE 802.1Q VLAN • IEEE 802.3 10BASE-T specification • IEEE 802.3u 100BASE-TX specification • IEEE 802.3ab 1000BASE-T specification • IEEE 802.3z 1000BASE-X specification • RMON I and II standards • SNMPv1, SNMPv2c, and SNMPv3
	2.1.13	Must support Operating Temperature of 32° to 104°F (0° to 40°C) Operation up to 6000 feet at 55°C and 13,000 feet at 45°C
	2.1.14	Must have a minimum of Mean-Time-Between-Failures (MTBF) of 315,790 hrs
	2.1.15	Must Support Relative Humidity of Ambient (noncondensing) operating: 5% to 90%
	2.1.16	Must support up to 64,000 Media Access Control (MAC) Entries
	2.1.17	Must support up to 64,000 IPv4 routes
	2.1.18	Must support up to 32,000 IPv4 Multicast routes
	2.1.19	Must support up to 32,000 IPv6 routes
	2.1.20	Must support up to 16,000 IPv6 Multicast routes
	2.1.21	Must support up to 512,000 Flow Entries
	2.1.22	Must support up to 18,000 QoS ACL Entries
	2.1.23	Must support up to 18,000 Security ACL Entries

		2.1.24	Must support up to 16 GB DRAM	
		2.1.25	Must support up to 16 GB Flash	
		2.1.26	Must support up to 4094 Total VLAN IDs	
		2.1.27	Must support up to 13,000 STP Virtual Ports for PVST	
		2.1.28	Must support up to 13,000 STP Virtual Ports for MST	
		2.1.29	Must support up to 1000 Total Switched Virtual Interfaces (SVIs)	
		2.1.30	Must support up to 9198 bytes of Jumbo Frames	
	2.2.	**Additional Items 4 units**		
		2.2.1	Console Cable 6ft with USB Type A and mini-B	
		2.2.2	8 x 10GE Network Module	
	2.3.	**Warranty and Support**		
		2.3.1	3YR Warranty and Support 8x5xNBD	
3	**3.**	**LAN Switch 48-port 10Gig 12xmGig, 36x1G,4x10G PoE+ with accessories, 3 years license and support**		**Brand and Model:**
	3.1.	**15 Units Access Switches**		
		3.1.1	Must be of the same vendor as the Core and Distribution switches, and Access Points to ensure compatibility and easy troubleshooting	
		3.1.2	Proposed hardware vendor must be placed in the leader quadrant of year 2020 Gartner report for Wired and Wireless	
		3.1.3	1 RU Form Factor 48 ports full POE+ (12 mGig ports up to 10G, 36 ports up to 1G), 4x10G PoE+, Advanced License	
		3.1.4	Must deliver up-to 392 Gbps Full Duplex of switching capacity and 291.66 Mpps of forwarding rate	

		3.1.5	Switch Capabilities
			 • Up to 48ports
			 • Flexible downlink options
			 • Operational efficiency with optional backplane stacking, supporting stacking bandwidth up to 80 Gbps
			 • UADP 2.0 Mini with integrated CPU offers customers optimized scale with better cost structure
			 • Enhanced security with AES-128 MACsec encryption, policy-based segmentation, and trustworthy systems
			 • Layer 3 capabilities, including OSPF, EIGRP, ISIS, RIP, and routed access
			 • Advanced network monitoring using Full Flexible NetFlow
			 • Software-Defined Access (SD-Access):
			     o Simplified operations and deployment with policy-based automation from edge to cloud managed
			     o Network assurance and improved resolution time
			 • Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus device rollouts or updates to an existing network	

	• A Common Licensing based operating system for the enterprise product family with support for model-driven programmability and streaming telemetry • ASIC with programmable pipeline and micro-engine capabilities, along with template-based, configurable allocation of Layer 2 and Layer 3 forwarding, Access Control Lists (ACLs), and Quality of Service (QoS) entries	

