CLARK COUNTY, NEVADA
BID NO. 605325-19
CLARK COUNTY DETENTION CENTER: SOUTH TOWER;
FIRE ALARM SYSTEM REPLACEMENT

June 28, 2019

ADDENDUM NO. 1

INVITATION TO BID

1. The bid opening date of Wednesday, July 10, 2019 at 2:15:00 p.m. remains unchanged

SKETCHES

2. Add FSK-01, dated June 27, 2019, revising Note 8 and Note 9 on Drawing Sheet FA.0.0.1.

3. Add FSK-02, dated June 27, 2019, revising SHEET NOTE 2 on all FA Drawing Sheets from FA.1.0.0 through FA.2.6.6.

QUESTIONS & ANSWERS

1. QUESTION: “Smoke Fire Dampers are being required to have a toggle switches installed at each SFD. Is there adequate access at each SFD to complete this work? If access is not available, we will need to walk each SFD to determine what has access and what does not to provide a complete proposal.”

   ANSWER: Yes, adequate access is provided at each Smoke Fire Dampers (SFD) to complete the work.

2. QUESTION: “Some Smoke Fire Dampers are being required to be “Pinned Open” and abandoned in place. Is there adequate access at each SFD to complete this work? If access is not available, we will need to walk each SFD to determine what has access and what does not to provide a complete proposal.”

   ANSWER: Yes, adequate access is provided at each Smoke Fire Dampers (SFD) to complete the work.

3. QUESTION: “JCI Base Bid proposal Appendix E excludes CAT5 cable rom NAE locations to owners Network Switch. Who provides the CAT 5 cable? I did not see on the contract drawings where the CAT 5 wire needs to be ran.”

   ANSWER: Refer to Keyed Note No. 3 on Bid Set drawing E2.02, dated May 20, 2019.

4. QUESTION: “JCI Base Bid proposal Appendix includes “Existing Fire Alarm Decommissioning Assist for $31,765.00. In further detail please clarify what this cost covers.”

   ANSWER: JCI will demo selected Control Modules and Detectors, leaving existing Signaling Line Circuit (SLC) wiring intact, and delete these devices from existing fire panel programming.
5. QUESTION: “JCI ADD / ALT proposal Appendix F, I see this as more of JCI upgrading their controllers. What impact does that have on the fire alarm scope of work?”

ANSWER: Refer to APPENDIX F, JCI Additive Alternate #1 Proposal for JCI’s scope of work.

6. QUESTION: “Who carry’s the cost of the MQAA 3rd party inspector?”

ANSWER: The Owner will retain and carry the cost of Mechanical Quality Assurance Agency (MQAA) 3rd party inspector. Refer to Bid document Specification section 28 46 00, Article 2.23.

7. QUESTION: “Please provide the MQAA comprehensive plan detailing how they plan to re-inspect, re-test and re-certify the system.”

ANSWER: As referenced in the fire alarm specifications and fire protection report, the specific MQAA inspection, testing, and 100% re-certification requirements are to be developed by the approved MQAA (TMXc Solutions, LLC.) and submitted to the Owner and City of Las Vegas Fire & Rescue for review and approval prior to systems inspections’ testing. Refer to TEST PLAN dated June 26, 2019, attached to this Addendum for reference ONLY as “Attachment A”. A more detailed test plan with scenarios and code references will be submitted to the City of Las Vegas Fire & Rescue by TMXc Solutions, LLC. for approval prior to distributing official copies to the contractor.

8. QUESTION: “Please provide JCI as-built drawings reflecting Notification Appliance Circuits (NAC), existing wiring and existing conduit layout.”

ANSWER: Bid Set drawings reflect the most up to date knowledge of existing wiring and conduit layout. JCI as-built drawings are not available for distribution.

9. QUESTION: “Will the existing devices / wire that are not being changed out to new be required to be covered under any warranty?”

ANSWER: No. Only new devices, conduit and wiring installed by the Contractor or their subs will be required to be covered under warranty.

10. QUESTION: “Per Fire Protection Report page 5 of 24 item #(12) states “New monitoring and control circuits and equipment for supply fans, stair pressurization fans (SPFs), air-handling units (AHUs), Exhaust Fans (EF), variable air volume (VAV) control, fan coil units, etc. will be provided. These may further require additional/new monitoring equipment such as sail switches, current transformers (CTs), or other sensors & circuits to monitor their status. Additional smoke detectors on any supply air/ pressurization fan and AHUs above 2,000 CFM may further be required to comply with applicable code requirements.” Is the highlighted statement in addition to the table shown on contract drawings M0.01 or is this statement referring to this table? In the underline statement how do we interpret “may further be required”. I do not see in the contract documents where all exiting HVAC units are listed with its CFM rating. How are we to know if there are HVAC units currently in operation that are over the 2000cfm rating without duct detectors. Would this item fall under the Construction Conflict Allowance?”

