المجلس الوطني الاتحادي
الإمارات العربية المتحدة

الممارسة / المناقصة: (2024-10)

تاريخ الطرح

2024/07/04 ---2024/06/12

اسم المشروع : تطوير أنظمة الصوت والصورة في قاعة زايد

جدول المحتويات

1- التعريفات

مُقدم العطاء/ المناقص	الكيان القانوني الذي يحق له تقديم عروض اسعار استجابة لهذا العرض
المجلس / الطرف الاول	المجلس الوطني الاتحادي - ابوظبي
الطرف الثاني	الشركة المتعاقد معها لتنفيذ المشروع
مدير المشروع	ممثل الطرف الأول للإشراف ومتابعة سير تنفيذ أعمال المشروع
الأعمال	الاعمال المطلوب تنفيذها طبقا لشروط العقد
العقد	جميع وثائق العقد وهي مستندات المناقصة والعقد والشروط العامة والخاصة والمواصفات العامة والخاصة
المورد/ المقاول	مُقدم العطاء المختار الذي تم إخطاره رسميًا لتنفيذ نطاق العمل المحدد في طلب تقديم العروض هذا
موقع المشروع	مقر المجلس الوطني الاتحادي في ابوظبي

2-مقدمة عن المناقصة

يعتزم المجلس الوطني الاتحادي تطوير أنظمة الصوت والصورة في قاعة زايد، وعليه يسرنا دعوتكم للاشتراك في المناقصة وتقديم عروضكم الفنية والمالية بموجب المتطلبات المرفقة وطبقاً للمتطلبات اللاحقة.

- مدة تنفيذ الاعمال (3) أشهر من تاريخ الترسية.
- على المقاول تقديم جدول زمني لكافة اعمال المشروع.
- يحق للمجلس فسخ العقد دون انذار الطرف الثاني حال تقاعسه او تأخيره او تباطئه عن تنفيذالاعمال.
- في حال التعاقد مع مقاول بالباطن، يجب الحصول على موافقة المجلس مسبقاً.
- على المشترك في المناقصة تقديم العروض الفنية والمالية المعدة على النحو التالي:
  - **أولا: العرض المالي ويشتمل على :-**

- أجور التوريد والتركيب والتشغيل والصيانة والضمان لكافة الاعمال والمواد .

- القيمة الاجمالية للأعمال قبل الضريبة وبعد الضريبة.

ثانيا: العرض الفني ويشتمل على :

1. تقديم المواصفات الفنية والقياسية لكافة الأعمال المطلوبة والمواد المقترحة.
2. **يحق للمتقدم بالمناقصـــة تقديم عدة مقترحات من أي علامة تجارية أو تقنية تلبي متطلباتنا وتتوافق مع انظمة المجلس المعمول بها.**
3. توقيع مستندات المناقصة.
4. تقديم ملف الشركة ويتضمن الرخص، هيكل الشركة، كشف بالمشاريع المماثلة مع ارقام التواصل، شهادات الايزو ، شهادة القيمة المحلية المضافة، شهادات التراخيص الخاصة والشهادات التقديرية وشهادات Authorized dealer
5. أية إيضاحات تراها الشركة ضرورية ومؤثره في أعمال المشروع.
6. السيرة الذاتية لجميع أعضاء فريق العمل للمشروع.
7. سياسة إدارة نظام ضبط ومراقبة الجودة.
8. سياسة إدارة نظام الصحة والسلامة المهنية والبيئية.

- **ثالثاً: التقييم:**

  - سيتم تقييم العروض المؤهلة بنسبة 70 ٪ فنياً و 30٪ مالياً بناءً على المعايير المعتمدة ومع الأخذ في الاعتبار استيفاء متطلبات العروض المذكورة.
  - لا يحق لأي مناقص الاعتراض على نتيجة التقييم.
  - تتم عملية التقييم بموجب المستندات المقدمة من قبل المناقص.
  - التقييم الفني هو مجموع العلامات التي يحصل عليها المناقص بعد تقييم عطائه الفني.
  - العطاءات المؤهلة هي العطاءات التي حصلت في التقييم الفني على مجموع علامات % 70 فأكثر.

- المشاريع المشابه هي أي مشاريع مرتبطة بنفس نطاق اعمال هذا العقد.

Description	Scoring Weight
Project Team	15%
Fulfillment of the RFP Requirements	15%
Methodology and Approach	15%
References	10%
Timeline	15%
Commercial Proposal	30%

- **رابعاً: طريقة التقديم:**

- يتم تقديم العروض المالية والفنية في أظرف مغلقة ومختومة بالشمع الأحمر ويكتب على الاظرف نوع العرض مع اسم الشركة ورقم المناقصة / الممارسة وتسلم لدى قسم المشتريات والعقود بمبنى المجلس الوطني الاتحادي بابوظبي في الموعد المحدد.

ملاحظة:

تعتبر الوثائق النهائية والكاملة للمشروع والمعتمدة للتنفيذ بما في ذلك المخططات والمستندات والمقدمة من الشركة ملكاً خاصاً للمجلس الوطني الاتحادي وله الحق في استخدامها في هذا المشروع أو أي مشروع آخر دون مطالبة الشركة بأية أجور أو حقوق إضافية لاحقاً.

- **خامساً: المواعيد النهائية:**

يجب تسليم جميع العروض في موعد أقصاه الموعد المحدد في الجدول أدناه، وسيتم إعادة العروض الواردة بعد هذا الوقت دون النظر فيها، و لن يتم احتساب أي عروض مقدمة إلى موقع آخر بخلاف المذكور أدناه، مقدم العطاء وحده هو المسؤول عن التأكد من تسليم العروض في الوقت المحدد.

جدول المواعيد المهمة التي يجب على جميع مقدمي العطاءات الالتزام بها:

الرقم	الحدث	التاريخ
1	طرح المناقصة	2024/06/12
2	تأكيد مقدمي العطاءات على مشاركتهم بالمناقصة	2024/06/13
3	الموعد النهائي لتقديم الاستفسارات إلى المجلس الوطني الاتحادي (إن وجدت)	2024/06/20
4	رد المجلس الوطني الاتحادي على الاستفسارات (إن وجدت)	2024/06/25
5	الموعد النهائي لتقديم العروض الساعة: 12:00 ظهراً	2024/07/04

يجب على الجميع اتباع هذا النطاق الزمني،حيث يخطط المجلس الوطني الاتحادي الالتزام بالبرنامج المحدد ضمن النطاق الزمني المذكور أعلاه، وسيتم إبلاغ المشاركين بالمناقصة، عبر البريد الإلكتروني عند حدوث أي تغيير في الجدول الزمني.

- **سادساً: الاستفسارات والتوضيحات:**

يمكن لمقدمي العطاء إرسال أسئلة كتابية عبر البريد الإلكتروني إلى العنوان التالي قبل التاريخ المحدد أعلاه، وقبل الموعد النهائي لتقديم العروض:

البريد الإلكتروني: Bids@almajles.gov.ae

قسم المشتريات والعقود

رقم هاتف: 026199440-026199411

المجلس الوطني الاتحادي (FNC)، صندوق بريد 836، أبو ظبي، الإمارات

ملاحظة : في حال طلب عقد اجتماعات سيتم جدولتها مع مقدمي العطاء لمعرفة المتطلبات/التوضيحات وللإجابة على الأسئلة التي قد تراود مقدمى العطاءات،كما يمكن لهم تجهيز أسئلة مكتوبة لتوضيح أي نقاط في وثائق المناقصة في أي وقت حتى التاريخ المحدد بالجدول اعلاه ، وسيتم تعميم هذه الإجابات على كل المتقدمين.

3- تعليمات المناقصين

يجب على كل من يتقدم للاشتراك في المناقصة مراعاة ما يأتي:

- أن يحدد عنواناً له في دولة الإمارات العربية المتحدة لتوجيه المراسلات (مع ذكر صندوق البريد والعنوان البريدي وأرقام الهواتف والفاكس والبريد الالكتروني).
- على المناقص الالتزام بما ورد في وثائق المناقصة وكافة الملاحق الخاصة بمناقصة المشروع وملئ كافة الجداول المطلوبة.
- لا يجوز للمناقص شطب اي شرط من الشروط التعاقدية او المواصفات الفنية أو اجراء أي تعديل عليها وإلا استبعد عطاؤه، واذا رغب المناقص في وضع اشتراطات فنية خاصة أو اجراء أي تعديل، فعليه أن يوضحها في كتاب مرفق بالعطاء.
- على كل مناقص ان يراعي عند تعبئة العطاء تجنب محو أو كشط أي بيان قام بوضعه في العطاء.
- على المناقصين أن يراعوا تقديم عطاءاتهم في الموعد المحدد مستوفية لجميع الشروط المطلوبة ولن يلتفت الى عطاء يصل بعد الميعاد المحدد مهما كان السبب في تأخيره.
- يعتبر توقيع المناقص على العطاء اقراراً منه باطلاعه عليه وبدراسته وقبوله لجميع ما ورد في وثائق هذا العطاء.
- اذا تخلف المناقص الفائز عن الحضور لتوقيع العقد بدون عذر مقبول خلال مدة أقصاها أربعة عشر يوما من تاريخ إخطاره بترسية العطاء اعتبر منسحباً مع حرمانه من الاشتراك في المناقصات التي يطرحها المجلس للمدة التي يحددها.
- على المناقص الفائز تعيين ممثل/ فريق عمل مقيم للتنسيق مع متطلبات المجلس.
- طلب تقديم العرض لا يلزم المجلس الوطني الاتحادي بمنح العقد أو إلزامية المجلس بمنح العطاء لأقل العروض المقدمة سعراً .

- يجب ألا يتضمن العرض الفني أي معلومات مالية، وسوف يستثنى أي عرض فني يحتوي على أي شكل من أشكال المعلومات المالية التي يمكن أن تؤدي إلى تحديد عرض السعر أو أي معلومات أخرى قد تكون ذات صلة بالعرض.
- يقع على عاتق الطرف الثاني مسؤولية فهم جميع المتطلبات و طرح أي تساؤلات بما يختص بالمشروع قبل تقديم عرضه النهائي.
- تعتبر الدعوة وكافة الملاحق والمراسلات جزء لا يتجزء من وثائق المناقصة والعقد

4- بيان الاعمال المطلوبة

1-Federal National Council Solution Integration Scope of Work

Project Overview

During the upcoming summer recess, the Federal National Council will undergo a substantial upgrade to its audiovisual system within Zayed Hall. This overhaul encompasses various critical components, including LED wall, an AVoIP distribution system, broadcast cameras with controls, broadcast control surfaces and switching, and audio enhancements. The aim of this comprehensive installation is to modernize and enhance the council's capabilities in audiovisual presentation and communication within Zayed Hall.

The primary objective of this project is to transition the existing analog video distribution, video switching solutions, LED wall, robotic cameras, high-quality and reliable system based on the latest technology trends. This upgraded system should retain existing functional capabilities while seamlessly integrating with recently adopted AV, broadcast, and production solutions. The ultimate goal is to ensure the system is future-proof, easily maintainable, and scalable for future requirements.

Key tasks within this project scope include:

1. Designing and implementing the upgraded video distribution and switching system.
2. Integrating existing AV, broadcast, and production solutions with the upgraded system.
3. Providing updated and as-built drawings, source code, user manuals, and training manuals during the handover process.
4. Offering after-sales support for the upgraded system.
5. Conducting operational training sessions for the systems that are part of the upgrade.
6. Providing professional services tailored to end-user requirements.
7. The AV Integrator will supply and install all the required cabling and its installation for the AV upgrade.
8. High Availability / Redundancy to be considered wherever applicable
9. Subscription-based/ perpetual licensing for the upgrade will be priced for one year with a provision for three years.
10. The AV Integrator is responsible for integrating the newly furnished equipment with the owner-provided equipment that is not part of the upgrade. This includes providing any necessary cabling, software updates, and accessories to ensure a fully functional system.

11. The AV Integrator is responsible to cover all the existing AV equipment with a comprehensive AMC\SLA.
12. Dashboard for all the systems and Application Health status.
13. Ensure lead times for necessary equipment for the upgrade are provided, verifying that all items will arrive and be installed within the project timeline.
14. Installation, commissioning, testing and training.

The AV Integrator is responsible for ensuring the comprehensive functionality of the system, encompassing integration, programming, and commissioning. By fulfilling these duties, the project endeavors to provide an audiovisual system that not only meets but also anticipates the present and future requirements of the Federal National Council. Additionally, A site visit during the tender process is obligatory for all AV Integrators participating in bidding on this project.

