04 April 2023

SUPPLEMENTAL / BID BULLETIN

Addendum No. 2023-003-01

Subject: <u>**Terms of Reference for the Supply, Delivery, Installation, Testing, Training and Commissioning of the Weather Media Production System / PR No.2023-02-0070**</u>

This Bid Bulletin is being issued to provide all prospective bidders the correct Terms of Reference for the project due to inadvertent conversion of documents.

This Supplemental Bid Bulletin shall form an integral part of the said Bidding Documents.

For guidance and information of all participating bidders.

Sgd.

BONIFACIO G. PAJUELAS, Ph.D.
Chairperson, PAGASA-BAC

Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)

TERMS OF REFERENCE
FOR THE SUPPLY, DELIVERY, INSTALLATION, TESTING, TRAINING, AND COMMISSIONING OF THE WEATHER MEDIA PRODUCTION SYSTEM

A. BACKGROUND

PAGASA began the video recording of the daily weather forecast updates twice a day and uploaded to YouTube on 5 December 2016. Shortly thereafter, PAGASA also began the live streaming of updates as well as press briefings for tropical cyclones on Facebook.

This project aims to improve the current delivery of PAGASA products and services (weather forecasts, climate outlook forum, astronomy event and others) through the Social Media platform of YouTube and Facebook, by the acquisition of video and audio equipment that conforms to broadcast standards.

B. APPROVED BUDGET FOR THE CONTRACT (ABC)

The Approved Budget for the Contract is Twelve Million pesos (Php 12,000,000.00) inclusive of VAT and all applicable government taxes and permits.

C. BIDDER'S QUALIFICATION

For purposes of determining the Eligibility of prospective bidders to participate in the bidding of this Project, the documentary requirements prescribed under Section 23 of the 2016 Revised Implementing Rules and Regulation (IRR) of RA 9184, and the specific qualification requirements under this Terms of Reference (TOR) must be complied with accordingly.

Additional qualifications:

1. Manufacturer should have at least five (5) years of experience in Audio Video System installations or similar in nature.
2. Local supplier/contractor should be an authorized representative of the manufacturer of the prescribed equipment
3. Local supplier/ contractor should have the capacity to respond to maintenance and warranty services requirement

D.   PLACE AND DATE OF DELIVERY

The winning bidder shall supply and deliver the deliverables at PAGASA Weather and Flood Forecasting Center (WFFC) Building for ninety (90 c.d.) calendar days from receipt of the Notice to Proceed (NTP).

E.   TECHNICAL SPECIFICATIONS

Item No.	Quantity	Item Name	Specifications
1	1 unit	Compact Cellular High Efficiency Video Coding (HEVC) Field Unit for On the Go Live Streaming Transmitter with 2 GSM dongles	VIDEO RESOLUTIONS: 4Kp60/50/25/30/24, 1080p50/60/25/30/24, 1080i50/60, 720p50/60, PAL, NTSC
			VIDEO INTERFACES: 12G/3G/HD/SD-SDI and HDMI 2.0
			VIDEO ENCODER: H.265/HEVC, H.264, 10-bit/HDR
			AUDIO ENCODER: AAC-HE/LC, up to 8 audio channels
			PORTABILITY: Professional-grade cross-shoulder pack, camera mount and belt pack options
			SIMULTANEOUS BONDING: Up to 6 network links: 2 x internal 4G modems, 2 x external cellular modems (4G Native), internal WiFi and Ethernet
			EXTERNAL MODEMS: Net 4G/5G with high-efficiency antennas for worldwide support
			POWER SOURCES: 3 hours internal battery, DC IN: 12V-19V AC/DC adaptor or external battery
			RESILIENCY AND QUALITY: featuring proprietary algorithms such as automatic Adaptive Bit Rate (ABR), automatic Forward Error Correction (FEC) and other lost packet recovery algorithms
			INTERFACES: 2 x USB 2.0, micro USB, RJ-45 Ethernet, 3.5mm in/out audio jack, micro-SD card, SIM cards