	3.1.6 Resiliency and high availability
	
	• Automated device provisioning is the ability to automate the process of upgrading software images and installing configuration files on switches when they are being deployed in the network for the first time. This provides turnkey solutions such as Plug and Play and Preboot Execution Environment (PXE) that enable an effortless and automated deployment.
	• API-driven configuration is available with modern network switches. It supports a wide range of automation features and provides robust open APIs over NETCONF and RESTCONF using YANG data models for external tools, both off the shelf and custom built, to automatically provision network resources.
	• Granular visibility enables model-driven telemetry to stream data from a switch to a destination. The data to be streamed is identified through subscription to a data set in a YANG model. The subscribed data set is streamed to the destination at specified intervals. Additionally, he switch software enables the push model. It provides near-real-time monitoring of the network, leading to quick detection and rectification of failures.
	Seamless software upgrades and patching supports OS resilience. The switch supports cold patching with reboot, which provides fixes for critical bugs and security vulnerabilities between regular maintenance releases. This support lets you add patches without having to wait for the next maintenance release. Cold patching requires the switch to be rebooted after patching to allow the changes to take effect.
	• High availability: The switches support high-availability features, including the following:
	    o Cross-stack EtherChannel provides the ability to configure EtherChannel technology across different members of the stack for high resiliency.
	    o IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) provides rapid spanning tree convergence independent of spanning tree timers and also offers the benefit of Layer 2 load balancing and distributed processing.
	    o Per-VLAN Rapid Spanning Tree (PVRST+) allows rapid spanning tree (IEEE 802.1w) reconvergence on a per-VLAN spanning tree basis, providing simpler configuration than MSTP. In both MSTP and PVRST+ modes, stacked units behave as a single spanning tree node.
	    o Switch-port auto-recovery ("err-disable" recovery) automatically attempts to reactivate a link that is disabled because of a network error.	

	3.1.7 Smart operation • WebUI is an embedded GUI-based device-management tool that provides the ability to provision the device, to simplify device deployment and manageability, and to enhance the user experience. It comes with the default image, so there is no need to enable anything or install any license on the device. You can use WebUI to build configurations, and to monitor and troubleshoot the device without having CLI expertise. • The switches have an embedded RFID tag that facilitates easy asset and inventory management using commercial RFID readers. • The switches support both front and back blue beacon LEDs for easy identification of the switch being accessed. • The switches provide optimum power saving with Energy Efficient Ethernet (EEE) on the RJ-45 ports and low-power operations for industry best-in-class power management and power consumption capabilities. The ports support reduced power modes so that ports not in use can move into a lower power utilization state. Other efficient switch operation features are as follows: o Per-port power consumption command allows customers to specify a maximum power setting on an individual port. • The switches have hardware support to connect a Bluetooth dongle to your switch, enabling you to use this wireless interface as an IP management port interface. The port can be used for configuration and troubleshooting using WebUI or the Command-Line Interface (CLI), and to transfer images and configurations.	
	3.1.8 IP Routing Protocols • The Express Forwarding hardware routing architecture delivers extremely high-performance IP routing in the Series switches, based on: • IP unicast routing protocols (including static, Routing Information Protocol Version 1 [RIPv1], RIPv2, RIPng, and Open Shortest Path First [OSPF], Routed Access) are supported for small network routing applications with the Network Essentials stack. Equal-cost routing facilitates Layer 3 load balancing and redundancy across the stack. • Advanced IP unicast routing protocols (including Full [OSPF], Enhanced Interior Gateway Routing Protocol [EIGRP], and Intermediate System-to-Intermediate System Version 4 [IS-ISv4]) are supported for load balancing and for constructing scalable LANs. Ipv6 routing (using OSPFv3 and EIGRPv6) is supported in hardware for maximum performance. • Protocol-Independent Multicast (PIM) for IP multicast routing is supported, including PIM sparse mode (PIM SM), and Source-Specific Multicast (SSM). • Ipv6 addressing is supported on interfaces with appropriate show commands for monitoring and troubleshooting.	