LED Wall(s)

Design Narrative

The LED Wall installation within the space will feature one single 4K LED Wall. It will be positioned on the existing wall where the current LED wall is situated. This wall will have front serviceability and redundant video feed. The entire setup, including installation, mounting frame, spare parts kit, and a three-year warranty, will be provided by AV INTEGRATOR. In addition, the removal of the existing LED Wall will be the responsibility of AV INTEGRATOR. The Federal National Council is responsible for providing structural drawings of Zayed Hall so that the mounting of the LED Walls can be validated.

Scope of Work – Hardware Integration

This section describes hardware specifications. All equipment provided and installed by AV INTEGRATOR unless otherwise specified.

LED Wall(s)

The LED Walls shall be 4K in resolution and meet or exceed the following specifications:

- Overall Size A minimum of 7.29 meters wide
- LED Pitch 1.9mm
- Maximum Brightness 1500 Nits
- Display Resolution 277,008 pixels/m^2
- Refresh Rate >1.9k or 3.8K (Hz)
- Video Frame Rates Supported 50/60/100/120 Hz
- Serviceability Front Service
- Scan Configuration 1/15 scan
- LED Driver IC Custom Common Cathode LED Driver
- LED Type SMD-1514
- Cabinet Size (W x H x D) 608 x 342 x 76 (mm)
- Construction Material Aluminum
- Cabinet Weight (approximate) 9.8 (Kg)
- Cabinet Resolution 320 x 180 (Pixels)
- Cabinet Configuration 2 x 1 (Modules)
- Module Dimensions 304 x 342mm
- Viewing Angle (50% Brightness) 160° Horizontal, 160° Vertical

- Certifications PSE/ETL/CE.FCC/ROHS, CCC
- Operating Power Voltage 100-240 volts
- Operating Power Frequency 50-60 Hz
- Power Consumption at 1500 Nits Max: 673 Typical (1/3) 224 (W/㎡)
- Power Consumption at 800 Nits Max: 390 Typical (1/3) 149 (W/㎡)
- Operating Temperature -20°C min / +45°C max
- Storage Temperature -20°C min / +60°C max
- Operating Humidity 20% min / 90% max
- Storage Humidity 10% min / 90% max
- Nominal LED Work Life (50% Brightness) >_100,000 Hours
- Video Input to Send Box Controller DVI / HDMI
- Software Brightness Control 256 steps
- Grey Scale Max 16 bits
- Dynamic Range Ratio 8,000:1

LED Controller(s)

The LED Controller(s) shall meet or exceed the following specifications:

- Control
  - LAN RJ45 port for accessing local area network.
  - RS232 RJ11(6P6C) port for connecting to central control.
  - USB IN
- GENLOCK
  - 1× BNC port, male. Support Bi-level and Tri-level sync. Support 23.98~60Hz frame rates.
  - GENLOCK LOOP 1× BNC port, male. □ Loop out Genlock sync signal
- Input
  - 1x HDMI 2.0
  - 1x DP1.2
  - 1x 12G SDI
- Input Resolution
  - 4096 x 2160 pixels @ 60Hz
- HDCP
  - 2.2
- Output
  - 20x 1G Ethernet
  - 2x 10G Fiber
- Output Resolution
  - 13.1 million pixels
- Video Processing
  - Cropping
  - Scaling
  - Splicing
- Layers

    - 3
- Low Latency
    - Yes
- HDR
    - Yes

AVoIP distribution system and accessories

Design Narrative

The AVoIP system and associated accessories will facilitate the transmission to, and in some cases, from the delegate desks situated in Zayed Hall. Among these, 185 desks will receive 4K video from the Control Room, which can be routed to the on-desk OFE video monitors via a video switch. Additionally, each desk features an OFE PC linked to the video switch. Delegates have the flexibility to choose between viewing the Control Room video feed or content from their local PC by simply pressing the momentary buttons mounted on their desks.

Moreover, among the 185 desks, 10 will have the capability to transmit video from their local PCs back to the Control Room and 2 via wireless: Total (12). This transmitted video can then be directed to the LED Wall and other desks as determined by the Control Room operators.

All network switches, licensing, and accessories for this solution are the responsibility of AV INTEGRATOR. The network switches will have redundant power supplies.

Zayed Hall is the strategic place where the key events occur within the FNC Abu Dhabi building, Building 1. The control room already has an existing AV system based on Extron XTP II Crosspoint matrix switcher as a central distribution matrix together with Blackmagic ATEM system for production environment and both these systems are integrated to each other.
This part of the project upgrade is intended to remove all the analog distribution systems that are integrated to distribute the video signals from the central distribution matrix to the delegates within Zayed Hall. And this upgrade is intended to remove unnecessary products and legacy technologies from the system in order to make the system more sustainable and deliver highest quality signal distribution with a smaller number of complex cables and conversion products.
There are 185 delegates seats available in the hall and they are all equipped with individual displays. The system should be able to send any of the sources within the control room to all those displays without any visual latency between those displays. The delegate should be able to select their own dedicated PC or central content as and when required with the help of a push button panel that are equipped in front of every delegate location.
Within the hall, at the delegate location, there will be 12 wired\wireless privileged users who should be able to push their local PCs to the central system / matrix to push those contents to all delegates and on the main LED Video Wall as well.
The system should be able to integrate 10 x displays from Building 2 to the main AV distribution and should be able to deliver contents from Zayed Hall simultaneously without any visual latency and no quality compromise on the Audio and Video signals.
Video transmission to and from rooms or buildings outside of Zayed Hall and the Control Room will be disabled via the control system during legislative sessions.

Scope of Work – Hardware Integration

This section describes hardware specifications, quantities determined by AV INTEGRATOR. All equipment provided and installed by AV INTEGRATOR unless otherwise specified.

Professional Network AV Encoder

Shall meet or exceed the following specifications:

- Network AV Encoder needs to be a professional AV over IP encoder that streams ultra-low latency, high quality video and audio, signals over 1 Gbps Ethernet networks based on copper cable infrastructure.
- The Encoder should deliver lossless 4K/60 4:4:4 video with ultra-low latency and efficient bit rates. The CODEC within the encoder must be capable of tolerating the bursty network traffic found on converged networks.
- The encoding and decoding mechanism must be designed for the Pro AV industry to deliver robust, pristine video on converged or isolated networks. Traditional standard CODECS should not be considered.
- CODEC should be enabled with ISS (Intelligent Selective Streaming) technology to achieve extremely low bitrates while maintaining lossless video performance by significantly reducing the bandwidth required for low motion video such as presentations and spreadsheets allowing more streams over converged networks without sacrificing video quality.
- Encoders must support HDCP 1.4 and 2.3 for content encryption and HDMI 2.0, 4K / 60Hz with 4:4:4 chroma sampling & HDR on AV signals, also the encoder must have an input loop out on HDMI connectivity.
- Encoder must comply with IEEE 802.3at Type 2 (PoE+), class 4
- AES 67 Audio routing must be supported on the entire AVoIP system.
- Independent Audio Breakaway must be supported for flexible audio routing.
- Encoder must be equipped with HDCP Key management / Key Minder to continuously verify HDCP compliance for quick, reliable switching and distribution between input and output devices to ensure quick and reliable switching in professional AV environments, while enabling simultaneous distribution of a single source signal to one or more displays.
- Network error concealment technology must be incorporated within the CODEC mechanism to deliver high immunity to network errors without adding streaming bandwidth and latency on the Audio and Video performance.
- CODEC must support the following network security capabilities.
    - 802.1x port-based Network Access Control (PNAC)
    - SRTP encryption of AV and data stream
- The system should be able to support multicast filtering with IGMPv2multicast per RFC 2236, IGMPv3multicast per RFC 3376 to obtain lower bandwidth.

- Support Diffserv QoS with DSCP and Precedence Values Support multicast TTL (Time to Live) values on all interfaces.
- Encoding and decoding video and audio at bit rates adjustable from 250 Mbps to 900 Mbps within the system.
- Encoder shall be capable of preserving absolute changes to the video on a frame-by-frame basis up to 60 frames per second.

Professional Network AV Decoder

Shall meet or exceed the following specifications:

- Network AV Decoder needs to be a professional AV over IP Decoder that streams ultra-low latency, high quality video and audio, signals over 1 Gbps Ethernet networks based on copper cable infrastructure.
- The Decoder should deliver lossless 4K/60 4:4:4 video with ultra-low latency and efficient bit rates. The CODEC within the Decoder must be capable of tolerating the bursty network traffic found on converged networks.
- The encoding and decoding mechanism must be designed for the Pro AV industry to deliver robust, pristine video on converged or isolated networks. Traditional standard CODECS should not be considered.
- CODEC should be enabled with ISS (Intelligent Selective Streaming) technology to achieve extremely low bitrates while maintaining lossless video performance by significantly reducing the bandwidth required for low motion video such as presentations and spreadsheets allowing more streams over converged networks without sacrificing video quality.
- Decoders must support HDCP 1.4 and 2.3 for content encryption and HDMI 2.0, 4K / 60Hz with 4:4:4 chroma sampling & HDR on AV signals, also the Decoder must have built in Vector 4K scaling mechanism to ensure critical quality 4K imagery, with highest quality image upscaling and downscaling, enhanced color accuracy, and picture detail.
- Decoder must comply with IEEE 802.3at Type 2 (PoE+), class 4
- AES 67 Audio routing must be supported on the entire AVoIP system.
- Independent Audio Breakaway must be supported for flexible audio routing.
- Decoder must be equipped with HDCP Key management / Key Minder to continuously verify HDCP compliance for quick, reliable switching and distribution between input and output devices to ensure quick and reliable switching in professional AV environments, while enabling simultaneous distribution of a single source signal to one or more displays.
- Network error concealment technology must be incorporated within the CODEC mechanism to deliver high immunity to network errors without adding streaming bandwidth and latency on the Audio and Video performance.
- CODEC must support the following network security capabilities.
    - 802.1x port-based Network Access Control (PNAC)

  - SRTP encryption of AV and data stream
- The system should be able to support multicast filtering with IGMPv2multicast per RFC 2236, IGMPv3multicast per RFC 3376 to obtain lower bandwidth consumption.
- Support Diffserv QoS with DSCP and Precedence Values Support multicast TTL (Time to Live) values on all interfaces.
- Encoding and decoding video and audio at bit rates adjustable from 250 Mbps to 900 Mbps within the system.
- The decoder shall be capable of preserving absolute changes to the video on a frame-by-frame basis up to 60 frames per second.

Professional Network AV Decoder

Shall meet or exceed the following specifications:

- A dedicated control appliance to manage professional AV over IP endpoints across one or more networks.
- The Management appliance should be able to manage from 16 to 240 encoders or decoders from a single device.
- Support for adding the required number of end points needs to be managed within the same hardware by using one time license as required by the number of end points to be added.
- The entire system should be configurable from a simple web-based UI and should not use any dedicated software installation.
- Unit must provide a secure web browser interface for configuration and management of each device in the streaming system, including:
  - Simple management of streaming connections from an input-output connection management display
  - Identification and streaming connections
  - Monitoring of device warnings
  - Controller appliance configuration
  - Identification and control of encoder and decoder configurations
  - Monitoring of streaming bandwidth
  - Management of firmware upgrades to the entire system or select system devices
  - Present a comprehensive view of all system element information including:
    - Device status
    - Serial number
    - Device name
    - IP Address
    - Controller
    - Device type
    - Firmware version
- Sorting and organizing system devices based on device attributes.
- System must support encrypted secure communications through the SSH – Secure Shell protocol.

- Support encrypted secure web user interface thorough HTTPS – Hypertext Transfer Protocol Secure.
- Device should allow external control via Ethernet communication.
- Provide two isolated, independent LAN ports to facilitate secure control from a secondary network.
- Allow management of multiple streaming systems in combined or independent domains
- Provide external control systems with a single point of control for the entire streaming system.
- Unit must support either an external 12V power supply unit or PoE Complies with IEEE 802.3af (PoE), class 3.

2 Input HDMI Switcher

Shall meet or exceed the following specifications:

- The HDMI Switcher must support computer and video resolutions up to 4K/60 @ 4:4:4
- The Switcher must comply with HDMI 2.0b specification features include data rates up to 18 Gbps, HDR, Deep Color up to 12-bit, 3D, and HD lossless audio formats.
- Support for HDR – High Dynamic Range video — to deliver greater contrast range and wider color gamut by providing the necessary video bandwidth, color depth, and metadata interchange capability for HDR video.
- Capable of Ethernet monitoring and control over a LAN or WAN
- The device must be equipped with EDID Manager / management to manage EDID communication between connected devices to ensure that all sources power up properly and reliably output content for display.
- The switcher should have the capability to automatically adjust color bit depth and HDMI / DVI format correction based on the display EDID, preventing color compatibility conflicts between source and display.
- The switcher should be controllable via RS 232, Ethernet and Contact Closure.
- Automatic input switching should be configurable to highest numbered input or an ative input on a configured priority.