			WIRELESS INTERFACES: WiFi 802.11 a,b,g,n,ac support with internal MIMO antennas 2 x internal 4G modems with high-efficiency antennas for worldwide support
2	1 unit	**Receiver Server with 4 Outputs includes 23 inches Monitor, USB Keyboard and USB Mouse**	FORM FACTOR: 1U rackmount server
			SOFTWARE: Pre-installed with decoder software
			VIDEO DECODER: H.264/HEVC
			CONFIGURATIONS: Single SDI output
			IP OUTPUTS: RTMP for streaming to CDNs or social media, MPEG-TS, Matrix and NDI
			RESOLUTIONS: 1080p50/60/25/30/24, 1080i/50/60, 720p50/60/25/30/24, PAL, NTSC
			HW INTERFACES: 3G/HD/SD-SDI
			NETWORK INTERFACE: 2 X 1000/100/10 RJ-45
			POWER SOURCES: 110-240V 50/60HZ
3	3 units	**Remotely controllable 1080p Full Network Device Interface (NDI) Pan, Tilt and Zoom (PTZ) Camera w/ 20x Optical Zoom, 16x Digital Zoom**	IMAGE SENSOR: 1 / 2.86 inch CMOS 2.2MP
			LENS: 5.2-104mm
			OPTICAL ZOOM: 20x
			MIN. ILLUMINATION: Color: 0.5 lux
			OPERATING TEMPERATURE: -10 – +50 (°C)
			VIDEO OUTPUT: NDI/SDI/HDMI/USB2.0(UVC)
			VIDEO FORMATS: 1080p 60, 59.94, 50, 29.97, 25 - 1080i 60, 59.94, 50 - 720p 60, 59.94, 50
			SERIAL PTZ CONTROL: 1x RJ45: RS232/RS422
			Power Input: 12v DC, PoE+ (IEEE 802.3at)
			WEIGHT: 1.0Kg Maximum
4	2 units	**Remotely controllable 1080p Full NDI PTZ**	IMAGE SENSOR: 1 / 2.86 inch CMOS 2.2MP

		Camera w/ 10x Optical Zoom	LENS: 4.7-47mm
			OPTICAL ZOOM: 10x
			MIN. ILLUMINATION: Color: Color: 0.5 lux
			OPERATING TEMPERATURE: -10 – +50 (°C)
			VIDEO OUTPUT: NDI/SDI/HDMI/USB2.0
			VIDEO FORMATS: 1080p 60, 59.94, 50, 29.97, 25, 1080i 60, 59.94, 50, 720p 60, 59.94, 50
			SERIAL PTZ CONTROL: 1x RJ45: RS232/RS422
			POWER CONSUMPTION: Min. 11.1W – Max. 15.2W (PTZ move simultaneously)
			WEIGHT: 1.0Kg Maximum
5	2 units	NDI PTZ Camera Controller keyboard	RS 232/ RS422: Baud Rate 2400 / 4800 / 9600 / 19200 / 38400
			Programmable function buttons: 6
			Maximum camera control: Max. 255 with multiple protocols including NDI/IP
			Key/Button illumination: Multi-colour LED
			Power input: DC 12V, PoE (Power over Ethernet), Power via RS232/RS422 port
			Operating Temp: 0-40 (ºC)
6	2 units	Teleprompter with Bluetooth Remote Controller including software	Multi-language Support: English, Dutch, Spanish, Portuguese, Russian, Chinese (Traditional), Chinese (Simplified)
			Prompter Size (Max): Width: 270mm, Height: 210mm, Depth: 460mm
			Weight: 1.3 Kg Maximum
			Operating Temp. Range: 0~40 °C
7	2 units	Software application for all-in-one production switcher,	Video Cameras: 4K, HD and SD capable. Support for Webcams and capture cards.