	3.1.9	Must have Ethernet management port: RJ-45 connectors, 4-pair Cat 5 UTP cabling	
	3.1.10	Must have the following industry standards: • EEE 802.1s • IEEE 802.1w • IEEE 802.1x • IEEE 802.1x-Rev • IEEE 802.3ad • IEEE 802.3af • IEEE 802.3at • IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1p CoS prioritization • IEEE 802.1Q VLAN • IEEE 802.3 10BASE-T specification • IEEE 802.3u 100BASE-TX specification • IEEE 802.3ab 1000BASE-T specification • IEEE 802.3z 1000BASE-X specification • RMON I and II standards • SNMPv1, v2c, and v3	
	3.1.11	EMI and EMC compliance: • FCC Part 15 (CFR 47) Class A • ICES-003 Class A • EMI and EMC compliance: • FCC Part 15 (CFR 47) Class A • ICES-003 Class A • EN 55032 Class A • CISPR 32 Class A • AS/NZS 3548 Class A • BSMI Class A • VCCI Class A • CISPR 35 • EN 55024, EN300 386*, EN 61000-3-2, EN 61000-3-3 • EN 61000-6-1	
	3.1.12	Must support perating temperature* and altitudes: • -5°C to +45°C, up to 5000 feet (1500m) • -5°C to +40°C, up to 10,000 feet (3000m) * Minimum ambient temperature for cold start is 32°F (0°C)	
	3.1.13	Must have a minimum Mean-Time-Between-Failures (MTBF) of 337,360 hrs	
	3.1.14	Must Support Relative Humidity of Ambient (noncondensing) operating: 5% to 90% noncondensing	
	3.1.15	Must Support up to 80 Gbps of Stacking bandwidth	
	3.1.16	Must support up to 16,000 Media Access Control (MAC) Entries	
	3.1.17	Must support up to 11,000 (8,000 direct routes and 3,000 indirect routes) Total number of IPv4 routes (ARP plus learned routes)	
	3.1.18	Must support up to 3,000 IPv4 routes	
	3.1.19	Must support up to 1,500 IPv6 routes	

	3.1.20	Must support up to 1,000 Multicast Entries	
	3.1.21	Must support up to 1000 QoS Scale Entries	
	3.1.22	Must support up to 1500 ACL Scale Entries	
	3.1.23	Must support up to 12 MB packet buffer	
	3.1.24	Must support up to 32,000 Flexible NetFlow (FNF) entries	
	3.1.25	Must support up to 2 GB DRAM	
	3.1.26	Must support up to 4 GB Flash	
	3.1.27	Must support up to 4096 Total VLAN IDs	
	3.1.28	Must support up to 512 Total Switched Virtual Interfaces (SVIs)	
	3.1.29	Must support up to 9198 bytes of Jumbo Frames	
	3.2.	**Warranty & Support**	
	3.2.1	3YR Warranty and Support 8X5XNBD	
4	**4. PoE+ with accessories, 3 years license and support**		**Brand and Model:**
	4.1.	**4 Units Access Switches**	
	4.1.1	Must be of the same vendor as the Core and Distribution switches, and Access Points to ensure compatibility and easy troubleshooting	
	4.1.2	Proposed hardware vendor must be placed in the leader quadrant of year 2020 Gartner report for Wired and Wireless	
	4.1.3	1 RU Form Factor 24 ports full PoE+ (8 mGig ports up to 10G, 16 ports up to 1G), 4x10G, PoE+,Advanced License	
	4.1.4	Must deliver up-to 272 Gbps Full Duplex of switching capacity and 214.28 Mpps of forwarding rate	

	4.1.5	Switch Capabilities
		
		• Up to 48ports
		• Flexible downlink options
		• Operational efficiency with optional backplane stacking, supporting stacking bandwidth up to 80 Gbps
		• UADP 2.0 Mini with integrated CPU offers customers optimized scale with better cost structure
		• Enhanced security with AES-128 MACsec encryption, policy-based segmentation, and trustworthy systems
		• Layer 3 capabilities, including OSPF, EIGRP, ISIS, RIP, and routed access
		• Advanced network monitoring using next-generation in flow technology
		• Software-Defined Access (SD-Access):
		   o Simplified operations and deployment with policy-based automation from edge to cloud managed
		   o Network assurance and improved resolution time
		• Plug and Play (PnP) enabled: A simple, secure, unified, and integrated offering to ease new branch or campus	

device rollouts or updates to an existing network
- A Common Licensing based operating system for the enterprise product family with support for model-driven programmability and streaming telemetry
- ASIC with programmable pipeline and micro-engine capabilities, along with template-based, configurable allocation of Layer 2 and Layer 3 forwarding, Access Control Lists (ACLs), and Quality of Service (QoS) entries