Digital Twisted Pair AV Distribution Amplifier

Shall meet or exceed the following specifications:

- The Distribution device must support single 4K HDMI input with an HDMI Loop out and the video and / or Audio signal must be distributed to 8 x outputs via Shielded Twisted pair cables.
- The device must support multiple embedded audio format and external analog audio as well if needed.
- The DTP Twisted pair outputs must be configurable to achieve HDBaseT connectivity if needed.
- The DTP / Twisted pair outputs must be capable of delivering power to the Twisted pair Receiver units at the display locations.
- The Distribution system needs to be selected based on the physical cable length between the DA and display location.

- The device must be equipped with EDID Manager / management to manage EDID communication between connected devices to ensure that all sources power up properly and reliably output content for display.
- The Distribution amplifier should have the capability to automatically adjust color bit depth and HDMI / DVI format correction based on the display EDID, preventing color compatibility conflicts between source and display.
- The device must have Output muting control that Provides the capability to mute one or all outputs at any time. In addition to muting audio, video, or both, the unit can also be set to mute video and sync to allow projectors or flat panel displays to automatically enter into standby mode (if the displays are capable) to save energy and enhance lamp or panel life.
- The device must have Built-in Web pages that supports the use of a standard browser for device monitoring and troubleshooting over an intuitive Web interface.
- The DA should be controllable and monitored via RS 232 and Ethernet.

Digital Twisted Pair AV Distribution Amplifier

Shall meet or exceed the following specifications:

- The Digital Twisted pair receiver must support 4K HDMI output with embedded Audio format and external / separate analog audio if connected.
- The Receiver needs to be selected based on the physical cable length between the DA and display location where the receiver is installed.
- The Receiver unit must be capable of receiving power from a Transmission device, DA or a compatible switching system.
- The transmission mechanism must be capable of using Shielded CAT6A cables
- The unit must be capable of transmitting Bidirectional RS-232 control and IR signals can be transmitted alongside the video signal, allowing remote AV devices to be controlled without the need for additional cabling.

Control Room Switching and Recording Equipment

Design Narrative

The Control Room is presently equipped with broadcast switching equipment, control surfaces, and recording equipment, which will undergo an upgrade to align with current industry standards. The new equipment will be installed and programmed with a focus on minimizing the training and learning curve for operators. Additionally, seamless integration will be ensured with the existing OFE equipment in the booth, streamlining operational efficiency and functionality.

Scope of Work – Hardware Integration

This section describes hardware specifications, quantities determined by AV INTEGRATOR. All equipment provided and installed by AV INTEGRATOR unless otherwise specified.

Capture and Playback

The Capture and Playback device(s) shall meet or exceed the following specifications:

Connections

- SDI Video Inputs — 1
- SDI Video Outputs — 2 x program out, 1 x loop out
- SDI Rates — 270Mb, 1.5G, 3G, 6G, 12G
- Analog Video Inputs — Component YUV or Composite NTSC/PAL
- Analog Audio Inputs connectors — 2 channels of professional balanced analog audio with 1/4 inch Jack
- Analog Audio Outputs connectors — 2 channels of professional balanced analog audio with 1/4 inch Jack
- SDI Audio Inputs — 16 Channels embedded in SD/HD/2K/UHD/4K
- SDI Audio Outputs — 16 Channels embedded in SD/HD/2K/UHD/4K
- HDMI 2.0b Video Inputs — 1
- HDMI 2.0b Video Outputs — 1
- HDMI Audio Inputs — 8 Channels embedded in SD/HD/UHD/4K
- HDMI Audio Outputs — 8 Channels embedded in SD/HD/UHD/4K
- Mic Input software control — 1 x XLR microphone input. 48V Phantom Power switchable via
- Sync Input — Tri-Sync or Black Burst
- Device Control direction reversible under software control — Sony™ compatible RS-422 deck control port. Serial ports TxRx
- USB — 1 x USB-C 3.1 Gen 1 (up to 5 Gb/s)
- SD Card Reader — UHS-I and UHS-II compatible
- Computer Interface charging capability — Thunderbolt™ 3 (Mac OS, Windows and Linux) with 45W host

Supported Codecs

AVC-Intra, AVCHD, Canon XF MPEG2, Digital SLR, DV-NTSC, DV-PAL, DVCPRO50, DVCPROHD, DPX, HDV, HEVC, XDCAM EX, XDCAM HD, XDCAM HD422, DNxHR & DNxHD, Apple ProRes 4444, Apple ProRes 422 HQ, Apple ProRes 422, Apple ProRes LT, Apple ProRes 422 Proxy, Uncompressed 8-bit 4:2:2, Uncompressed 10-bit 4:2:2, Uncompressed 10-bit 4:4:4.

SDI Video Standards

- SD Video Standards — 525i59.94 NTSC, 625i50 PAL

- HD Video Standards 720p50, 720p59.94, 720p60,1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30,1080i50, 1080i59.94, 1080i60
- 2K Video Standards 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, 2Kp50 DCI, 2Kp59.94 DCI, 2Kp60 DCI, 2KPsF23.98 DCI, 2KPsF24 DCI, 2KPsF25 DCI, 2KPsF29.97 DCI, 2KPsF30 DCI
- Ultra HD Video Standards 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60
- 4K Video Standards 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, 4Kp50 DCI, 4Kp59.94 DCI, 4Kp60 DCI
- SDI Compliance SMPTE 259M, SMPTE 274M, SMPTE 296M, SMPTE 424M, SMPTE 425M Level A and B, SMPTE 2036-1, SMPTE 2048-1, SMPTE 2081-10, SMPTE 2082-10 and SMPTE ST2108-1
- SDI Metadata Support RP 188/SMPTE 12M-2 and closed captioning
- Multiple Rate Support SDI video connections are switchable between SD/HD/2K/UHD and 4K
- SDI Audio Sampling Television standard sample rate of 48 kHz and 24-bit
- SDI Video Sampling 4:2:2, 4:4:4
- SDI Color Precision 8, 10, 12-bit RGB 4:4:4 in 2D modes up to 4Kp30 DCI and 8, 10-bit YUV 4:2:2 in all 2D modes. 8, 10, 12-bit RGB 4:4:4 in 3D modes up to 2Kp60 DCI and 8, 10-bit YUV 4:2:2 in all 3D modes
- SDI Color Space REC 601, REC 709 and REC 2020
- HDR Support HDR static metadata packing, HLG and PQ transfer characteristics

HDMI Video Standards

- SD Video Standards 525i59.94 NTSC, 625i50 PAL
- HD Video Standards 720p50, 720p59.94, 720p60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 1080i50, 1080i59.94, 1080i60
- Ultra HD Video Standards 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60
- 4K Video Standards 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI, 4Kp50 DCI, 4Kp59.94 DCI, 4Kp60 DCI
- HDMI Audio Sampling Television standard sample rate of 48 kHz and 24-bit
- HDMI Video Sampling 4:4:4, 4:2:2 and 4:2:0
- HDMI Color Precision 8, 10 and 12-bit
- HDMI Color Space REC 601, REC 709 and REC 2020

- HDR Support — HDR static metadata packing, HLG and PQ transfer characteristics
- HDMI Configuration to connected display — HDMI 2.0b supports Deep Color and HDR. Automatically configures
- Multiple Rate Support 4K — HDMI video connections are switchable between SD/HD/UHD and
- Copy Protection — HDMI input is unable to capture from copy protected HDMI sources. Always confirm copyright ownership before capture or distribution of content

Processing

- Real Time Effects — DaVinci Resolve, Final Cut Pro X internal effects. Premiere Pro CC Mercury Playback Engine effects. Avid Media Composer internal effects
- Colorspace Conversion — Hardware based real time
- Physical Installation — Requires a computer with a Thunderbolt™ 3 port

Recording and Storage

The Recording and Storage device(s) shall meet or exceed the following specifications and in addition a minimum of 4TB of storage media will be provided:

Connections

- SDI Video Inputs — 1
- SDI Video Outputs — 2
- SDI Monitor Outputs — 1
- SDI Rates — 270Mb, 1.5G, 3G, 6G, 12G.
- HDMI 2.0 Video Inputs — 1
- HDMI 2.0 Video Outputs — 1
- Built in Speaker — Mono
- Audio Output — 1 x 6.35 mm headphone jack
- Screen — 2.2-inch LCD
- Timecode Connections — 1 x XLR In, 1 x XLR Out
- Reference Connections — 1 x BNC In, 1 x BNC Out. Tri-Sync or Black Burst.
- SDI Audio Inputs — 16 channels embedded audio
- SDI Audio Outputs — 16 channels embedded audio
- HDMI Audio Inputs — 8 channels embedded audio
- HDMI Audio Outputs — 8 channels embedded audio
- Remote Control — 1 x RS-422 In, 1 x RS-422 Out
- Recorder Configuration — Via user interface or Ethernet Protocol
- Ethernet — 10Gb/s
- Computer Interface — 1 x USB Type-C 3.1 Gen 2 (up to 10Gb/s) for external drive recording, webcam out, software configuration and updates.

Standards

- SD Video Standards 525i59.94 NTSC, 625i50 PAL
- HD Video Standards 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30
- 2K DCI Video Standards 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI
- Ultra HD Video Standards 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60
- 4K DCI Video Standards 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI
- SDI Compliance SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M level A and B, SMPTE 2081-1, SMPTE 2081-10, SMPTE 2082-1, SMPTE 2082-10, SMPTE 2084 and SMPTE 2108-1
- SDI Metadata Support HD RP188 and closed captioning CEA-708. HDR Metadata supported on SDI
- Supported HDMI Formats 525i59.94 NTSC, 625i50 PAL, 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60, 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2Kp29.97 DCI, 2Kp30 DCI, 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60, 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI, 4Kp29.97 DCI, 4Kp30 DCI
- Audio Sampling Television standard 24-bit, 48 kHz sample rate
- Video Sampling 4:2:2 YUV
- Color Precision 10-bit
- Color Space REC 601, REC 709, REC 2020. 33 point 3D LUTS can be applied to SDI monitor out.
- HDR Support Hybrid Log-Gamma, ST2084 300, ST2084 500, ST2084 800, ST2084 1000, ST2084 2000, ST2084 4000, ST2084.
- Multi Rate Support Auto detection of SD, HD, 6G-SDI and 12G-SDI.
- Copy Protection HDMI input is unable to capture from copy protected HDMI sources. Always confirm copyright ownership before capture or distribution of content.

Media

- 2 x 2.5 inch disc slots
- 2 x SD card slots
- 1 x USB-C 3.1 Gen 2 expansion port for external recording of SD, HD, 2K DCI, Ultra HD and 4K DCI.
- Media Type
    - SATA-II or SATA-III 2.5 inch solid state media.UHS-I and UHS-II SD cards.
- Media Format

- Can format media to ExFAT (Windows/Mac)or HFS+ (Mac) file systems.

Supported Codecs

ProRes HQ QuickTime, ProRes 422 QuickTime, ProRes LT QuickTime, ProRes Proxy QuickTime for all formats up to 2160p60. Playback only of ProRes 4444 QuickTime up to 2160p60 with auto routing of fill and key over SDI A and B outputs. DNxHD 220x, DNxHD 220x MXF, DNxHD 145, DNxHD 145 MXF, DNxHD 45, DNxHD 45 MXF for 720p and 1080p HD formats up to 60fps.DNxHR HQX, DNxHR HQX MXF, DNxHR SQ, DNxHR SQ MXF, DNxHR LB, DNxHR LB MXF for 2K DCI and 2160p formats up to 60fps. H.265 SDI 4:2:2 10-bit, H.265 High 4:2:0 10-bit, H.265 Medium 4:2:0 10-bit, H.265 Low 4:2:0 10-bit for all 2160p formats up to 60 fps. H.264 SDI 4:2:2 10-bit, H.264 High 4:2:0 8-bit, H.264 Medium 4:2:0 8-bit, H.264 Low 4:2:0 8-bit for all formats up to 1080p60.

Control

- Built in Control Panel
  - 16 buttons for transport and device control with search dial featuring electronic clutch and 2.2 inch color display.
- External Control
  - RS-422 deck control, SDI start/stop, timecode run. Includes Ethernet Protocol. Supports remote FTP file upload.
-

SDI Audio Embedding

The SDI Audio Embedding device(s) shall meet or exceed the following specifications:

Connections

- SDI Video Inputs
  - 1 x 12G-SDI SD/HD/2K/4K auto switching.
- SDI Video Outputs
  - 1 x 12G-SDI output.
- Analog Audio Inputs
  - 2 channels professional balanced analog audio via XLR connectors, or 2 channel unbalanced analog line level via RCA connectors. Right XLR can be configured for timecode input.
- Digital Audio Inputs
  - 4 channels professional 110Ω balanced digital audio via XLR connectors. Right XLR can be configured for timecode input.
- Embedded Audio Support
  - 16 channels.
- Optical Audio Input

- S/PDIF Signal with TOSLINK Connector.