TERMS OF REFERENCE FOR THE SUPPLY, DELIVERY, INSTALLATION, TESTING, TRAINING, AND COMMISSIONING OF THE WEATHER MEDIA PRODUCTION SYSTEM

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		graphics, online streamer, recorder, audio mixer and multiviewer	NDI: Send and receive high quality, low latency video and audio on the local network between vMix systems and any NDI compatible sources. See NDI.
			Video Files: Support for all popular formats including AVI, MP4, H264, MPEG-2, WMV, MOV and MXF.
			Audio Files: MP3 and WAV.
			Audio Devices: Mix multiple audio sources such as SoundCards, ASIO Audio Interfaces and capture card audio.
			Video and Audio PlayLists: Combine multiple video and/or audio files into a single Input Web Browser, RTSP, PowerPoint, Photos, Solid Colour and more.
			Total Inputs: 1000
			Maximum Resolution: 4096 x 2160
			Overlay Channels: 4
			Instant Replay: 8 Cameras
8	2 units	Laptop for the all-in-one software application	Operating System: Windows 11 Home, Windows 11 Pro
			Processor: Intel® Core™ i7
			Graphics: Laptop GPU, 80W (95W with Dynamic Boost),4GB GDDR6
			Display: 17.3-inch,FHD (1920 x 1080) 16:9,anti-glare display, sRGB:62.5%, Adobe:47.34%, Refresh Rate:144Hz, IPS-level, Adaptive-Sync,MUX Switch + Optimus
			Memory: 16GB DDR5-4800, SO-DIMM x 2 slot, Max Capacity: 32GB
			Storage: 512GB M.2 NVMe™ PCIe® 3.0 SSD
			Camera: 720P HD camera
			Audio: Dolby Atmos, Hi-Res certification, AI noise-canceling technology, Built-in array microphone, 2-speaker system

			Network and Communication: Wi-Fi 6(802.11ax)+Bluetooth 5.0 (Dual band) 2*2;(*BT version may change with OS upgrades.)
			Power Supply: ø6.0, 200W AC Adapter, Output: 20V DC, 10A, 200W, Input: 100-240V AC, 50/60Hz universal
			Weight: 2.60 Kg Maximum
9	**1 set**	**Desktop Computer for the all-in-one software application**	Operating System: Windows 11 64Bit
			Processor: Intel Core i9 13900K 24C/32T LGA1700 13th Gen
			Graphics:12GB GDDR6X 384BIT 3-DP HDMI
			Memory: DDR5 5200Mhz 2x16GB DDR5
			Storage: MZ-V7S2T0BW SSD 970 Evo Plus NVME 2TB
			Power Supply: Total continuous power - 1000W, Voltage: 100 V - 240 V, Current: 13 - 6.5 A, Frequency: 50 Hz - 60 Hz
			Dimensions (L x W x H): 516 x 224 x 510mm (incl. Protrusions)
10	**1 unit**	**PCI Express capture and playback card**	SDI Video Inputs/OUTPUTS: 4 x bidirectional 12-bit SD/HD independently configurable as either Input or Output.
			SDI Audio Inputs/OUTPUTS: 16 channels embedded in SD and HD.
			Sync Input: Tri-Sync or Black Burst.

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			Computer Interface: PCI Express 4 lane generation 2, compatible with 4, 8 and 16 lane PCI Express slots.
			Power Consumption: 10 Watts
			Operating Temperature: 5° to 40 ° C (32° to 104° F)
			Color Space: REC 601, REC709, REC2020
11	1 unit	2 Channel USB Sound Card	Phantom Power: 48 V, Selectable On/Off (Applied to All Inputs)
			Frequency Response: Inputs: 20 Hz to 20 kHz ±0.1 dB
			Sample Rates: Up to 192 kHz (AD/DA Conversion)
			Bit Depths: Up to 24-Bit (AD/DA Conversion)
			OS Compatibility: macOS 10.12 or Later, macOS 11, Windows 7 or Later, iPadOS
			Required Hardware: Available USB 2.0 Port
			Channels of I/O: Analog, 2 Inputs / 2 Outputs at 192 kHz
			Weight: 470.0 g Maximum
12	2 units	Compact Four Channel Instant Replay Controller	Simultaneous Control: up to 4 RS-422 Video Decks and file-based Video Recorders
			Connection Type: USB
13	1 unit	Capture Card with broadcast quality connections	SDI Video Outputs: 2 x 3Gb/s SD/HD switchable, supports fill and key
			Analog Video Inputs: Y, B-Y, R-Y/NTSC/PAL