4.1.6   Resiliency and high availability

- Automated device provisioning is the ability to automate the process of upgrading software images and installing configuration files on switches when they are being deployed in the network for the first time. This provides turnkey solutions such as Plug and Play and Preboot Execution Environment (PXE) that enable an effortless and automated deployment.
- API-driven configuration is available with modern network switches. It supports a wide range of automation features and provides robust open APIs over NETCONF and RESTCONF using YANG data models for external tools, both off the shelf and custom built, to automatically provision network resources.
- Granular visibility enables model-driven telemetry to stream data from a switch to a destination. The data to be streamed is identified through subscription to a data set in a YANG model. The subscribed data set is streamed to the destination at specified intervals. Additionally, he switch software enables the push model. It provides near-real-time monitoring of the network, leading to quick detection and rectification of failures.
- Seamless software upgrades and patching supports OS resilience. The switch supports cold patching with reboot, which provides fixes for critical bugs and security vulnerabilities between regular maintenance releases. This support lets you add patches without having to wait for the next maintenance release. Cold patching requires the switch to be rebooted after patching to allow the changes to take effect.
- High availability: The switches support high-availability features, including the following:
  - Cross-stack EtherChannel provides the ability to configure EtherChannel technology across different members of the stack for high resiliency.
  - IEEE 802.1s Multiple Spanning Tree Protocol (MSTP) provides rapid spanning tree convergence independent of spanning tree timers and also offers the benefit of Layer 2 load balancing and distributed processing.
  - Per-VLAN Rapid Spanning Tree (PVRST+) allows rapid spanning tree (IEEE 802.1w) reconvergence on a per-VLAN spanning tree basis, providing simpler configuration than MSTP. In both MSTP and PVRST+ modes, stacked units behave as a single spanning tree node.

		o Switch-port auto-recovery ("err-disable" recovery) automatically attempts to reactivate a link that is disabled because of a network error.	

	4.1.7	IP Routing Protocols
		
		• The Express Forwarding hardware routing architecture delivers extremely high-performance IP routing in the Series switches, based on:
		  o IP unicast routing protocols (including static, Routing Information Protocol Version 1 [RIPv1], RIPv2, RIPng, and Open Shortest Path First [OSPF], Routed Access) are supported for small network routing applications with the Network Essentials stack. Equal-cost routing facilitates Layer 3 load balancing and redundancy across the stack.
		  o Advanced IP unicast routing protocols (including Full [OSPF], Enhanced Interior Gateway Routing Protocol [EIGRP], and Intermediate System-to-Intermediate System Version 4 [IS-ISv4]) are supported for load balancing and for constructing scalable LANs. Ipv6 routing (using OSPFv3 and EIGRPv6) is supported in hardware for maximum performance.
		  o Protocol-Independent Multicast (PIM) for IP multicast routing is supported, including PIM sparse mode (PIM SM), and Source-Specific Multicast (SSM).
		  o Ipv6 addressing is supported on interfaces with appropriate show commands for monitoring and troubleshooting.	

	4.1.8	Must have Ethernet management port: RJ-45 connectors, 4-pair Cat 5 UTP cabling	
	4.1.9	Must have the following industry standards: • EEE 802.1s • IEEE 802.1w • IEEE 802.1x • IEEE 802.1x-Rev • IEEE 802.3ad • IEEE 802.3af • IEEE 802.3at • IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports • IEEE 802.1D Spanning Tree Protocol • IEEE 802.1p CoS prioritization • IEEE 802.1Q VLAN • IEEE 802.3 10BASE-T specification • IEEE 802.3u 100BASE-TX specification • IEEE 802.3ab 1000BASE-T specification • IEEE 802.3z 1000BASE-X specification • RMON I and II standards • SNMPv1, v2c, and v3	