- Multi Rate Support
  - Automatic switching between SD/HD/2K and 4K.
- Updates and Configuration
  - USB or Ethernet.
- Reclocking
  - Yes

Standards

- SD Video Standards
  - 525i59.94 NTSC, 625i50 PAL
- HD Video Standards
  - 720p50, 720p59.94, 720p60, 1080i50, 1080i59.94, 1080i60
    1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p30, 1080p50, 1080p59.94, 1080p60
    1080PsF23.98, 1080PsF24, 1080PsF25, 1080PsF29.97, 1080PsF30
- 2K Video Standards
  - 2Kp23.98 DCI, 2Kp24 DCI, 2Kp25 DCI, 2KPsF23.98 DCI, 2KPsF24 DCI, 2KPsF25 DCI
- Ultra HD Video Standards
  - 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p30, 2160p50, 2160p59.94, 2160p60
- 4K Video Standards
  - 4Kp23.98 DCI, 4Kp24 DCI, 4Kp25 DCI
- SDI Compliance
  - SMPTE 259M, SMPTE 292M, SMPTE 296M, SMPTE 372M, SMPTE 424M, SMPTE 425M level A and B, SMPTE 2081-1, SMPTE 2081-10, SMPTE 2082-1 and SMPTE 2082-10
- SDI Video Rates
  - SDI video connections are auto switching between standard definition SDI, 1.5G-SDI, 3G-SDI, 6G-SDI and 12G-SDI.
- SDI Video Sampling
  - 4:2:2, 4:4:4
- SDI Audio Sampling
  - Television standard sample rate of 48 kHz and 24-bit.
- SDI Auto Switching
  - Automatically selects between SD, HD, 3G, 6G and 12G-SDI.
- SDI Color Precision

- YUV 4:2:2 and RGB 4:4:4 in HD, 2K and 4K.
- SDI Color Space
  - REC 601, REC 709

Software

- Software Control
  - Mac™ and Windows™ software upgrade via USB and Ethernet.
- Internal Software Upgrade
  - Via included updater application.

Broadcast Production Switcher

The Broadcast Production Switcher shall meet or exceed the following specifications:

Connections

- Total Video Inputs
  - 40 x up to Ultra HD / 10 x in 8K
- Total Video Outputs
  - 28 x up to Ultra HD / 7 x in 8K
- Total Aux Outputs
  - 24 x up to Ultra HD / 6 x in 8K
- SDI Rates
  - 1.5G, 3G, 6G, 12G
- Total Audio Inputs
  - 2 x balanced 1/4 inch Jack, 1 x 32 stereo channel BNC MADI in.
- Total Audio Outputs
  - 2 x balanced 1/4 inch Jack, 2 x 32 stereo channel BNC MADI out.
- Reference Input
  - Tri-Sync or Black Burst.
- Video Input Re-Sync
  - On all 40 inputs
- Frame Rate and Format Converters
  - On all 40 inputs.
- SDI Video Inputs
  - 40 x 10-bit 720p, 1080i, 1080p, 2160p and 10 x 4320p switchable.
- Extra Audio Outputs
  - 1 x 5 pin XLR Talkback.
- SDI Audio Outputs
  - 2 Ch embedded into SDI output on all outputs.
- Extra Audio Inputs

- 1 x 5 pin XLR Talkback.

- SDI Program Outputs
  - Any of the 24 SDI outputs.
- SDI Preview Outputs
  - Any of the 24 SDI outputs.
- Total Multi Views
  - 4 x up to Ultra HD / 1 x in 8K
- SDI Multi View Outputs
  - 4
- Remote
  - RJ12 supports RS-422
- Control Panel Connection
  - Ethernet supports 10/100/1000 BaseT. Allows direct connection between panel and chassis, or via network.
- Internal Timecode Generator
  - Yes
- Talkback
  - RJ45 for 3rd party talkback systems.
- Tally Output
  - Added via ethernet connection to Blackmagic Design GPI and Tally Interface product. (Not included).
- Computer Interface
  - 1 x USB 2.0 port.

Standards

- SD Video Standards
  - None
- HD Video Standards
  - 720p50, 720p59.94, 1080i50, 1080i59.94, 1080p23.98, 1080p24, 1080p25, 1080p29.97, 1080p50, 1080p59.94
- Ultra HD Video Standards
  - 2160p23.98, 2160p24, 2160p25, 2160p29.97, 2160p50, 2160p59.94
- 8K Video Standards
  - 4320p23.98, 4320p24, 4320p25, 4320p29.97, 4320p50, 4320p59.94
- SDI Compliance
  - SMPTE 292M, SMPTE 296M, SMPTE 424M, SMPTE 425M Level A and B, SMPTE 2081-1, SMPTE 2081-10, SMPTE 2082-1 and SMPTE 2082-10, SMPTE 2082-12.

- Video Sampling
    - 4:2:2
- Color Precision
    - 10-bit.
- Color Space
    - REC 709
- SDI Auto Switching
    - Automatically detects between level A and level B 3G-SDI, 6G-SDI and 12G-SDI. Requires 2SI in 8K mode.

Product Specifics

- Upstream Keyers
    - 16 x up to Ultra HD / 4 x in 8K with Chroma/Linear/Luma key.
- Downstream Keyers
    - 4 x up to Ultra HD / 2 x in 8K.
- Advanced Chroma Keyers
    - 16 x up to Ultra HD / 4 x in 8K.
- SuperSource
    - 2
- Talkback Support
    - Yes
- Mix Minus Support
    - Yes
- Linear/Luma Keyers
    - 21 x up to Ultra HD / 7 x in 8K
- Transition Keyer (Stinger/DVE)
    - 4 Stinger, 4 DVE .
- Total Number of Layers
    - 28 x up to Ultra HD / 7 x in 8K
- Pattern Generators
    - 21 x up to Ultra HD / 9 x in 8K
- Color Generators
    - 2
- DVE with 3D Borders & Drop Shadow
    - 4 x up to Ultra HD / 1 x in 8K
- Control Panel
    - Front fascia emergency switching, software or optional hardware panel.

- Routable Windows
    - 64 x up to Ultra HD / 16 x in 8K
- Tally
    - Red for program and green for preview indication.
- Windows Source Labels
    - Yes

Media Player

- Media Players
    - 4 x up to Ultra HD / 1 x in 8K
- Channels
    - Fill and key for each media player.
- Media Pool Still Image Capacity
    - 64 x up to Ultra HD / 24 x in 8K with fill and key.
- Media Pool Clip Capacity
    - 4 x up to Ultra HD / 2 x in 8K with fill and key.
- Media Player Clip Length in 720 HD
    - 3200 frames.
- Media Player Clip Length in 1080 HD
    - 1600 frames.
- Media Player Clip Length in Ultra HD
    - 400 frames.
- Media Player Clip Length in 8K
    - 100 frames.
- Media Pool Still Image Format
    - PNG, TGA, BMP, GIF, JPEG and TIFF.
- Media Pool Video File Format
    - TGA Sequence.
- Media Pool Audio File Format
    - WAV, MP3 and AIFF.

Processing

- Processing Delay
    - < 7 lines in up to Ultra HD / in 10 lines in 8K
- Audio Mixer
    - 156 Channel mixer
    - Selectable On/Off/Audio-Follow-Video.
    - Level and Peak metering.
    - Master gain control.

- 6 band parametric EQ, Dynamics including Expander, Gate, Compressor and Limiter.

- Down Conversion
  - None

Software

- Control Panel Included
  - Software Control Panel included free for Mac 10.13 High Sierra, Mac 10.14 Mojave or later and Windows 8.1 64-bit or Windows 10 64-bit.
- Software Updates
  - Using USB 2.0 connection directly connected to Mac OS or Windows computers.
- Configuration
  - Set via Software Control Panel

Production Switcher Control Surface

The Production Switcher Control Surface shall meet or exceed the following specifications:

Connections

- Ethernet
  - 4 x 10/100/1000 BASE-T with loop outputfor additional control panels or computers.
- Software Updates
  - 1 x USB-C for firmware updates.

Product Specifics

- Number of Mix Effects Rows
  - 2
- Direct Cross Points
  - 20
- Shifted Cross Points
  - 40
- Crosspoint Button Type
  - Tri-Color LED
- Crosspoint Label
  - 6 rows 24 character LCD
- On-Air indicator
  - 8
- Power Status Indicators
  - None
- DSK Transition Selectors
  - 4 x Auto, Cut, Tie/Preview

- Preview Transition
  - 2
- Transition Rate Displays
  - Via main menu
- LCD Menu Displays
  - 2
- Menu Control
  - 2 x 20 buttons
- Dedicated Macro Buttons
  - 2 x 20
- Transport Control Buttons
  - 8
- Destination Bus
  - 2
- Source Select Bus
  - 2
- Fader Bar
  - 2
- 3 Axis Joystick
  - 1
- Numeric Keypad
  - 1

Broadcast Cameras, Robotics, and Accessories

Design Narrative

The existing broadcast cameras, camera robotics, and associated accessories in Zayed Hall will undergo an upgrade to meet current industry standards. This entails the removal of the current camera systems and installation of the new ones in the same locations, with upgraded cabling as necessary. Programming adjustments will be made to ensure that the operator's experience closely mirrors the current operations, facilitating a smooth transition to the upgraded equipment.

Scope of Work – Hardware Integration

This section outlines the hardware installation process and provides an overview of general functionality and specifications. All necessary equipment and accessories, including but not limited to fiber extenders, patch bays, and patch cables required to establish a functional system, will be provided and installed by AV INTEGRATOR, unless specifically stated otherwise.

Broadcast Camera(s)

The Broadcast Cameras shall meet or exceed the following specifications:

Camera

- Pick-up device
  - 3x 2.3” UHD Xenios CMOS imagers with global shutter
- Smear
  - no vertical smear
- Shutter
  - no mechanical shutter
- Optical system
  - F1.4 prism
- Lens mount
  - 2/3” (B4 type) Bayonet lens mount
- Optical filter wheels
  - 2x motorized wheels
- Optical filters on first wheel
  - clear, 1/4 ND, 1/16 ND, 1/64 ND, Cap
- Optical filters on second wheel
  - clear, 4P-star, soft focus
- Electronic color correction
  - 3200°K, 5600°K, 7500°K, FL, 2 AWB presets, variable, continuous auto white
- Sensitivity @2000 lux (typical) + S/N ratio
  - F11 @ 62 dB S/N ratio (in 2160p50)
- Aspect ratio
  - 16:9
- Modulation depth
  - 60% (typical) at 800 TV lines (27 MHz) in 1080i50/59.94 modes
- Digital resolution
  - 16-bit A/D-conversion with 34-bit processing in RGB
- Horizontal resolution
  - >1,000 TV lines (HD), >2,000 TV lines (4K UHD)
- Gain selection
  - -6 dB to +18 dB in 3 dB steps (user-definable presets) or continuous master gain
- Standards compliant
  - SMPTE ST 2110
  - AMWA NMOS IS-04,-05,-07 and-09

Connectivity

- REF/AES BNC connector
  - Reference input, output or AES digital audio
- BNC A to E connectors

- Video BNC baseband connectors, input and output (1.5G, 3G or 12G)
- Camera control network (C2IP)
  - RJ-45 Ethernet connector (1 Gb/s)
- Ethernet/IP Trunk
  - RJ-45 Ethernet connector (1 Gb/s)
- Lens connector
  - 12p Hirose connector
- Monitoring video
  - Micro HDMI (type D) connector
- Hybrid Fiber connector
  - Neutrik opticalCON Duo hybrid fiber connector
- Mounting holes
  - On top: 2x 3/8" – 16 UNC, 6x 1/4" – 20 UNC, 10x M4
  - At bottom: 2x 3/8" – 16 UNC, 4x 1/4" – 20 UNC

Creative Grading Panel(s)

The Creative Grading Panel(s) shall meet or exceed the following specifications:

- Ethernet-based camera control system
  - Supports 10/100Base-T networks
  - Uses C2IP, a TCP/IP-based protocol
  - Uses off-the-shelf standard network infrastructure
- Camera control:
  - Multicamera control supports up to 99 cameras
  - Multipoint control supports multiple control points per camera
- Creative Grading Panel:
  - Joystick simultaneously enables full control of four controls of choice, such as Iris, Master Black, Variable Gain and Variable Color Temperature
  - Assignable knobs provide direct access for Gamma Level, ND Filter, Detail Level and Saturation or any other set of controls that are required for the task at hand

Camera Lenses

The Camera Lens(es) shall meet or exceed the following specifications:

- Sensor Compatibility
  - 2/3" (16:9)
- Focal Length

- 7.6 to 175mm
- With Extender: 15.2 to 350mm

- Built-In Extender
  - 2x
- Zoom Ratio
  - 23x
- Angle of View
  - 16:9
  - Wide: 64.5 x 39° (H x V)
  - Tele: 3.1 x 1.8° (H x V)
  - 16:9 With 2x Extender
  - Wide: 35 x 20.1° (H x V)
  - Tele: 1.6 x 0.9° (H x V)
- Maximum Aperture
  - f/1.8 to 2.6
- Filter Thread
  - M95
  - M107
- Macro
  - No
- Minimum Focus Distance
  - From Front of Lens: 2.6' / 0.8 m
- Optical Image Stabilization
  - No

Key Features

- S10 Focus/Zoom Servo Drive
- 4K+ Compatible Resolution
- Fast f/1.8 Max Aperture at 7.6 to 119mm
- 16-Bit Encoders for Virtual Systems
- QuickZoom Focus Check Feature

Camera Control System

The Camera Control System shall meet or exceed the following features:

The system will have fully integrated legislative software and a large touchscreen display that includes access to special camera control software designed for government, educational institutions and large houses of worship that have a need to capture multiple speakers, sometimes simultaneously, while using a single controller.