ANSWER: With regards to the highlighted section, this is in addition to the referenced table as existing sail switches, current transformers (CTs), or other sensors & circuits may be required to remain connected to the existing JCI Metasys system. With regards to the underlined statement, additional duct smoke detectors will be required in the smoke control system, such as in the South Tower’s Stair Pressurization Fans 1 – 4 and in Supply Air Fans SF-6 and SF-7. This requirement in included in Note 8 of FSK-01 attached. Construction Conflict Allowance will be utilized for unforeseen conditions prior to increasing the Contractor’s PO.

11. QUESTION: “Contact documents talk about reusing existing JCI devices and the 20% failure rate of devices when crossed over to the Notifier NFS2-3030. Contract drawing FA.0.0.1 notes (8) and (9) state to replace all existing duct detectors and heat detectors. Are we to replace all duct detectors and heat detectors or will they fall under the 20% calculation?”
ANSWER: Any and all existing devices that are compatible with the new NFS2-3030 system shall remain in place. If, through testing, it is found that devices are not compatible, or fail, they will be replaced with new devices as specified in the Bid Documents. See sketch FSK-01 attached. Contractor shall include replacement costs as part of the base bid for all devices shown on Bid drawing sheet FA.0.0.1 in table “SYMBOL LEGEND AND QUANTITIES” under column “ANTICIPATED EXISTING DEVICES TO BE REPLACED”.

12. QUESTION: “JCI Base Bid Proposal Appendix includes (95) separate damper actuators on existing VAV boxes. Contract Drawings sheet M0.01 mechanical table shows there shall be (97) new damper actuators on existing VAV boxes. Does JCI proposal need to be revised to (97) new damper actuators?”

ANSWER: Bid drawing sheet M0.01 mechanical table shows the correct number of new damper actuators which is 97.

13. QUESTION: “Contract drawings E2.00, E2.01 and E2.02 reflects conduit going to each VAV Boxes. Is this conduit existing or will this conduit need to be installed?”

ANSWER: Conduit is existing where dotted. Refer to detail #1 on Bid Set drawings E2.00, E2.01 and E2.02 dated May 20, 2019. Conduit and wire is new where conduit is shown solid on drawings.

14. QUESTION: “Conduit drawings E2.01 and E2.02 reflects the electrical panel and circuits number for the VAV Boxes. Is this power existing or is the what needs to be installed?”

ANSWER: Circuit is existing. Note the (E) existing at each box and detail #1 on the Bid Set drawings E2.01 and E2.02.

15. QUESTION: “If item (13) list above is new conduit that needs to be installed, we will need an additional job walk to bring out the necessary contractors such as electrical contractor and paint and patch contractors to determine what impact their scopes will have on this project.”

ANSWER: Refer to notes #1-3 on E202. Solid circuits are new. Panel E21 shown where note #2 is located on plan.

16. QUESTION: “If items (14) listed above is new work, I did not see on the contract drawings where the emergency electrical panels are located for circuits called out for on contract drawing E2.01 circuits EG1-41, EG4-36, EG4-38 and EG4-40. Please identify where these panels are in the building.”

ANSWER: Panel EG1 is located in emergency panel room at column V.2/1. Panel EG4 is located in a room at column G/9.

17. QUESTION: “Contract drawing E2.08 reflects the new emergency power circuit for the new electric dampers E71-38, E71-40 and E71-42. I did not see where panel E71 is located. Please identify where this panel is in the building.”

ANSWER: Located on seventh floor column G.6/20.

18. QUESTION: “On each "FA" Sheet Note 2 calls out for all fire alarm devices to be replaced with new devices. Are the fire alarm devices reflected on the FA drawings current "As-Built" locations of each fire alarm device currently installed on the system. 1.1.1.1. Then as we install the new Notifier NFS2-3030 system we replace the 20% failure rate based upon the Symbol Legend and Quantities table shown on FA.0.0.1?”