	4.1.10	EMI and EMC compliance: • FCC Part 15 (CFR 47) Class A • ICES-003 Class A • EMI and EMC compliance: • FCC Part 15 (CFR 47) Class A • ICES-003 Class A • EN 55032 Class A • CISPR 32 Class A • AS/NZS 3548 Class A • BSMI Class A • VCCI Class A • CISPR 35 • EN 55024, EN300 386*, EN 61000-3-2, EN 61000-3-3 • EN 61000-6-1	
	4.1.11	Must support perating temperature* and altitudes: • -5°C to +45°C, up to 5000 feet (1500m) • -5°C to +40°C, up to 10,000 feet (3000m) * Minimum ambient temperature for cold start is 32°F (0°C)	
	4.1.12	Must have a minimun of Mean-Time-Between-Failures (MTBF) of 379,410 hrs	
	4.1.13	Must Support Relative Humidity of Ambient (noncondensing) operating: 5% to 90% noncondensing	
	4.1.14	Must Support up to 80 Gbps of Stacking bandwidth	
	4.1.15	Must support up to 16,000 Media Access Control (MAC) Entries	
	4.1.16	Must support up to 11,000 (8,000 direct routes and 3,000 indirect routes) Total number of IPv4 routes (ARP plus learned routes)	
	4.1.17	Must support up to 3,000 IPv4 routes	
	4.1.18	Must support up to 1,500 IPv6 routes	
	4.1.19	Must support up to 1,000 Multicast Entries	
	4.1.20	Must support up to 1000 QoS Scale Entries	
	4.1.21	Must support up to 1500 ACL Scale Entries	
	4.1.22	Must support up to 12 MB packet buffer	
	4.1.23	Must support up to 32,000 Flexible NetFlow (FNF) entries	
	4.1.24	Must support up to 2 GB DRAM	
	4.1.25	Must support up to 4 GB Flash	
	4.1.26	Must support up to 4096 Total VLAN IDs	
	4.1.27	Must support up to 512 Total Switched Virtual Interfaces (SVIs)	
	4.1.28	Must support up to 9198 bytes of Jumbo Frames	
4.2.		**Warranty & Support**	
	4.2.1	3YR Warranty and Support 8X5XNBD	

	5. **WIFI 6 Indoor AP with accessories, 3 years license and support**	**Brand and Model:**
	5.1 Must be of the same vendor as the Core and Distribution switches, and Access switches to ensure compatibility and easy troubleshooting	
	5.2 Proposed hardware vendor must be placed in the leader quadrant of year 2020 Gartner report for Wired and Wireless	
	5.3 Must have a built in DNS security feature to block request from malicious and unwanted destinations before establishing connection	
	5.4 Must be a cloud-based, subscription-based security which blocks proliferation of security threats including malware, phishing, cryptomining and Botnet command and control attacks/callbacks, as part of compliance to Republic Act 10175 or the "Cybercrime Prevention Act of 2012"	
	5.5 Must be capable of captive portal functionality and redirection to specific site/s, network, or VPN network	
	5.6 Must provide a cloud-based, subscription-based child protection system which can block content such as, but not limited to, pornography and proxies in compliance to Republic Act 9775 or the "Anti-Child Pornography Act of 2009"	
	5.7 2x2:2 (2.4GHz) + 4x4:4 (5GHz) MU-MIMO 802.11ax	
	5.8 3 Gbps* dual-radio aggregate frame rate	
5	5.9 24x7 real-time WIPS/WIDS, spectrum analytics, and WiFi location tracking via dedicated 3rd radio	
	5.10 Integrated Bluetooth Low Energy Beacon	
	5.11 Integrated scanning radio	
	5.12 Enhanced transmit power and receive sensitivity	
	5.13 Integrated enterprise security and guest access	
	5.14 Application-aware traffic shaping	
	5.15 Optimized for voice and video	
	5.16 Self-configuring, plug-and-play deployment	
	5.17 Sleek design blends into office environments	
	5.18 Full-time Wi-Fi location tracking via dedicated 3rd radio	
	5.19 2.4 GHz 802.11b/g/n/ax client access radio 2.4 GHz 802.11b/g/n/ax client access radio 5 GHz 802.11a/n/ac/ax client access radio 2.4 GHz & 5 GHz dual-band WIDS/WIPS, spectrum analysis, & location analytics radio 2.4 GHz Bluetooth Low Energy (BLE) radio with Beacon and BLE scanning support Concurrent operation of all four radios Supported frequency bands (country-specific restrictions apply): • 2.412-2.484 GHz • 5.150-5.250 GHz (UNII-1) • 5.250-5.350 GHZ (UNII-2)	