			Analog Audio Inputs: 2 x 1/4 inch jack connectors for balanced and unbalanced analog audio.
			SDI Audio Inputs/Outputs: 16 Channels embedded in SD and HD.
			HDMI Audio Outputs: 2 Channels embedded in SD and HD.
			Reference Input: Tri-Sync or Black Burst.
			SD Video Standards: 525i59.94 NTSC, 625i50 PAL
			SDI Compliance: SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 372M and SMPTE 425M A/B.
			Computer Capture: 1 x Thunderbolt™ 3 for Mac and Windows. Powers from Thunderbolt host computer
14	2 units	**High-speed, dual-WAN connectivity Network Switch**	Processor: Quad-Core ARM® Cortex®-A57 at 1.7 GHz
			System memory: 4 GB DDR4
			On-board storage: 16 GB eMMC Integrated 128 GB SSD
			Max. power consumption (excluding PoE output): 50W
			Power supply: AC/DC, Internal, 240W
			Supported voltage range: 100—240V AC
			Management interface: Ethernet/ Bluetooth
			LCM display: (1) 1.3" touchscreen; Bootup animation: bootup in progress; Firmware upgrade icon: firmware upgrading
			Mount material: SGCC steel rack mount
15	2 units	**10-Channel Analog Mixer with USB**	Number of Analog Input Channels : 10
			Number of Mic Preamps: 4
			Number of Compressors: 2

			Power Supply: External 100-240 VAC
			Weight: 2.2 kg Maximum
16	4 units	**2-way reference studio speaker**	Maximum SPL per pair: 108 dB SPL @ 1m
			Low Frequency Power: 30 watts, 4ohms load, 60 watts peak
			High Frequency Power: 20 watts, 6ohms load, 40 watts peak
			Crossover Frequency: 2kHz
			Power Consumption: 90 watts with music, loud mix, 10 watts quiescent
			Weight: 4.6 kg Maximum
17	1 unit	**2-Bay Desktop NAS Enclosure Server**	Number of Bays: 2 x 2.5"/3.5" with 32TB HDD
			I/O: 2 x USB Type-A (USB 3.1 / USB 3.2 Gen 1 (5 Gb/s)), 2 x RJ45 (Gigabit Ethernet)
			Form Factor: Desktop
			Max User Accounts: 2048
			Supported File Systems: Internal: BTRFS, EXT4, External: BTRFS, EXT3, EXT4, FAT, HFS+, NTFS, exFAT
			Power Consumption: 14.69 W (Typical), 4.41 W (Standby)
			Storage Temperature: -5 to 140°F / -20 to 60°C
			Certifications: BSMI, CCC, CE, EAC, FCC, Kcc, RCM, RoHS, VCCI
18	4 units	**Handheld Dynamic Microphone**	Cartridge Type: Dynamic (moving coil)
			Frequency Response: 50 to 16,000 Hz
			Polar Pattern: Supercardioid
			Output Impedance: 150 Ω
			Sensitivity: −51 dBV/Pa (2.8 mV)
			Weight: Net: 0.278 kg
			Connector: Three-pin professional audio (XLR), male
19	4 units		Operating Range: 300 ft (91 m) line of sight