ANSWER: Any and all existing devices that are compatible with the new NFS2-3030 system shall remain in place. If, through testing, it is found that devices are not compatible, or fail, they will be replaced with new devices as specified in the bid documents. See sketch FSK-02 attached. Contractor shall include replacement costs as part of the base bid for all devices shown on Bid drawing sheet FA.0.0.1 in table “SYMBOL LEGEND AND QUANTITIES” under column “ANTICIPATED EXISTING DEVICES TO BE REPLACED”
Except as modified herein all other bid specifications, terms and conditions and special conditions shall remain the same.

ISSUED BY:

SANDY MOODY-UPTON
Purchasing Analyst II

Attachment(s):
*ATTACHMENT A* — TEST PLAN dated June 26, 2019
Sketch FSK-01 dated June 27, 2019
Sketch FSK-02 dated June 27, 2019

CC:
Chuck James, Real Property Management
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PROPOSED TESTING PROGRAM OUTLINE

The proposed testing of the smoke control system serving this facility will include 100% re-certification and would be completed in three phases as summarized below:

- **Phase 1:** Review the design documents & Test Plan Development
- **Phase 2:** Verification of individual Components as related to upgraded system
  - Verification of output devices utilized in the Smoke Control System including:
    - Fire/Smoke Dampers (Open & Close)
    - Smoke Dampers (Open & Close)
    - Control Dampers (Open & Close)
    - Fans (startup and shutdown).
  - Initiation devices utilized in the Smoke Control System including:
    - New Area Detectors at pressurized stair enclosure
    - All corridor area smoke detectors.
    - Sprinkler Waterflow Switches
    - Dedicated switches at the new FSCP
- **Phase 3:** Functional testing of the smoke control system.
  - Execution of Testing Scenarios
  - Measurement of Differential Pressures & Door Opening Force
  - Measurement of Fan Volumes
  - Verification of stand-alone Duct Detector Shutdown
PHASE 1: DOCUMENTATION REVIEW

TMCx has reviewed the latest Smoke Control Drawings and Fire Protection Report and based upon this review we have developed Test Scenarios to be utilized by the inspectors in the field during functional testing. The completed Test Scenarios are included in Tab 2 of this document for review.

In addition to the review of the design documents, TMCx will review the manufacturer’s submittal data for any new or replacement components of the smoke control system including: fire smoke dampers, smoke control actuators, variable frequency drives and initiating devices to confirm that the submitted equipment meets the smoke control requirements set forth in the Fire Protection Report and applicable codes.

TMCx will also review the fire alarm, sprinkler system and mechanical drawings as necessary as aids to testing.

PHASE 2: COMPONENT VERIFICATION

TMCx will conduct inspections of individual components during Phase 3 functional testing activities to ensure compliance with the design documents and applicable codes as related to the system upgrade. The following outline the individual inspections:

Automatic Sprinkler System Zones

TMCx will inspect the fire sprinkler zones, confirming the automatic sprinkler system zones correspond with the smoke zones and/or zoned as required in the approved fire protection report. Typically, the Atrium and non-atrium spaces on the same floor are served by a single water flow switch.

Fire/Smoke Dampers

TMCx will inspect and test each fire smoke damper as required to configure per the test plan for:

- Proper installation
- Full range of motion
- Each damper was commanded to confirm that the damper opens or closes as required, and that the damper status and description is monitored and annunciated at the Smoke Control Panel as required.

Duct Smoke Detectors

TMCx will inspect and confirm that:

- For fans equipped with new duct mounted smoke detectors, verify the differential pressures across the sampling tubes to confirm that the detector is performing per the manufacturer’s requirements.
- Shutdown of the associated fan will also be confirmed along with the correct annunciation of the detector.
• Where air sampling type duct smoke detectors are utilized to close fire smoke dampers, TMCx will confirm that upon shutdown of the associated fan and damper(s) close as required.

Fire Alarm Initiation Devices

TMCx will inspect and confirmed that for all fire alarm initiating devices that initiate smoke control, each will be tested, confirming correct annunciation and sequence of operation in accordance with the approved Fire Protection Report and Smoke Control Diagrams:

• Each waterflow device will be initiated to confirm the correct zone is activated.
• Each of newly installed area smoke detectors adjacent to pressurized stair enclosures will be initiated to confirm the correct operation.
• Each corridor area smoke detector.
• Atrium Beam detector will be initiated to confirm the correct zone is activated.

Smoke Control Supply and Exhaust Fans

TMCx will inspect and confirm that:

• Velocities will be measured at each smoke exhaust fan, verifying airflow meet the design criteria developed by the Mechanical Engineer-of-Record.