		• 5.470-5.600, 5.660-5.725 GHz (UNII-2e) • 5.725 -5.825 GHz (UNII-3)	
	5.20	Internal Antenna (5.1dBi max gain at 2.4 GHz, 5.9dBi max gain at 5 GHz)	
	5.21	DL- OFDMA**, UL-OFDMA**, TWT support**, BSS Coloring** 2.4GHz: 2 x 2 multiple input, multiple output (MIMO) with two spatial streams 5GHz: 4 x 4 multiple input, multiple output (MIMO) with four spatial streams SU-MIMO, UL MU-MIMO** and DL MU-MIMO support Maximal ratio combining (MRC) & beamforming 20 and 40 MHz channels (802.11n); 20, 40, and 80 MHz channels (802.11ac Wave 2); 20, 40 and 80 MHz channels (802.11ax) Up to 1024-QAM on both 2.4 GHz & 5 GHz bands Packet aggregation	
	5.22	Power over Ethernet: 42.5 - 57 V (802.3at) or 37 - 57 V (802.3af) - low power mode ** Alternative: 12 V DC input Power consumption: 30W max (802.3at) or 15W max (802.3af) - low power mode ** Power over Ethernet injector and DC adapter sold separately	
	5.23	In low power mode, MR44 will do the following: a. Downshift its Ethernet uplink speed from 2.5 Gbps to 1 Gbps b. Transition from 4x4:4 to 2x2:2 in 5GHz c. Disable its dedicated IoT (previously known as BLE) radio d. Reduce the max Tx power	
	5.24	1x 100/1000/2.5G BASE-T Ethernet (RJ45) 1x DC power connector (5.5 mm x 2.5 mm, center positive)	
	5.25	All standard mounting hardware included Desktop, ceiling, and wall mount capable Ceiling tile rail (9/16, 15/16 or 1 1⁄2" flush or recessed rails), assorted cable junction boxes Bubble level on the mounting cradle for accurate horizontal wall mounting	
	5.26	Two security screw options (included) (13.5 mm long and 2.5 mm diameter and 5 mm head) Kensington lock hard point Concealed mount plate with anti-tamper cable bay	
	5.27	Operating temperature: 32 °F to 104 °F (0 °C to 40 °C) Humidity: 5 to 95% non-condensing	
	5.28	Mean Time Between Failure (MTBF): 500,000 hours at +25°C operating temperature	
	5.29	Integrated Layer 7 firewall with mobile device policy management Real-time WIDS/WIPS with alerting and automatic rogue AP containment with Air Marshal	
	5.30	Advanced Power Save (U-APSD) WMM Access Categories with DSCP and 802.1p support Layer 7 application traffic identification and shaping	
	5.31	PMK, OKC, & 802.11r for fast Layer 2 roaming Distributed or centralized layer 3 roaming	
	5.32	Embedded location analytics reporting and device tracking Global L7 traffic analytics reporting per network, per device, and per	