		Handheld Wireless Microphone System 2 channel	Available Frequencies: Between 524 – 865 MHz
			Audio Range: 50 – 15,000 Hz
			Transmitter RF Output Power: 10 mW, typical
			Audio Output Connector: XLR and 1/4" (6.3 mm) unbalanced
			Maximum Output Level: -27 dBV (XLR, mic level), -13 dBV (1/4")
			Battery Life: Up to 14 hours
			Dynamic Range: 100 dB A-weighted
			Operating Temperature Range: -18°C (0°F) – +50°C (122°F)
20	2 units	Miniature lavalier condenser microphone	Type: Electret Condenser
			Frequency Response: 50 to 20,000 Hz
			Polar Pattern: Unidirectional (Cardioid)
			Output Impedance @ 1 kHz, typical: 600 Ω
			Audio Output Level: -43.5 dBV/Pa
			Signal-To-Noise Ratio @ 1 kHz: 72 dB
			Power Requirements: +5 V DC (nominal), 10 V maximum (DC bias)
			Polarity: Positive pressure on diaphragm produces positive voltage on pin 3 with respect to pin 1
			Cable: 1.3 m (50 in.)
			Net Weight: 25 g Maximum
21	4 units	Wireless Intercom System Full-Duplex with 2 communication headsets	Transmission Range: 350m (1000ft) Line-of-Sight
			Frequency band: 1.9GHz DECT
			Modulation mode: GFSK
			Transmit power: <21dBm (125.9mW)
			Receiving sensitivity: <-90dBm
			Transmission latency: <35ms
			Battery Capacity: 700 mAh (2.66Wh) Li-Ion battery
			Signal-to-Noise Ratio: >55dB

22	1 unit	SD, HD and 3G-SDI broadcast monitor display	Display Element: TFT Active Matrix LCD.
			Display Resolution: 800 x 480 pixels
			Contrast Ratio: Typically 500:1
			SDI Auto Switching: Automatically selects between SD, HD and 3 Gb/s SDI.
			Video Sampling: 4:2:2 and 4:4:4
			2K Format Support: 2K DCI 23.98p, 2K DCI 24p, 2K DCI 25p 2K DCI 23.98PsF, 2K DCI 24PsF, 2K DCI 25PsF
			Color Depth: 16.7 Million Colors
			Power Consumption: < 20 Watts
23	2 units	Distribution Amplifier SDI Video Inputs	SDI Auto Switching: Automatically detects SD, HD or 6G-SDI.
			SDI Compliance: SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 372M, SMPTE ST-2081, ITU-R BT.656 and ITU-R BT.601
			SDI Color Space: YUV and RGB
			Operational Voltage Range: 12 - 31V DC
			Operating temperature: 0° to 40° C (32° to 104° F)
			Dimensions: 4.8 x 3.6 x 0.9"
			SDI Video Sampling: 4:2:2 and 4:4:4
			SDI Audio Sampling: Television standard sample rate of 48 kHz and 24 bit.
24	1 unit	Ultra HD 4K 3G-SDI/HDMI Pro Camcorder	Image Sensor: 1/2.5-type (inch) MOS Sensor
			Effective Pixels: 8.29 megapixels
			Optical Zoom: 24x
			Focal Length: 4.12 98.9mm
			Minimum Illumination: 1.5 lx (F1.8, Super Gain +, 1/30)
			Recording Format: MOV, MP4, AVCHD
			System Frequency: 59.94Hz / 50.00Hz