Smoke Zone Boundaries

TMCx will inspect the smoke zone boundaries for each smoke zone to confirm all penetrations are sealed and the required opening protection has been provided.

Doors (Opening Protection)

TMCx will inspect and confirm that:

• All doors to stair vestibules, stair enclosures, exit passageways and elevator lobbies are self or automatic closing and that they function as required.
• Ratings of the doors are in accordance with the Fire Protection Report.
• Doors are equipped with smoke seals as required.

PHASE 3: FUNCTIONAL TESTING

TMCx will perform testing of the smoke control systems utilizing the Test Scenarios developed from the design documents. The results of each test will be documented and submitted with the Final Report.

Functional testing will consist of the following:
Fire Alarm Initiating Devices

TMCx will confirm that all fire alarm initiating devices that initiate smoke control or stair pressurization, provide correct annunciation and sequence of operation in accordance with the approved Fire Protection Report and Smoke Control Drawings.

Fire Smoke Dampers

Each fire smoke damper required to configure for smoke control for each smoke zone will be tested to confirm proper operation. A percentage of dampers will be deliberately placed out of position while smoke control is active to confirm a trouble is displayed at the Firefighters Smoke Control Panel (FSCP).

Although every fire/smoke damper will be verified for proper configuration, status reporting, and annunciation during the component testing phase to establish complete confidence in the field installation, a statistical percentage of fire/smoke dampers will be re-verified during the scenario testing.

Fans

Each fan required to configure for smoke control for each smoke zone will be visually inspected and tested to confirm it configures as required. Each smoke control fan required to energize will be shut down when called to operate to confirm a trouble is displayed at the FSCP as required.

For smoke control exhaust fans equipped with duct smoke detectors, TMCx will confirm that the detection will not shut down the fan when in smoke mode.

For stair pressurization and atrium supply fans equipped with duct smoke detectors, TMCx will confirm:

- That these fans will shut down upon activation of the duct smoke detector but will reactivate upon activation of the manual switch at the FSCP.
- The smoke exhaust, supply and stair pressurization fans will be verified to confirm they are performing within their design limits.

Doors

Where doors are required to be automatic closing, TMCx will confirm that:

- The doors close and latch as required for each zone.
- The door opening force for all zone boundary doors used for egress is maintained less than 30 pounds in the direction of egress when in smoke mode.

Smoke Removal System Testing

A new manual smoke removal system is provided for all levels. Upon activation via dedicated switch at the FSCP, TMCx will confirm that:

- The associated air handlers and shaft dampers to configure.
- Total cfm will be verified by traverse of the supply and return at the AHU’s at each floor.
The supply fan(s) ramp to static pressure setpoint.

Based upon the design calculations as provided on mechanical drawing and approved air balance sub-consultant will record air flow rates to verify the minimum exchange air flow is provide for each floor. The results will be included with the Final Report.

Smoke Zone Testing

- The dedicated supply and exhaust fans will start.
- The doors on hold-open devices are release and close to isolate all level.

TMCx will utilize an approved air balance sub-consultant to record air flow rates to verify the minimum air flow requirements. The results will be included with the Final Report.

Pressurized Stair Enclosure

Pressurized stair enclosures will be tested by TMCx’s approved air balance sub-consultant utilizing a calibrated digital differential pressure measurement device, verifying a minimum positive pressure differential between the stair and exit passageway is obtained. The stair pressurization fan “set speeds” for the newly installed VFD’s will be captured during testing and included with the final report.

Door opening forces will be measured, confirming a maximum of 30 lbs door opening force in the path of travel.

Hand-Off-Auto (HOA) Switches

Where HOA switches are provided for smoke control equipment, TMCx will confirm:

- They will be disabled when the fan is in smoke mode or completely removed from the fan.

Variable Frequency Drives

Where smoke control fans are equipped with new variable frequency drives, TMCx will confirm:

- That the manual controls on the drive are locked out when the fan is in smoke mode.
Firefighters Smoke Control Panel (FSCP)

TMCx will confirm:

- The operation of each manual switch.
- Correct status of all indicator lamps
- Trouble status indication for each individual device shown on the panel.
- Each zone indicates proper status of all equipment within 60 seconds of receiving an alarm as required.

Automatic Sequence Operation

TMCx will verify the automatic operation for each smoke compartment via customized test scenarios developed in accordance with the Fire Protection Report and Smoke Control Diagrams.