		application	
	5.33	1 power/booting/firmware upgrade status	
	5.34	RoHS For additional country-specific regulatory information, please contact Meraki sales	
	5.35	Lifetime hardware warranty with advanced replacement included	
	5.36	For the 50 units, 3 years Advanced License and Support	
	5.37	For 108 Units Transceiver: 10GBASE-SR SFP Module, Enterprise-Class	
	5.38	Must be of the same brand as the Core, Distribution, and Access switches and must be on the list of supported traceivers to ensure compatibility and easy troubleshooting	
6	**6. Civil Works Implementation**		
	6.1 SCOPE OF WORKS:		
	6.1.1	Site inspection, Roughing Ins Layout Inspection, Bending, condition, planning, site-kick off, Mobilization & Implementation	
	6.1.2	Supply, Delivery and Implementation of Copper (Cat6) & Fiber (FOC) Cable Roll-out & Roughing-ins Pulling	
	6.1.3	Supply, Delivery and Installation of Hangers, Catenaries and Supports for Vertical and Horizontal Cable Wire Ways	
	6.1.4	Supply, Delivery and Installation of Telecom Service Loop Cabinet (FTTX, E1/T1, VDSL, CATV) and MDF System Integration	
	6.1.5	Supply, Delivery and Installation of Powder Coated Cable Tray with Cover, Coupling, Grounding and elbow	
	6.1.6	Supply, Delivery and Installation of IDF Racks (Floor: 2, 3, 5 & 6) and MDF Racks at 4/F allocated Server room white space	
	6.1.7	Supply, Delivery and Installation of Copper and Fiber disconnection devices and modules	
	6.1.8	Supply, Delivery and Termination of End-to-end wiring building block and modules in compliance with ANSI TIA568B Standards	
	6.1.9	Harnessing, Grooming and Housekeeping for Cabling Infrastructure and Distribution	
	6.1.10	Project Management, Supervision, and Timely coordination and Progress reporting to over all PM/Gencon	
	6.1.11	Provide Fluke Networks Certifying Testing Reports for each node for PASS/FAIL results with Soft & Hard Copy Test Results	
	6.1.12	Live Data Comm Network Infra Testing for IP Devices management access, WoL, Ping of Devices, VLAN Tunneling and other protocols	
	6.1.13	Provide Detailed As-Built Plan, Programming and Configurations Scripts and System Architecture for Operable proof	

	6.1.14 Acceptance, Turnover & Conduct Technical Training & Knowledge Transfer to a designated Engr's/IT personnel of the Company	

6.2 BILL OF QUANTITY:

- **ICT INFRA PASSIVE COMPONENTS**
  - **13 rolls** - Category 6 U/UTP Installation Cable, Blue, Branded
  - **42 pcs** - Category 6 Unshielded Navigator, Dual Type IDC, White pc
  - **42 pcs** - Category 6 Faceplate, Integral molding, w/o icon, 1-Port, white
  - **42 pcs** - Amco Box
  - **11 units** - Category 6 Unshielded Patch Panel, Dual Type IDC, 24 Ports
  - **11 units** - 19" 1U, Cable Management Plastic Holder Type, Black
  - **42 units** - Category 6/UTP Patch Cord, 30AWG(Blue), 1M
  - **42 units** - Category 6/UTP Patch Cord, 30AWG(Blue), 2mtrs
- **INTERMEDIATE DISTRIBUTION FRAME (IDF)**
  - **2 racks** - Wall Mount IDF Cabinet, height 2f, Closed type, black
  - **2 units** - IDF cooling fan, with three pins German-plug type, 1wire/2fans (cable length, 2M)
  - **2 units** - IDF Power distribution units w/ aluminum body, European type, 6 outlets, w/ surge protector, w/ LED switch (1.5U)
- **INTERMEDIATE DISTRIBUTION FRAME (IDF)**
  - **500 meters** - 8-Core FOC CABLES, OUTDOOR SM, FIG.8
- **INDOOR FOC SYSTEM**
  - **1500 meters** - 8-Core FOC CABLES, INDOOR/OUTDOOR SM
  - **29 units** - Fiber Optic Patch Panel (MAIN BODY, BLACK), Loaded
  - **60 units** - SC/PC Duplex MM Adapter w/ zirconia Sleeve
  - **240 pcs** - Fiber optic pigtail SM, 1m
  - **28 pcs** - SC/UPC-LC/UPC Duplex SM, 3M
  - **240 cores** - FIBER FUSION TERMINATIONS
  - **1 lot** - FOC OTDR TESTING, REPORTS & DOCUMENTATION
- **(V&H) CABLE PATHWAYS, CATENARIES, HANGERS, SUPPORTS & CONSOLIDATION ENCLOSURES**
  - **1 lot** - V-H Powder Coated Cable Pathways, Cover, Coupling, Elbows, Reducer, WM Bracket, H-Supports, F-Conduit and Accessories
  - **1 lot** - V-H Consolidated Enclosures (Indoor & Outdoor)
  - **1 lot** - Telecom Conduits, Catenaries, Hangers & Supports
  - **1 lot** - Fabrication of Cable Ladder & Floor Mounting Pad Enclosures
- **ENGINEERING & LABOR**
  - **1 lot** - Labor Installation, Commisioning & Testing

I hereby certify that the statement of compliance to the foregoing technical specifications are true and correct, otherwise, if found to be false either during bid evaluation or post-qualification, the same shall give rise to automatic disqualification of our bid.