			Video Compression Format: H.264/MPEG-4 AVC Main Profile, High Profile
			Streaming Method: Unicast, Multicast
			Network Protocol: RTSP/RTP/RTMP/RTMPS
			Weight: Body: approx. 0.9kg (1.98 lb)
25	2 units	**AMD Adaptive Sync 32 inches monitor**	Color Depth: 8-bit / 10-bit color is supported
			Max Resolution: 3840 x 2160 @ 60 Hz
			Power Rating: 19 V 3.3 A
			Temperature Operating Conditions: 0 °C to 40 °C (32 °F to 104 °F)
			Dimensions (With Stand): 28.7 x 20.4 x 8.2"
			Weight (With Stand): 6.2 kg (13.6 lbs) Maximum
26	6 units	**BI-COLOR LED Par Can Fixture**	Power Draw Total: 115W, 0.964A @ 120V/60Hz, 112W, 0.5A @ 220V/50Hz
			Light Source: 100 Watt COB Cool White LED (5700K)
			DMX Input/Output: 5-pin DMX In/Out
			Multi-voltage operation: AC 100-240V, 50/60Hz
			Beam Angle: 9, 15, 20, 25, or 30 - degree
			Daisy chain: 15 fixtures (120V); 25 fixtures (230V)
			DMX Channels: 2 DMX channels
			Control protocol: DMX-512
			Electronic Dimming: 0 - 100% with 5 dimming curves
			Weight: 3.4kg. Maximum
27	3 units	**Dual Color Dimmable LED Panel Light**	AC Input Power: 110 to 240 VAC, 50 / 60 Hz
			Power Consumption: 100 W Maximum
			Lumens: 3200

			Variable Color: 3200 to 5600K
28	6 units	**High-Powered LED Wash Strobe Fixture (RGBW)**	Light Source: 144x 1.5W RGB SMD LEDs + 144x .5W Cool White SMD LEDs
			Beam Angle: 120-degree Beam Angle
			Temperature: 6000k Color Temperature (White LED's only)
			Control Protocol: DMX
			6 DMX Modes: 4, 8, 10, 10a, 12,15, 18 and 18a Dim Modes: 6 Presets (Standard, Stage, TV, Architectural, Theatre & Stage 2)
			Display: LCD display with 4-button touch menu
			Data: 3-pin & 5-pin DMX In/Out
			Max Power Consumption: 226W
			Dimensions (LxWxH): 15.3" x 5.63" x 8.38"
29	1 unit	**Mini DMX Lighting Controller**	Number of DMX Channels: Control up to 192 DMX Channels
			Connection: 3-Pin DMX Connection
			DC INPUT: Accepts a DC 9~12V, 300 mA minimum, power supply
			Weight: 2.25 Kgs Maximum
30	1 unit	**6-Way DMX Splitter & Amplifier**	Voltage: 100~240V, 50/60Hz
			Fuse: 1A
			Weight: 1.3Kg Maximum
31	1 unit	**Folding Double Sided Stik Ladder**	Construction: Aluminum
			Height: 7' (2.1 m)
			Load Capacity: 113.4 kg Maximum
			Weight: 11.5 kg Maximum
32	5 units	**Tripod Kit with Center Column for PTZ**	Maximum Working Height: 89.4" / 227.1 cm Maximum
			Head Mount Type: 3/8"-16 Male
			Load Capacity: 14 kg Maximum
			Materials: Aluminum Alloy
			Weight: 4.2 kg Maximum
33	2 units		SPOT TO FLOOD RANGE: 20 - 70 degrees

		150W 2-Point 4" Bi-Color LED Fresnel Light	BUILD MATERIAL: Aluminum
			LENS: 4" Glass Fresnel
			LIGHT SOURCE: 150 Watt LED
			OPERATING VOLTAGE: 120-240VAC
			MAX POWER CONSUMPTION: 81 W
			COLOR TEMPERATURE: Bi-Color 3200K - 5600K
			OPERATION TEMPERATURE: 10 - 110o F
			FIXTURE WEIGHT: 4.5 kg Maximum
			FIXTURE DIMENSIONS: 19 x 12 x 6 in (Maximum)
34	1 unit	40 RU RACK	BUILD MATERIAL: Aluminum
			Dimension: 600mm(W) x 700mm(D) x 1778mm(H) Maximum
35	1 unit	20 RU RACK	BUILD MATERIAL: Aluminum
			Dimension: 600mm(W) x 700mm(D) x 890 mm(H) Maximum
36	1 set	3-METER CONSOLE TABLE WITH WHEELS, 2 DRAWERS & 3 CHAIRS FOR STUDIO ROOM	
37	1 set	1.5-METER CONSOLE TABLE WITH WHEELS, 1 BUILT-IN DRAWER & 3 CHAIRS FOR BRIEFING ROOM	
38	2 sets	3-TONNER SPLIT TYPE AIR CONDITIONING UNIT 3-PHASE, 230 VOLTS	
39	1 lot	Electrical and Electromechanical Works	Installation and lay-out of lighting system (fixture/console) for studio Installation and lay-out of duplex convenience outlet universal type 3-prong