Attached in TAB 2 of this report is a draft copy of the test scenarios that will be performed for each zone, verifying correct automatic sequence.

TMCx will initiate each automatic sprinkler waterflow switch for all levels to verify the correct sequence of operation in accordance with the approved Fire Protection Report and Control Diagrams.

TMCx will test each area smoke detector and duct mounted smoke detector serving the fire/smoke dampers in each smoke compartment, confirming all of the dampers in the associated smoke compartment closes.
7. FIRE ALARM CONTRACTOR TO REMOVE EXISTING FIRE ALARM SYSTEM DEVICES AND EQUIPMENT AND REPLACE WITH NEW FIRE ALARM SYSTEM DEVICES AND EQUIPMENT AS NECESSARY/REQUIRED. REMOVED DEVICES AND EQUIPMENT SHALL BE DISPOSED OF BY THE FIRE ALARM CONTRACTOR IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.

8. UNLESS OTHERWISE INDICATED, EXISTING ADDRESSABLE HVAC SYSTEM SMOKE DETECTORS THAT ARE UL LISTED COMPATIBLE WITH THE NFS2-3030 FIRE ALARM SYSTEM WILL REMAIN IN THEIR CURRENT LOCATIONS AND RE-CONNECTED TO THE NEW FIRE ALARM SYSTEM. NON-COMPATIBLE DETECTORS WILL BE REPLACED WITH NEW ADDRESSABLE DETECTORS THAT ARE UL LISTED COMPATIBLE WITH THE NFS2-3030 FIRE ALARM SYSTEM. FIRE ALARM CONTRACTOR SHALL FURTHER PROVIDE AND INSTALL ADDITIONAL NEW COMPATIBLE ADDRESSABLE HVAC SYSTEM SMOKE DETECTORS WITHIN THE AIR INTAKES OF ALL SMOKE CONTROL/SMOKE MANAGEMENT SUPPLY AIR/PRESSURIZATION FANS SUCH AS SOUTH TOWER STAIR PRESSURIZATION FANS 1-4 AND SUPPLY AIR FANS SF-6 AND SF-7.

9. UNLESS OTHERWISE INDICATED, EXISTING ADDRESSABLE HEAT DETECTORS THAT ARE UL LISTED COMPATIBLE WITH THE NFS2-3030 FIRE ALARM SYSTEM WILL REMAIN IN THEIR CURRENT LOCATIONS AND RE-CONNECTED TO THE NEW FIRE ALARM SYSTEM. NON-COMPATIBLE DETECTORS WILL BE REPLACED WITH NEW COMPATIBLE ADDRESSABLE DETECTORS OF THE SAME TYPE AND TEMPERATURE RATING AS THOSE REMOVED.

10. THE NUMBER AND TYPE OF ADDRESSABLE DEVICES SHOWN ARE THE ESTIMATED NUMBER OF EXISTING CONTROL AND MONITOR MODULES THAT WILL BE REMOVED FROM THE DESIGN BY JCI AND NOT REPLACED BY THE FIRE ALARM CONTRACTOR BASED ON THE MODIFICATIONS BEING MADE TO THE FIRE/SMOKE DAMPERS SHOWN ON THE PROJECTS MECHANICAL DRAWINGS. FIRE ALARM CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, ELECTRICAL, AND JCI CONTRACTORS TO DETERMINE THE TYPE AND THE FINAL NUMBER OF DEVICES IMPACTED PRIOR TO CONSTRUCTION.
2. UNLESS OTHERWISE INDICATED, ALL EXISTING ADDRESSABLE FIRE ALARM EQUIPMENT AND DEVICES THAT ARE UL LISTED COMPATIBLE WITH THE NFPA-3030 FIRE ALARM SYSTEM AND TO REMAIN IN PLACE, REUSED, AND CONNECTED TO THE NEW FIRE ALARM SYSTEM. REPLACEMENT TO BE BASED ON A ONE-FOR-ONE, LIKE-FOR-LIKE BASIS REUSING THE EXISTING FIRE ALARM DEVICES, CIRCUITRY (CONDUIT, WIRING, AND CABLEING) AND EXISTING SYSTEM INFRASTRUCTURE AS MUCH AS POSSIBLE. NEW FIRE ALARM SYSTEM CIRCUITS AND DEVICES SHALL BE PROVIDED AS REQUIRED IN THE PROJECT DOCUMENTS.