Name of Company	Signature Over Printed Name of Authorized Representative	Date

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[*] *[Bidders must state here either "**Comply**" or "**Not Comply**" against each of the individual parameters of each Specification stating the corresponding performance parameter of the equipment offered. Statements of "Comply" or "Not Comply" must be supported by evidence in a Bidders Bid and cross-referenced to that evidence. Evidence shall be in the form of manufacturer's un-amended sales literature, unconditional statements of specification and compliance issued by the manufacturer, samples, independent test data etc., as appropriate. A statement that is not supported by evidence or is subsequently found to be contradicted by the evidence presented will render the Bid under evaluation liable for rejection. A statement either in the Bidder's statement of compliance or the supporting evidence that is found to be false either during Bid evaluation, post- qualification or the execution of the Contract may be regarded as fraudulent and render the Bidder or supplier liable for prosecution subject to the applicable laws and issuances.]*

Bid Form

Date: _____

Invitation to Bid No: **PB No. 21-131-10**

To: ***DBM-PS BAC X Chairperson***
Procurement Service
PS Complex, RR Road
Cristobal St., Paco, Manila

Gentlemen and/or Ladies:

Having examined the Bidding Documents including Bid Bulletin Numbers *[_____]*, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to ***Upgrading of Local Area Network (LAN) – Various IT Equipment for the Department of Agrarian Reform (DAR) Central Office*** in conformity with the said Bidding Documents.

Lot No.	Item No.	Qty.	Item / Description	Unit Price	Total Amount
1	1	2 unit/s	**Core Switch 40-Port 10Gig switch with accessories, 3 years license and support**		
	2	4 unit/s	**Core Switch 16-port 10Gig switch with accessories, 3 years license and support**		
	3	15 unit/s	**LAN Switch 48-port 10Gig 12xmGig, 36x1G,4x10G PoE+ with accessories, 3 years license and support**		
	4	4 unit/s	**PoE+ with accessories, 3 years license and support**		
	5	50 unit/s	**WIFI 6 Indoor AP with accessories, 3 years license and support**		

	6	1 unit/s	Civil Works and Implementation		
			TOTAL BID PRICE		

Note: For purposes of Bid Evaluation, bidders are advised to use two (2) decimal places in setting up their bid prices.

TOTAL PRICE IN WORDS:

Lot 1: _____

We undertake, if our Bid is accepted, to deliver the goods in accordance with the delivery schedule specified in the Section VI. Schedule of Requirements.

If our Bid is accepted, we undertake to provide a performance security in the form, amounts, and within the times specified in the Bidding Documents.

We agree to abide by this Bid for the Bid Validity Period specified in BDS provision for **ITB** Clause **14.2** and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice to Execute Framework Agreement (NEFA), shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements as per **ITB** Clause 5 of the Bidding Documents.

I/We likewise certify/confirm that the undersigned, *[for sole proprietorships, insert]:* as the owner and sole proprietor or authorized representative of *[Name of Bidder]*, has the full power and authority to participate, submit the bid, and to sign and execute the   ensuing contract, on the latter's behalf for the ***Upgrading of Local Area Network (LAN) – Various IT Equipment for the Department of Agrarian Reform (DAR) Central Office.***

Or;

I/We likewise certify/confirm that the undersigned, *[for partnerships, corporations, cooperatives, or joint ventures, insert]:* is granted full power and authority by the *[Name of Bidder]*, to participate, submit the bid and to sign and execute the ensuing contract on the latter's behalf for ***Upgrading of Local Area Network (LAN) – Various IT Equipment for the Department of Agrarian Reform (DAR) Central Office.***

We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Dated this _____ day of _____ 20_____.

_____   _____
[signature]   *[in the capacity of]*

Duly authorized to sign Bid for and on behalf of _____