			Wiring and installation of feeder conductor for the supply of 2-units of 3- tonner split type air conditioning unit
			Mounting and installation of 1-set main breaker 70AT, 3P, 230 volts
			Supply of 2-units of 3-tonner split type 3-phase air conditioning units
			Supply of labor and materials for the air conditioning units copper tubing and insulation
			Dismantling of existing lighting
			Installation of new studio house lighting
			Mounting and installation of 1-set 3-gang toggle switch
			Fabrication and installation of DMX cable tray 60 or 100mm
			Supply of console table for studio and briefing room
			Supply of 40RU equipment rack for studio and 20RU equipment rack for briefing room
			Supply of labor and materials for the project
40	1 lot	**Studio room improvement**	Dismantling of Ceiling
			Dismantling of Electrical
			Dismantling of Existing HVAC Acoustic Wall
			Provision of Hallway Dressing Room, and Studio Area
			Floor Finish (Vinyl Carpet)
			Provision of New Blinds on Dressing Room
			Studio Area installation of Glass Window
			Installation of Studio Chroma Wall
			Installation of Studio Batten Lights Frame
			Open Ceiling (Existing Lights to be installed)
			Floor gas trench to be open

41	1 lot	**Audio, Video, and Broadcast Equipment Works**	Testing and Installation of Broadcast Equipment
			Testing and Installation of Audio System
			Testing and Installation of Video System
			Program Input System
			Installation of lighting fixtures
			Configuration of DMX Controllers to the lighting fixtures
			Design and fabrication of Console tables
			Design and fabrication of Equipment Racks

F.   ELECTRICAL, MECHANICAL, AND INFRASTRUCTURE REQUIREMENTS

The Prospective Bidder shall coordinate with the Electrical group of the Engineering and Technical Services Division (ETSD) Central Office regarding the electrical layouts, electrical accessories, electrical wires, distribution box, and other peripheral needs for tapping the studio system to the electrical source. Before the submission of bids, the prospective bidder has the option to conduct an ocular survey of the location site. Site location plan and electrical layout is provided in the documents; any queries may be sent through written form thru the BAC secretariat and will be answered thru supplemental bid bulletin.

All expenses incurred for the integration of the project into the building's electrical system shall be shouldered by the Winning Bidder. Must be required to submit all necessary electrical plans, diagrams, and other pertaining documents as required and approved by the Electrical group of ETSD.

The Winning Bidder shall also coordinate with the Infrastructure and Aircon units of the Engineering and Technical Services Division (ETSD) Central Office. All expenses incurred during the preparation and installation activity including necessary permits or clearances shall be shouldered by the Winning Bidder.

G.   TESTING AND TRAINING

The Testing and Training shall be conducted on-site at PAGASA, WFFC. The testing must be witnessed by at least one (1) middle and/or top management staff from the Weather Division (WD) and from ETSD.

All related expenses during the activity shall be borne by the Winning Bidder. Moreover, 3-day hands-on end-users training on Weather Media Production System shall also be conducted onsite at PAGASA, WFFC.

The hands-on training shall include hardware/software configuration and system maintenance. The Winning Bidder shall provide meals for at least ten (10) training participants and the site acceptance team.

## H.	SYSTEM AND EQUIPMENT WARRANTY

The Winning Bidder shall submit a warranty certification stating that all system components, accessories, and workmanship shall be warranted for one (1) year including maintenance support and services from the date of delivery. Parts, units, and subsystems found to have factory defects must be fixed or replaced immediately during the warranty period.

Warranty includes version upgrades or updates, troubleshooting and technical support based on 24x7 via email provided by the supplier.