Built in Camera Controls

The control panel features all the camera painting and shading tools to natively support virtually all broadcast cameras (including those from Blackmagic, Canon, Grass Valley, Hitachi, Ikegami, JVC, Panasonic, Sony, and Telemetrics) without requiring a separate camera control unit (CCU).

Fast Access to Shots

With quick access to custom overlays, stored presets, and built-in intelligence for all robotic cameras within a system, the operator can easily select the best camera angles and add graphics with one button press. The system also features live video preview and the ability to snapshot thumbnails for shot presets.

Touchscreen User Interface

With the software's facial recognition technology and previously stored facial profiles, the operator can simply touch the icon designated for that person on the large touch panel to command the corresponding camera to move to that speaker. LGS technology can also detect if a different person has occupied a designated seat and adjusts the on-screen title accordingly. The smaller touchscreen display on the main panel can also show a Robotic Status view that includes all the currently selected camera's robotics parameters displayed at once; such as elevation height, pan/tilt angles, rotation, and XY location.

Automatic Shot Framing

Exclusive Automatic Shot Framing and Tracking keeps on-screen talent perfectly framed and automatically corrects when talent has unexpectedly shifted—without the operator having to manually touch the control panel.

Universal Connectivity & 3rd Party Support

With full connectivity for most remotely controlled PTZ systems, the control panel also supports camera tally and is compatible with a broad range of video routers, audio mixers, production switchers, character generators, and mic systems from a wide variety of manufacturers.

Dual Customizable Joysticks

Equipped with two user-configurable joysticks to control PT heads, camera framing and movement of robotic pedestals or trolleys along a track, the control panel can also more easily accommodate left- and right-handed operators.

Servo Pan / Tilt Head

The Servo Pan / Tilt Head(s) shall meet or exceed the following specifications:

Specifications

- Pan Travel (Max)
  - +-360° w/endstop (720° without end-stops)
- Tilt Travel (Max)
  - +180° -180°
- End Stop Resolution
  - Electronic smooth top
- Velocity (Min/Max)
  - Pan 0.01º - 90º/sec; Tilt 0.01º - 90º/sec

- Stopping Accuracy
    - 60arc sec (0.016º)
- Position Resolution
    - 5,625 mil counts per 360º (23-bit)
- Acceleration
    - 90º/sec.2
- Virtual Option Feedback Accuracy
    - 360 Deg = 8000,000 Counts
    - 0.00045 Deg/Count
- Audible Noise
    - 31 dB(A) max, IEC free field at velocity 60º/sec
- Operating Modes Velocity
    - position cut & fade w/convergence, motion key frame, manual w/ option
- Payload
    - 90 lbs. (40.8kg) on center of mass
- Camera Power Output
    - 60W (15 VDC, 4A max)
- Temperature Range
    - Operating:4 to 50ºC (40 to120ºF)
    - Storage: -30 to + 60ºC (-22 to 140)
- Virtual Data Output
    - Ethernet UDP
- Compatible Lenses
    - Analog teleconference & digi full servo lenses

Wireless Microphone System(s)

Design Narrative

To bolster security within this high-profile venue, the existing wireless microphone system will undergo an upgrade to an encrypted wireless microphone system. This enhancement will ensure the confidentiality and integrity of communications by employing encryption protocols, thus safeguarding against unauthorized interception or tampering.

Scope of Work – Hardware Integration

This section describes hardware specifications. All equipment provided and installed by AV INTEGRATOR unless otherwise specified.

Wireless Microphone System

Shall meet or exceed the following specifications:

The digital wireless system shall operate in the VHF, UHF, ISM (900 MHz), 1.2 GHz, 1.5 GHz, or 1.8 GHz band with the specific range being dependent on the user's locale. The system shall include the option of

changing the operating frequency in order to avoid RF interference. Preconfigured group, channel and frequency setups shall be available to ensure that multiple systems in use do not interfere with one another.

Available transmitters shall include: a bodypack for use with lapel or headworn microphones and a handheld microphone for voice.

All transmitters shall be powered by a Lithium Ion rechargeable battery and shall have a power on/off switch with LED status indicator. When operated with the rechargeable battery, the system shall display remaining run time in hours and minutes (accurate to within 15 minutes), percentage health, percentage charge, charge cycles, and temperature. The system shall offer networked charging stations with two, four, or eight charging bays for transmitters.

The transmitter front end shall optimize itself for standard inputs without requiring transmitter gain adjustments thus allowing all gain changes to be made at the receiver, which shall provide a 60 dB range of system gain. Overall system signal to noise ratio shall be >120 dB.

The system shall offer a choice of single-channel, dual-channel, and quad-channel rackmount receivers. The receivers shall include Dante™ digital audio networking in addition to analog audio outputs. All receivers shall include DC power on the RF inputs for use with directional antennas and antenna distribution components.

The receiver shall include an RF level meter, an audio level meter, and a Networking Interface connector for computer control and monitoring. The system shall detect RF interference and indicate such to the user via the LCD and RF meters. The system shall use technology such as digital predictive diversity to optimize RF stability.

The system shall include always-on AES-256 encryption that cannot be disabled. The encryption scheme shall conform to the US Government National Institute of Standards and Technology (NIST) publication FIPS-197. The encryption mechanism shall utilize a randomized key that is not transmitted via RF.

Wireless Charging Pad(s)

Design Narrative

Each of the desks in Zayed Hall will be equipped with wireless charging pads for mobile phones.

Scope of Work – Hardware Integration

This section describes hardware specifications. All equipment provided and installed by AV INTEGRATOR unless otherwise specified.

Wireless Charging Pads-

Shall meet or exceed the following specifications:

- Up to 7.5W of wireless charging power
- Easy alignment and larger pad surface for stronger charging signal
- Simplified charging — just lay your phone onto the pad and go

- Two thermal protection systems control temperatures and prevent overheating
- Allows for charging through most phone cases up to 3mm
- Foreign Object Detection (FOD) keeps pad and devices safe
- Non-slip grip material keeps phone in place in case of vibration while charging.
- LED indicates charging status, so it's easy to know when your phone is aligned and charging

Control Room Notification Board

Design Narrative

A new digital notification board will replace the existing one. The old board, controlled by a small PLC, features individual lights triggered by button presses. The new board, based on a stretch LCD display, will integrate with the existing system to replicate its functionality. Each button press, processed by the PLC, will correspond to lighting up specific sections on the digital board, mimicking the current system.

Scope of Work – Hardware Integration

This section describes hardware specifications. All equipment provided and installed by AV INTEGRATOR unless otherwise specified.

Digital Notification Board

Shall meet or exceed the following specifications:

- Panel Technology: VA with Direct LED backlights
- Active Screen Area (W x H) [mm]: 1,039.7 x 259.9
- Screen Size [inch/cm]: 42 / 107.2
- Aspect Ratio: 16:4
- Pixel Pitch [mm]: 0.542
- Brightness [cd/m²]: 700
- Contrast Ratio (typ.): 4000:1
- Viewing Angle [°]: 178 horizontal / 178 vertical (typ. at contrast ratio 10:1)
- Colour Depth [bn]: 1,073 (10bit)
- Response Time (typ.) [ms]: 8 (grey-to-grey)
- Haze Level [%]: Pro (44)
- TNi [°C]: 110
- Supported Orientation: Landscape

Video Interface

Shall meet or exceed the following features:

- Powers challenging 2D Web GL motion graphics in Full HD with speedy load times, smooth animations, and responsive interactions.
- Supports multi-touch interactions with Full HD resolution graphics including pinch, zoom and swipe.
- Real-time transformation of 2D motion graphics linked to live data feeds.
- Plays 4K video, rotates Full HD video, and performs dual HD video decoding.

- Streamlines deployments with one less cable using the PoE+ Ethernet port to power the player.
- Offers optional SSD storage that is secure, self-encrypting, and supports high capacities.
- Expands connectivity options with 2 USB ports (Type A & C).
- Operates in tight spaces & extreme conditions with its ultra-thin design & patented aluminum enclosure.

Control Interface

Shall meet or exceed the following specifications:

- Communications
    - Ethernet: 100 Mbps, auto-switching, auto-negotiating, auto-discovery, full/half duplex, DHCP, SSL, TLS, IEEE 802.3af and 802.3at Type 1 compliant
- Connectors
    - LAN PoE: (1) 8-pin RJ45 connector, female; 100Base-TX Ethernet port; PoE (Power over Ethernet) PD (Powered Device) port
    - DIGITAL IN: (1) 5-pin 3.5 mm detachable terminal block; Comprises (4) digital inputs (referenced to GND); Input Voltage Range: 0–24 Volts DC; Logic Threshold: ≥2.0 Volts DC 0/low, ≤1.1 Volt DC 1/high; Input Impedance: 2.2k Ohms pulled up to 5 Volts G: (1) 4-40 screw; Chassis ground lug
- Controls & Indicators
    - PWR: (1) Bicolor green/amber LED, indicates that power is present, amber indicates that the device is booting and not yet ready to operate, green indicates that device is ready to operate
    - ONLINE: (1) Green LED, indicates that the device is connected to a Crestron control system via Ethernet
    - SETUP: (1) Red LED and (1) recessed pushbutton for Ethernet setup, LED indicates that the SETUP pushbutton has been pressed (times out automatically) [2]
    - LAN PoE: (2) Bicolor LEDs, green LED indicates 100Mbps Ethernet link status, amber LED indicates Ethernet activity

Room Acoustics

Design Narrative

Scope of Work: Study, Supply, and Integration of Acoustic Treatments for Legislative Hall

1. Introduction: Federal National Council recognizes the importance of ensuring optimal acoustic conditions within its premises to facilitate effective communication, enhance audio clarity, and maintain a conducive environment for legislative proceedings. This Scope of Work outlines the requirements and expectations for the study, supply, and integration of acoustic treatments within Zayed Hall.
2. Objectives:

a. To conduct a comprehensive acoustic assessment of Zayed Hall to identify existing acoustic deficiencies and requirements.
b. To propose and supply appropriate acoustic treatments tailored to the specific needs of Zayed Hall.
c. To supply and integrate acoustic treatments into the existing infrastructure of Zayed Hall.
d. To enhance speech intelligibility, minimize reverberation, and mitigate undesirable sound reflections within Zayed Hall.

3. Scope of Services:
    a. Acoustic Assessment:
        i. Engage a qualified acoustic consultant to conduct a thorough assessment of Zayed Hall.
        ii. Evaluate existing acoustic conditions, including reverberation times, background noise levels, and sound propagation characteristics.
        iii. Identify areas of concern, such as speech intelligibility issues, excessive reverberation, and sound reflections.
        iv. Generate a comprehensive report detailing the findings of the acoustic assessment and recommendations for improvement.
    b. Design and Proposal:
        i. Based on the findings of the acoustic assessment, develop a detailed design proposal for the implementation of acoustic treatments.
        ii. Specify the types of acoustic treatments required, including but not limited to acoustic panels, ceiling baffles, and sound-absorbing materials.
        iii. Consider aesthetic considerations and architectural constraints in the design proposal to ensure the integration of acoustic treatments with the existing decor of Zayed Hall.
        iv. Provide pricing for the supply and installation of the proposed acoustic treatments.
    c. Supply of Acoustic Treatments:
        i. Procure high-quality acoustic products from reputable manufacturers in accordance with the approved design proposal.
        ii. Ensure that the supplied acoustic treatments meet the specified performance criteria and comply with relevant standards and regulations.
        iii. Coordinate logistics and delivery schedules to ensure timely arrival of acoustic treatments at Zayed Hall.
    d. Integration and Installation:
        i. Carry out the installation of acoustic treatments in accordance with the approved design proposal and manufacturer's guidelines.
        ii. Ensure that the installation process minimizes disruption to legislative activities and adheres to safety protocols.
        iii. Conduct thorough quality assurance checks to verify the proper integration and functionality of the installed acoustic treatments.

4. Deliverables:
    a. Acoustic assessment report detailing findings and recommendations.
    b. Design for the implementation of acoustic treatments.
    c. Pricing for the supply and installation of acoustic treatments.
    d. Documentation of procurement activities and product specifications.

e. Completed installation of acoustic treatment.

5. Responsibilities:
    a. The Federal National Council will provide necessary access to the premises for conducting the acoustic assessment and installation activities.
    b. The selected contractor will be responsible for delivering the services outlined in this Scope of Work in a timely and professional manner.
6. Compliance:
    a. The selected contractor shall ensure compliance with all relevant laws, regulations, and standards governing acoustic treatments and construction activities.

Operator Positions in Zayed Hall

Design Narrative

Within Zayed Hall, two operator stations will be established to manage content distribution to the delegates present. Each station will be equipped with a small video monitor and a video decoder that connects to the central system located in the control room. Additionally, a touchscreen interface will be provided at each station to facilitate efficient control and operation. This setup ensures a streamlined process for previewing and approving content before it is shared within the hall.

Scope of Work – Hardware Integration

This section describes hardware specifications. All equipment provided and installed by AV INTEGRATOR unless otherwise specified.

Professional Network AV Decoder

Shall meet or exceed the following specifications:

- Network AV Decoder needs to be a professional AV over IP Decoder that streams ultra-low latency, high quality video and audio, signals over 1 Gbps Ethernet networks based on copper cable infrastructure.
- The Decoder should deliver lossless 4K/60 4:4:4 video with ultra-low latency and efficient bit rates. The CODEC within the Decoder must be capable of tolerating the bursty network traffic found on converged networks.
- The encoding and decoding mechanism must be designed for the Pro AV industry to deliver robust, pristine video on converged or isolated networks. Traditional standard CODECS should not be considered.
- CODEC should be enabled with ISS (Intelligent Selective Streaming) technology to achieve extremely low bitrates while maintaining lossless video performance by significantly reducing the bandwidth required for low motion video such as presentations and spreadsheets allowing more streams over converged networks without sacrificing video quality.
- Decoders must support HDCP 1.4 and 2.3 for content encryption and HDMI 2.0, 4K / 60Hz with 4:4:4 chroma sampling & HDR on AV signals, also the Decoder must have built in Vector 4K scaling mechanism to ensure critical quality 4K imagery, with highest quality image upscaling and downscaling, enhanced color accuracy, and picture detail.
- Decoder must comply with IEEE 802.3at Type 2 (PoE+), class 4

- AES 67 Audio routing must be supported on the entire AVoIP system.
- Independent Audio Breakaway must be supported for flexible audio routing.
- Decoder must be equipped with HDCP Key management / Key Minder to continuously verify HDCP compliance for quick, reliable switching and distribution between input and output devices to ensure quick and reliable switching in professional AV environments, while enabling simultaneous distribution of a single source signal to one or more displays.
- Network error concealment technology must be incorporated within the CODEC mechanism to deliver high immunity to network errors without adding streaming bandwidth and latency on the Audio and Video performance.
- CODEC must support the following network security capabilities.
    - 802.1x port-based Network Access Control (PNAC)
    - SRTP encryption of AV and data stream
- The system should be able to support multicast filtering with IGMPv2multicast per RFC 2236, IGMPv3multicast per RFC 3376 to obtain lower bandwidth consumption.
- Support Diffserv QoS with DSCP and Precedence Values Support multicast TTL (Time to Live) values on all interfaces.
- Encoding and decoding video and audio at bit rates adjustable from 250 Mbps to 900 Mbps within the system.
- The decoder shall be capable of preserving absolute changes to the video on a frame-by-frame basis up to 60 frames per second.

Touch Screen

Shall meet or exceed the following specifications:

- Display Type TFT active-matrix color LCD
- Size 10.1 in. (257 mm) diagonal
- Aspect Ratio 16:10 WUXGA
- Resolution 1920 x 1200 pixels
- Brightness 400 nits (cd/m²)
- Contrast 1000:1
- Color Depth 24 bit, 16.7M colors
- Illumination Edgelit LED with auto brightness control
- Viewing Angle ±80° horizontal, ±80° vertical
- Touch Screen Projected capacitive, 5-point multitouch capable
- Ethernet 100 Mbps, auto switching, auto negotiating, auto discovery, full/half duplex, TCP/IP, UDP/IP, CIP, DHCP, SSL, TLS, SSH, SFTP (SSH File Transfer Protocol), IEEE 802.1X, SNMP, IPv4 or IPv6, Active Directory® service authentication, HTTPS web browser setup, XiO Cloud® client, IEEE 802.3at compliant

Video Monitor

- Panel Technology IPS TFT with W-LED backlight

- Screen Size [inch/cm] 27 / 68
- Screen Aspect Ratio 16:9
- Colour Gamuts 110 % sRGB; 81.6% AdobeRGB, 78% NTSC
- Pixel Pitch [mm] 0.155
- Brightness (typ.) [cd/m²] 350
- Contrast Ratio (typ.) 1000:1 (12000:1 dynamic contrast ratio)
- Viewing Angle [°] 178 horizontal / 178 vertical (typ. at contrast ratio 10:1)
- Response Time (typ.) [ms] 5
- Synchronisation Rate
    - Horizontal Frequency [kHz] 31.5 – 135
    - Vertical Frequency [Hz] 30 – 75
- Resolution
    - Optimum Resolution 3840 x 2160 at 60 Hz

Digital Signage

Design Narrative

Scope of Work:
1. The AV Integrator will do the Site Assessment: Evaluate locations for digital signage placement, cabling, installation and configuration.
3. The AV Integrator will do Installation mount screens securely, connect all equipment, and ensure functionality coordinating .
4. The AV Integrator responsibility to engage with FNC IT department to install the Content Management System (CMS) Setup: Install and configure software for content scheduling and management on the existing VM machine and it should be compatible with Hyperv platform.
5. The AV Integrator responsibility Training the client for Content Creation and Develop engaging content or coordinate with client-provided content.
6. The AV Integrator responsibility Testing and Quality Assurance to Ensure all components are working correctly and content displays properly.
7. The AV Integrator responsibility to Provide training for staff on how to operate the digital signage system.
8. The AV Integrator responsibility to provide the Maintenance Plan, Establish a plan for ongoing maintenance, including troubleshooting and updates for minimum 3 years support and maintenance.

8 DISPLAYS PERPETUAL LIC				
1	24" Ultra Wide Display	Pro DVX	ProDVX UW-24	8
2	* Includes PADS4 Server / Designer / Scheduler / Messenger / Agent / CMS Admin user / CMS User / Workspace Admin user	Pads4	PADS4EP	1

3	Redundancy server license	Pads4	Pads4	1
4	Server Hardware + Redundancy Hardware	By Client	By Client	1
5	Network Switch and wireless access point	By Client	By Client	1
6	PADS4 BASIC Viewer (Windows or HTML5)	Pads4		8
7	PADS4 CMS User	Pads4		5
3 Years Software maintanance				
8	3 Years Software maintanance	Services	Services	1
Services				
9	Online Server Setup, Installation & Commissioning	ACT	ACT	1
10	Advanced feature installation and coordination : SSL/SSO/AD/ Exchange integration	ACT	ACT	1
11	Online Training	ACT	ACT	1
12	Content Creation Standard Template: Development time (within 15 working days)	ACT	ACT	1
Cabling and Accessories				
13	Cabling and accessories	ACT	ACT	1
14	Installation and testing commisioning	ACT	ACT	1

Infrastructure for ADTV

Design Narrative

Scope of work:

1. Replace all existing Triax cables with LEMO SMPTE cables.
2. Include an additional 4 SMPTE cables at the main entrance, equipped with a 13AMP power socket.
3. Implement 6 SMPTE cables for wireless active antennas, detailed in the equipment list below:

No.	Item	Model no	Qty
1	3dBi omni antenna	ANT3N-300370-OD-NM-B	10
2	Micro sector 9dBi antenna	AP002132	2

3	3GHz downconverter	DCBGSB-310360	12
4	Fiber head	FH-SMPTE	6
5	Fiber base	FB-SMPTE	6
6	Active splitter 4 X 1:8		3
7	Camera contro ODU	VS-CCODU-E-403473	2
8	Camera control IDU	VS-CCIDU-ETH-FULL-GEN	2
9	Sony license	VS-CCIDU-SON-UP	8
10	Bolero active antenna		4

4. For the main gallery, the following equipment needs to be installed:
   - New Waveform Monitor
   - Grade One Monitor
   - GPIO Interface for Joystick Override

Conference System :

Scope of work: AV Integrator will be responsible of Supplying, Installing, configuring, programming, testing and commissioning the redundancy conference System.
AV Integration will be responsible of all adaptor converter if required.

	Make	Model	Description	Qty
1	Televic	Plixus MME Dante	Plixus MME Dante	1
2	Televic	CoCon Redundancy	This module allows automat take-over of the Plixus Engine or the CoCon Room Server by a spare engine or room server in case one would become inactive. Includes an ePowerSwitch4 to facilitate automatic startup of spare engine.	1
3		SVC	Installation, Configuration, Commissioning	1

VDI:

Design Narrative

Scope of work:

The scope of work includes but is not limited to:

1. Assessment and Planning

- Conduct a detailed assessment of the organization's current desktop infrastructure and user requirements.

- Define the technical architecture and design of the VDI solution, considering factors such as hardware, software, networking, and security.
- Develop a migration plan for transitioning existing desktop workloads to the VDI environment.

2. Infrastructure Deployment

- Procure and configure hardware components, including servers, storage, networking equipment, and virtualization software.
- Install and configure the VDI software stack, including hypervisors, connection brokers, management consoles, and user profile management tools.
- Configure backup and disaster recovery solutions for the VDI infrastructure.
- The vendor/partner is responsible for quoting and procuring all necessary hardware and software components required to implement the VDI solution. This includes but is not limited to servers, storage systems, networking equipment, virtualization software, operating systems, and VDI management tools.
- Once the hardware and software components are acquired, the vendor/partner will proceed with the configuration, installation, and integration of the infrastructure components to build the VDI environment according to the agreed-upon design specifications.

3. Desktop Migration

- Identify desktop workloads suitable for migration to the VDI environment.
- Virtualize desktop images and applications using tools such as VMware Horizon, Citrix Virtual Apps and Desktops, or Microsoft Remote Desktop Services.
- Migrate user profiles, data, and settings to the VDI environment with minimal disruption to end-users.

4. Testing and Optimization

- Conduct performance and load testing to ensure the VDI infrastructure meets performance requirements under various workloads.
- Optimize resource allocation, virtual machine configurations, and network settings for maximum efficiency and user experience.
- Implement security measures, such as access controls, encryption, and endpoint protection, to safeguard the VDI environment against threats.

5. Training and Documentation

- Develop user documentation and training materials for accessing and using the VDI environment.
- Conduct training sessions for IT administrators and support staff on VDI management, troubleshooting, and maintenance.
- Provide end-user training and support to ensure a smooth transition to the new desktop environment.

6. Support and Maintenance

- Provide ongoing support and maintenance services for the VDI infrastructure, including software updates, patch management, and troubleshooting.
- Monitor the performance and health of the VDI environment using monitoring tools and implement proactive measures to address issues as they arise.
- Offer technical support and assistance to end-users for VDI-related issues and inquiries.

7. Deliverables

The following deliverables will be provided as part of this project:

- VDI architecture and design documents
- Implementation plan and migration strategy
- Configured VDI infrastructure with documented configurations
- Migrated desktop workloads with minimal disruption
- Performance testing reports and optimization recommendations
- User documentation and training materials
- Ongoing support and maintenance services

8. Assumptions and Dependencies

The successful implementation of the VDI solution is contingent upon the following assumptions and dependencies:

- Availability of necessary resources, including hardware, software licenses, and skilled personnel.
- Cooperation and collaboration from stakeholders and end-users throughout the project lifecycle.
- Adherence to industry best practices and compliance requirements for VDI deployments.
- Timely resolution of any issues or challenges encountered during the implementation process.

9. Acceptance Criteria

The project will be considered successfully completed upon meeting the following acceptance criteria:

- VDI infrastructure is deployed and operational according to the defined architecture and design.
- Desktop workloads are migrated to the VDI environment with minimal disruption to end-users.
- Performance testing results demonstrate that the VDI environment meets or exceeds performance requirements.
- End-users are trained and able to effectively access and use the VDI environment for their daily tasks.
- Ongoing support and maintenance services are in place to ensure the stability and reliability of the VDI infrastructure.

10. Project Team

- The project team will consist of representatives from the client organization and the vendor, including project managers, system administrators, network engineers, and end-user support specialists.

Hardware

SI NO.	Description	Term (Months)	Quantity
1	Subscription, End User Computing (EUC) Ultimate Software License & Mission Critical Software Support Service for 1 User	36.00	100
2	Term in months	36.00	36.00
3	Nutanix Hardware Platform * NX-8170-G9, 1 Node Configuration Nutanix Software * Foundation - Hypervisor Agnostic Installer * Controller VM * Prism Management * Starter License Entitlement		3.00
4	Intel Xeon-Gold 6426Y processor (2.5 GHz/ 16-core/ 185W, Sapphire Rapids)		6.00
5	64GB Memory Module (4800MHz DDR5 RDM)		36.00
6	7.68 TB NVMe SSD		6.00
7	No SSD as part of the system configuration		3.00
8	LOM Module: Broadcom 10GbE, 2-port, Base-T NIC (BCM 57416)		3.00
9	SMC 25/10GbE, 2-port, NIC (BCM 57414);transceiver not included		6.00
10	C13/C14, 10A, 4ft Power cord		6.00
11	24/7 Mission Critical Level HW Support for Nutanix HCI appliance	36.00	3.00
12	3m SFP28 to SFP28 Cable; up to 25GbE bandwidth per SFP28 specifications		12.00

13	Education, Individual seat for Enterprise Cloud Administration (ECA) course. Delivery: virtual instructor-led (vILT) in English or Japanese (Japan). Contact nutanixtraining@education.nutanix.com for additional info. Priced per individual seat. One single-use exam voucher included. Term: Must be consumed or scheduled within 12 months of purchase date.		2.00
14	Service, NCI Cluster Deployment or Expansion - Pro Edition. For each quantity purchased, deployment is limited to 1 node at a single physical site. Includes choice of one: NUS Files, Objects, or Volumes.		3.00
15	Selected region for Services Delivery		3.00
16	Nutanix AHV Hypervisor		3.00
17	Platform Integration Fee		1.00

No.	Description	Unit Qty.	Qty.
	vSAN CertifiedNode-2288H V7_Site1		
1	2288H V7		3
1.1	2288H V7		
1.1.1	Base Configuration		
2288H V7 (24*2.5inch HDD Chassis-Support 16 NVMe)H22H-07(For oversea)		1	3
Server Platinum 1500W Version 2.0 AC power supply		2	6
1.1.2	Sapphire Rapids CPU(With 2U Heat Pipes Heatsink)		
Intel Xeon Gold 5420+(2.0GHz/28-Core/52.5MB/205W) Sapphire Rapids MCC CPU (with 2U Soldering-special heat sink)		2	6
1.1.3	Memory		
DDR5 RDIMM DRAM-64GB-4800MT/s-1.1V-ECC-2Rank(2G*8bit)		12	36
1.1.4	Hard Disk(with 2.5" Front Panel)-SAS		
HDD,600GB,SAS 12Gb/s,10K rpm,128MB or above,2.5inch(2.5inch Drive Bay)		2	6
1.1.5	Hard Disk(with 2.5" Front Panel)-NVMe		
SSD,1600GB,NVMe PCIe,Mixed Use,P5620 Series,2.5inch(2.5inch Drive Bay)		1	3
SSD,3840GB,NVMe PCIe,Read Intensive,PM9A3 Series,2.5inch(2.5inch Drive Bay)		3	9
1.1.6	RAID Card		
RAID Card SuperCap,used for 35xx/39xx		1	3
1.1.7	OCP NIC 3.0 Mezz Card		
XC310 BC53ETHF- GE350-T2 OCP3.0 Ethernet Card-2*GE(I350)-Dual Port-RJ45, PCIE 2.1 x4-Vendor ID 8086-Device ID 1521-2-Subvendor ID 1f24-Subdevice ID 200b		1	3
1.1.8	Riser Card		
1*16X SLOT(PCIE5.0)+2*8X SLOT(PCIE4.0)-IO1&2 module		1	3
1.1.9	PCIe Card-NIC		
XP330 Ethernet Adapter,10/25G Optical Interface(Intel X710),2-Port,SFP+(without Optical Transceiver),Half-height Half-length(included Half Handle bars and Full Handle bars),PCIe 3.0 x8		1	3
1.1.11	PCIe Card-SAS/RAID card		
9560-8i,PCIe RAID Controller,4GB Cache,PCIe 4.0 X8-HH/HL		1	3
1.1.12	Fan and Air duct		
Air duct(2U radiator)		1	3
8038+ Fan module		4	12
1.1.13	Cable		
High Speed Cable,HS Cable Slimline-2*mini SAS HD,0.9m&0.8m,Slimline X8 STR,2*((31AWG*1Pair+31AWG*2Drain)*8+31AWG*1Pair*4),2*Internal mini SAS HD R/A,Slimline-2*mini SAS HD		1	3
1.1.14	Cable and Optical Module		
Optical transceiver,SFP+,850nm,10Gb/s,-7.3~-1dBm,-9.9dBm,LC, MM,0.3km		2	6
1.1.15	Insert Card		
TPM2.0 Card(SPI)		1	3
1.1.16	Guide Rail and Slide Rail		

Ball Bearing Rail Kit(Direct delivery material)		1	3
Cable Management Arm(Direct delivery material)		1	3
1.1.17	C13 wall plug power cords all over the world		
Power Cable,Britain AC Power Cable 250V10A,3.0m,PGAM ,H05VV-F-1.0mm^2(3C),C13SF,Black		2	6
1.1.18	C13 PDU power cords all over the world		
Power Cords Cable,Europe AC 250V10A,1.8m,C14SM,H05VV-F- 3*1.00^2,C13SF,PDU Cable		2	6
1.2	Technical Support Service		
2288H V7 (24*2.5inch HDD Chassis-Support 16 NVMe)H22H-07(For oversea)_Super-Care Onsite Premier 2288H V7_36Month(s)		1	3

Dell Thin client – 50 Quantity

Option	Selection	Quantity
Base	OptiPlex 3000 TC CTO	1
Processor	Intel® Pentium® N6005 (4 MB cache, 4 cores, 4 threads)	1
Operating System	Windows 10 IoT Enterprise LTSC 2021, English	1
Microsoft Application Software	No Productivity Software	1
Memory	8 GB: 1 x 8 GB, DDR4	1
Storage	No Storage Drive Selected	1
Additional Storage	256GB Additional Hard Drive	1
Graphics	Intel® Graphics	1
Wireless	Wireless LAN Card with Internal Antenna	1
Keyboard	Wireless Keyboard Selected	1
Chassis Options	OptiPlex 3000 Thin Client, Intel Pentium N6005 Fiber capable, 64GB eMMC	1
Mouse	Wireless Mouse	1
Power Cord	Power Cord for 3-pin Adapter EUR (SADMG)	1
Power Supply	65 Watt A/C Adapter	1
Documentation	Safety/Environment and Regulatory Guide (English, Hebrew, Russian, Hungarian, Turkish, Ukrainian)	1
Placemat	Opti 3000 Thin Client Placemat	1
Order Information	Dell Order	1
ENERGY STAR	ENERGY STAR LABEL Digital Label for Thin OS and Ubuntu + DHC	1
EPEAT 2018	EPEAT 2018 Registered (Gold)	1

Operating System Recovery Options	Recovery USB Media Not Included	1
Bios for TPM	Trusted Platform Module (Discrete TPM Enabled)	1
EAN/UPC Labels	No UPC Label	1
Shipping Material	OptiPlex TC Packaging and Labels	1
Transportation from ODM to region	Desktop Standard shipment	1
Wireless Driver	None	1
Speakers	No Internal Speaker	1
System Monitoring Options	System Monitoring not selected in this configuration	1
Processor Label	Intel Pentium Processor Label	1
Label	Regulatory Label 3000 TC	1
Software Stack	Software Drivers for WIE10	1
Systems Management	Out-of-Band Systems Management	1
Monitor Stand	OptiPlex Micro and Thin Client Vertical Stand	1
Additional Stands/Mounts	No Stand or Mount	1
Adapter	No Additional Cable	1
Serial Port Adapter	Additional VGA Port	1
Optical Software	PowerDVD Software not included	1
Intel Responsiveness Technologies	No Intel Responsive	1
Raid Connectivity	NO RAID	1
Consolidation Fees - (EM-EMEA Only)	Consolidation Fee Desktop	1
FGA Module	Custom BTO Configuration	1
Home and Small Business Security solutions	No anti-virus software	1
Warranty Information	No Warranty Tech Sheet Required	1
BIOS Configuration - Standard	BIOS: Wake-On-Lan Set To Enabled (Same As Remote wake up)	1
Dell Services: Extended Service	ProSupport Next Business Day Onsite Service after remote diagnosis with HW-SW Support, 36 Month(s)	1

Dell Services: Hardware Support	Parts Only Warranty, 12 Month(s)	1
Dell Services	Dell Wyse Management Pro Suite	1

Citrix

Sl NO.	Part Number	Product	Edition	Model	Number of days	Quantity
1	6002996	Citrix for Private Cloud	Premium	Concurrent	1095	50.00
2	6000376	ADC VPX Software Subs	Advanced	1 Gbps	1095	2.00

VMWare

Product	Description	Qty
VMware Horizon 8 Enterprise Term Edition: 10 Concurrent User Pack for 3 years term license; includes Production Support/Subscription	Includes Horizon, Workspace ONE Access Standard Edition, Application Remoting, Horizon for Linux, ThinApp, App Volumes, Dynamic Environment Manager, vSphere for Desktop, vSAN Advanced for Desktop, and vCenter Server Desktop for 10 concurrent connections. Includes Production Support and Subscription. Does not include Fusion and vRealize Operations.	5

Terms and Conditions

1. The Vendor has the discretion to select either the provided hardware specifications or equipment of similar capacity and functionality to construct the VDI infrastructure, ensuring compatibility and performance.
2. VDI-related applications must be selected from reputable vendors, with options including VMWare or Citrix, in accordance with industry standards and client requirements.
3. The number of user licenses for the VDI solution is fixed at 50, notwithstanding that the hardware infrastructure has been sized to accommodate up to 100 users.
4. All hardware and software components utilized in the VDI solution shall be accompanied by a minimum of three years of comprehensive support from the respective manufacturers or vendors.

5. The proposed hardware and software selections should not have an End of Life (EOL) or End of Support (EOS) status within the next seven years from the commencement of this project, ensuring longevity and sustainability of the VDI environment.
6. The VDI solution is an end-to-end implementation, and the Vendor/Partner assumes full responsibility for meeting all infrastructure requirements, including the procurement and installation of any necessary cables, SFPs or other ancillary components essential for the seamless operation of the VDI environment.

Scope of Work – Software Integration

An existing control system is installed to activate many necessary user needs. This greatly reduces the complexities of operating an integrated A/V system and facilitates greater system utilization and an enhanced meeting experience. The existing control system will be updated to control the new equipment that is installed. All programming and testing is the responsibility of the AV Integrator.

User Experience

Developing a unique system based upon the end users' needs and an understanding of how the space will be utilized has led AV INTEGRATOR to identify three styles of user and room interactions: Autopilot, Co-Pilot, and Pilot. These styles range from the user who wants to use technology transparently, to the person who wants to control every aspect of collaboration. Based on the design requirements, AV INTEGRATOR has selected the following user experience for this room:

Pilot

This is a fully user driven room experience. User interaction is required for most system features, and a user interface is required. Automation in this experience is minimal, and typically limited to core events to shut down the room to reduce power consumption and preserve equipment life. Use and function for this experience commonly includes spaces designed for mixed use, training rooms, and control rooms.
The goal of this automation level is for end users to be in control. The user will direct the room when to present, dial a call, and control a device.
For more specific information about the chosen automation design and use cases, please refer to the User Experiences section of AV INTEGRATOR *Programming Functionality Statements* document.

User Interface

A user interface will facilitate advanced system operation. The following user interface(s) will be used for this system:

- The touch screen graphical user interface will be a custom solution specifically for this project. This custom solution will require coordination meetings with AV INTEGRATOR to design, submit and approve prior to completing all control code creation. Please reference the *Custom User Interface* scope of work document for specific details on this option.
    - AV INTEGRATOR will provide the layout and the functionality of each button for each user page of the touch screen to the Customer prior to implementation for client input and final client approval.
- All specified equipment in the proposal will be incorporated into the control system.

As part of the programming process, AV INTEGRATOR will provide the layout and the functionality of each button to the Customer prior to implementation for input and final approval.

Network and Network Security

The integration of Audio-Visual hardware can consist of many different devices and systems, each with varying network requirements, impacts to traffic and routing, and unique management and security processes. AV INTEGRATOR will work with Federal National Council identified stakeholders to properly assess network requirements and deployment considerations.
AV INTEGRATOR will design the system to meet identified network requirements and will provide construction drawings and a list of devices before installation on site. At the time of installation, AV INTEGRATOR will connect devices according to the documented system design and identified network requirements. The following network design is being followed for this project:

Hybrid AV/Client Network

Hardware that does not require integration to the client network can be completely isolated from the client network.

- The control system, touch panel, and audio video transport devices that carry Ethernet control reside in their own wired network.
- Hardware that requires integration with the owner network will be connected directly to the owner network. Examples: control system for monitoring, video conference codec, 3rd party SIP device.
- Systems for monitoring, control, scheduling, and other, is provided by services residing in the "Cloud", external to the owner's network. In this type of deployment data will need to traverse the owner network.

2- Federal National Council Solution maintenance and support Scope of Work

Overview

The System integrator service offering shall provide remote technical phone support services, facilitation of manufacturer repair or replacement programs, access to manufacturer published software updates and upgrades for covered assets, and unlimited Onsite Field Technician dispatch. And should cover the existing system and the new integrated system Explained in below SLA for a period of 12 month start after the handover and acceptance of the end user to the system.

SLA \ RMA

- Unlimited onsite field technician dispatch – Monday - Friday 8AM to 5PM with Guaranteed SLA - Engineers on site within next business day.
- Offers Helpdesk Technical Support: Provision of both Telephone and VC Support 24x7x365.
- Facilitates the repair or replacement programs of manufacturer programs for applicable hardware.
- Access to software updates and upgrades for hardware covered by manufacturer program.
- Use of online incident reporting tool for easy ticket awareness.

- Software and firmware updates managed for covered assets.
- "The RMA (Return Merchandise Authorization) process for any faulty component is deemed critical, and replacements should be delivered Next Business Day (NBD). Furthermore, core and critical components must have replacement units available within the client's premises.
-

HELP DESK & CALL RESPONSE

The system Integrator will provide 1st call pickup within 60 seconds during normal business hours. When a case is opened, the Help Desk will classify the case either as a standard, critical or maintenance request. The system Integrator shall respond to written service requests within four (4) hours of notification.
All calls for assistance are logged as an open case number in the Help Desk ticketing system. This case number remains open until a resolution to the initial report is achieved or the customer and/or the Help Desk determine the case can be closed. The case number is the customer's unique identifier about a specific request and should be used and communicated whenever contacting the Help Desk about an open case.
Onsite technician arrival: Once the Help Desk has diagnosed the issue and an onsite technician has been determined necessary, a field technician will be dispatched and arrive onsite after the appointment is coordinated and confirmed with the Customer. If a replacement part is required, the technician will be dispatched in coordination with the arrival of the replacement parts.

HELP DESK PROCESS

LEVEL 1 HELP DESK SUPPORT

Log call and identify level of coverage for equipment in crisis.
Check equipment/system status for errors.
Perform complete diagnostics and analysis remotely (Telnet, VPN, Extranet, etc.)
Determine systems all working within manufacturer specifications.
Adjust any settings to repair problem.
Escalate to Level 2 Help Desk if problem is not resolved.

LEVEL 2 HELP DESK SUPPORT

Diagnose and identify cause of problem.
Repair remotely via remote access to equipment or identify defective equipment and order replacement components from manufacturer.
Schedule parts delivery from manufacturer.
Dispatch technician to arrive with replacement part.
Escalate to Level 3 if problem is not resolved.

LEVEL 3 HELP DESK SUPPORT

Escalate problem to manufacturer engineering for resolution.
Work with manufacturer's engineering to test and provide information.
Implement fix provided by manufacturer's engineering and test, Close Case.

Repair/Replacement Facilitation

- Whilst the new equipment is covered under manufacturer warranty, if the equipment needs to be removed from the site for repair, the system integrator will use its best endeavours to repair the equipment quickly and without undue delay.

- The system integrator will manage the administration in regard to shipping and logistics and if required arrange manufacturer advanced replacements or loan equipment if included within the manufacturer warranty. the system integrator will also manage any warranties on equipment installed by others.

Software Updates and Upgrades

- FNC will receive the latest software updates and upgrades remotely available per manufacturer recommendation as the responsibility of the service provider.

Incident Reporting Tool

- The system integrator shall provide an online tool to keep the end user up to date on ticket creation and frequency. This valuable insight allows the end user to make educated decisions based on equipment performance and uptime during annual business reviews.

Unlimited Onsite Support

- The system integrator shall provide unlimited onsite technical support Monday through Friday 8AM to 5PM, next-business day onsite response following the Help Desk's determination that an onsite dispatch is needed.

Preventative Maintenance Visits

- The system integrator shall provide yearly Preventative Maintenance Visit: prescheduled maintenance visits that provide a field technician to conduct an onsite 47-point cleaning, testing, and calibration of in-room devices. Technicians will record all activities and findings, then make recommendations for identified issues or opportunities for performance optimization. Issues found to be resolved under the service contract at no additional cost.

Onsite Technical Managed Resources

- The system integrator shall provide a technical resource for 30 days during the year to do a site visit and system checkup the day before the government session and to be onsite during the session for support.

5- ملحق الشروط العامة لتقديم عروض الاسعار

الشروط العامة لتقديم عروض الأسعار:

1. **وسائل التواصل:**

أ. لمزيد من المعلومات الفنية والاستفسارات يرجى التواصل على: البريد الإلكتروني .Bids@almajles.gov.ae

ب. لمزيد من المعلومات بشأن تسليم العروض يرجى التواصل مع قسم المشتريات والعقود على هاتف رقم 026199440 – 026199411 أو البريد الإلكتروني Bids@almajles.gov.ae

2. **محتويات العروض الفنية والمالية ومكان تسليمها:**

أ. يجب أن تكون العروض مفصلة، كل بند على حدة، بالسعر ومدة التنفيذ، حسب المواصفات المطلوبة.

ب. تسليم العروض المالية بالدرهم الإماراتي.

ت. الالتزام بالمواصفات والمعايير القياسية الإماراتية المعتمدة.

ث. يجب أن تكون العطاءات صالحة لمدة لا تقل عن 60 يومًا من تاريخ التقديم.

ج. إرفاق نسخة من الرخصة التجارية للمورد مع المغلفات المالية والفنية.

ح. ارفاق نسخة من شهادة القيمة الوطنية المضافة (ICV) ان وجدت

خ. لا تقبل العطاءات التي تقدم على اساس خفض نسبة مئوية من أقل عطاء بل يجب أن يشتمل العطاء على اسعار إفرادية واجمالية خاصة به.

د. تُسلم العروض الفنية والمالية إلى قسم المشتريات والعقود لدى المجلس الوطني الاتحادي بأبوظبي، على أن تكون العروض منفصلة ومغلفة ومختومة بالشمع الأحمر، وأن يُدَّون على المغلفات من الخارج رقم الممارسة –المناقصة وموضوعها واسم الشركة ونوع العرض.

General Conditions for Submitting Quotations:

1. **Contact Metods:**

A. For more technical information and inquiries, kindly contact by email Bids@almajles.gov.ae

B. For more information and inquiries about submitting the offers, kindly contact on telephone No. 026199440 -026199441or by email **Bids@almajles.gov.ae**

2. **Contents of Technical and Financial offers and place of delivery:**

A. Offers must be detailed for each item separately, with price and implementation period according to the required specifications.

B. The financial offers should be presented in UAE dirhams.

C. Adherence to the approved UAE standards and specifications.

D. Bids must be valid for at least 60 days from the date of submission.

E. Attach a copy of the Trade license with financial and techical envelopes.

F. Attach a copy of the IN-Country Value Certificate, if any (ICV).

G. Technical and financial offers shall be submitted to the Procurement and Contracts Department at the Federal National Council (FNC) in Abu Dhabi, provided that the offers are separate, closed and sealed with red wax and written on the envelopes from outside the order number, subject, company name and type of offer, making sure to submit a

confirmation letter for the amount of the initial bank guarantee provided.

3. Bank Guarantees:

A. Presenting a bank statement having 5% of the value of the submitted quotation and attaching it in a separate envelope valid for 60 days from the date of closing the application.

B. The winning supplier must submit a bank statement in Arabic or bilingual language having (10%) of the total amount awarded, provided that it is renewed automatically according to the period starting from the date of signing the contract.

4. Payment Method:

Payment terms are according to the rules and conditions of the Federal National Council (the FNC does not apply the prepayment policy).

5. Date of submitting the offers:

The deadline for submitting offers is Thursday on 04/07/2024

6. Supplier Registration:

Bids are accepted only from suppliers registered in the suppliers' electronic system at the following link https://www.almajles.gov.ae:1033/

7. Special Conditions:

A. The Arabic language is the official language of this tender and will be used in all documents and correspondence. Drawing, technical specifications, tables of quantities, prices and technical offers may be organized in English. In the event of a contradication between the Arabic text and its counterpart in English, the Arabic text shall prevail.

3. الضمانات البنكية:

أ. تقديم ضمان بنكي بنسبة 5% من قيمة عرض السعر المقدم وإرفاقه بمغلف منفصل صالح لمدة 60 يوما من تاريخ اغلاق الطلب مع تقديم خطاب تأكيد بمبلغ الضمان البنكي الابتدائي المقدم

ب. يجب على المورد الفائز تقديم ضمان بنكي بنسبة (10٪) باللغة العربية أو ثنائي اللغة لإجمالي المبلغ الممنوح، شريطة أن يجدد تلقائياً حسب المدة التي تبدأ من تاريخ توقيع العقد.

4. طريقة الدفع:

شروط الدفع وفقًا لقواعد وشروط المجلس الوطني الاتحادي (لا يوجد لدى المجلس سياسة الدفع المسبق).

5. موعد تسليم العروض:

آخر مدة لتسليم العروض يوم الخميس الموافق 2024/07/04

6. تسجيل الموردين:

يتم قبول العطاءات فقط من الموردين المسجلين في نظام الموردين الإلكتروني على الرابط الآتي:

https://www.almajles.gov.ae:1033

7. شروط خاصة:

أ. اللغة العربية هي اللغة الرسمية لهذا العطاء وستستعمل في جميع الوثائق والمراسلات،ويجوز تنظيم الرسومات والمواصفات الفنية وجداول الكميات والاسعار والعروض الفنية باللغة الانجليزية ، وفي حالة التعارض بين النص العربي ومقابله باللغة الانجليزية يكون النص العربي هو المعمول عليه.

ب. للمجلس الحق في فسخ التعاقد إذا تأخرت الشركة في التوقيع على العقد لمدة خمسة عشر يوماً من بعد اخطارها أو إنجاز العمل المتفق عليه أو رفض التنفيذ .

ت. للمجلس الحق في اختيار جميع البنود المتضمنة لعرض السعر أو أحدها حسب ما تفتضيه الحاجة.

ث. تخضع الممارسة لما جاء في القرار رقم (14) لسنة (2018م) بشأن اللائحة المالية للمجلس الوطني الاتحادي، ثم للأنظمة المتبعة في الحكومة الاتحادية، و خاصة الأحكام الواردة بقرار مجلس الوزراء رقم (4) لسنه (2019م) و تعديلاته بشأن لائحة المشتريات و إدارة المخازن في الحكومة الاتحادية .

B. The board has the right to cancel the contract if the company is late in signing the contract for a period of (15) days after notifying it Or the completion of the work agreed upon or refused its implement.	ج. يحق للمجلس إلغاء أو تعديل متطلبات المناقصة- الممارسة في أي وقت قبل فتح المظاريف أو بعد ذلك وقبل الترسية دون أي اعتراض من مقدمي العطاء ودون أحقيتهم في المطالبة بأي تعويض من جراء ذلك .
C. The board has the right to choose all or one of the items included in the price offer as needed.	ح. تعتبر الدعوة وكافة الملاحق والمراسلات جزء لا يتجزء من وثائق المناقصة والعقد .
D. The order is subject to what is stated in Resolution No. (14) of the year (2018) regarding the Financial Regulations of the Federal National Council and then to the regulations followed in the Federal Government, particularly those related to the provisions contained in Cabinet Resolution No. (4) for year (2019) and its amendments regarding the Procurement Regulations and Warehouse Management in Federal Government.	خ. المجلس الوطني الاتحادي غير ملزم برد العروض المشاركة الى مقدمي العطاء بأي حال من الاحوال .
E. The federal National Council is not obligated to return the offers participating in the bid in any way.	د. يتم توضيح واظهار جميع الافتراضيات بعرض الاسعار ان وجدت.
F. All defaults are shown by displaying prices, if any.	ذ. على الشركات الإفصاح عن المنتجات والخدمات المستدامة والصديقة للبيئة في هذا العرض إن وجد.
G. Disclosure of sustainable and environmentally friendly products and services in this Boq if applicable.	ر. عدم انسحاب المتناقص او الممارس طوال فترة تقديم ودراسة العروض وقبل البت فيها والا سيتم مصادرة الضمان الابتدائي .
H. The bidder must not withdraw during the period of submitting and studing the offers and before deciding of them, othewise the initial guarantee will be confiscated.	